Florida Atlantic University
Ph.D. in Neuroscience Proposal
Appendix J

Curriculum Vitae

William H. Alexander
Center for Complex Systems and Brain Sciences
Florida Atlantic University
777 Glades Rd
Boca Raton, FL 33431
USA
walexander@fau.edu

EDUCATION

Indiana University, Bloomington
Degree: Ph.D. **2006**
Major: Cognitive Psychology
2nd Major: Cognitive Science
Dissertation: "A Real-Time Model of Attention"

University of Nevada, Reno
Degree: B.A. **1999**
Major: Psychology
Minor: Philosophy

RESEARCH EXPERIENCE

Florida Atlantic University – Center for Complex Systems **2018 - Present**
Assistant Professor
Research Topics: Computational Modeling, fMRI, Cognitive Control, Decision-Making

Ghent University
Odysseus Laureate **2013-2017**
Research Topics: Computational Modeling, fMRI, Cognitive Control, Decision-Making

Indiana University, Bloomington
Postdoctoral Researcher – Cognitive Control Lab **2007-2013**
Director: Joshua W. Brown
Research Topics: Executive Control, Decision Making, Reinforcement Learning, Computational Modeling, fMRI

Okinawa Institute of Science and Technology
Researcher – Neural Computation Unit **2006-2007**
Director: Kenji Doya
Research Topics: Attention, Computational Modeling, Neuromodulation

Indiana University, Bloomington
Graduate Student – Computational Cognitive Neuroscience Lab **2001-2006**
Director: Olaf Sporns
Research Topics: Neural Bases of Reinforcement, Embodied Cognition, Robotics

FUNDING SOURCES

Title	**Role**	**Dates**

The Neural Architecture of Reinforcement Learning in Partially Observable Environments (AFOSR). **$646,748 Total Costs**	Co-Principal Investigator	**2020 - 2023**
A Reinforcement Learning Framework for Cognitive Control (FWO G.OC44.13N). **€598,600**	Principal Investigator	**2013 - 2018**
Integrated Cognitive Architectures for Understanding Sensemaking (subcontract). PI: Joshua Brown	Co-Investigator	**2010-2013**
Neural Mechanisms of Risky Behavior Avoidance NIH/NIDA R01 DA026457. PI: Joshua Brown	Co-Investigator	**2009-2010**

TEACHING EXPERIENCE

**Denotes Graduate-Level Course*

Florida Atlantic University

*	**Instructor – Cognitive Neuroscience**	**Fall 2020**
*	**Instructor – Computational Neuroscience**	**Yearly (2018-19)**
	Instructor – Experimental Design and Statistics	**Yearly (2019-20)**

Ghent University

*	**Instructor - Modeling Cognitive Processes**	**Fall, 2014**
*	**Guest Lecturer - Model-Based fMRI - Introduction to Neuroimaging**	**Fall, 2014**
	Instructor - Model-Based fMRI Analysis - Practical Data Analysis and Modeling in Cognitive and Clinical Neuroscience Training School	**April, 2014**

Indiana University, Bloomington

*	**Assistant Instructor – Advanced Statistical Analysis**	**Fall, 2005**
	Assistant Instructor – Statistical Techniques	**Spring, 2005**
*	**Assistant Instructor –Advanced Statistical Analysis**	**Fall, 2004**
	Instructor – Methods of Experimental Psychology	**Spring, 2004**

PEER-REVIEWED MANUSCRIPTS **Denotes First or Senior Author*

* 1. Cogliatti-Dezza, I., Cleeremans, A., and **Alexander,W.H.** (revised). Independent and Interacting Value Systems for Reward and Information in the Human Brain

* 2. **Alexander, W.H.** and Womesldorf, T. (revised). Interactions between medial and lateral prefrontal cortex in hierarchical predictive coding.

* 3. Vassena E., Deraeve, J., and **Alexander, W.H.** (2020). Surprise, value and control in anterior cingulate cortex during speeded decision-making. *Nature Human Behavior*

* 4. Cogliati-Dezza, I., Cleeremans, A., and **Alexander, W.H.** (2019). Should we control? The interplay between cognitive control and information integration in the resolution of the exploration-exploitation dilemma.

* 5. Vassena, E., Deraeve, J., and **Alexander, W.H.** (2019). Task-specific prioritization of reward and effort information: Novel insights from behavior and computational modeling. *Cognitive, Affective, & Behavioral Neuroscience*

* 6. **Alexander, W.H.**, and Brown, J.W. (2018). Frontal cortex function as derived from hierarchical predictive coding. *Scientific Reports* 8, 4312.

* 7. Deraeve, J. and **Alexander, W.H.** (2018). Fast, accurate and stable feature extraction using neural networks. *Neuroinformatics*

* 8. Cogliati-Dezza, I., Yu, A., Cleeremans, A., and **Alexander, W.H.** (2017). Learning the value of information and reward over time when solving exploration-exploitation problems. *Scientific Reports*, 7, 16919.

* 9. **Alexander. W.H.**, and Brown, J.W. (2017). The role of anterior cingulate cortex in prediction error and signaling surprise. *Topics in Cognitive Science*

* 10. Vassena, E., Holroyd, C., and **Alexander, W.H.** (2017). Computational models of anterior cingulate cortex: At the crossroads between prediction and effort. *Frontiers in Neuroscience*, 11, 316.

* 11. **Alexander, W.H.,** Vassena., E., Hayden., B.Y., Brown, J.W., and Collins, A.E. (2017). Prefrontal cortex in control: Broadening the scope to identify mechanisms. *Journal of Cognitive Neuroscience*,29.

* 12. Brown, J.W., and **Alexander, W.H.** (2017). Foraging value, risk avoidance, and multiple control signals: How the anterior cingulate cortex controls value-based decision-making. *Journal of Cognitive Neuroscience*, 29, 1656-1673.

* 13. **Alexander, W.H.**, Vassena, E., Deraeve, J., and Langford, Z. D. (2017). Integrative modeling of prefrontal cortex. *Journal of Cognitive Neuroscience*, 29, 1674-1683.

* 14. Vassena, E., Deraeve, J., and **Alexander, W.H.** (2017). Predicting motivation: computational models of PFC can explain neural coding of motivation and effort-based decision-making in health and disease. *Journal of Cognitive Neuroscience*, 29, 1633-1645.

15. Jahn, A., Nee., D.E., **Alexander, W.H.**, and Brown, J.W. (2016). Distinct regions of pain and prediction error within medial prefrontal cortex. *Journal of Neuroscience*36(49), 12385-12392.

* 16. **Alexander, W.H.**, and Brown, J.W. (2015). Hierarchical Error Representation: A computational model of anterior cingulate and dorsolateral prefrontal cortex. *Neural Computation*, 27, 2354-2410

* 17. **Alexander, W.H.,** Fukunaga, R., Finn, P., and Brown, J.W. (2015). Rewardsalience and risk aversion underlie differential ACC activity in substance dependence. *Neuroimage: Clinical* 8, 59-71.

18. Silvetti, M., **Alexander, W.H.**, Verguts, T., and Brown, J.W. (2014). From conflict management to reward-based decision making: Actors and critics in primate medial frontal cortex. *Neuroscience and Behavioral Reviews.* 46(1), 44-57.

* 19. **Alexander, W.H.** and Brown, J.W. (2014). A general role for medial prefrontal cortex in event prediction. *Frontiers in Computational Neuroscience*, 8:69

* 20. Jahn, A., Nee, D.E., **Alexander, W.H.**, and Brown, J.W. (2014). Distinct regions of anterior cingulate cortex signal prediction and outcome evaluation. *Neuroimage* 95,80-89

* 21. Zarr, N, Brown, J.W., and **Alexander, W.H.** (2014). Discounting of reward sequences: a test of competing formal models of hyperbolic discounting. *Frontiers in Psychology.*

* **22. Alexander, W.H**. and Brown, J.W. (2011). Medial prefrontal cortex as an action-outcome predictor. *Nature Neuroscience* 14(10), 1338-1344.

* 23. **Alexander, W.H.** and Brown, J.W. (2010). Computational models of response-outcome prediction as a basis for cognitive control. *Topics in Cognitive Science* 2(4), 658-677.

* 24. **Alexander, W.H.** and Brown, J.W. (2010). Hyperbolically discounted temporal difference learning. *Neural Computation* 22(6), 1511-27.

* 25. **Alexander, W.H.** and Brown, J.W. (2010). Competition between learned reward and error outcome predictions in anterior cingulate cortex. *Neuroimage,* 49(5), 3210-3218.

* 26. **Alexander, W.H.** (2007). Shifting Attention Using a Temporal Difference Prediction Error and High-Dimensional Input. *Adaptive Behavior,* 15, 121-133

* 27. **Alexander, W.H.** and Sporns, O. (2006). Temporal difference learning with learned attention shifts. *Proceedings of the Fifth International Conference on Development and Learning.* Bloomington, IN.

* 28. **Alexander, W.H.** and Sporns, O. (2004). Interactions of environment, behavior, and synaptic patterns in a neuro-robotic model. In: *Animals to Animats 8: Proceedings of the Eighth International Conference on the Simulation of Adaptive Behavior,*pp. 13-22, Schaal, S., Ijspeert, A., Billard, A., Vijayakumar, S., Hallam, J., and Meyer, J-A. (Editors). MIT Press: Cambridge, MA.

29. Sporns, O. and **Alexander, W.H.** (2003). Neuromodulation in a learning robot: Interactions between neural plasticity and behavior. *Proceedings of IJCNN 2003*, 2789-2794.

* 30. **Alexander, W.H.** and Sporns, O. (2003). An Embodied Model of Learning, Plasticity, and Reward. *Adaptive Behavior.* Vol 10(3-4), Sum 2002, pp. 143-159

31. Sporns, O., and **Alexander, W.H.** (2002). Neuromodulation and plasticity in an autonomous robot. *Neural Networks.* Vol 15(4-6), Jun-Jul 2002, pp. 761-774.

* 32. **Alexander, W.H.** and Sporns, O (2002). Timed delivery of reward signals in an autonomous robot. In: *Animals to Animats 7: Proceedings of the Seventh International Conference on the Simulation of Adaptive Behavior*, pp. 195-204, Hallam, B., Floreano, D., Hallam, J., Hayes, G. and Meyer, J-A. (Editors), MIT Press: Cambridge, MA.

33. Sporns, O., and **Alexander, W.H.** (2002). Dopamine, reward conditioning, and robot behavior. In: *Proceedings of the 2nd International Conference on Development and Learnin*g, pp. 265-270, IEEE Computer Society, Los Alamitos, CA.

BOOK CHAPTERS

1. **Alexander, W.H.**, and Brown, J.W. (2015). Reciprocal interactions of computational modeling and empirical investigation. In: *Model-based cognitive neuroscience: an introduction.* pp. 321-338. Forstmann, B. and Wagenmaakers, E.J. (Eds), Springer:New York, NY

2. Brown, J.W. and **Alexander, W.H.** (2011). Computational Neuroscience Models: Error monitoring, conflict resolution, and decision making. In: *Perception-reason-action cycle: Models, algorithms and systems.* pp. 169-186, Cutsurdis, V., Hussain, A, & Taylor, J.G. (Eds),Springer: New York, NY.

POSTERS/PRESENTATIONS

** Denotes invited talk or symposium*

* 1. **Alexander, W.H.** (2017). Towards a theory of prefrontal cortex. Panel member at the 13th International Conference for Cognitive Neuroscience

* 2. **Alexander, W.H.** (2017). Error representations in dorsolateral prefrontal cortex. Invited talk at Cosyne 17. Salt Lake City, UT

3. **Alexander, W.H.**, and Vassena, E.(2016). Context and outcome uncertainty in anterior insula. Poster at the annual meeting of the Society for Neuroscience. San Diego, CA

4. Deraeve, J., Vassena, E.., and **Alexander, W.H.** (2016). Task representations in the dorsolateral prefrontal cortex. Poster at the annual meeting of the Society for Neuroscience. San Diego, CA

5. Jahn, A., Nee, D.E., **Alexander, W.H.,** and Brown, J.W. (2016). Medial prefrontal cortex signals prediction errors across domains of pain and cognitive control. Poster at the annual meeting of the Society for
* Neuroscience. San Diego, CA

6. **Alexander, W.H.** (2016). Function following form: Representation in Prefrontal Cortex. Invited talk at the 5th workshop on the Computational
* Properties of Prefrontal Cortex. Lyon, France

7. **Alexander, W.H.** (2016). Representations of prediction error in cognitive control. Talk presented at the annual meeting of the Cognitive
* Neuroscience Society. New York, NY

8. **Alexander, W.H.** (2015). Effects of task representation on learning and behaviour. Talk at the conference for the European Society for Cognitive Psychology. Paphos, Cyprus.

9. Deraeve, J., and **Alexander, W.H.** (2015). Task representations in dorsolateral prefrontal cortex. Poster at the conference for the European Society for Cognitive Psychology. Paphos, Cyprus.

10. Vassena, E., Verguts, T., Kochman, K., Latomme, J., and **Alexander, W.H.** (2015). Enhanced temporal prediction in musicians: evidence from behavior and model-based fMRI. Poster at the conference for the European Society for Cognitive Psychology. Paphos, Cyprus.

11. Vassena, E., **Alexander, W.H.**, Kochman, K., Latomme, J., Verguts, T. (2015). Higher-order temporal prediction in prefrontal cortex: a model-based fMRI study in expert musicians. Poster at the Conference for the
* Organization of Human Brain Mapping. Honolulu, HI.

12. **Alexander, W.H.** (2015). Understanding cingulate function from multiple
* perspectives. Invited talk at McLean Hospital/Harvard Medical.

13. **Alexander, W.H.** (2015). Error representation in dorsolateral prefrontal cortex. Invited talk at Brown University.

14. **Alexander, W.H.** (2015). The influence of order on hierarchical learning. Poster at the Fifth Symposium on Biological Decision Making. Paris, France.

15. Jahn, A., Nee, D.E., **Alexander, W.H.**, and Brown, J.W. (2014). Medial prefrontal cortex signals prediction errors across multiple domains of pain and cognitive control. Poster at the annual meeting of the Society for
* Neuroscience. Washington, D.C.

16. **Alexander, W.H.** (2014). E cingulus pluram: Multiple computational roles of anterior cingulate activity. Symposium talk at the International Conference on Cognitive Neuroscience. Brisbane, Australia.

17. **Alexander, W.H.** and Brown, J.W. (2014). A computational model of dorsolateral prefrontal cortex. Poster at the Cognitive Neuroscience Society annual conference. Boston, MA.

18. Jahn, A., Nee, D.E., **Alexander, W.H.**, and Brown, J.W. (2013). Distinct regions of anterior cingulate cortex signal prediction and outcome evaluation. Poster at the annual meeting of the Society for Neuroscience. * San Diego, CA.

19. **Alexander, W.H.** (2013). The multiple functions of anterior cingulate: a computational reconciliation. Invited talk at the Workshop on Interfacing Models with Brain Signals to Investigate Cognition. University of California, Irvine.

20. **Alexander, W.H.**, and Brown, J.W. (2013). A general role for anterior cingulatecortex in predicting task-related events. Poster at the Cognitive Neuroscience Society annual conference. San Francisco, CA.

21. Jahn, A., **Alexander, W.H.**, Nee, D.E., and Brown, J.W. (2013). Pain, Congruency,and Surprise: Prediction Violation Across Domains in the Anterior Cingulate Cortex. Poster at the Cognitive Neuroscience Society annual conference. San Francisco, CA.

22. **Alexander, W.H.**, Fukunaga, R, and Brown, J.W. (2012). Risk aversion underlies medial prefrontal cortex activity in substance dependence. Poster at the Cognitive Neuroscience Society annual conference. Chicago, IL. *

23. **Alexander, W.H.** and Brown, J.W. (2010). Medial prefrontal cortex predicts the outcomes of actions. Nanosymposium talk at the annual meeting of the Society for Neuroscience. San Diego, CA.

24. **Alexander, W.H.** and Brown, J.W. (2010). Discounting time and probability by reward perception. Poster at the Society for Neuroeconomics annual conference. Evanston, IL.

25. **Alexander, W.H.** and Brown, J.W. (2010). A common mechanism for time and probability discounting. Poster at the Air Force Office of Scientific Research Cognition & Decision Joint Program Review. Arlington, VA.

26. **Alexander, W.H.** and Brown, J.W. (2008). A computational neural model of learned response-outcome predictions by anterior cingulate cortex. Poster at the annual meeting of the Society for Neuroscience. Washington, D.C.

27. **Alexander, W.H.** and Brown, J.W. (2008). Error likelihood effects in anterior cingulate cortex modulated by average reward and reinforcement learning. Poster at the annual conference for the Cognitive Neuroscience Society. San Francisco, CA. *

28. **Alexander, W.H.** (2004). Mutual influences of environment and behavior on the development of a neural model. Invited talk at the workshop for Neurorobotic Models in Neuroscience and Neuroinformatics. Los Angeles, CA, July 17, 2004.

29. **Alexander, W.H.** and Sporns, O. (2003). Environmental influence on behavior and development of an autonomous robot. Poster at the Annual meeting of the Society for Neuroscience, New Orleans, LA.

30. Sporns, O., Bulwinkle, D., Chadderdon, G., and **Alexander, W.H.** (2003). Neuro-robotic models of learning and addiction. Poster at NIH Symposium (Biomedical Information Science and Technology Initiative) Digital Biology, The Emerging Paradigm. Bethesda, MD.

31. Malkoc, G., **Alexander., W.H.**, and Webster, M.A. (2001). Color and Adaptation in Perceptual Grouping. Poster at the 1st Annual Meeting of the Vision Sciences Society, Sarasota, FL.

32. Amberg, M.D., Yamashita, J.A., Merica, B.L., **Alexander, W.H.**, and Wallace, W.P. (2001). Words with overlapping phonemes in early positions facilitate correct recall. Poster at the Annual Convention of the Western Psychological Associations. Tucson, AZ.

AWARDS

Odysseus II Program – Ghent University/Flanders Research Foundation, 2012

Cognitive Science Summer Research Fellowship – Indiana University, 2005

Outstanding Paper – International Conference on Development and Learning (co-author), 2002

Summer Research Incentive Fellowship – Indiana University, 2002

Faculty Commendation – Indiana University, 2001-2002

National Science Foundation Graduate Research Fellowship – Honorable Mention, 2002

Cognitive Science Supplemental Fellowship – Indiana University, 2001

PROFESSIONAL SERVICE

Ad-hoc Reviewer: *Adaptive Behavior*; *Cognitive, Affective, & Behavioral Neuroscience; Cognitive Science; Cortex; Neural Computation; Journal of Experimental Psychology: General; Neuroimage; Neuropsychologia*; *PLOS One; Topics in Cognitive Science; Proceedings of the National Academy of Sciences; Nature Communications Biology; Nature Human Behavior*

PROFESSIONAL MEMBERSHIPS

Society for Neuroscience

Cognitive Neuroscience Society

RINDY CHRISTINE ANDERSON

Florida Atlantic University
Department of Biological Sciences
3200 College Ave
Davie, FL 33314

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Web: http://rindy1.wix.com/rindyandersonlab

Education/Employment History

University of Miami	Ph.D., Biology
University of San Diego	M.S., Marine Science
Arizona State University	B.S., Zoology

2014 – present	Assistant Professor of Biological Sciences, Florida Atlantic University
2012 – 2014	Research Scientist, Duke University
2007 – 2012	Postdoctoral Research Associate, Duke University
1999 – 2001	Research Biologist, Hubbs-Sea World Research Institute

Scholarship/Research/Creative Activity

Google Scholar h-index since 2016: 18, i10-index 28
Citations since 2016: 1,707 as of Feb 25, 2021

Publications in Print

Refereed Journal Articles (41): *indicates undergraduate author, **indicates graduate student author, [GC] indicates non-FAU graduate student collaborator, [†]indicates postdoctoral researcher, [1]indicates co-first authors. Since appointment at FAU (17) with 2 manuscripts under review.

2021

41. Joseph Niederhauser[**], Morgan Slevin[**], Erik Noonburg, **Rindy C. Anderson**. 2021. Behavior, habitat quality, and territory defense in Bachman's sparrow. *Behaviour.* Accepted Feb 22, 2021.

2020

40. Morgan Slevin[GC], Jennifer Houtz[GC], David Bradshaw[GC], and **Rindy C. Anderson**. Evidence supporting the microbiota-gut-brain axis in a songbird. *Biology Letters*. Published 4 Nov. 2020. https://doi.org/10.1098/rsbl.2020.0430

39. Erik Noonburg, **Rindy C. Anderson**. Asymmetric competition and floater dynamics: a model. *Ecology* Published 31 Oct. 2020. https://doi.org/10.1002/ecy.3238

38. Clara Howell[GC], **Rindy C. Anderson**, Elizabeth P. Derryberry (2020) Female zebra finches prefer the songs of males who quickly solve a novel foraging task to the songs of males unable to solve the task. *Ecology & Evolution*. DOI: 10.22541/au.158030917.75813308.

37. Sara E. Bebus[†], Blake C. Jones, **Rindy C. Anderson** (2020) Development of the corticosterone stress response differs among passerine species. *General and Comparative Endocrinology*. https://doi.org/10.1016/j.ygcen.2020.113417.

2019

36. Clara Howell [GC], **Rindy C. Anderson**, Elizabeth P.Derryberry (2019) Female cognitive performance and mass are correlated with different aspects of mate choice in the zebra finch (*Taeniopygia guttata*). *Animal Cognition* 22: 1085. https://doi.org/10.1007/s10071-019-01299-6

35. Jill A. Soha, Susan Peters, **Rindy C. Anderson**, William A. Searcy, Stephen Nowicki (2019) Performance on tests of cognitive ability is not repeatable across years in a songbird. *Animal Behaviour* 158:281-288. https://doi.org/10.1016/j.anbehav.2019.09.020

2018

34. Kendra B. Sewall, **Rindy C. Anderson**, Jill A. Soha, Susan Peters, Stephen Nowicki (2018) Early life conditions that impact song learning in male zebra finches also impact neural and behavioral responses to song in females. *Developmental Neurobiology* 78: 785–798. https://doi.org/10.1002/dneu.22600.

33. Sabah Ali*, **Rindy C. Anderson** (2018) Song and aggressive signaling in the Bachman's sparrow. *The Auk: Ornithological Advances* 135: 521–533. https://doi.org/10.1642/AUK-17-216.1

32. Casey A. Klofstad, **Rindy C. Anderson** (2018) Voice pitch predicts electability, but does not signal leadership ability. *Evolution and Human Behavior* 39(3) 349-354.

31. Joseph N. Niederhauser**, Adrienne L. Dubois, William A. Searcy, Stephen Nowicki, **Rindy C. Anderson** (2018) A test of the eavesdropping avoidance hypothesis as an explanation for the structure of low amplitude aggressive signals in the song sparrow. *Behavioral Ecology and Sociobiology* 72: 47.

2017

30. **Rindy C. Anderson**, William A. Searcy, Susan Peters, Melissa Hughes, Adrienne L. Dubois, Stephen Nowicki (2017) Song learning and cognitive ability are not consistently related in a songbird. *Animal Cognition* 20(2) 309–320.

2015

29. Casey A. Klofstad, **Rindy C. Anderson**, Stephen Nowicki (2015) Perceptions of Competence, Strength, and Age Influence Voters to Select Leaders with Lower-Pitched Voices. *PLoS ONE* 10(8): e0133779.

28. **Rindy C. Anderson,** Dustin G. Reichard (2015) The function and evolution of low-amplitude signals: Introduction to the Special Issue on Whispered Communication. *Animal Behaviour* 105: 215.

27. Dustin G. Reichard, **Rindy C. Anderson** (2015) Why signal softly? The structure, function and evolutionary significance of low-amplitude signals. *Animal Behaviour* 105: 253-265.

26. Caglar Akcay, **Rindy C. Anderson**, Stephen Nowicki, Michael D. Beecher, William A. Searcy (2015) Quiet threats: soft song as an aggressive signal in birds. *Animal Behaviour* 105: 267-274.

25. Molly K. Grace [GC], **Rindy C. Anderson** (2015) No frequency shift in the "D" notes of Carolina chickadee calls in response to traffic noise. *Behavioral Ecology and Sociobiology* 69(2): 253–263.

Prior to appointment at FAU (24):

2014

24. Robert F. Lachlan[1], **Rindy C. Anderson**[1]**,** Susan Peters, William A. Searcy, Stephen Nowicki. (2014) Typical versions of learned swamp sparrow songs are more effective signals than are less typical versions. *Proceedings of the Royal Society of London B* 281: 20140252.

23. **Rindy C. Anderson,** Casey A. Klofstad, William J. Mayhew, Mohan Venkatachalam. (2014) Vocal fry may undermine the success of young women in the labor market. *PLOS ONE* 9(5): e97506.

22. **Rindy C. Anderson**, Susan Peters, Nowicki, S (2014) Effects of early auditory experience on the development of local song preference in female swamp sparrows. *Behavioral Ecology and Sociobiology* 68(3): 437-447.

21. Evan L. MacLean, Brian A. Hare, Charles L. Nunn, Elizabeth Addessi, Filippo Amici, **Rindy C. Anderson** et al. (58 authors) (2014) The Evolution of Self Control. *Proceedings of the National Academy of Sciences*, 11(20): E2140–E2148.

2013

20. **Rindy C. Anderson**, Adrienne L. Dubois, David K Piech, William A. Searcy, Stephen Nowicki (2013) Receiver response to an aggressive visual signal, the wing-wave display, in swamp sparrows. Behavioral *Ecology and Sociobiology* 67(4): 593–600.

19. William A. Searcy, **Rindy C. Anderson**, Ballentine B, Stephen Nowicki (2013) Limits to reliability in avian aggressive signals. *Behaviour* 150(5): 1129-1145.

2012

18. **Rindy C. Anderson**, Casey A. Klofstad (2012) Preference for leaders with masculine voices holds in the case of feminine leadership roles. *PLoS ONE* 7(12): e51216.

17. **Rindy C. Anderson**, Melissa Hughes, William A. Searcy, Stephen Nowicki (2012) The receiver-dependent cost of soft song: a signal of aggressive intent in songbirds. *Animal Behaviour*, 83(6): 1443-1448.

16. Christopher J. Maddison, **Rindy C. Anderson**, Nora H. Prior, Michael D. Taves, Kiran K. Soma (2012) Soft song during aggressive interactions: seasonal changes and endocrine correlates in song sparrows. *Hormones and Behavior*, 62: 455–463.

15. Casey A. Klofstad, **Rindy C. Anderson**, Susan Peters (2012) Sounds like a winner: Voice pitch influences perception of leadership capacity in both men and women. *Proceedings of the Royal Society of London, Biological Sciences*, 279(1738): 2698-2704.

14. **Rindy C. Anderson**, Casey A. Klofstad (2012) For love or money?: The influence of personal resources and environmental resource pressures on human mating preferences. *Ethology*, 18(9): 841-849.

13. Ann E. Bowles, **Rindy C. Anderson** (2012) Behavioral responses and habituation of pinnipeds and small cetaceans to novel objects with and without a pinger. *Aquatic Mammals*, 38(2): 161-188.

12. Evan L. MacLean, Luke J. Matthews, Brian A. Hare, Charles L. Nunn, **Rindy C. Anderson**, et al. (21 authors) (2012) How Does Cognition Evolve?: Phylogenetic Comparative Psychology. *Animal Cognition*, 15(2): 223-238.

2011

11. Neeltje Boogert, **Rindy C. Anderson**, Susan Peters, William A. Searcy & Nowicki, S (2011) Song repertoire size correlates with inhibitory control, but not other measures of cognitive ability, in male song sparrows. *Animal Behaviour* 81: 1209-1216.

2009

10. **Rindy C. Anderson** (2009) Operant conditioning and copulation solicitation display assays reveal a stable preference for local song by female swamp sparrows. *Behavioral Ecology & Sociobiology* 64: 215-223.

9. Jonathan F. Prather, Stephen Nowicki, **Rindy C. Anderson**, Susan Peters, Richard Mooney (2009) Neural correlates of categorical perception in learned vocal communication. *Nature Neuroscience* 12: 221-228.

2008

8. **Rindy C. Anderson**, William A. Searcy, Susan Peters and Stephen Nowicki (2008) Soft song in the song sparrow: acoustic analysis and implications for signal function. *Ethology*, 114(7): 662-676.

7. William A. Searcy, **Rindy C. Anderson** and Stephen Nowicki (2008) Is bird song a reliable signal of aggressive intent? A reply. *Behavioral Ecology and Sociobiology*, 62: 1213–1216.

6. **Rindy C. Anderson**, William A. Searcy, Stephen Nowicki (2008) Testing the function of song matching in birds: responses of eastern song sparrow to partial song matching. *Behaviour*, 145: 347-363.

2007

5. **Rindy C. Anderson**, Stephen Nowicki & William A. Searcy (2007) Soft song in song sparrows: response of males and females to an enigmatic signal. *Behavioral Ecology and Sociobiology*, 61: 1267-1274.

4. Melissa Hughes, **Rindy C. Anderson**, William A. Searcy, Laurie M. Bottensek & Stephen Nowicki (2007) Song type sharing and territory tenure in eastern song sparrows: implications for the evolution of song repertoires. *Animal Behaviour*, 73: 701-710.

2006

3. William A. Searcy, **Rindy C. Anderson**, & Stephen Nowicki (2006). Bird song as a signal of aggressive intent. *Behavioral Ecology and Sociobiology*, 60: 234-241.

2005

2. **Rindy C. Anderson**, William A. Searcy & Stephen Nowicki (2005). Partial song matching in an eastern population of song sparrows (*Melospiza melodia*). *Animal Behaviour*, 69:(1), 189-196.

2003

1. Lawrence F. Wolski, **Rindy C. Anderson**, Ann E. Bowles & Pamela K. Yochem (2003). Measuring hearing in the harbor seal (Phoca vitulina): Comparison of behavioral and auditory brainstem response techniques. *Journal of the Acoustical Society of America*, 113:(1) 629-636.

Works currently under review

Joseph Niederhauser[**], Rindy C. Anderson. Flexibility under fire: low repeatability of aggressiveness and boldness in Bachman's sparrow. *Under review at Behavioral Ecology and Sociobiology*.

Joseph Niederhauser[**], Rindy C. Anderson. Spatial pattern of song-type sharing in Bachman's Sparrow. Under review at *Ornithology* (formerly *The Auk*).

My Refereed Presentations Since Appointment at FAU (9)

*indicates undergraduate co-presenter, **indicates graduate co-presenter, [GC] indicates non-FAU graduate collaborator, †indicates postdoctoral researcher

International:

Behavior 2019 (joint conference by the Animal Behavior Society and the International Ethological Congress), July 26, 2019.

Rindy C. Anderson, Sabah Ali*, Joseph Niederhauser**, Paula Ziadi**. Testing hypotheses about song as an agonistic signal in Bachman's sparrow. Oral presentation.

National:

Animal Behavior Society Annual Meeting (virtual conference), July 28-31, 2020.
Rindy C. Anderson, Joseph Niederhauser**, Laura Roldan*, Christian Hunt*, Nicole Nalty*. Capture and handling affects future response to playback in Bachman's sparrow. Oral presentation.

Society for Integrative and Comparative Biology Annual Meeting, January 3-7, 2020
Rindy C. Anderson, Sabah Ali*, Joseph Niederhauser**, Paula Ziadi**. Why so many song types? Testing hypotheses about song as an agonistic signal in Bachman's sparrow. Oral presentation.

Society for Integrative and Comparative Biology Annual Meeting, January 3-7, 2018
Rindy C. Anderson, Sabah Ali*. Understanding Complexity in Communication Systems: Song and Aggressive Signaling in Bachman's Sparrow. Oral presentation. Publication 33

Society for Integrative and Comparative Biology Annual Meeting, January 3-7, 2017
Rindy C. Anderson, Joseph N. Niederhauser,** Adrienne A. DuBois, William A. Searcy, Stephen Nowicki. Are song sparrow 'soft songs' adapted for short-range communication? Oral presentation. Publication 31

Animal Behaviour Society Annual Meeting, July 31, 2016.
Rindy C. Anderson, William A. Searcy, Adrienne L. Dubois, Susan Peters, Stephen Nowicki. Song learning and cognitive ability in the song sparrow. Oral presentation. Publication 30

Society for Integrative and Comparative Biology Annual Meeting, January 5, 2016.
Rindy C. Anderson, Kendra B. Sewall, Jill Soha, Susan Peters, Stephen Nowicki. Effects of developmental stress on problem solving and song learning in the zebra finch. Oral presentation. Publication 34

Animal Behavior Society Annual Meeting, August 11, 2014
Organized and hosted a symposium: "The Function, Evolution and Significance of Low-amplitude Acoustic Signals in Animal Communication." The symposium resulted in a Special Issue in the International journal *Animal Behavior*. I co-edited the Issue and co-authored three of its papers, publications 26, 27, 28.
Rindy C. Anderson, Dustin G. Reichard. Low-amplitude acoustic signaling: a symposium overview and insights from two sparrow systems. Oral presentation. Publication 27

Statewide:

Florida Ornithological Society Fall Meeting Nov 2017
Rindy C. Anderson. Understanding Complexity in Communication Systems: Song and Aggressive Signaling in Bachman's Sparrow. Oral presentation. Publication 33

Prior to appointment at FAU I presented my research at 11 National Meetings of the Animal Behavior Society, the Society of Integrative and Comparative and Biology, and the North American Ornithological Conference.

Co-authored Student and Collaborative Refereed Presentations (27)

International:

Behavior 2019 (joint conference by the Animal Behavior Society and the International Ethological Congress), July 26, 2019.

Collaborators: Clara Howell[GC], Rindy C. Anderson, Elizabeth Derryberry. Solving is Sexy: the role of problem-solving ability in mate choice in zebra finches (Taeniopygia guttata). Student oral presentation by Howell. Publication 36

National:

Animal Behavior Society Annual Meeting (virtual conference), July 28-31, 2020.
Student: Joseph Niederhauser**, Morgan Slevin**, Erik Noonburg, Rindy C. Anderson. Flexibility under fire: low repeatability of aggressiveness and boldness in Bachman's sparrows. Oral presentation by Niederhauser.

Student: Morgan Slevin**, Jenn Houtz[GC], David Bradshaw II**, Rindy C. Anderson. Evidence supporting the microbiota-gut-brain axis in a songbird. Oral presentation by Slevin.

Collaborator: Jill A. Soha, Rindy C. Anderson. Song Repertoires in a Northern Population of Bachman's Sparrows. Oral presentation by Soha.

Society for Integrative and Comparative Biology Annual Meeting, January 3-7, 2020
Collaborator/former postdoc: Sara Bebus†, Blake Jones, Rindy Anderson. Brood-parasitized nestlings have higher baseline corticosterone concentrations. Oral presentation by Bebus. Publication 37.

Student: Morgan Slevin**, Wilner Fresin*, Gillian Cannataro*, Rindy C. Anderson. Smarts and Symbiosis: Elucidating the Relationships Between the Microbiome and Cognitive Performance in Birds. Oral presentation by Slevin.

Society for Integrative and Comparative Biology Annual Meeting, January 3-7, 2019
Collaborator/former postdoc: Sara Bebus[†], Blake Jones, Rindy C. Anderson. Development of the corticosterone stress response among passerine nestlings. Oral presentation by Bebus. Publication 37.

Student: Joseph Niederhauser**, Paula Ziadi**, Benjamin Blakely*, Rindy C. Anderson. Spatial pattern of song sharing in Bachman's sparrows. Oral presentation by Niederhauser.

Student: Paula Ziadi**, Benjamin Blakely*, Brin Cerbone*, Rindy C. Anderson. Testing hypotheses about song type matching and song sequences in songbird vocal repertoires. Oral presentation by Ziadi.

Collaborators: Clara Howell[GC], Rindy C. Anderson, Elizabeth Derryberry. Solving is Sexy: the role of problem-solving ability in mate choice in zebra finches (Taeniopygia guttata). Oral presentation by student Howell. Publication 36.

Student: Morgan Slevin**, Joseph Niederhauser**, Paula Ziadi**, Erik Noonburg, Rindy C. Anderson. Linking territory characteristics to behavioral syndromes in Bachman's Sparrow. Poster presentation by Slevin.

Society for Integrative and Comparative Biology Annual Meeting, January 3-7, 2018
Student: Maria P. Ziadi**, Rindy C. Anderson. Testing hypotheses about song type matching in Bachman's sparrow. Poster presentation by Ziadi.

Student: Joseph N. Niederhauser**, Rindy C. Anderson. Habitat variation in relation to nesting success and nestling condition in Bachman's sparrow. Poster presentation by Niederhauser.

American Association for the Advancement of Science Annual Meeting, February 17, 2017
Student: Sabah B. Ali*, Rindy C. Anderson Song as an aggressive signal in the Bachman's sparrow. Poster presentation by Ali. Publication 33.

Society for Integrative and Comparative Biology Annual Meeting, January 3-7, 2017
Student: Joseph N. Niederhauser**, Rindy C. Anderson. Song learning and juvenile development in Bachman's sparrow. Poster presentation by Niederhauser.

Student: Sabah B. Ali*, Rindy C. Anderson Song and aggressive signaling in the Bachman's sparrow. Poster presentation by Ali. Publication 33

Regional:

Southeastern Ecology and Evolution Conference Oct 2018
Student: Joseph N. Niederhauser**, Maria P. Ziadi**, Benjamin Blakely*, Rindy C. Anderson. Spatial pattern of song sharing in Bachman's sparrows. Oral presentation by Niederhauser.

Statewide:

Florida Undergraduate Research Conference Feb 2017
Student: Sabah B. Ali*, Rindy C. Anderson Song and aggressive signaling in the Bachman's sparrow. Poster presentation by Ali. Publication 33

Florida Ornithological Society Fall Meeting, Nov 2018
I organized and hosted the Florida Ornithological Society Fall Meeting in November 2018 at the FAU Davie Campus.
Student: Joseph Niederhauser**, Paula Ziadi**, Benjamin Blakely*, Rindy C. Anderson. Spatial pattern of song sharing in Bachman's sparrows. Oral presentation by Niederhauser.

Student: Paula Ziadi**, Benjamin Blakely*, Brin Cerbone*, Rindy C. Anderson. Testing hypotheses about song type matching and song sequences in songbird vocal repertoires. Oral presentation by Ziadi.

Student: Morgan Slevin**, Joseph Niederhauser**, Paula Ziadi**, Erik Noonburg, Rindy C. Anderson. Linking territory characteristics to behavioral syndromes in Bachman's Sparrow. Poster presentation by Slevin.

Student: Brin Cerbone*, Paula Ziadi**, Rindy C. Anderson. Bachman's Sparrows: Do they song match with their neighbors? Poster presentation by Cerbone.

Florida Ornithological Society Fall Meeting Nov 2017

Student: Maria P. Ziadi**, Rindy C. Anderson. Testing hypotheses about song type matching in Bachman's sparrow. Poster presentation by Ziadi.

Student: Joseph N. Niederhauser**, Rindy C. Anderson. Habitat variation in relation to nesting success and nestling condition in Bachman's sparrow. Poster presentation by Niederhauser.

Florida Ornithological Society Fall Meeting Oct 2016

Student: Sabah B. Ali*, Rindy C. Anderson Song as an aggressive signal in the Bachman's sparrow. Poster presentation by Ali. Publication 33

Student: Joseph N. Niederhauser**, Rindy C. Anderson. Song learning in Bachman's sparrow. Poster presentation by Niederhauser.

Student: Rachel Saless**, Rindy C. Anderson. Acoustic structure, singing behavior, and vocal performance trade-offs in the Northern Cardinal. Poster presentation by Saless.

Non-Refereed Publications, Presentations and Proceedings Since Appointment at FAU

Publications:

Casey A. Klofstad, Stephen Nowicki, & **Rindy C. Anderson** (2016) Politics and Pitch: How Voice Influences Our Choice of Leaders. *American Scientist* 104: 282-287. ***Our piece was the cover story.***

Creative Activities and Achievements

Presentations and Invited Seminars: (20 total, 11 invited seminars at academic institutions)

Queens College, City University of New York, November 4, 2020. Invited Virtual Talk. Title: "Bird songs and bird brains: the evolution of elaborate and reliable animal communication signals." Invited by Dr. David Lahti.

Simon Frasier University, Burnaby, Canada, October 28, 2020. Invited Virtual Talk. Title: "The evolution of elaborate and reliable animal communication signals." Invited by Brett Hodinka.

Phillip and Patricia Frost Museum of Science, Miami, Florida, May 20, 2020. Invited Virtual Talk: "Why Birds Sing, Why it Matters."

Nova Southeastern University, Department of Biological Sciences, February 21, 2020. Invited by Eben Gering. Title: "Studying Bachman's sparrow: the social functions of birdsong and elaborate vocal repertoires."

Florida State University, Department of Biological Science, February 3, 2020. Invited by Blake Jones. Title: "The social roles of bird song and the evolution of elaborate vocal repertoires."

Audubon Society of the Everglades, December 3, 2019. Title: "Fighting and Flirting: The Social Roles of Bird Song."

University of Florida, Department of Wildlife Ecology and Conservation, March 18, 2019. Invited by Professor Katie Sieving. Title: "A tale of two sparrows: song, signal reliability, and the evolution of animal communication."

Boca Raton Public Library, FAU Division of Research "Research in Action" Lecture Series, March 7, 2019. Invited by Karin Scarpinato. Title: "Studying animal behavior: why birds sing, why it matters."

Boca Raton Institute for Learning in Retirement, SPOTLIGHT: Science and Environment Lecture Series, February 25, 2019. Invited by Ata Sarajedini. Title: "Sounds like a winner: what animal voices teach us about human communication and politics."

New Mexico State University Biology Seminar Series, March 2018. Invited by Professor Timothy Wright. Title: "Function and reliability in the evolution of animal communication systems."

Boca Raton Institute for Learning in Retirement, November 2018. "Studying the evolution of animal communication: why birds sing and why it matters."

Fort Lauderdale Rotary, August 2017. Invited by FAU Associate Provost of Broward Campuses Anthony Abbate. Title: "Why birds sing, why it matters."

College of William and Mary Biology Seminar Series, April 2017. Invited by Professor John Swaddle. Title: "A tale of two sparrows: song function, reliability and the evolution of animal communication systems." Seminar was cancelled due to weather-related flight cancellation.

FAU Center for Molecular Biology and Biotechnology Seminar Series, March 2016. Invited by Professor Herbert Weissbach. Title: "Sounds like a winner: what birdsong, the human voice, and politics teach us about vocal communication systems."

Archbold Biological Station, March 2016. Invited by Dr. Reed Bowman. Title: A tale of two sparrows: song function, reliability and the evolution of animal communication systems

Keynote speaker at FAU Integrative Biology Ph.D. Program Retreat, February 2016. Invited by FAU IB graduate students. Title: "Sounds like a winner: what birdsong, the human voice, and politics teach us about vocal communication systems."

Broward College, November 2015. Invited by Michael Pullin, Associate Dean of Science, Broward College South Campus. Title: "From bird song to candidate speeches: why honesty matters in vocal communication."

University of Tennessee, Knoxville, October 2015. Invited by Professor Todd Freeberg. Title: "Signal function, reliability and the evolution of animal communication systems."

University of Memphis, April 2015. Invited by the University of Memphis Graduate students. Title: "Signal function, reliability and the evolution of animal communication systems."

University of Southern Mississippi, February 2015. Invited by Associate Professor Jodie Jawor. Title: "Signal function, reliability and the evolution of animal communication systems."

Prior to appointment at FAU: Virginia Tech (November 2013), Western Carolina University (October 2012), West Georgia University (October 2011), Florida International University (October 2011), North Carolina Museum of Natural Sciences (April 2011), Swarthmore University (February 2011), University of California at Riverside (October 2010), University of Maryland College Park (December 2009) and College of Charleston (December 2008)

Other Creative Activities and Achievements:

Invited Blog Pieces:
Casey A. Klofstad, **Rindy C. Anderson** & Stephen Nowicki (2016) Sounds Like a Winner! Research shows that voters prefer candidates with lower-pitched voices. Invited Blog, *Scientific American online*.
Rindy C. Anderson (2015) Do Candidates' Voices Convey More Than Their Words? Invited Blog, *Huffington Post online*.

Grants Since Appointment at FAU

External

FUNDED $92,199

1) Spring 2021 Sub-award from Miami-Dade College-FAU Summer Research Institute
Title: Summer Research Institute
Total award value: $27,900; $6,000 to my lab
PI for subcontract with MDC; I manage the program at FAU and mentor 2 MDC students in my lab with a budget of $6,000.
Co-PI, FAU Program Manager

2) American Ornithological Society
Title: Research Award
Total award value: $5,000 (direct costs only)
PI, no Co-PIs

3) Summer 2020 Sub-award from Miami-Dade College-FAU Summer Research Institute
Title: Summer Research Institute
Total award value: $32,900; $8,000 to my lab
PI for subcontract with MDC; I manage the program at FAU and mentor 2 MDC students in my lab with a budget of $8,000.
Co-PI, FAU Program Manager

4) Spring 2020 Sub-award from MDC-FAU Spring Research Institute
Total award value: $9,800, $6,000 to my lab
PI for subcontract with MDC; I manage the program at FAU and mentored 2 MDC students in my lab.
Co-PI, FAU Program Manager

5) 2019 Eastern Bird Banding Memorial Research Award
Title: Integrating studies of behavior, reproduction, and habitat quality to conserve Bachman's sparrow
Total Award Value: $750
Direct Costs/yr: $750, Indirect Costs/yr: $0
PI (no co-PIs)

6) 2017 Wildlife Acoustics, Inc. Product Grant
Title: Studying female song in Bachman's Sparrow
Agency: Wildlife Acoustics, Inc.
Dates of Award: June 2017 - June 2018
Total Award Value: $849
Direct Costs/yr: $849, Indirect Costs/yr: $0

7) 2016 Frank J. Schwartz Early Career Fellowship
Title: Are brood parasitic nestlings insensitive to their environment? A study of stress responsiveness in the brown-headed cowbird, *Molothrus ater*. Publication 37
Agency: University of Pittsburgh
Dates of Award: Feb – Oct 2016
Total Award Value: $10,000
Direct Costs/yr: $10,000, Indirect Costs/yr: $0
PI, Co-PI: Sara Bebus, FAU postdoctoral research associate

NOT FUNDED > $82,900

1) 2019 American Wildlife Conservation Foundation Grant
Title: Integrating studies of behavior, reproduction, and habitat quality to conserve Bachman's sparrow
Agency: The American Wildlife Conservation Foundation Grant
Total Award Value: $2,000

2) 2019 Morris Animal Foundation Research Grant – Wildlife Study
Title: Studying the impact of stress on the health and gut microbiome of a wild songbird
Foundation: Morris Animal Foundation
Total Award Value: $10,800.

3) 2019 The Pamela and Alexander F. Skutch Research Award for Studies in Avian Natural History
Title: Integrating studies of behavior, reproduction, and habitat quality to conserve Bachman's sparrow
Agency: The Association of Field Ornithologists
Total Award Value: $10,000

4) 2018 American Wildlife Conservation Foundation Grant
Title: Integrating studies of behavior, reproduction, and habitat quality to conserve Bachman's sparrow
Agency: The American Wildlife Conservation Foundation Grant
Total Award Value: $2,000

5) 2018 The Morris Animal Foundation Research Grant – Pilot Study
Agency: Morris Animal Foundation
Title: Stress, Smarts, and Symbiosis: evaluating the potential of the gut microbiome to reduce stress and improve cognition in birds.
Total Award Value: $10,800.

6) 2017 Division of Environmental Biology preliminary proposal: How habitat quality, physiological condition, and social behavior interact to affect juvenile survival and population viability in a songbird
Agency: National Science Foundation
Total Award Value: pre-proposal, no budget
Duration of Award: 3 yrs

7) 2017 Integrative Organismal Systems preliminary proposal: Collaborative Research Co-PI Rosvall: How stress generates adult plasticity in decision-making
Agency: National Science Foundation
Total Award Value: none - pre-proposal, no budget
Your role: PI, External Co-PI: Kimberly Rosvall, Assistant Professor of Biology, Indiana University

8) 2017 Integrative Organismal Systems preliminary proposal: The evo-devo of developmental stress: an experimental approach to understanding the evolution of brood parasitism
Agency: National Science Foundation
Total Award Value: pre-proposal, no budget
PI, External Co-PI: Sara Bebus, FAU postdoctoral research associate

9) 2017 Brevard Zoo Conservation Fund proposal: Behavioral syndromes and the conservation of an imperiled songbird, the Bachman's Sparrow
Title Agency: Brevard Zoo
Total Award Value: $5,614
PI (no co-PIs)

10) 2017 National Geographic Society Standard Grant: Behavioral syndromes and the conservation of an imperiled songbird, the Bachman's Sparrow
Agency: National Geographic Society
Total Award Value: $13,910
Duration of Award: 1 yr
PI (no co-PIs)

11) 2017 Eppley Foundation Research Grant: Behavioral syndromes and the conservation of an imperiled songbird, the Bachman's Sparrow
Agency: The Eppley Foundation for Research
Total Award Value: $13,910
PI (no co-PIs)

12) 2017 Curtis and Edith Munson Foundation Research Grant: Behavioral syndromes and the conservation of an imperiled songbird, the Bachman's Sparrow
Agency: The Curtis and Edith Munson Foundation
Total Award Value: $13, 910
PI (no co-PIs)

13) 2016 Integrative Organismal Systems preliminary proposal: Collaborative Research: How stress modulates the integration of cognition and mate choice.
Agency: National Science Foundation
Total Award Value: none – pre-proposal
PI, External Co-PI: Kimberly Rosvall, Assistant Professor, Biology, Indiana Univ.

14) 2016 Whitehall Foundation Pre-proposal: Glucocorticoid mechanisms linking cognition and mate choice.
Agency: Whitehall Foundation
Total Award Value: none – pre-proposal
PI (no co-PIs)

Internal

FUNDED $79,969

1) FAU OURI grant: Ennis, Al-Hraki, Poveda
Dates of Award: Jan - May 2021
Total Award Value: $1,200
PI and Faculty Mentor

2) FAU OURI grant: Whu
Dates of Award: May – July 2020
Total Award Value: $600
PI and Faculty Mentor

3) FAU OURI Team Grant: Gonzales, Reynolds, Zamudio
Dates of Award: Dec 2019 – August 2020
Total Award Value: $1,200
PI and Faculty Mentor

4) FAU OURI SURF Fellowship to Wilner Fresin
Dates of Award: May 2019 – August 2019
PI and Faculty Mentor
Total Award Value: $4,000
PI and Faculty Mentor

5) FAU OURI Team Grant: Roldan & Hunt
Dates of Award: May 2019 – Dec 2019
Total Award Value: $1,200
PI and Faculty Mentor

6) FAU OURI Team Grant: Fresin & Cannataro
Dates of Award: May 2019 – Dec 2019
Total Award Value: $1,200
PI and Faculty Mentor

7) 2018 FAU CESCOS Seed Grant: Testing models of social behavior and population dynamics in a territorial bird. *Two manuscripts under review: Niederhauser et al. at Behavior, Noonburg and Anderson at Ecology*
Total Award Value: $16,675
Duration of Award: 1 yr
PI, Co-PI: Erik Noonburg, FAU Biological Sciences

8) 2018 OURI Grant: Cerbone
Dates of Award: May 2018– Dec 2018
Total Award Value: $600
PI and Faculty Mentor

9) 2017 Technology Fee Grant: FAU Bioacoustics Hub: Equipment to Enhance Technology-driven Education and Research Training in the Biological Sciences
Duration of Award: 1 yr
Total Award Value: $18,094
PI

10) 2017 Brain Institute Pilot Grant: Glucocorticoid mechanisms linking cognition and mate choice
Duration of Award: 1 yr
Total Award Value: $20,000
PI

11) 2017 OURI Grant: Blakely
Dates of Award: Dec 2017- May 2018
Total Award Value: $600
PI and Faculty Mentor

12) 2017 OURI Grant: Hearne
Dates of Award: Dec 2017- May 2018
Total Award Value: $600
PI and Faculty Mentor

13) 2016 OURI Grant: Applebaum
Dates of Award: Dec 2016- May 2017
Total Award Value: $600
PI and Faculty Mentor

14) 2016 FAU OURI Summer Undergraduate Research Fellowship, Publication 33
Awarded to Mentor Anderson, student Sabah Ali
Total Award value: $4,000
Duration of Award: Summer 2016
PI and Faculty Mentor

15) 2015 FAU OURI Team Grant: Ali and Montero
Dates of Award: Dec 2015– May 2016
Total Award Value: $1,200
PI and Faculty Mentor

16) 2015 OURI Grant: Ali, Publication 33
Dates of Award: May – Dec 2015
Total Award Value: $600
PI and Faculty Mentor

17) 2015 Broward Undergraduate Research Award, Publication 33
Awarded to student Sabah Ali and Faculty Mentor Anderson
Duration of Award: Nov 2015 – April 2016
Total Award Value: $1,000
PI and Faculty Mentor

18) 2015 OURI Grant: Koukoulidis
Dates of Award: Dec - May 2015
Total Award Value: $600
PI and Faculty Mentor

19) 2015-2016 Faculty Research Mentoring Award, mentor Professor Dale Gawlik. Publication 31
Total Award Value: $6,000
Duration of Award: 1 yr
PI, Dale Gawlik was Faculty Mentor

Funding prior to appointment at FAU:
Duke University Preparing Future Faculty Fellowship, 2007-2008 (workshops and local travel provided)
NSF ADVANCE awards to attend Faculty Development workshops, $300 in 2007, $700 in 2010
University of Pittsburgh G. Murray McKinley Research Grant, $549 in 2007, $567 in 2008
Duke University Sigma Xi Postdoctoral Travel Award, April 2007, total award $1,200
NSF Doctoral Dissertation Improvement Grant, 2005-2007, total award $6,397
Animal Behaviour Society Student Research Grant, March 2004, total award $2,000

Courses Taught at FAU

1) Principles of Behavioral Ecology (3 cr). I developed this new course in 2015 as a flipped classroom, team-based course. Cross-listed with graduate and undergraduate students. I taught the course for three semesters as a Special Topics course and then converted it to regular course added to the catalog for the spring 2019 semester. I teach this course in the spring semesters (S2015, S2016, S2017, S2018, S2019, S2020, S2021). In S2020 I taught the course from Davie with video-conferenced sections to Boca and Harbor Branch to accommodate graduate students.

2) Comparative Animal Behavior (3 cr). I teach this lecture course in the fall semesters (F2015, F2017, F2018, F2019) and summer full term (S2020). Enrollment 200 - 225.

3) Seminar in Animal Behavior and Cognition (1 cr). I developed this Special Topics course in 2016 as a seminar cross-listed for both undergraduate and graduate students. I have taught this course once in fall 2016, and will offer it occasionally during spring and summer semesters.

4) Directed Independent Research course Songbird Behavior (1-3 cr), 44 students to date. Undergraduate students work with myself and my graduate students on projects in both the lab and the field related to songbird social behavior, vocal communication systems, bioacoustics, sexual selection, and microbiomes.

Supervision of Postdoctoral Researchers
March - October 2016 Dr. Sara Bebus, supported as a co-PI on a University of Pittsburgh Frank J. Schwartz Early Career Fellowship to PI Anderson, project title: "Are brood parasitic nestlings insensitive to their environment? A preliminary study of stress responsiveness in the brown-headed cowbird." The project resulted in an NSF pre-proposal submitted January 2017, and Publication 37.

Supervision of Graduate Students (28 total)
Major Advisor (6): graduated (3)

Current Doctoral students, FAU Integrative Biology Program (3)
Morgan Slevin, IB-N (Neurosci) Aug 2018 – present
Heather Wolverton IB-ES (Env. Sci.) began Jan 2020
Hans Gonzembach, IB-ES (Env. Sci.) begins Aug 2021
Current Master's Thesis students, FAU Biology Program (1)
Charles Daria, Biology MS, Aug 2019 - present
Incoming Master's Thesis students
William Abbott, Env. Sci. MS, beings Aug 2021

Graduated Doctoral students, FAU Integrative Biology Program (1)
Joseph Niederhauser, IB-ES (Env Sci) 2015 - graduated July 2020
Graduated Master's Thesis students, FAU Biology Program
Paula Ziadi, 2017 – 2019 graduated July 2019
Graduated Non-Thesis Masters student, FAU Biology Program
Rachel Saless, FAU Biology Master of Science Non-Thesis Program 2015 – graduated Dec 2018

Committee Member (21): graduated (18)

FAU Integrative Biology Doctoral Program
Cody Mott, 2019-present
David Essian, 2016-present
Beth Brady, graduated Aug 2020
Betsy Evans, graduated Aug 2020

FAU Biology Master's Thesis Program
Rachel Larson, 2019-present
Ivanna Serra, graduated Aug 2020
Jacquelyn Evans, graduated Aug 2020
Angela Field, graduated spring 2020

Supervision of Graduate Students cont'd

Charlene Korchia, graduated spring 2020
Jamie Fraham, graduated summer 2019
Erin Binkley, graduated fall 2018
Meagan Gary, graduated fall 2016
FAU Environmental Science Master's Thesis Program
Ashley Jackson, graduated summer 2018
Jenna May, graduated summer 2018
Camille Herteaux, graduated spring 2018
FAU Biology Non-thesis Master's Program
Walker Nambu, (Comp. Examiner) graduated spring 2019
Lauren Fremont, (Comp. Examiner) graduated fall 2018
Ryan Bruellman, (Comp. Examiner), graduated fall 2017
Joseph Prio (Comp. Examiner), also served as a Committee Member when student was in the M.S. Thesis Program. Graduated fall 2016.
Amanda McIntosh, graduated fall 2016

External graduate committees
Luis Vargas, University of Miami Biology PhD Program (Ext. Committee Member) graduated fall 2017

Supervision of Undergraduate Students

44 DIR students, 18 FAU Office of Undergraduate Research and Inquiry Grant Awardees, 24 volunteers
*****indicates presenter at national/regional conference, **[A]**indicates authorship on a publication, **[H]**indicates Biology Honors Program

2017 Undergraduate Researcher of the Year

Sabah Ali[*A] was awarded the distinction of Undergraduate Researcher of the Year for the College of Science. Under my mentorship Sabah also won a *SURF Fellowship* (2016), a *Broward Undergraduate Research Grant* (2016), both individual and team *OURI Grants*, and completed an *Honor's Thesis* (Song and aggressive signaling in Bachman's sparrow). He is the first author on Publication 33.

Directed Independent Study/Research (44 students)

2021: Leena Al-Hraki, Luisana Munoz, Kristen Palmer, Elisset Poveda[H], Austin Stratt, Hannah Wahba, Emily Whu[H]
2020: Emily Argueta, Marisa Betancourt, Isabella Dixon, Vanessa Durand, Carson Ennis, Adriana Gonzales[H], Christian Hunt, Thu Le, Jeffrey Miranda, Nicole Nalty, Laura Roldan[H], Angelina Smith, Emily Whu, Maria Zamudio
2019: Gillian Cannataro[H], Vanessa Durand, Sofia Feliciano, Wilner Fresin, Adriana Gonzales, Christian Hunt, Emily McAdams, Nicole Nalty, Andressa Reiss[H], Laura Roldan
2018: Brin Cerbone*, Jenna Johnson, Rohan Palkar
2017: Jennifer Applebaum, Ryan Bruellman, Benjamin Blakely, Brian Fedak, Michelle Giambrone, Haley Grosch, Willow Hearne, , Marcel Lopez, Jasmine Macedo, Magd Naguib, Delia Rodriguez, Jazz Whittaker
2016: Sabah Ali[*AH], David Lipszyc, Caitlyn Monterro, Luke Otfinowski, Delicia Pop

FAU Office of Undergraduate Research and Inquiry Grant Awardees (18 students, 15 awards)

2021: Carson Ennis, Leena Al-Hraki, Elisset Poveda (team grant)
2020: Emily Whu (individual grant)
2019: Adriana Gonzales, Korbin Reynolds, Maria Zamudio (team grant)
Summer 2019: Wilner Fresin SURF Fellowship
2018: Wilner Fresin NSF LEARN Award, Brin Ceborne (individual grant), Laura Roldan and Christian Hunt (team grant); Wilner Fresin and Gillian Canatarro (team grant)
2017: Benjamin Blakely (individual grant), Willow Hearne (individual grant)
Summer 2016: Sabah Ali SURF Fellowship
2016: Jennifer Applebaum (individual grant)
2015: Sabah Ali[*A] and Caitlyn Monterro (team grant); Sabah Ali (individual grant); Nikki Koukoulidis 2015 (individual grant)

Miami-Dade College – FAU STEM Research Partnership (6 students)
2021: D'Arsey Laguerre, Ernesto Perez
2020: Tetewah Tetteh, Herlancia Lafrance, Alana Acevedo, Kianna Bailey

Student volunteers not included above (24)
2020: Jennifer Charo, D'Andre Nicholson, Malia Simpson, Rebecca Wahba
2019: Safiyyah Mir, Korbin Reynolds, Nicole Rita, Amaris Sukhu, Gina Valo
2018: Bradley Beer, Gillian Herbert, Anha Islam, Mathub Kalantari, Alyssa Pearson, Kyle Schwarz, Luis Torres
2017: Carolyn Johnson, Chris Carstens, Michelle Giambrone, Kristina Jones, Allesandra Lezcano,
2016: Zara Mansoor, Daniel Pertwee, Heather Gilchrist

Supervision of High School Students (9)
Emily Whu (2020 – present) FAUHS dual-enrolled at FAU
Angelina Smith (2019 – present) FAUHS dual-enrolled at FAU
Emily Argueta (2019 – present) FAUHS dual-enrolled at FAU
Alina Rizvi (2018 – 2019) FAUHS dual-enrolled at FAU
Pavan Gudoor (2018) American Heritage High School
Willow Hearne (2017-2018) FAUHS dual-enrolled at FAU, OURI awardee
Taylor Knoll (2017-2018) Boca Raton Community High School
Arman Alexis (2016-2017) FAUHS student
Sabah Ali (2015-2017) FAUHS dual-enrolled at FAU, authored publication 33, won four FAU grants and fellowships (>$7,500), and named 2017 College of Science Researcher of the Year

Service and Professional Development

Service to the Institution

Department/School service:

- Biology Chair Search Committee 2019-2020
- Honors in Biological Sciences-Research Steering Committee Member 2018
- Integrative Biology Admissions Committee, IB-NS faculty rep 2018-present
- Judge for Environmental Science Symposium, 2017
- Personnel Committee Member 2016-present
- Keynote speaker at FAU Integrative Biology Ph.D. Program Retreat, 2016
- Guest lectures (6) for faculty in Biological Sciences (2016-2021)
- Environmental Science Admissions Committee Member 2015-present

Service to the College/University:

- Brain Institute Internal Advisory Board, College of Science representative August 2020-present
- Comparative Medicine Advisory Committee Member 2019-present
- *Ad hoc* Neuroscience and Behavior Advisory Committee Member 2019-present
- Graduate Training in Neuroscience Program Steering Committee 2017-present
- Member of the FAU Brain Institute 2017 - present
- Host Neuroscience Seminar speaker, Dr. Luke Remage-Healy November 2019
- Host, Neuroscience Seminar speaker, Dr. Ofer Tchernichovski September 2017
- Judge, OURI Spring Symposium 2015-present
- Judge, FAU Research Day, 2015-present
- Reviewer, OURI Student Research Grant proposals, SURF Fellowship proposals, 2018
- Invited seminar for FAU Center for Molecular Biology and Biotechnology Seminar Series, 2016
- Co-founder (with Marianne Porter, Kate Detwiler), FAU Faculty Writing Group, 2016-present

Service to the Discipline/Profession

- Associate Editor, *Behaviour* (International journal) January 2018-present. I handle 6-8 manuscripts per year.
- Mentoring Program Coordinator, Society for Integrative and Comparative Biology, Division of Animal Behavior Executive Committee, 2019-present
- Animal Behavior Society, Mentoring Program participant, 2019-present
- Host and co-organizer, Florida Ornithological Society Fall Meeting, FAU Davie, Nov 2-3, 2018

- Membership in Scientific Societies: Animal Behaviour Society (International), Society for Integrative and Comparative Biology (National), Association for Field Ornithology (National), American Ornithological Society (National), Florida Ornithological Society (Regional), Florida Chapter of the Wildlife Society (Regional)
- Reviewer for journals: 56 reviews since appointment at FAU: Animal Behaviour (20 reviews), Avian Research (1), Behaviour (11), Behavioral Ecology (1), Behavioral Ecology and Sociobiology (2), Behavioral Processes (3), Biology Letters (1), Condor (1), Ethology (2), Evolution (1) Hormones and Behavior (2), Integrative and Comparative Biology (1), Scientific Reports (1)
- Reviewer for National Science Foundation Proposals: NSF ad hoc reviewer, 2014 (1 review), 2015 (1 review), 2016 (1 review), 2017 (1 review); NSF Panelist, full proposal review panel, 2014
- Reviewer for Scientific Society Proposals: Animal Behavior Graduate Student Grants (3 grants 2016, 3 grants 2017, 3 grants 2018); Society for the Study of Comparative and Integrative Biology (4 grants 2016)

Service to the Community/Public, Science Outreach, Media

- Frost Science Museum Virtual Lecture, May 20, 2020. Title: “Why birds sing, why it matters.”
- Science Olympiad February 2020, designed and administered the Ornithology event
- Audubon Society of the Everglades, December 3, 2019. Title: “Fighting and Flirting: The Social Roles of Bird Song.”
- Boca Raton Public Library, FAU “Research in Action” Lecture Series, March 7, 2019. Title: “Studying animal behavior: why birds sing, why it matters.”
- Boca Raton Institute for Learning in Retirement: Science and Environment Lecture Series, February 25, 2019. Title: “Sounds like a winner: what animal voices teach us about human communication and politics.”
- Frost Science Museum, Earth Day April 2019, presented “forager scramble!” game
- NPR WLRN radio and web: A Sparrow's Songs: College Students in Broward Show Off Their Research Projects At FAU Symposium, November 2019 https://www.wlrn.org/post/sparrows-songs-college-students-broward-show-their-research-projects-fau-symposium#stream/0
- NPR WRN web and Hidden Brain podcast feature story of voice research: Sounds Like A Winner: What Voices Have To Do With Politics, November 2018: https://www.npr.org/2018/11/05/664465019/sounds-like-a-winner-what-voices-have-to-do-with-politics
- Science Daily web feature story of voice research, March 2018: https://www.sciencedaily.com/releases/2018/03/180314092354.htm
- Partnership with STEM Coordinator Sean Williams at Somerset Academy Miramar to bring science to the classroom. Delivered guest lectures (“What does a scientist do?”) and developed hands-on class activities (“The amazing word of Bioacoustics!”) for 6-8th graders, May 2018.
- Boca Raton Institute for Learning in Retirement, November 2018. “Studying the evolution of animal communication: why birds sing and why it matters.”
- Museum of Discovery and Science, volunteer science docent, one weekend each month, 2018
- Invited seminar for the Fort Lauderdale Rotary Club, Aug 2017
- Lecture to the Jupiter Lifelong Learning Society, Nov 2016
- New York Times web feature of voice research, January 2016: https://www.nytimes.com/2016/01/26/opinion/campaign-stops/what-voters-want.html Invited seminar for Archbold Biological Station, March 2016
- MSNBC web feature of voice research: Five ways to train your voice to sound powerful, March 2015: http://www.msnbc.com/msnbc/five-ways-train-your-voice-sound-powerful

Professional Development

- FAU Faculty Research Mentoring Program Awardee, 2015-2016

- Preparing Future Faculty Fellowship Program, Duke University, 2007-2008
- NSF ADVANCE Faculty Development Workshops: Negotiating the Ideal Faculty Position (2007), Junior Faculty Development (2010), Rice University
- Duke Professional Development Workshop: Effective teaching in large enrollment courses, 2011

Gizelle Anzures

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Florida Atlantic University
Department of Psychology
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Personal Address:
2044 Alta Meadows Ln. Unit 1805
Delray Beach, FL 33444
Phone: (561) 372-2313
Cell: (754) 215-6520

ACADEMIC POSITIONS:

Assistant Professor 2017-present
Florida Atlantic University

Postdoctoral Scholar 2014-2016
Center for Human Development, University of California, San Diego

Postdoctoral Scholar 2011-2013
Centre for Brain and Cognitive Development, University of London

EDUCATION:

Ph.D. in Developmental Psychology 2007-2011
Human Development and Applied Psychology, University of Toronto

M.A. in Developmental Psychology 2006-2007
Human Development and Applied Psychology, University of Toronto

B.A. Honours in Psychology 2002-2006
Department of Psychology, Brock University

GRANTS, AWARDS & FELLOWSHIPS:

National Institute of Health Pathway to Independence Award (R00) Independent Principal Investigator	2017-2020	$745, 742 USD
National Institute of Health Pathway to Independence Award (K99) Postdoctoral Fellowship	2014-2016	$191, 142 USD
Canada-UK Millennium Research Awards Postdoctoral Fellowship	2011-2013	$10, 000 CND
Natural Sciences and Engineering Research Council of Canada Postdoctoral Fellowship	2011-2013	$80, 000 CND
Canadian Psychological Association Certificate of Academic Excellence Doctoral Dissertation	2012	N/A
Canadian Psychological Association Certificate of Academic Excellence Undergraduate Thesis	2006	N/A

PUBLICATIONS:

Refereed Publications:

Anzures, **G**., & Haist, F. (in preparation). Fusiform responding to own- and other-race faces in children and adults.

Anzures, **G**., Haist, F. (in preparation). The fusiform and beyond: Development of the functional neuroarchitecture of own- and other-race face categorization.

Refereed Publications continued:

Anzures, **G**., & Haist, F. (under review). Functional neuroarchitecture of own- and other-race face categorization.

Anzures, **G**., Mildort, M., Fennell, E., Bell, C., & Soethe E. (under review). Race and early face-sensitive ERPs in children and adults.

Anzures, **G**., Mildort, M. (in press). Do perceptual expertise and implicit racial bias predict early face-sensitive ERP responses? *Brain and Cognition*.

Bedford, R., Leno, V. C., Wright, N., Bluett-Duncan, M., Smith, T. J**., Anzures**, **G**., . . . Hill, J. (in press). Emotion recognition performance in children with callous unemotional traits is modulated by co-occurring autistic traits. *Journal of Clinical Child & Adolescent Psychology*.

Haist, F., & **Anzures**, **G**. (2017). Functional development of the brain's face-processing system. *Wiley Interdisciplinary Reviews: Cognitive Science*, *8*, e1423. doi: 10.1002/wcs.1423

Anzures, **G**., Goyet, L., Ganea, N., & Johnson, M. H. (2016). Enhanced ERPs to visual stimuli in unaffected male siblings of ASD children. *Child Neuropsychology*, *22*, 220-237 doi: 10.1080/09297049.2014.988609

Anzures, **G**., Kelly, D. J., Pascalis, O., Quinn, P. C., Slater, A. M., de Viviés, X., & Lee, K. (2014). Own- and other-race face identity recognition in children: The effects of pose and feature composition. *Developmental Psychology*, *50*, 469-481. doi: 10.1037/a0033166

Anzures, **G**., Quinn, P. C., Pascalis, O., Slater, A. M., & Lee, K. (2013). Development of own-race biases. *Visual Cognition*, *21*, 1165-1182. doi: 10.1080/13506285.2013.821428

Anzures, **G**., Quinn, P. C., Pascalis, O., Slater, A. M., Tanaka, J. W., & Lee, K. (2013). Developmental origins of the other-race effect. *Current Directions in Psychological Science*, *22*, 173-178. doi: 10.1177/0963721412474459

Liu, S., **Anzures**, **G**., Ge, L., Quinn, P. C., Pascalis, O., Slater, A. M., Tanaka, J. W., & Lee, K. (2013). Development of recognition of face parts from unfamiliar faces. *Infant and Child Development*, *22*, 165-179. doi: 10.1002/icd.1781

Xiao, W. S., Xiao, N. G., Quinn, P. C., **Anzures**, **G**., & Lee, K. (2013). Development of face scanning for own- and other-race faces in infancy. *International Journal of Behavioral Development*, *37*, 100-105. doi: 10.1177/0165025412467584

Anzures, **G**., Wheeler, A., Quinn, P. C., Pascalis, O., Slater, A. M., Heron-Delaney, M., Tanaka, J., & Lee, K. (2012). Brief daily exposure to Asian females reverses perceptual narrowing for Asian faces in Caucasian infants. *Journal of Experimental Child Psychology*, *112*(4), 484-495. doi: 10.1016/j.jecp.2012.04.005

Robbins, R. A., Maurer, D., Hatry, A., **Anzures**, **G**., & Mondloch, C. J. (2012). Effects of normal and abnormal visual experience on the development of opposing aftereffects for upright and inverted faces. *Developmental Science*, *15*(2), 194-203. doi: 10.1111/j.1467-7687.2011.01116.x

Anzures, **G**., Ge, L., Wang, Z., Itakura, S., & Lee, K. (2011). An own-age bias in adults' facial age judgments. *Psychologia*, *54*, 166-174. doi: 10.1167/10.7.624

Pascalis, O., de Martin de Viviés, X., **Anzures**, **G**., Quinn, P. C., Slater, A. M., Tanaka, J. W., & Lee, K. (2011). Development of face processing. *Wiley Interdisciplinary Reviews: Cognitive Science*, *2*(6), 666-675. doi: 10.1002/wcs.146

Anzures, **G**., Pascalis, O., Quinn, P. C., Slater, A. M., & Lee, K. (2011). Minimizing skin color differences does not eliminate the own-race recognition advantage in infants. *Infancy*, *16*(6), 640-654. doi: 10.1111/j.1532-7078.2010.00066.x

Heron-Delaney, M. **Anzures**, **G**., Herbert, J. S., Quinn, P. C., Slater, A. M., Tanaka, J. W., Lee, K., & Pascalis, O. (2011). Perceptual training prevents the emergence of the other race effect during infancy. *PLoS ONE*, *6*(5), e19858. doi: 10.1371/journal.pone.0019858

Refereed Publications continued:

Wheeler, A., **Anzures**, **G**., Quinn, P. C., Pascalis, O., Omrin, D. S., & Lee, K. (2011). Caucasian infants scan own- and other-race faces differently. *PLoS ONE*, *6*(4), e18621. doi: 10.1371/journal.pone.0018621

Quinn, P. C., **Anzures**, **G**., Izard, C. E., Lee, K., Pascalis, O., Slater, A. M., & Tanaka, J. W. (2011). Looking across domains to understand infant representation of emotion. *Emotion Review*, *3*(1), 197-206. doi: 10.1177/1754073910387941

Anzures, **G**., Ge, L., Wang, Z., Itakura, S., & Lee, K. (2010). Culture shapes efficiency of facial age judgments. *PLoS ONE*, *5*(7), e11679. doi: 10.1371/journal.pone.0011679

Anzures, **G**., Quinn, P. C., Pascalis, O., Slater, A. M., & Lee, K. (2010). Categorization, categorical perception, and asymmetry in infant's representation of face race. *Developmental Science*, *13*(4), 553-564. doi: 10.1111/j.1467-7687.2009.00900.x

Anzures, **G**., Mondloch, C. J., & Lackner, C. (2009). Face adaptation and attractiveness aftereffects in 8-year-olds and adults. *Child Development*, *80*(1), 178-191. doi: 10.1111/j.1467-8624.2008.01253.x

Ge, L., **Anzures**, **G**., Wang, Z., Kelly, D. J., Pascalis, O., Quinn, P. C., Slater, A. M., Yang, Z., & Lee, K. (2008). An inner face advantage in children's recognition of familiar faces. *Journal of Experimental Child Psychology*, *101*(2), 124-136. doi: 10.1016/j.jecp.2008.05.006

Book Chapters & Edited Books:

Anzures, **G**., Quinn, P. C., Pascalis, O., Slater, A., & Lee, K. (2019). Development of face processing ability in childhood. In Zelazo, P. D. (Ed.), *The Oxford handbook of developmental psychology, Volume 1: Body and Mind*. New York: Oxford University Press.

Lee, K., **Anzures**, **G**., & Freire, A. (2017). Cognitive development in adolescence. In A. Slater & G. Bremner (Eds.), *An introduction to developmental psychology*, *3rd edition*. Malden, MA: Blackwell Publishing.

Quinn, P. C., **Anzures**, **G**., Lee, K., Pascalis, O., Slater, A. M., & Tanaka, J. W. (2013). On the developmental origins of differential responding to social category information. In M. R. Banaji & S. A. Gelman (Eds.), *Navigating the social world: What infants, children, and other species can teach us* (pp. 286-291). New York: Oxford University Press. doi: 10.1093/acprof:oso/9780199890712.003.0052

Lee, K., **Anzures**, **G**., & Baluja, A.F. (2011). Cognitive development in adolescence. In A. Slater & G. Bremner (Eds.), *An introduction to developmental psychology, 2nd edition* (pp. 359-387). Hoboken, NJ: John Wiley & Sons, Inc.

Lee, K., **Anzures**, **G**., Quinn, P. C., Pascalis, O., & Slater, A. M. (2011). Development of face processing expertise. In G. Rhodes, A. Calder, M. H. Johnson, & J. V. Haxby (Eds.), *Handbook of face perception* (pp. 753-778). Oxford, UK: Blackwell Publishing. doi: 10.1093/oxfordhb/9780199559053.013.0039

Slater, A., Lewis, M., **Anzures**, **G**., & Lee, K. (Eds.). (2011). *Introduction to infant development*. (Canadian Edition). Toronto: Oxford University Press.

CONFERENCE PRESENTATIONS:

Anzures, **G**., & Mildort, M. (May, 2019). *Race categories and implicit biases in children and adults.* Poster presented at the annual meeting of the Vision Sciences Society, St. Pete Beach, Florida.

Fennell, E., Mildort, M., Soethe, E., & **Anzures, G.** (May, 2019). *ERP responses to race and implicit bias in children and adults*. Poster presented at the annual meeting of the Vision Sciences Society, St. Pete Beach, Florida.

CONFERENCE PRESENTATIONS continued:

Soethe, E., Mildort, M., Fennell, E., & **Anzures, G.** (May, 2019). *Visual scanning of faces, race contact, and implicit racial bias*. Poster presented at the annual meeting of the Vision Sciences Society, St. Pete Beach, Florida.

Trulson, H., Mildort, M., Earles, J., & **Anzures, G.** (May, 2019). *Event-related potentials, race categorization, and implicit racial biases in adults and children*. Poster presented at the annual meeting of the Vision Sciences Society, St. Pete Beach, Florida.

Anzures, **G**., Mondloch, C. J., & Haist, F. (June, 2017). *The fusiform and beyond: Responding to face race in children and adults*. Poster presented at the annual meeting of the Organization for Human Brain Mapping, Vancouver, British Columbia.

Anzures, **G**., Mondloch, C. J., & Haist, F. (November, 2016). *The functional brain architecture of own- and other-race face processing in children and adults*. Poster presented at the annual meeting of the Society for Neuroscience, San Diego, California.

Anzures, **G**., & Haist, F. (May, 2016). *Scanning faces during encoding and retrieval: Age and race effects*. Poster presented at the annual meeting of the Vision Sciences Society, St. Pete Beach, Florida.

Anzures, **G**. (January, 2014). *Development of an own-race face recognition advantage*. Papers presented at The 9th Inuyama Comparative Social Cognition Symposium, Nagoya, Japan.

Anzures, **G**., Goyet, L., Ganea, N., & Johnson, M. H. (October, 2013). *Face recognition and ERPs in non-ASD children with genetic susceptibility to ASD*. Paper presented at the annual meeting of the British Autism Study of Infant Siblings (BASIS), London, UK.

Xiao, N., Wheeler, A., **Anzures**, **G**., Bartlett, M., Quinn, P. C., Pascalis, O., Lee, K. (April, 2013). *The origin of the left side face scanning bias in early infancy*. Poster presented at the biennial meeting of the Society for Research in Child Development, Seattle, Washington.

Anzures, **G**., Wheeler, A., Quinn, P. C., Pascalis, O., Slater, A. M., & Lee, K. (April, 2011). *Enhancing infants' other-race face recognition*. Poster presented at the biennial meeting of the Society for Research in Child Development, Montreal, Quebec.

Anzures, **G**., Ge, L., Wang, Z., Itakura, S., Lee, K. (May, 2010). *An own-age bias in adults' facial age judgments*. Poster presented at the annual meeting of the Vision Sciences Society, Naples, Florida.

Wheeler, A., **Anzures**, **G**., Quinn, P. C., Pascalis, O., Slater, A., & Lee, K. (May, 2010). *Differences in own- and other-race face scanning in infants*. Poster presented at the annual meeting of the Vision Sciences Society, Naples, Florida.

Anzures, **G**., Kelly, D. J., Quinn, P. C., Pascalis, O., Slater, A., & Lee, K. (May, 2010). *The other-race effect in children: Face recognition or picture recognition?* Poster presented at Development 2010: A Canadian Conference on Developmental Psychology, Ottawa, Ontario.

Lee, K., **Anzures**, **G**., Wheeler, A., Quinn, P. C., Pascalis, O., Slater, A. (March, 2010). *Can the other-race face recognition effect be ameliorated with other-race face experience?* Paper presented in K. Lee & D. Mareschal Chairs. "The role of differential experience on perceptual and cognitive development." Symposium at the biennial meeting of the International Conference on Infant Studies, Baltimore, Maryland.

Anzures, **G**., Pascalis, O., Quinn, P. C., Slater, A., & Lee, K. (March, 2010). *The role of race and color in infants' recognition of own- and other-race faces*. Paper presented in D. Maurer & D. J. Lewkowicz Chairs. "The effects of early experience on the processing of faces and persons." Symposium at the biennial meeting of the International Conference on Infant Studies, Baltimore, Maryland.

Anzures, **G**., Ge., L., Wang, Z., Itakura, S., & Lee, K. (May, 2009). *Differential sociocultural experience moderates latency of facial age judgments*. Poster presented at the annual meeting of the Vision Sciences Society, Naples, Florida.

CONFERENCE PRESENTATIONS continued:

Anzures, **G**., Quinn, P. C., Pascalis, O., Slater, A. M., & Lee, K. (April, 2009). *Racial categorization of faces in infancy: A new other-race effect*. Paper presented in L. Scott Chair. "Behavioral and neural processes underlying infant categorization and individuation abilities." Symposium at the biennial meeting of the Society for Research in Child Development, Denver, Colorado.

Anzures, G., Ge, L., Liu, S., & Lee, K. (April, 2009). *A re-evaluation of the encoding switch hypothesis in children's face processing*. Poster presented at the biennial meeting of the Society for Research in Child Development, Denver, Colorado.

Anzures, G., Ge, L., Wang, Z., Kelly, D. J., Pascalis, O., Quinn, P., et al. (May, 2008). *Face feature processing in children: What develops and what does not?* Poster presented at the annual meeting of the Vision Sciences Society, Naples, Florida.

Anzures, G., Liu, S., Ge, L., Quinn, P., Pascalis, O., Slater, A., et al. (March, 2008). *Racial categorization of human faces in 6- and 9-month-olds*. Poster presented at the biennial meeting of the International Conference on Infant Studies, Vancouver, British Columbia.

Anzures, **G**. & Mondloch, C. J. (March, 2007). *Face adaptation and attractiveness aftereffects: A novel method for children*. Poster presented at the biennial meeting of the Society for Research in Child Development, Boston, Massachusetts.

CONFERENCE DEVELOPMENT AND COORDINATION:

Meeting Title	***Date***	***Conference or University***
Postdoctoral Research Symposium	September 14, 2015	UC San Diego
Science Writing & Communication	March 21, 2015	Science, Technology, Engineering, and Math (STEM) Career Symposium, UC San Diego
Preconference: The Development of Face Processing	April 01, 2009	Society for Research in Child Development (SRCD), Denver, CO
Preconference: The Development of Face Processing	March 28, 2007	Society for Research in Child Development (SRCD), Boston, MA

TEACHING EXPERIENCE:

Instructor of Record:

Course Title	***Semester/Quarter***	***University***	***Department***
Infant Development (DEP 4115)	Fall 2019 Fall2017	Florida Atlantic U.	Psychology
Psychology of Human Development	Spring 2019 Spring 2017	Florida Atlantic U.	Psychology
Seminar in Development of Social Cognition (DEP 6931)	Fall 2018	Florida Atlantic U.	Psychology
Seminar in Cognitive Development (DEP 6067)	Spring 2018	Florida Atlantic U.	Psychology
Cognitive Development in Infancy	Fall 2016	UC San Diego	Psychology
Psychological Foundations of Learning and Development	Fall & Winter 2008-2009	OISE/University of Toronto	Human Development and Applied Psychology

Professional Development Courses on Teaching:

Course Title	*Date/Semester*	*University/Center*	*Course Director*
Teaching & Learning Workshops	Winter 2014	UC San Diego	Peter Newbury

Description: Interactive classes on learning outcomes, teaching alternatives to lecturing, and student and teacher assessments.

Psychological Foundations of Teacher Education: Effective Curriculum and Pedagogical Design	Fall & Winter 2008-2009	OISE/University of Toronto	Steven Katz

Description: Course on how to lecture and stimulate discussion, and how to develop a course outline, assignments, and grading scheme.

Invited Guest Lectures:

Course/Meeting Title	*Date*	*University*	*Topic*
Funding Fest: NIH K99/R00 & the NIH Grant Process	05/13/15	UC San Diego	Navigating the K99 Application Process
Neurological Development and Cognitive Change	02/11/15	UC San Diego	The Development of the Social Brain
Introduction to Psychology	11/23/10	Zhejiang Sci-Tech University	Role of Experience in Shaping Face Perception

Supervision of Students and Research Assistants:

M.A. Students	*Dates*
Eli Fennell	2017-present
Elizabeth Soethe	2017-present

Undergraduate Honors Thesis Students	*Dates*
Jessica Samuel	2018-2019
Hayleefay Trulson	2018-2019

Undergraduate Research Opportunity students (2nd, 3rd, or 4th year)	*Dates*
Leah Goodwin	2019
Emily Ludwig	2019
Muzen Abushamma	2019
Binjil Mupo	2019
Meredith Lee	2018
Farah Chahine	2018

Undergraduate Research Opportunity students (2nd, 3rd, or 4th year)	*Dates*
Haylee Trulson	2018
Jessica Samuel	2018
Tatevik Malisetyan	2018
Tayler Petrella	2018
Alexander Routhier	2017

Supervision of Students and Research Assistants continued:

Undergraduate Research Opportunity students (2nd, 3rd, or 4th year)	*Dates*
Gavin Davis-Ramos	2016
Michael Banki	2015
Eric Joglekar	2015
Shruti Kamath	2015
Kathleen Kanegawa	2015
Alina O'Tool	2015
Jordan Ezell	2012
Anissa Tebal	2009-2010
Sabrina Haque	2008-2009
Ruifan Zeng	2007-2008

Paid Research Assistants	*Dates*
Cassandra Bell	2019-present
Melissa Mildort	2017-2019
Emily Mackenzie	2011
Erica Ellis	2009-2010
Ruth Kim	2009-2010
Danielle Omrin	2008-2010
Matineh Sayeh	2008-2009
Ida Ratan	2008-2009
Carly McCreath	2008-2009
Merike Andre-Barrett	2007-2008

Voluntary Research Assistants	*Dates*
Emily Ahne	2019
Cassandra Bell	2018-2019
Stephanie Frais	2018
Natasa Ganea	2012-2013
Yueyan Zhang	2010
Huimin Shi	2010
Darko Odic	2008-2009
Andrea Tang	2008

DEPARTMENTAL COMMITTEES/SERVICE:

Committee	*Date of Service*
Undergraduate Committee (Member)	2018-present
Human Neuroscience Search Committee (Member)	2018-2019
Behavioral Neuroscience Search Committee (Member)	2018
Center for Complex Systems Graduate Admissions Committee (Chair)	2017-2018
Departmental Chair Search Committee (Member)	2017

COLLEGE OF SCIENCE/UNIVERSITY COMMITTEES/SERVICE:

Committee/Service	*Date of Service*
FAU Association for Women in Science (AWIS)	2018-2019
FAU College of Science Initiative to Stimulate Extramural Research	2018

Graduate and Professional Student Assoc. Research Day Faculty Judge, FAU	2017
Postdoctoral Dependent Care Travel Award Selection Committee, UCSD	2016
Chancellor's Advisory Committee on the Status of Women, UCSD	2015-2016
Child Care Oversight Committee, UCSD	2015-2016

PROFESSIONAL SOCIETY MEMBERSHIPS:

Society	***Date of Membership***
Organization for Human Brain Mapping	2016-2017
Society for Neuroscience	2016
Vision Sciences Society	2008-2010, 2015-2016 2018-2019
American Association for the Advancement of Science	2015
Cognitive Neuroscience Society	2014-2015
Society for Research in Child Development	2013
International Society on Infant Studies	2013
Association for Psychological Science	2011-2012

AD HOC REVIEWER:

Journal	***Date of Service***
Developmental Neuropsychology	2018-2020
Journal of Experimental Child Psychology	2009-2020
Vision Research	2019-2020
British Journal of Psychology	2019
Developmental Cognitive Neuroscience	2019
Infant Behavior and Development	2018-2019
NeuroImage: Clinical	2018-2019
Developmental Psychology	2014-2019
Visual Cognition	2012-2019
British Journal of Developmental Psychology	2018
Royal Society Open Access	2018
Child Development	2013-2018
Developmental Science	2011-2018
Journal of Experimental Psychology: Learning, Memory, and Cognition	2017
Psychological Bulletin	2016-2017
Cerebral Cortex	2013-2017
Infancy	2012-2017
Child Development Perspectives	2015
Applied Cognitive Psychology	2014
International Journal of Psychology	2014
Neuroscience and Biobehavioral Reviews	2014
PLoS ONE	2014
Journal of Cross-Cultural Psychology	2013-2014
International Journal of Behavioral Development	2010-2012

RAQUEL ASSIS

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APPOINTMENTS

Assistant Professor (tenure track) 8/2019 – Present
Department of Computer and Electrical Engineering and Computer Science, Florida Atlantic University

Faculty Fellow 8/2019 – Present
Institute for Human Health and Disease Intervention, Florida Atlantic University

Affiliated Faculty Member 4/2020 – Present
Department of Biological Sciences, Florida Atlantic University

Assistant Professor (tenure track) 1/2014 – 8/2019
Department of Biology, Pennsylvania State University

Affiliated Faculty Member 1/2014 – 8/2019
Center for Medical Genomics, Pennsylvania State University

Affiliated Faculty Member 7/2017 – 8/2019
Center for Computational Biology and Bioinformatics, Pennsylvania State University

NIH Postdoctoral Research Fellow 9/2011 – 12/2013
Department of Integrative Biology, University of California Berkeley

Visiting Scholar 11/2013
Department of Mathematics and Statistics, University of Canterbury

EDUCATION

Ph.D. in Bioinformatics, University of Michigan 2011

B.S. in Psychology and Zoology (double major), *summa cum laude*, University of Florida 2006

HONORS

Florida Atlantic University Woman Leader in STEM Award 2019

Ralph E. Powe Junior Faculty Enhancement Award Nomination (selected by University committee) 2015

NIH Ruth L. Kirschstein National Research Service Award Postdoctoral Fellowship (3 years support) 2012 – 2014

Visiting Scholar, Department of Mathematics and Statistics, University of Canterbury 2013

Ford Foundation Postdoctoral Fellowship Honorable Mention 2012

NIH National Research Service Award Postdoctoral Fellowship (declined due to change in institution) 2011

Rackham Merit Fellowship, University of Michigan (3 years support) 2006 – 2011

AAAS/Science Program for Excellence in Science Award 2008

NSF Graduate Research Fellowship Honorable Mention 2008

Ford Foundation Diversity Fellowship Honorable Mention 2008

Rackham Graduate School Travel Grant, University of Michigan ($850) 2010

Bioinformatics Program Travel Grant, University of Michigan ($2,000) 2010

Rackham Graduate School Travel Grant, University of Michigan ($850) 2009

Bioinformatics Program Travel Grant, University of Michigan ($1,000) 2009

Rackham Graduate School Travel Grant, University of Michigan ($600) 2009

Guidant Foundation Fellowship (1 year support) 2007 – 2008

Rackham Summer Institute Fellowship, University of Michigan (summer support) 2006

Two-Year Scholar, University of Florida (awarded to top graduating seniors) 2006

Charles Vincent and Heidi Cole McLaughlin Scholarship, University of Florida ($1,000) 2005

Florida Academic Scholars Award (4 years tuition and books for any Florida public university) 2003 – 2006

Presidential Scholarship, Florida Atlantic University (4 years tuition, books, and $6,000/year stipend) 2003 – 2004

FUNDED GRANTS

COECS/I-SENSE Joint Seed Funding Competition ($25,000) 7/2020 – 7/2021
Uncovering genomic footprints of recent demographic events in African Old World monkeys
Role: Principal Investigator (Co-PIs Michael DeGiorgio and Kate Detwiler)

National Science Foundation, DEB-2001059 (transfer of DEB-1555981; $92,656) 10/2019 – 4/2021
Interrogating the role of natural selection in the functional evolution of duplicate genes
Role: Principal Investigator (100%)

National Science Foundation, DEB-1555981 ($379,792) 4/2016 – 9/2019
Interrogating the role of natural selection in the functional evolution of duplicate genes
Role: Principal Investigator (100%)

Office of Science Engagement, Pennsylvania State University ($1,500) 11/2015 – 8/2016
Studying the functional evolution of duplicate genes in animals
Role: Principal Investigator (100%)

National Institutes of Health, F32 GM-100673-02 ($149,466) 7/2012 – 1/2014
Gene duplication in the evolution of novel phenotypes and human disease
Role: Principal Investigator (100%)

National Institutes of Health, F32 GM-100673-01 (declined due to change in institution) 7/2011
Gene duplication in the evolution of novel phenotypes and human disease
Role: Principal Investigator (100%)

PEER-REVIEWED JOURNAL ARTICLES († DENOTES CORRESPONDING AUTHOR, **BOLD** DENOTES GROUP MEMBER**)**

19. DeGiorgio M**†**, **Assis R†**. Learning retention mechanisms and evolutionary parameters of duplicate genes from their expression data. *Molecular Biology and Evolution* in press (2020).

18. **Jiang X**, **Assis R†**. Population-specific genetic and expression differentiation in Europeans. *Genome Biology and Evolution* 12: 358–369 (2020).

17. **Assis R†**. Out of the testis, into the ovary: biased outcomes of gene duplication and deletion in *Drosophila*. *Evolution* 73: 1850–1862 (2019).

16. **Jiang X**, **Assis R†**. Rapid functional divergence after small-scale duplication in grasses. *BMC Evolutionary Biology* 19: 97 (2019).

15. **Assis R†**. Lineage-specific expression divergence in grasses is associated with male reproduction, host-pathogen defense, and domestication. *Genome Biology and Evolution* 11: 207–219 (2018).

14. **Jiang X**, **Assis R†**. Natural selection drives rapid functional evolution of young *Drosophila* duplicate genes. *Molecular Biology and Evolution* 34: 3089–3098 (2017).

13. **Assis R†**. Transcriptional interference promotes rapid expression divergence of *Drosophila* nested genes. *Genome Biology and Evolution* 8: 3149–3158 (2016).

12. **Perry BR**, **Assis R†**. CDROM: Classification of Duplicate gene RetentiOn Mechanisms. *BMC Evolutionary Biology* 16: 82 (2016).

11. **Assis R†**, Bachtrog D. Rapid divergence and diversification of mammalian duplicate gene functions. *BMC Evolutionary Biology* 15: 138 (2015).

10. **Assis R†.** Strong epistatic selection on the RNA secondary structure of HIV. *PLoS Pathogens* 10: e1004363 (2014).

9. **Assis R†**. *Drosophila* duplicate genes evolve new functions on the fly. *Fly* 8 (2014).

8. **Assis R†**, Kondrashov AS. Conserved proteins are fragile. *Molecular Biology and Evolution* 31: 419–424 (2014).

7. **Assis R†**, Bachtrog D. Neofunctionalization of young duplicate genes in *Drosophila*. *Proceedings of the National Academy of Sciences of the United States of America* 110: 17409–17414 (2013).

6. **Assis R†**, Zhou Q, Bachtrog D. Sex-biased transcriptome evolution in *Drosophila*. *Genome Biology and Evolution* 4: 1189–1200 (2012).

5. **Assis R†**, Kondrashov AS. A strong deletion bias in nonallelic gene conversion. *PLoS Genetics* 8: e1002508 (2012).

4. **Assis R†**, Kondrashov AS. Nonallelic gene conversion is not GC-biased in *Drosophila* or primates. *Molecular Biology and Evolution* 29: 1291–1295 (2011).

3. Kondrashov AS, **Assis R.** Bridges: A tool for identifying local similarities in long sequences. *Bioinformatics* 26: 2055–2056 (2010).

2. **Assis R†**, Kondrashov AS. Rapid repetitive element-mediated expansion of piRNA clusters in mammalian evolution. *Proceedings of the National Academy of Sciences of the United States of America* 106: 7079–7082 (2009).
***Featured in GenomeWeb article**

1. **Assis R**, Kondrashov AS, Koonin EV, Kondrashov FA**.** Nested genes and increasing organizational complexity of metazoan genomes. *Trends in Genetics* 23: 475–478 (2008).

PUBLISHED OPEN SOURCE SOFTWARE

3. *CLOUD*: CLassification using Ornstein-Uhlenbeck of Duplicates (2020)
R program that implements DeGiorgio and Assis' (2020) multi-layer neural network for classifying retention mechanisms and predicting evolutionary parameters of duplicate genes from expression data in two species

   Available at assisgroup.fau.edu/software.html

2. *CDROM*: Classification of Duplicate gene RetentiOn Mechanisms (2016)
R program that implements Assis and Bachtrog's (2013) decision tree for classifying retention mechanisms of duplicate genes from expression data in two species

   Available at https://cran.r-project.org/web/packages/CDROM/

1. *Bridges* (2010)
C program that implements Assis and Kondrashov's (2010) heuristic search algorithm for identifying local similarities in long DNA sequences

   Available at http://github.com/rassis/bridges

INVITED TALKS

26. Implications of genomic rearrangements in adaptation and disease. *Department of Biomedical Informatics and Institute for Quantitative Theory and Methods, Emory University* (2019).
25. Implications of genomic rearrangements in adaptation and disease. *Department of Biology, Georgia State University* (2019).
24. Evolution of genomic rearrangements in animals and plants. *Herbold Computational Biology Program, Fred Hutchinson Cancer Research Center* (2019, cancelled due to emergency).
23. Evolution of genomic rearrangements in animals and plants. *Department of Genome Sciences, University of Washington* (2019, cancelled due to emergency).
22. Implications of genomic rearrangements in adaptation and disease. *Center for Medical Genomics, Pennsylvania State University* (2019).
21. Functional classification and analysis of genomic rearrangements. *Department of Computer and Electrical Engineering and Computer Science, Florida Atlantic University* (2019).
20. Implications of genomic rearrangements in adaptation and disease. *Department of Biological Sciences, Florida Atlantic University* (2019).
19. Evolution of genomic rearrangements in animals and plants. *Department of Biology, University of New Mexico* (2019).
18. Evolution of genomic rearrangements in animals and plants. *Center for Computational Molecular Biology, Brown University* (2019).
17. Evolution of genomic rearrangements in animals and plants. *Department of Biology, Temple University* (2019).
16. Evolution of genomic rearrangements. *Bioinformatics and Genomics Program, Pennsylvania State University* (2018).
15. Functional evolution of duplicate genes. *Department of Biological Sciences, Southern Illinois University* (2016).
14. Investigating the functional evolution of duplicate genes. *Stochastic Modeling and Computing Group, Pennsylvania State University* (2016).
13. Evolution of novel phenotypes. *Bioinformatics and Genomics Program, Pennsylvania State University* (2015).
12. Functional evolution of duplicate genes in *Drosophila* and mammals. *Bioinformatics and Genomics Retreat, Pennsylvania State University* (2014).
11. Functional evolution of duplicate genes in *Drosophila* and mammals. *Genomics Seminar, Pennsylvania State University* (2014).
10. Evolution of novel phenotypes by gene duplication. *Bioinformatics and Genomics Program, Pennsylvania State University* (2014).
9. Origin of genomic and phenotypic novelty by gene duplication. *Department of Biological Sciences, University of Alabama* (2013).
8. Origin of genomic and phenotypic novelty by gene duplication. *Department of Biology, Pennsylvania State University* (2013).
7. Origin of genomic and phenotypic novelty by gene duplication. *Department of Biology, University of Oregon* (2013).
6. Evolution of novel sequences by gene duplication. *Population Genetics Group, University of California Davis* (2011).
5. Evolution of novel sequences by gene duplication. *Center for Theoretical Evolutionary Genomics, University of California Berkeley* (2011).
4. Evolution of novel sequences by gene duplication. *Department of Biology, Stanford University* (2011).
3. Evolution of novel sequences by gene duplication. *Department of Human Genetics, University of Chicago* (2011).
2. A phylogenetic estimate of nonallelic gene conversion rate. *Life Sciences Institute Colloquium, University of Michigan* (2009).

1. Rapid repetitive element-mediated expansion of piRNA clusters in mammalian evolution. *Department of Ecology and Evolutionary Biology, University of Michigan* (2009).

CONTRIBUTED CONFERENCE TALKS (* DENOTES PRESENTING AUTHOR, **BOLD** DENOTES GROUP MEMBER**)**

11. **Jiang X*, Assis R**. Shared and population-specific sequence and expression divergence in Europeans. *Evolution Conference*. Providence, RI (2019).
10. **Jiang X*, Assis R**. Natural selection drives rapid neofunctionalization of *Drosophila* duplicate genes. *Molecular, Cellular, and Integrative Biosciences Retreat*. Boalsburg, PA (2018).
9. **Assis R***. Expression evolution of *Drosophila* nested genes. *Society for Molecular Biology and Evolution Conference*. Austin, TX (2017).
8. **Jiang X***, **Assis R**. Natural selection drives rapid neofunctionalization of *Drosophila* duplicate genes. *Society for Molecular Biology and Evolution Conference*. Austin, TX (2017).
7. **Assis R***. Expression evolution of *Drosophila* nested genes. *New York Area Population Genomics Meeting*. New York, NY (2017).
6. **Assis R***, Bachtrog D. Functional evolution of duplicate genes in *Drosophila* and mammals. *Society for Molecular Biology and Evolution Conference*. San Juan, Puerto Rico (2014).
5. **Assis R***, Bachtrog D. Evolution of novel phenotypes by gene duplication. *Bay Area Population Genomics Meeting*. San Francisco, CA (2013).
4. **Assis R***, Bachtrog D. Neofunctionalization of young duplicate genes in *Drosophila*. *Drosophila Research Conference*. Washington, DC (2013).
3. **Assis R***, Kondrashov AS**.** Rapid repetitive element-mediated expansion of piRNA clusters in mammalian evolution. *Society for Molecular Biology and Evolution Conference*. Iowa City, IA (2009).
2. **Assis R***, Kondrashov AS, Koonin EV, Kondrashov FA**.** Nested genes and increasing organizational complexity of metazoan genomes. *Drosophila Research Conference*. San Diego, CA (2008).
1. **Assis R***, Kondrashov AS, Koonin EV, Kondrashov FA**.** Increasing organizational complexity of metazoan genomes. *International Colloquium of Evolutionary Studies*. Hayama, Japan (2008).

TEACHING (BOLD DENOTES NEW COURSE DEVELOPED**)**

Instructor, **CAP 6546: Data Mining for Bioinformatics**, Florida Atlantic University	Fall 2020 (2 sections)
Instructor, **CAP 4773: Introduction to Data Science and Analytics**, Florida Atlantic University	Spring 2020 (2 sections)
Guest Lecturer, MCIBS 589: Colloquium in Bioinformatics and Genomics, Pennsylvania State University	Fall 2018
Instructor, **BIOL 497: Analysis of Biological Data**, Pennsylvania State University	Fall 2018
	Fall 2017
	Fall 2016
	Spring 2016
	Spring 2015
Instructor, PSU 16: First-Year Seminar in Biology, Pennsylvania State University	Fall 2018 (2 courses)
	Fall 2017
	Fall 2016 (2 courses)
	Fall 2015
Guest Lecturer, MCIBS 589: Colloquium in Bioinformatics and Genomics, Pennsylvania State University	Fall 2015

Guest Lecturer, MCIBS 589: Colloquium in Bioinformatics and Genomics, Pennsylvania State University Fall 2014

Guest Lecturer, IB 87: Introduction to Research Methods in Biology, University of California Berkeley Summer 2013

Graduate Student Instructor, BIO 172: Introductory Biology, University of Michigan Spring 2008

CURRENT STUDENTS

Balaji Kumar, Ph.D. in Biology, Pennsylvania State University 2016 – Present

Saheed Oseni, Ph.D. in Integrative Biology, Florida Atlantic University 2020 – Present

Anuradha Choudhury, Ph.D. in Computer Science, Florida Atlantic University 2020 – Present

Srabanti Datta, Ph.D. in Electrical Engineering, Florida Atlantic University Starting Spring 2021

PAST STUDENTS (BOLD DENOTES STUDENT WHO GRADUATED WITH THESIS FROM GROUP**)**

Xueyuan Jiang, Ph.D. in Molecular, Cellular, and Integrative Biosciences, Pennsylvania State University 2016 – 2019

Juan Cerda, Ph.D. in Bioinformatics and Genomics, Pennsylvania State University (rotation project) 2017

Brent Perry, B.S. in Biology, Pennsylvania State University 2014 –2017

Jacob Heldenbrand, M.S. in Molecular, Cellular, and Integrative Biosciences, Pennsylvania State University 2015 –2016

Soufieh Hakimzadeh, B.S. in Biomedical Engineering, Pennsylvania State University 2015 –2016

Janne Olsen, B.S. in Biology, Pennsylvania State University 2015

William Rosenow, B.S. in Biology, Pennsylvania State University 2014

Nabeel Ahmed, Ph.D. in Bioinformatics and Genomics, Pennsylvania State University (rotation pro) 2014

Margaret Sy, B.S. in Integrative Biology, University of California Berkeley 2012

Andy Cheon, B.S. in Bioengineering, University of California Berkeley 2012

Jason Chang, B.S. in Biochemistry, University of California Berkeley 2012

DISSERTATION COMMITTEES

Laura King, Ph.D. in Integrative Biology, Florida Atlantic University 2019 – Present

Viridiana Magana, Ph.D. in Biology, Pennsylvania State University 2015 – Present

Monika Cechova, Ph.D. in Biology, Pennsylvania State University 2014 – 2019

Samarth Rangavittal, Ph.D. in Bioinformatics and Genomics, Pennsylvania State University 2014 – 2018

DEPARTMENTAL SERVICE

Newsletter Editor, Department of CEECS, Florida Atlantic University 2020 – Present

Representative at Undergraduate Commencement, Department of CEECS, Florida Atlantic University 2020

Member, Student Competitions Committee, Department of CEECS, Florida Atlantic University 2019 – Present

Speed Networking Host, Data Science and Analytics Conference, Florida Atlantic University 2019

Peer Evaluator of Teaching, Department of Biology, Pennsylvania State University 2019

Member, Marker Lecture Committee, Department of Biology, Pennsylvania State University 2017 – 2019

Member, Student Awards Committee, Department of Biology, Pennsylvania State University 2017 – 2019

Member, Faculty Search Committee, Department of Biology, Pennsylvania State University 2017 – 2018

Representative at Undergraduate Commencement, Department of Biology, Pennsylvania State University 2017

Peer Evaluator of Teaching, Department of Biology, Pennsylvania State University 2017

Member, Course and Curriculum Committee, Department of Biology, Pennsylvania State University 2014 – 2018

Member, Faculty Search Committee, Department of Biology, Pennsylvania State University 2016 – 2017

Member, Graduate Admissions Committee, Department of Biology, Pennsylvania State University 2014 – 2016

Peer Evaluator of Teaching, Department of Biology, Pennsylvania State University 2014

COLLEGE SERVICE

Judge, Graduate Research Day, Florida Atlantic University 2020

Member, Paul Berg Prize Committee, Eberly College of Science, Pennsylvania State University 2019

Member, Marketing and Recruitment Committee, MCIBS, Pennsylvania State University 2014 – 2019

Member, Graduate Admissions Committee, Bioinformatics and Genomics, Pennsylvania State University 2014 – 2016

Member, Bioinformatics Seminar Committee, Bioinformatics Program, University of Michigan 2008– 2010

Graduate Student Recruiter, Bioinformatics Program, University of Michigan 2008

PROFESSIONAL SERVICE

Co-Organizer, Society for Molecular Biology and Evolution Annual Meeting, Québec City, Canada 2020
Gene duplications: adaptation and phenotypic novelty

Co-Organizer and Chair, Society for Molecular Biology and Evolution Annual Meeting, Austin, TX 2017
Mechanisms of phenotypic evolution

Co-Organizer and Chair, Society for Molecular Biology and Evolution Annual Meeting, San Juan, Puerto Rico 2014
Creative uses of next-generation sequencing technology in evolutionary genomics: Solving old problems with new approaches

GRANT PEER REVIEWING

National Science Foundation Ad Hoc Reviewer 2019

National Science Foundation Ad Hoc Reviewer 2018

National Science Foundation DEB Panelist 2017

National Science Foundation DEB Panelist (declined due to conflict of interest) 2016

JOURNAL PEER REVIEWING

Bioinformatics; *BMC Biology*; *BMC Evolutionary Biology*; *BMC Genomics*; *Evolution*; *Evolution, Medicine, and Public Health*; *Frontiers in Evolutionary and Population Genetics*; *G3: Genes, Genomes, Genetics*; *Genes*; *Genetica*; *Genetics*; *Genome Biology and Evolution*; *Genome Research*; *Human Genetics*; *IEEE/ACM Transactions on Computational Biology and Bioinformatics*; *Journal of Molecular Evolution*; *Methods in Ecology and Evolution*; *Molecular Biology and Evolution*; *Molecular Ecology*; *Nature Communications*; *PLoS Genetics*; *Proteomics*; *Scientific Reports*; *Theoretical Population Biology*

CONFERENCE PEER REVIEWING

Abstract reviewer for Society for Molecular Biology and Evolution Annual Meeting 2020

Abstract reviewer for Society for Molecular Biology and Evolution Annual Meeting 2017

Abstract reviewer for Society for Molecular Biology and Evolution Annual Meeting 2014

OUTREACH

Panelist, IEEE Signal Processing Society, PROmoting diveRsity in signal processing (PROGRESS) virtual workshop 2020
Q&A: Why academia?

Research in Action Seminar, Division of Research, Florida Atlantic University 2020
Unzip your genes to reveal the past and future (live nationwide virtual talk)

Haunted-U Science Camp, Pennsylvania State University 2018
Hands-on Halloween-themed science activities with K-12 students from local rural community (one day)

I'm a Scientist USA 2017
Online Q&A with K-12 students and teachers from schools around the United States (two weeks)

Science-U Summer Camp, Pennsylvania State University 2016
Hands-on genetics activities with K-12 students from local rural community (two weeks)

Guest Lecturer, Advanced Biology, Berkeley High School 2013
Hands-on phylogenetic tree-building activity with freshman high school students (one day)

Guest Lecturer, Mathematical and Theoretical Biology Institute, Arizona State University 2009
Computer labs on evolution with undergraduate students from underrepresented minorities (one week)

PROFESSIONAL DEVELOPMENT

Teaching Online Orientation, Florida Atlantic University (online) 2020

Academic Continuity Course Build, Florida Atlantic University (online) 2020

Female Leaders in Science Course, Florida Atlantic University (two days) 2020

Evidence-Based Teaching Academy, Pennsylvania State University (one week) 2019

PROFESSIONAL SOCIETIES

Society for the Study of Evolution 2019 – Present

Society for Molecular Biology and Evolution 2012 – Present

New York Academy of Sciences 2012 – 2013

American Association for the Advancement of Science 2008 – 2011

International Society for Computational Biology 2010 – 2011

Society for Neuroscience 2006 – 2007

Curriculum Vitae
Randy Dean Blakely, Ph.D.

Rm 109, MC-17
Brain Institute
Florida Atlantic University
Jupiter, FL 33458
rblakely@health.fau.edu
http://www.blakelylab.org

BIRTHPLACE
Columbus, Georgia (Feb 6,1959)

EDUCATION

High School
Jordan Vocational High School, Columbus, GA, *Valedictorian* 1973-1977

Undergraduate
Emory University, Atlanta, GA 1977-1981
Major: Philosophy *summa cum laude*: Thesis Advisor, James Gouinlock
Minors: Physics, Chemistry

Undergraduate Research:
- James Herndon, Yerkes Regional Primate Research Center
  Primate Social Behavior and Endocrinology
- Raymond DuVarney, Department of Physics
  Microcomputer Amperometry Interface Fabrication
- Joseph Justice, Department of Chemistry, and Daryll Neill, Department of Psychology
  In Vivo Neurochemical Analyses of Psychotropic Drug Action

Aegean School of Classical Studies, Paros, Greece 1980

Graduate
Emory University, Atlanta, GA 1981-1983
Masters Program, Biology Dept

Cold Spring Harbor 1982
Advanced Neuroanatomical Techniques Short Course

The Johns Hopkins Univ. School of Medicine, Baltimore, MD 1983-1987
Doctoral Program in Neuroscience
- Ph.D. Thesis Adviser: Dr. Joseph T. Coyle
  Thesis: *The Neurobiology of N-acetyl-aspartyl-glutamate (NAAG)*

Postdoctoral Training
HHMI/Yale University School of Medicine, New Haven, CT 1987-1990
- Postdoctoral Advisor: Dr. Susan Amara
  Research Topic: *Expression Cloning of Neurotransmitter Transporters*

PROFESSIONAL APPOINTMENTS

Assistant Professor, Anatomy and Cell Biology, Emory Univ. SOM	1990-1994
Assistant Professor of Psychiatry and Behavioral Sciences, Emory Univ. SOM	1993-1994
Assistant Professor of Physiology, Emory Univ. SOM	1993-1994
Associate Professor of Anatomy and Cell Biology, Emory Univ. SOM	1994-1995
Associate Professor of Pharmacology, Vanderbilt University SOM	1995-1998
Director, Vanderbilt Center for Molecular Neuroscience	1996-2011
Professor of Pharmacology, Vanderbilt University SOM	1998-2016
Director, NIMH Cellular & Molecular Neuroscience Training Program	1999-2001
Director, Vanderbilt/NIMH Postdoctoral Training Program in Functional Neurogenomics	2002-2016
Professor of Psychiatry, Vanderbilt School of Medicine	2004-2016
Director, Vanderbilt Brain Institute (Interim)	2006-2007
Director, Vanderbilt/NIMH Silvio O. Conte Center for Basic Neuroscience Research	2007-2017
Professor, Department of Biomedical Science, Charles E. Schmidt College of Medicine Florida Atlantic University	2016-present
Executive Director, Florida Atlantic University Brain Institute	2016-present
Adjunct Professor of Neuroscience, The Scripps Research Institute (Florida)	2016-present
Teaching Faculty, Intergrative Biology and Neuroscience (IBAN), FAU	2016-present
Teaching Faculty, International Max Planck Research School (IMPRS) Program	2016-present

DISTINCTIONS/AWARDS

National Merit Scholar	1977-1981
John Gordon Stipe Scholar	1977-1981
Macy Fellowship for Foreign Study	1981
Rhodes Scholarship Finalist	1981
Rotary Scholar	1981
Phi Beta Kappa	1981
Sigma Xi Research Award	1982
Woodruff Neuroscience Investigator	1990
Mallinckrodt Young Investigator Award	1991-1994
Charles Judson Herrick Award, American Association of Anatomists	1992
Allan D. Bass Endowed Chair in Pharmacology	1995-2016
Established Investigator Award, NARSAD	1996
Daniel H. Efron Award for Research, ACNP	1999
Charles R. Park Prize for Basic Research	2003
Distinguished Investigator Award, NARSAD	2005
Zenith Award, Alzheimer's Association	2005
ASPET, Julius Axelrod Award	2008
ASPET-Astellas Award in Translational Pharmacology	2008
F. Peter Guengerich Award for Postdoctoral Mentoring	2009
Fellow, American Association for the Advancement of Science	2009
Chancellor's Award for Research	2013
Delores C. Shockley Partnership Award for Minority Research Mentorship	2015
Fellow, National Academy of Inventors	2017
Southeastern University Research Association Distinguished Researcher Award	2019
Lifetime Achievement Award in STEM Education, South Florida Science Center	2019

PATENTS AWARDED AND PENDING

1. Norepinephrine Transporter cDNA (Yale/Vollum Inst) International Patent# WO1992/017568
2. Serotonin Transporter cDNA (Emory/Duke) US Patent# 5,418,162
3. Proline Transporter cDNA (Emory/Duke) US Patent# 5,580,775
4. Proline Transporter Polypeptides and Antibodies (Emory/ Duke) US Patent# 5,759,788
5. *C. elegans* Dopamine Transporter sequence (Vanderbilt) U.S. Patent # 6,596,512

6. Genetic Mutation Underlying Orthostatic Intolerance and Diagnostic and Therapeutic Methods Relating
   Thereto, (Vanderbilt) US Patent # 7,094,532
7. Assay for Dopamine Neuron Viability using *C. elegans*, (Vanderbilt) US Patent# 6,894,205
8. Assays for Novel Serotonin Transporter (SERT) Blockers, (Vanderbilt) US Patent# 7,439,039
9. Human Choline Transporter cDNA, (Vanderbilt), US Patent #7,338,799
10. Fluorescent Uptake Assay for Monoamine Neurotransmitters Transporters, (Vanderbilt), US Patent#7,318,917
11. Fluorescent Substrates for Neurotransmitter Transporters, (Vanderbilt), US Patent# 8,647,827 B2
12. Compositions and Methods for Treating Autism Spectrum Disorders, (Vanderbilt) Provis Pat App, PTO 62/081,002, published as US-2016-0151366-A1 on 06/13/16
13. Methods for Identifying Treatments that Reduce the Actions of Drugs of Abuse (FAU) Non Provis Pat App, PTO 6818-318
14. Methods for Identifying MBLAC1-Dependent Molecular Networks (FAU) Non Provis Pat App, PTO 6818-319
15. Rescue of Autism Spectrum Disorder Abnormalities with 5-HT4 Agonists (Columbia) PTO 62/836,248

PROFESSIONAL SOCIETIES / AFFILIATIONS

Investigator, Vanderbilt Brain Institute
Investigator, Vanderbilt Institute of Chemical Biology
Investigator, Vanderbilt University Diabetes Center
Investigator, Vanderbilt University Autonomic Dysfunction Center
Investigator, Vanderbilt University Kennedy Center
Member, American Association for the Advancement of Science
Member, Society for Neuroscience
Member, American Society for Pharmacology and Experimental Therapeutics
Member, American Society of Human Genetics
Member, International Society for Psychiatric Genetics
Member, International Brain and Behavior Society
Member, Middle Tennessee Chapter, Society for Neuroscience
Member, Scientific Council, Brain and Behavioral Research Foundation
Member, Genetics Society of America
Member, NIMH Board of Scientific Counselors
Chair, NIMH Board of Scientific Counselors
Member, National Advisory Mental Health Council
Elected Fellow, American Association for the Advancement of Science
Elected Fellow, American College of Neuropsychopharmacology
Elected Member, Dana Alliance for Brain Initiatives
Member, Psychoneuroimmunology Research Society
Elected Fellow, National Academy of Inventors

INDUSTRY CONSULTING AND CONTRACTS

Forest Research Institute	2004-2010
Wyeth Women's Health Research	2004-2007
Lundbeck Psychopharmacology Scientific Advisory Board	2005-2015
Jubilant Innovation	2008-2010
Amgen	2012-2013
Neuroscience Detective/Prexa	2013-2014
Lundbeck	2013-2015
Pfizer	2015

ACADEMIC COMMITTEES/SYMPOSIA AND MEETING ORGANIZATION

Emory Departmental 5-Yr Planning Committee	1992
Emory Faculty Search Committee	1992-1995
Emory Neuroscience Graduate Admissions Committee	1992-1995
Executive Committee, Atlanta Chapter Society for Neuroscience	1992-1995
Symposium Committee, Atlanta Chapter Society for Neuroscience	1992-1995
Scientific Advisory Board, Brain & Behavior Research Foundation	1994-present
Steering Committee, Vanderbilt Cellular & Molecular Neuroscience Training Program	1995-2000
Task Force on Basic Research Initiatives, Vanderbilt University	1996-1997
Animal Care Administrative Review Committee, Vanderbilt University	1997
Neuroscience Ph.D. Curriculum Committee, Chair	1997-2011
Internal Advisory Board, Vanderbilt PPG on Cardiovascular Function	1997-2002
Vice-Chair, Catecholamine Gordon Conference	1999
Search Committee, Vanderbilt Kennedy Center Director	2000-2001
Pharmacology Faculty Promotions Committee, Vanderbilt University	2000-2016
Search Committee, Neurology Department Chairman, Vanderbilt University	2000-2002
Search Committee, Center for Child Development Director	2001-2002
Chair, Catecholamine Gordon Conference	2001
Strategic Academic Planning Committee, Vanderbilt University	2001-2002
Pharmacology Executive Advisory Committee, Vanderbilt University	2001-2016
Society for Neuroscience Chapters Committee	2001-2004
External Advisory Committee, Chair, COBRE LSU Neuroscience Center	2003-2009
Vanderbilt Graduate Faculty Council	2003-2005
RIMI External Advisory Committee, Tennessee	2004-2009
Vanderbilt Conference: Frontiers in Addiction Biology, Co-Organizer	2004
Vanderbilt Conference: Pharmacogenomics, Co-Organizer	2004
Chair, Aravind Babu Lectureship in Membrane Biology Committee	2004-2008
ACNP Awards & Honors Committee	2004
Systems Genetics Group External Advisory Board, Oak Ridge National Laboratory	2007
Board of Scientific Counselors, NIMH Intramural Program – Adhoc Member	2007-2008
Search Committee, Chair, Vanderbilt Brain Institute Director	2007
Communications Committee, Basic Science Strategic Plan, Vanderbilt SOM	2007
Tennessee Alzheimer's Disease Task Force	2007
Society of Neuroscience, Peter and Patricia Gruber International Research Award in Neuroscience Committee	2008-2011
NIMH Council Workgroup on Research Training	2008
Vanderbilt Task Force on Graduate Education	2008-2009
NIMH T32 Study Section Panel	2008
Vanderbilt Executive Faculty Committee	2008-2011
University of Montana Neuroscience Center, External Advisory Board	2008-2010
Addiction Research Center, UTMB Galveston, External Advisory Board	2008-present
Provost's Graduate Education Task Force Committee, Vanderbilt University	2008-2009
NIMH, Board of Scientific Counselors, full member	2010-2012
NIMH, Board of Scientific Counselors, Chair	2012-2014
ACNP Program Committee	2009-2014
ACNP Annual Meeting Program Co-Chair	2011-2012
ACNP Annual Meeting Chair	2012-2013
Research Enterprise Communications Advisory Committee, Vanderbilt University	2009-2012
ASPET Julius Axelrod Award Committee	2009-2012
Vanderbilt Discovery Lecture Series Steering Committee	2010-2012
Vanderbilt Neuroscience Visions Committee	2011
Blakemore Chair Appointment Committee, Vanderbilt University	2011
Burry Chair Selection Committee, Vanderbilt University	2010-2011

Psychiatric Disorders Chair Search Committee, Vanderbilt University	2012
Release & Reuptake Theme Committee, 10th International Catecholamine Symposium	2012
Dana Alliance for Brain Initiatives, Member	2012-present
Neurobiology of Autism, Neuroscience School of Advanced Studies, Course Director	2012
Delaware COBRE Center for Neuroscience Research, External Advisory Board	2013-2016
Brain In Flux ISN Satellite Conference, Co-Organizer	2013, 2015
UC Davis Neuroscience Graduate Program, External Advisory Board	2013-2016
University Alabama Birmingham Comprehensive Neuroscience Center, Advisory Board	2013-present
Emory University Conte Center for Oxytocin and Social Cognition, Advisory Board	2013-present
Pharmacology Ph.D. Qualifying Exam Committee (Chair)	2014-2016
Biomedical Science Research Space Committee	2016-2017
Psychology Chair Search Committee, ex officio	2016
ACNP Program Committee, Member	2017-2019
Integrative Biology Graduate Program Executive Committee	2017-present
National Advisory Mental Health Council	2017-2020
FAU College of Medicine Strategic Planning Committee	2017
FAU Psychology Department Faculty Search Committee (*ex officio*)	2017-2018
FAU Jupiter Coordination Council (JCC)	2017-present
Director, FAU Graduate Training Program in Neuroscience	2017-present
FAU Technology Review, Advisory and Innovation Committee (TRAIC)	2017-present
Palm Health Foundation Brath Health Advisory Committee	2017-present
FAU Research Core Committee (RCoC)	2017-present
Human Brain Exhibit Advisory Committee, South Florida Science Center & Aquarium	2016-2019
University of Michigan Udall Parkinson's Disease Center of Excellence	2018-2020
FAU Jupiter Strategy and Budget Committee	2019-present
BRAIN Initiative Multi-Council Working Group (MCWG) NIMH Representatitve	2020-present

FACULTY MENTORING ACTIVITIES

Eugenia Gurevich, Mentoring Committee (Pharmacology)	2005-2012
Claus Schneider, Mentoring Committee (Pharmacology)	2006-2012
Maureen Hahn, K01 Award Mentor	2006-2011
Gregg Mathews, K08 Award Mentor	2007-2009
Gregg Stanwood, Mentoring Committee (Pharmacology, Chair)	2007-2014
Peter Hedera, Mentoring Committee (Neurology)	2007-2012
Maureen Hahn, Mentoring Committee (Genetic Medicine)	2008-2014
Jeremy Veenstra-VanderWeele, K08 Award Mentor	2008-2013
Qi Zhang, Mentoring Committee (Pharmacology, Chair)	2010-2016
Jennifer Blackford, Mentoring Committee (Psychiatry)	2010-2016
David Weaver, Mentoring Committee (Pharmacology)	2011-2016
Carrie Jones, Mentoring Committee (Pharmacology)	2011-2016

TEACHING EXPERIENCE

Undergraduate Teaching Assistant, Astronomy, Emory University	1978-1981
Graduate Teaching Assistant, Biology Department, Emory University	1981-1983
Graduate Teaching Assistant, Medical and Graduate Neuroanatomy, JHU SOM	1984
Postgraduate Teaching Assistant, Advances in Cell Biology, Yale SOM	1990
Developmental Neurobiology, Lecturer, Emory SOM	1991-1994
Molecular Neurobiology, Course Director, Emory SOM	1992-1995
Ion Channel Regulation, Lecturer, Emory SOM	1992-1995
Neurobiology Laboratory, Lecturer, Emory College of A&S	1992-1995
Introductory Biophysics, Teaching Faculty, Emory SOM	1992-1995
Molecular Cloning of Neural Genes, Lecturer, Cold Spring Harbor	1992-1994
Medical Neuroscience, Lecturer, Emory School of Medicine	1993-1995

Pharmacology Graduate Seminar Course Director, Vanderbilt University SOM	1995-1996
Pharmacological Techniques and Instrumentation, Lecturer, Vanderbilt University SOM	1995-1996
IGP Neurobiology, (BioRegulation II), Lecturer, Vanderbilt University SOM	1996-2010
Excitable Membranes, Lecturer, Vanderbilt University School of Medicine	1996
Cellular & Molecular Neuroscience (NURO 345), Course Director Vanderbilt	1996-2007
Special Topics in Neuroscience, Lecturer, Vanderbilt SOM	1996
Advanced Molecular Neuroscience (NURO 346), Course Director, Vanderbilt SOM	1998-2005
Biological Basis of Mental Illness (NSC 235), Lecturer, Vanderbilt College of A&S	2002-2016
Pharmacology Targets (PHARM 320, 325), Vanderbilt SOM	2002-2007
Advanced Molecular Neuroscience, Lecturer, (NURO 346) Vanderbilt SOM	2005-2016
Human Genetics (HGEN 340), Lecturer, Vanderbilt SOM	2005-2012
Neurogenetics (NURO 376), Lecturer, Vanderbilt University SOM	2006-2012
Cellular & Molecular Neuroscience (NURO 345), Lecturer Vanderbilt SOM	2007-2016
Neuroscience Foundations (NURO 325), Lecturer	2005-2016
Neural Diseases (NURO 366), Lecturer, Vanderbilt SOM	2008-2012
Methods of Research in MRDD (PSY 325), Vanderbilt Peabody School of Education	2008
Brain and Behavior for Medical Students, Lecturer, Vanderbilt University SOM	2009-2010
Genetics of Model Organisms (CBio/HGen 349), Lecturer, Vanderbilt University SOM	2009-2012
Neurobiology of Autism Spectrum Disorders, Course Director, San Quirico d'Orcia	2012
Neurobiology of Addiction, Course Director or Lecturer	2012-2016
Neuroscience Seminar Series, Director	2016-present
Advanced Psychophathology, FAU School of Social Work, Lecturer	2017
Integrative Biology (BSC 6390-001), GNTP Lecturer	2018
Science of Addiction (BSC 4930-10H), Lecturer	2018
FAU Center for Autism and Related Disabilities (CARD) Autism Training Program	2019
Neuroscience 1 (PSB 6345-001)	2019

UNDERGRADUATE HONORS, MASTERS AND DOCTORAL COMMITTEES

1.	Aurora Isaac, Emory Neuroscience PhD	1992-1995
2.	Nelson Oyesiku, Emory Neuroscience PhD	1992-1995
3.	John Vanchiere, Emory Neuroscience PhD	1992-1995
4.	Caroline Reich, Emory Neuroscience PhD	1992-1994
5.	Amanda Smith, Emory Chemistry PhD	1994
6.	Leigh MacMillan, Vanderbilt Pharmacology PhD	1995-1996
7.	Jonathan Lu, Vanderbilt Pharmacology PhD	1995-1996
8.	Julie Zaucha, Vanderbilt Pharmacology PhD	1995-1996
9.	Christina Peterson, Vanderbilt Pharmacology PhD	1996-2000
10.	Matthew Wilson, Vanderbilt Pharmacology PhD	1997-2000
11.	Angela Winnier, Vanderbilt Cell Biology PhD	1997-2000
12.	Mike Chang, Vanderbilt Pharmacology PhD	1997-2000
13.	Nicole Schramm, Vanderbilt Pharmacology PhD	1997-2001
14.	Brent Thompson, Vanderbilt Neuroscience PhD	1999-2005
15.	Scott Ramsey, Vanderbilt Pharmacology PhD	2000-2001
16.	Christopher Sansam, Vanderbilt Pharmacology PhD	2000-2003
17.	Kim Petrie, Vanderbilt Pharmacology PhD	2000-2004
18.	Robert Carson, Vanderbilt Pharmacology PhD	2000-2002
19.	Lisan Parker, Vanderbilt Pharmacology PhD	2000-2004
20.	Scott Adams, Vanderbilt Physics PhD	2000-2003
21.	Christoph Lossin, Vanderbilt Neuroscience PhD	2000-2003
22.	Andrew Tapper, Vanderbilt Pharmacology PhD	2000-2002
23.	Lisa Hazelwood, Vanderbilt Pharmacology PhD	2001-2005
24.	Jamie McConnel, Vanderbilt Pharmacology PhD	2001-2008
25.	Hilary Highfield, Vanderbilt Pharmacology PhD	2001-2005

26.	Steve von Stetina, Vanderbilt Cell Biology PhD	2001-2006
27.	Zhaolin Hua, Vanderbilt Biology PhD	2001-2003
28.	Elaine Merrill, Vanderbilt Neuroscience PhD	2000-2004
29.	Joel Schwartz, Vanderbilt Neuroscience PhD	2000-2004
30.	Kelie Reece, Vanderbilt Pharmacology PhD	2001-2009
31.	Andrew Lundquist, Vanderbilt Pharmacology PhD	2001-2005
32.	William Siesser, Vanderbilt Neuroscience PhD	2001-2006
33.	Hugh Fentress, Vanderbilt Neuroscience PhD	2001-2005
34.	Jamie McConnel, Vanderbilt Pharmacology PhD	2001-2008
35.	Kristina Patterson, Vanderbilt University Undergraduate	2002-2003
36.	Efrain Garcia, Vanderbilt Pharmacology PhD	2003-2007
37.	Regina Myers, Vanderbilt Pharmacology PhD	2003-2006
38.	Joseph Watson, Vanderbilt Neuroscience PhD	2002-2008
39.	Nicole Garbarini, Vanderbilt Neuroscience PhD	2002-2008
40.	Xueying (Sharon) Liang, Vanderbilt SOM	2004-2009
41.	Uade Da Silva, Vanderbilt Neuroscience PhD	2004-2010
42.	Brandon Lute, Vanderbilt Neuroscience PhD	2004-2008
43.	Jennifer Ayala, Vanderbilt Pharmacology PhD	2005-2008
44.	Bonnie Garcia, Vanderbilt Neuroscience PhD	2005-2010
45.	Erica Bowton, Vanderbilt Neuroscience PhD	2005-2009
46.	Yang Geng, Vanderbilt Neuroscience PhD	2006-2009
47.	Niranjana Vijayakrishnan, Vanderbilt Neuroscience PhD	2006-2010
48.	Angela Shields, Vanderbilt MSTP Physiology	2006-2009
49.	Rebecca Orndorff, Vanderbilt University, Chemistry Masters Committee	2006-2009
50.	Molly Fricke, Pharmacology, Vanderbilt Neuroscience PhD	2006-2010
51.	Nicholas Campbell, Vanderbilt Neuroscience PhD	2007-2013
52.	Sabrina Doughty, Vanderbilt Neuroscienc PhD	2007-2011
53.	Guy Watkins, Vanderbilt Pharmacology PhD	2007-2010
54.	Nicole Speed, Vanderbilt Pharmacology PhD	2008-2010
55.	Jude James McElroy, Vanderbilt Physiology PhD	2008-2010
56.	Kari Johnson, Vanderbilt Pharmacology PhD	2008-2012
57.	Kelli Kazmier, Vanderbilt Physiology PhD	2009-2013
58.	Ernesto Solis, Vanderbilt Pharmacology PhD	2009-2013
59.	Rachel Lippert, Vanderbilt Physiology PhD	2010-2014
60.	Ericka Smith, Fisk University Masters Program	2011-2012
61.	Michael Nedelcovych, Vanderbilt Pharmacology PhD	2012-2015
62.	Yun Young (Susan) Yim, Vanderbilt Pharmacology PhD	2013-2017
63.	Tyne Miller, Vanderbilt Neuroscience PhD	2013-2017
64.	Elaine Ritter, Vanderbilt Neuroscience PhD	2013-2017
65.	Melanie Brady, Fisk University Masters Program	2013-2014
66.	Xiaohan Wang, Vanderbilt Neuroscience PhD	2013-2014
67.	Claire DelBove, Vanderbilt Pharmacology PhD	2013-2014
68.	Erica Tross, Fisk University Masters Program	2013-2014
69.	Hussain Jinnah, Vanderbilt Pharmacology PhD Program	2013-present
69.	Emily Ross, Vanderbilt University Chem Biol PhD	2013-2015
70	Cody Wenthur, Vanderbilt Pharmacology PhD	2013-2015
71.	Corey Roach, Fisk University Masters Program	2014-2015
72.	Christopher Kooker, Vanderbilt Neuroscience (Honors, Carneiro)	2014-2016
73.	Allyson Mallya, Vanderbilt Neuroscience PhD	2015-2016
74.	Dylan Morrow-Jones, Vanderbilt Neuroscience PhD	2015-2016
75.	Stephanie Moore, Vanderbilt Pharmacology PhD	2015-2016
76.	Julieta Di Mase, FAU IB Masters Program	2018-2019
77.	Bryan Conklin, FAU Complex Systems & Brain Sciences PhD (FAU)	2017-present

78.	Ke Zhang, FAU IB-NS PhD (MPFI)	2018-present
79.	Neymi Mignocchi, FAU IB-NS PhD (MPFI)	2018-present
80.	Amanda Kentner, FAU IB-NS PhD (MPFI)	2018-present
81.	Claire Rice-Kuchera, FAU Exp Psychology PhD (FAU)	2018-present
82.	Serena Sossi, FAU Integrative Biology – Neuroscience	2018-2019
83.	Lucas Thal, Chemistry PhD Program (Vanderbilt)	2018-2020
83.	Johnson Odibit, Masters in Fine Arts Masters	2019
84.	Danielle Riboul, FAU IB PhD (FAU)	2020-present

EDITORIAL BOARDS

Molecular Pharmacology, Field Editor	1995-2007
Journal of Biological Chemistry, Editorial Board	1999-2004
LENS, Editorial Board	2002-2008
Neuropsychopharmacology, Field Editor	2002-2007
Journal of Neuroscience, Editorial Board	2004-2009
Molecular Pharmacology, Editorial Board	2007-2012
Journal of Neurodevelopmental Disorders	2011-present

GRANT/PROGRAM REVIEWER

Emory URC External Reviewer	1991-1995
National Science Foundation External Reviewer	1993
NIDA Contract Reviewer for Biogenic Amine Transporter Drug Screening	1994-1998
NIDA K20/K21 Study Section Committee Member,	1994
NIDA DABR1 Study Section Ad Hoc Member,	1995
NIMH Molecular, Cellular, Developmental Neuroscience Study Section	1995-1998
NARSAD Young and Established Investigator Awards Review Committee	2000-present
NIH F02A Fellowship Study Section	2002
Alzheimer's Association	2004
NIH Study Section NIMH T32 Training Grants	2004
NIH Grant Reviewer	2004
NIH/MDCN Special Emphasis Panel ZRG1	2004
NIMH Loan Repayment Program Study Section ZMH1 DEA-M (C8)	2005
Cure Autism Now Grant Review, Los Angeles, CA	2005
Alzheimer's Association	2006
NIH NTRC Study Section, Bethesda, MD	2005-2006
NINDS Intramural Review Group	2006
NIMH Intramural Review Group	2007
NIMH K99 Review Committee	2007
NIDA K99 Study Section ADA1 JXR-D	2008
NIH ARRA Review Committee, Molecular and Cellular Neuroscience	2009
NIMH Board of Scientific Counselors (Member)	2010-2012
NIMH Board of Scientific Counselors (Chair)	2012-2014
Comprehensive Neuroscience Center, UAB, External Advisory Board	2013-present
NIMH National Advisory Mental Health Council (Member)	2017-2021
NIMH Genomics Workgroup, NAMHC (Member)	2017-2021
Udall Center External Advisory Board, University of Michigan	2018-present

INVITED PRESENTATIONS/SYMPOSIA

1. American College of Neuropsychopharmacology Symposium on Neurotransmitter
2. Transporters as Psychotropic Drug Receptors, American College of
3. Neuropsychopharmacology Meeting, Maui, Hawaii, 1989.
4. Emory Woodruff Scholars, 1991
5. Emory University, Dept. Pediatrics, 1991

6. NIDA Symposium on Molecular Biology of Neurotransmitter Receptors and Transporters, NIH, Bethesda, Maryland, 1991.
7. The Johns Hopkins School of Medicine, Neuroscience Dept., 1991.
8. American College of Neuropsychopharmacology Panel Session on New Developments in Molecular Pharmacology, American College of Neuropsychopharmacology Annual Meeting, San Juan, Puerto Rico, 1991.
9. Chairperson, ASPET Symposium on Structure and Function of Neurotransmitter Transporters, Orlando, FL, 1992
10. Vanderbilt University Dept. Pharmacology, 1992.
11. MRC Molecular Biology Dept, Cambridge, England, 1992.
12. Neurobiology of Serotonin Symposium, XVIIIth C.I.N.P. Congress, Nice, France, 1992
13. Cold Spring Harbor Molecular Cloning of Neural Genes Short Course, 1992.
14. Gordon Conference on Hormone Action, 1992.
15. Society of General Physiologists Young Investigator Symposium, Woods Hole, MA, 1992.
16. Hahnemann University Program in Neurosciences, 1992
17. Medical College of Georgia, Dept. Biochemistry and Molecular Biology, 1993
18. Georgia State University, Dept. Biology, 1993.
19. Morehouse School of Medicine, Dept. Biochemistry, 1993
20. Baylor University, Dept. Physiology, 1993.
21. Physiological Regulation of Neurotransmitter Transporters Symposium, 14th International
22. Society for Neurochemistry Meeting, Montpelier, France, 1993.
23. ARNMD Symposium: Molecular Biology of Schizophrenia and Affective Disorders,1993.
24. Porters Conference, Stowe Vermont, 1994.
25. Dept. Of Pharmacology, Yale School of Medicine, 1995.
26. 1st International Symposium on Neuroreceptor Mechanisms, Niigata Japan, 1995.
27. Vanderbilt, Dept. of Nephrology, 1995.
28. Vanderbilt Molecular Biophysics Department, 1996.
29. Substance Abuse Rounds, Vanderbilt University, 1996.
30. Vanderbilt Careers in Health Care Symposium, Science Outreach Program, 1996.
31. Bristol-Meyers Squibb, Pharmaceutical Research Institute, 1996.
32. University of Pennsylvania, Department of Pharmacology, 1997.
33. Case Western Reserve University, Dept. of Pharmacology,1997.
34. Wyeth-Ayerst Research, 1997.
35. CPDD Symposium, Recent Progress in Transporter Research, 1997.
36. Gordon Conference on Structure & Dynamics of Receptors, Transporters and Ion Channels, 1997.
37. FASEB Summer Conference on Protein Mediators, July, 1997.
38. Dept. Of Physiology Retreat Speaker, University of North Carolina at Chapel Hill, 1997.
39. National Institute of Mental Health, NIH, Satellite Symposium, 1997.
40. A Decade of Serotonin Research, 1997.
41. Co-Chair, ASPET Symposium on Neurotransmitter Transporters, 1998.
42. Medical College of Wisconsin, 1998.
43. The University of Chicago, 1998.
44. Gordon Research Conference on Membrane Transporters: Physiological and Pathological Implications,1998.
45. Oak Ridge National Laboratories, 1998.
46. Southeastern Pharmacological Society, 1998.
47. EU TMR Euroconference on Neuronal Transporters, 1998.
48. University of Alabama School of Medicine, 1998.
49. ACNP Meeting, Serotonin Gene Effects and Psychopathology, 1998.
50. Nanotechnology, Light, and Neuroscience, Vanderbilt University, 1999.
51. Vanderbilt Bench-to-Bedside Neuroscience Conference, 1999
52. Harvard Medical School, Department of Neurobiology, 1999.

53. Meharry University Medical School, 1999.
54. FASEB Summer Research Conference on Transporters of Amino Acids, Peptides, and Bioactive Amines: Structural, Functional, and Regulatory Aspects, 1999.
55. University of Heidelberg, Department of Pharmacology, 1999.
56. Catecholamine Gordon Conference (Co-Chair), 1999.
57. Sixth National Parkinson Foundation International Symposium on Parkinson's Disease Research, 1999.
58. University of Michigan, Department of Psychiatry, 1999.
59. Vollum Institute, 1999.
60. National Institute for Health, Model System Genomics Meeting, 1999.
61. Spring Brain Conference, Plenary Keynote Speaker, 2000.
62. Columbia University, Center for Molecular Recognition, 2000.
63. University of Colorado School of Medicine, Department of Pharmacology, 2000.
64. University of Cincinnati College of Medicine, Department of Molecular and Cellular Physiology, 2000.
65. Science Coalition, 2000.
66. Membrane Transport Gordon Conference, 2000.
67. Roche, 2000.
68. International Transporters Conference, 2000.
69. Mini Medical School, Vanderbilt University, 2000.
70. American Society for Human Genetics, 2000.
71. University of Pennsylvania, David Mahoney Institute of Neurological Sciences, 2000.
72. Biomedical Research Education & Training, Vanderbilt University, 2000.
73. University of Texas Health Sciences Center San Antonio, Department of Pharmacology, 2000.
74. Vanderbilt Conferences in Genomics, 2001.
75. Kansas University Medical Center, 2001.
76. Quantum Dot Corporation, 2001.
77. Catecholamine Gordon Research Conference, 2001.
78. Eli Lilly Pharmaceuticals, 2001.
79. Cold Spring Harbor Course on Cellular Biology of Addiction, 2001.
80. Pfizer Ann Arbor Laboratories, 2001.
81. Molecular Mechanisms of Synaptic Function, 2001.
82. Tennessee Mouse Genome Consortium Retreat, 2001.
83. FMC Corporation, 2002.
84. Medical University of South Carolina, 2002.
85. Erice International School of Biophysics, 2002.
86. Meharry Medical College Neuroscience Symposium, 2002.
87. International Symposium – Transporters, 2002.
88. John A. Oates Symposium in Experimental Therapeutics, 2002.
89. Columbia University, 2002.
90. University of Massachusetts Medical School, 2002.
91. University of Alabama School of Medicine, 2002.
92. European College of Neuropsychopharmacology (ECNP), 2002.
93. University of Tennessee Health Science Center, 2002.
94. University of California – San Francisco School of Pharmacy, 2003.
95. ASCPT Symposium, 2003.
96. Duke University, 2003.
97. Harvard Children’s Hospital 2003.
98. Johns Hopkins School of Medicine 2003.
99. University of North Dakota School of Medicine, 2003.
100. Wyeth, 2003
101. FASEB Conference, 2003.
102. Gordon Research Conference on Catecholamines (Co-Chair and Speaker), 2003.

103. Michigan State University, 2003.
104. University of Copenhagen/Panum Institute, 2003.
105. NIDA SFN Convention, 2003.
106. Society for Neuroscience Annual Meeting, 2003.
107. Tennesee Mouse Genome Consortium Meeting, 2003.
108. ASPET Julius Axelrod Symposium, 2004.
109. FASEB Meeting Seminar, 2004.
110. Vanderbilt University Lee Limbird Celebration, 2004.
111. Eli Lilly Corporation, 2004.
112. University of VT College of Medicine, 2004.
113. Wyeth, 2004.
114. Alfred Benzon Symposium, 2004.
115. Northwestern University School of Medicine, 2004.
116. Baylor College of Medicine, 2004.
117. Gordon Research Conference on Membrane Transport Proteins, 2004.
118. Roche, 2004.
119. CHADD International Conference, 2004.
120. Wyeth, 2005.
121. UT Southwestern, 2005.
122. Forsyth Institute, 2005.
123. Harvard Children's Hospital, 2005.
124. University of Pennsylvania, 2005.
125. International School of Biophysics, Erice—Sicily, 2005.
126. Vanderbilt Board of Trust Retreat, 2005
127. Louisiana State University School of Medicine, 2005.
128. FASEB, Transport Biology Meeting, 2005.
129. GRC Catecholamine Conference (Chair), 2005.
130. NIDA Neuroscience Center, 2005.
131. UT Health Science Center San Antonio, 2005.
132. Neuropharmacology Conference, New Perspectives in Neurotransmitter Transporter Biology, 2005.
133. ARNMD Conference, Mt. Sinai Medical Center, 2005.
134. Meharry Medical College Psychiatry Grand Rounds, 2006.
135. Pfizer, 2006.
136. Jerome Sutin Memorial Symposium, 2006.
137. NINDS Neuroscience Seminar, 2006.
138. University of Montana College of Medicine, 2006.
139. China Institute of Neuroscience, 2006.
140. IUPHAR Meeting Plenary Lecture, 2006.
141. Gordon Research Conference on Membrane Transport Proteins, 2006.
142. ORNL Workshop on Human Diseases, 2006.
143. Johns Hopkins School of Medicine, 2006.
144. University of Georgia, 2006
145. Vanderbilt University, 3rd Annual Grant Wilkinson Lectureship in Clinical Pharmacology, 2007
146. Winter Conference on Brain Research (WCBR), 2007
147. University of North Carolina, Chapel Hill, 2007
148. East TN State University, 2007
149. Congress of the German Physiological Society, 2007
150. Society of Biological Psychiatry Meeting, 2007
151. Vanderbilt Science Educators Program, 2007
152. Amgen, 2007
153. IBRO World Congress, Symposium, 2007
154. Penn State Neuroscience Program, 2007
155. Emory University, Dept Pharmacology, 2007

156. World Congress Psychiatric Genetics, 2007
157. Vanderbilt Department of Pharmacology, Retreat Speaker, 2007
158. Lundbeck, US, 2007
159. Vanderbilt Medical Center Advisory Board, 2007
160. Vanderbilt Center for Structural Biology, 2007
161. University Michigan, Neuroscience Program, 2007.
162. The Surgeons' Travel Club Annual Meeting, 2007
163. Winter Brain Conference, 2008
164. Keystone Symposium on Autism, 2008
165. Stanford University, 2008
166. Catecholamine Club, 2008
167. Royal Society of London, 2008
168. Drexel University, 2008
169. Autism Center, University Illinois at Chicago, 2008
170. University of Pittsburgh, 2009
171. University of Kansas, 2009
172. University of Wisconsin, 2009
173. University of Montana Neuroscience Retreat Speaker, 2009
174. Biomedical Transporters Meeting, 2009
175. SFB35 Symposium, Speaker, 2009
176. University of Washington, 2009
177. Healthy Minds Across America Symposium, 2009
178. Winter Conference on Brain Research, Symposium on Dopamine Signaling, 2010
179. Banbury Conference on The Lateral Habenula: Its Role in Behavior and Psychiatric Disorders, 2010
180. NIMH Outreach Meeting, Speaker, 2010
181. Massachusetts Institute of Technology, 2010
182. University of Pennsylvania, 2010
183. Healthy Minds Across America Symposium, 2010
184. Annual Meeting of the Society of Biological Psychiatry, 2010
185. University of Montana Neuroscience Retreat Speaker, 2010
186. WorldPharma, 2010
187. Gordon Research Conference: Membrane Transport Proteins, 2010
188. Translational Medicine Research in Autism: Challenges and Opportunities, 2011
189. University of Georgia, 2011
190. University of Alabama School of Medicine, 2011
191. Synapses: From Molecules to Circuits & Behavior, Cold Spring Harbor Laboratory, 2011
192. University of Vermont, 2011
193. Case Western Reserve University, July 2011
194. Bonn Symposium (NRW International Graduate Research School, Biotech Pharma International Symposium), 2011
195. University of Texas Southwestern, 2011
196. Einstein College of Medicine, 2011
197. University of Southern California, 2011
198. University of West Virginia, 2011
199. Yale University, 2012
200. Case Western Reserve University Symposium, 2012
201. ASPET Symposium on Neurotransmitter Transporters, 2012
202. University of North Dakota, 2012
203. Gordon Research Conference on Membrane Transport, 2012
204. Serotonin Club, July 2012
205. Neurobiology of Autism Spectrum Disorders, NSAS, 2012
206. University of Southern California, Program in Neurobiology, 2013
207. University of California Davis Neuroscience Center, 2013
208. Texas A&M Institute of Neuroscience, 2013

209. University of California San Francisco, 2013
210. University of East Tennessee, Department of Psychiatry, 2013
211. University of East Tennessee, Department of Biomedical Sciences, 2013
212. Dopamine 2013 International Conference, Speaker, 2013
213. Catecholamine Gordon Conference on Transporters, 2013
214. Vanderbilt Conte Symposium, 2013
215. Sackler Conference, 2014
216. Harvard University, McLean Hospital Neuroscience, 2014
217. University of Arkansas, 2014
218. Oregon Primate Research Center, 2014
219. Gairdner Symposium, University of Alberta, 2014
220. National Institute of Mental Health, 2014
221. Emory University, Department of Pharmacology, 2014
222. ACNP, Panel Chair and Speaker, 2014
223. Sackler Conference, 2015
224. Pfizer UK, WebEx, 2015
225. Michigan State University, 2015
226. Experimental Biology, Symposium Chair, 2015
227. Montana State University, Speaker 2015
228. Tulane University, 2015
229. Scripps Florida, 2015
230. Pfizer Gene Family Conference, 2015
231. Middle Tennessee State University, 2015
232. Vanderbilt Kennedy Center Research Ethics Grand Rounds, 2015
233. International Society for Serotonin Research, Panel Chair and Speaker 2016
234. Dopamine 2016, Symposium Chair and Speaker, 2016
235. FAU Special Seminar, 2016
236. Complex Systems and Brain Sciences 31st Anniversary Symposium, 2016
237. SFB35 Symposium, 2016
238. Children's Hospital of Pennsylvania, 2016
239. Vanderbilt Silvio O. Conte Center, Symposium Speaker, 2016
240. Emory University, 2017
241. Biomedical Science Dept (Complex Trait Analysis), FAU College of Medicine, 2017
242. Brain in Flux Meeting, Meering Co-Chair and Speaker, 2017
243. University of Florida, 2017
244. School of Social Work, FAU, Advanced Psychophathology Class (Michael Kane), 2017
245. Leadership Palm Beach County, 2018
246. South Florida Science Center, West Palm Beach, 2018
247. University of Massachusetts Medical School, Worcester, 2018
248. David Robertson Symposium, Vanderbilt, 2018
249. Gordon Research Conference on Membrane Transport, 2018
250. International Society of Serotonin Research, 2018
251. South Florida Science Center Brain Night, 2018
252. Brain & Bites Seminar, Brainy Days Program, Florida Atlantic University 2018
253. Future of Brain Research Symposium, Florida Atlantic University, 2018
254. Children Services Council of Palm Beach County, 2018
255. Center for Child Counseling, 2018
256. Webinar on ADHD and Dopamine Genetics, Brain and Behavioral Research Foundation, 2018
257. Weizmann Institute, 2018
258. Gonda Multidispinary Brain Research Center, Bar Ilan University, 2018
259. Hadassah Medical Center, Hebrew University, 2018
260. Edmond & Lily Safra Center for Brain Sciences, Hebrew University, 2018
261. Sagol School of Neuroscience, Tel Aviv University, 2018
262. Old Palm Golf Club, 2018

263. Gordon Conference on Glial Biology, Ventura, CA 2019
264. Vanderbilt Brain Institute Special Lecture, 2019
265. Co-Convener, A Celebration of Gene Therapy in Florida: Roundtable, Romer Foundation, 2019
266. Ernie Els Center for Excellence, Brainy Days Program, Jupiter, FL 2019
267. Chamber of Commerce of the Palm Beaches, Science and Technology Committee, South Florida Science Center, 2019
268. Northwestern University, Department of Pharmacology, 2019
269. 16th International Symposium on Cholinergic Mechanisms, 2019
270. Williams island Community Lecture, 2019
271. Boca Raton Innovation Campus Lecture, 2019
272. Dopamine 2020 Conference, 2020 (cancelled due to COVID-19, rescheduled 2021)
273. Science on Tap, South Florida Science Center (cancelled due to COVID-19)
274. Wake Forest University, Department of Pharmacology, 2020
275. Synchrony Symposium, Brain Foundation, 2020
276. Peking University, 2021

HONORARY/ENDOWED LECTURES

1. BioMega Lecture, University of Montreal, Department of Pharmacology, 1993
2. State-of-the-Art Lecture, ASCPT 1996
3. Grass Lecturer, British Columbia Chapter of Society for Neuroscience, 1996
4. Joint Institute for Biological Sciences Colloquium, Keynote Speaker, 1999
5. Spring Brain Conference, Plenary Keynote Speaker, 2000
6. East Tennessee State University, Grass Lecturer, 2001
7. Vaughn Science Lecture, Belmont University, 2003
8. Inaugural Ray Fuller Lecturer in the Neurosciences, ASPET, 2005
9. George Hertting Celebration Lecturer, Medical University of Vienna, 2005
10. Ohio State University, Grass Lectureship, Columbus, Ohio, 2007
11. Chancellor's Award Lecture, Louisiana State University Science Center, 2007
12. ASPET Axelrod Lecture, New Orleans, April 2009
13. Alexander D. Kenny Memorial Lecturer, Texas Tech Univ School of Medicine, 2010
14. Eckerd College Senior Capstone Speaker, 2010
15. F.C. MacIntosh Endowed Lectureship, McGill University, Montreal, 2011
16. Robert M. Hearin Distinguished lectureship, University of Mississippi Medical School, 2013
17. Booney Vance Memorial Lecture, Quinlan College of Medicine, East Tennessee State Univ, 2013
18. University Alabama Birmingham Comprehensive Neuroscience Center Retreat, Keynote Speaker 2013
19. SFB35 Symposium, Keynote Speaker, 2013
20. Brain In Flux ISN Satellite Meeting, Keynote Speaker, 2013
21. Cozart Heritage Lecture, Meharry Medical College, 2014
22. University of Montana Innovation and Imagination, Keynote Speaker, 2014
23. Founders Lecture, American Academy of Child & Adolescent Psychiatry, 2014
24. SFB35 Symposium, Plenary Lecturer, 2016
25. FAU Center for Autism and Related Disabilities Keynote Speaker, 2018
26. Rilett Lecture, Illinois State University, 2020 (Cancelled due to COVID 19, rescheduled 2021)
27. International Transmembrane Transporter Society, Plenary Speaker, 2020
28. Palm Beach Roundtable, Guest Speaker, 2020

GRANT SUPPORT

Past

1. **Emory University Research Council Award, PI**
   Structural Analysis of the Plasma Membrane Monoamine

	Neurotransmitter Transporter Gene Family	1991-1992
2.	**Edward J. Mallinckrodt Junior Faculty Merit Award**	1991-1994
3.	**NIH/NIMH R01 DA07390, PI**	
	Regulation of Serotonin Transporters	1991-2004
4.	**NIH/NINDS R01 NS33373, PI**	
	Molecular Analysis of Norepinephrine Transporters	1994-1998
5.	**Children's Brain Disease Foundation Award**	
	Molecular Biology of Creatine Transport	1993-1994
6.	**Batten's Disease Support and Research Association**	
	Creatine Transport in Batten's Disease	1993-1994
7.	**Emory University Research Council Award**	
	Electrophysiological Analysis of Neurotransmitter Transporter	
	In *Xenopus laevis* oocytes, PI.	1993-1994
8.	**NIH/NIDDK R01 DK44986, Co-Inv (Brian Noe, Emory, PI)**	
	Prohormone Converting Enzyme Specificity and Regulation	1992-1995
9.	**PMAF Fellowship Advisor for Dr. Sally Schroeter**	1994-1996
10.	**Vanderbilt Diabetes Research & Training Pilot**	
	Insulin Regulation of the Norepinephrine Transporter	1995-1997
11.	**NARSAD Established Investigator Award**	1996-1997
12.	**NIH NRSA, Advisor to Dr. Eric Barker**	1995-1998
13.	**CIDA Award for Dr. Mario Saltarelli, Advisor**	1993-1998
14.	**American Cyanamid Research Grant**	
	Molecular Analysis of *C. Elegans* Neurotransmitter Transporters	1997
15.	**NIH/NINDS NS34075, Co-Inv (L. Defelice, Vanderbilt, PI)**	
	Biophysics of Norepinephrine Transporter	1996-2004
16.	**Bristol-Myers Squibb Research Award**	
	Identification and Characterization of a Transporter for the	
	Endogenous Cannabinoid, Anandamide	1997-1999
17.	**U.S. Civilian Research, Co-PI (with Dr. Oleg Brusov & Dr. Richard Lozier)**	
	Analysis of Glycosylation and Phosphorylation of the Human Serotonin	
	Transporters in Mental Illness	1997-1999
18.	**NIH/NIMH T32 MH19732, PI**	
	Cellular and Molecular Neuroscience Training	1999-2002
19.	**Cure Autism Now Research Grant, PI**	
	Serotonin Transporter Gene and Autism	1998-2000
20.	**NIH/NIMH R01 MH58921, PI**	
	Acute Regulation of Norepinephrine Transporters	1998-2004
21.	**NIH SBR MH60063, Co-Inv (Advanced Targeting, Inc, Lead)**	
	Monoclonal Antibodies to Target Specific Neuronal Population	1999
22.	**Department of Energy/Oak Ridge National Laboratory 4500008014, Co-Inv**	
	Tennessee Mouse Consortium (subcontract)	1999
23.	**Intramural Discover Grant, PI**	
	Nanocrystal Probes for CNS Drug Targets	1999-2001
24.	**NIH/NIDA R01 DA07390, PI**	
	Regulation of Serotonin Transporters	1999-2005
25.	**Vanderbilt University Hobbs Society Research Award, PI**	
	Serotonin Transport Polymorphisms in Juvenile Obsessive	
	Compulsive Disorders	2000-2001
26.	**NIH/NIMH MH61971, PI**	
	Targeted Mutagenesis of the Mouse Genome and Neural Phenotypes	2000-2005
27.	**NIH/NIDDK P01 DK58212, Co-Inv (K. Strange, Vanderbilt, PI)**	
	Molecular Physiology of Membrane Transport in *C. elegans*	2000-2005
28.	**NIH/NIHLBI P01 HL056693, Co-Inv (D. Roberton, Vanderbilt PI)**	
	Autonomic Cardiovascular Regulation	2002-2012

29. **NIH/NIDA R01 HD035684, Co-Inv**
Prader-Willi Syndrome: Correlates of Compulsivity 2003-2008
30. **University of North Dakota R01 DA13141, Co-Inv (R. Vaughan, PI)**
Phosphorylation and Regulation of Dopamine Transporters 2003-2008
31. **Institutional Discovery Grant – Vanderbilt University Office of Research**
Cardiovascular Analysis of Choline Transporter Deficient Mice 2004-2005
32. **Alzheimer's Association Zenith Award ZEN-04-1001, PI**
A Chemical Genetic Screen for Modifiers of Presynaptic Choline Transport 2004-2006
33. **NIH/NINDS R01 NS034075, Co-PI (L. Defelice, Vanderbilt PI)**
Biophysics of Norepinephrine Serotonin Transporters 2004-2008
34. **NIH/NIMH R01 MH073159 MERIT AWARD, PI**
Molecular Analysis of Presynaptic Choline Transporters 2004-2014
35. **NIH/NIMH R01 MH058921, PI**
Acute Regulation of Norepinephrine Transporters 2004-2009
36. **NIH/NIBIB EB03728-03 Co-Inv (S. Rosenthal, Vanderbilt, PI)**
Quantum Dot Nanoconjugate Imaging of Neural Receptors 2004-2011
37. **NIH/NIMH MH65215, PI**
Postdoctoral Training Program in Functional Neurogenomics 2004-2016
38. **NARSAD Distinguished Investigator Award**
A Knock-In Model to Elucidate Serotonin Specific Gene Regulatory Networks 2005-2006
39. **Wyeth Research Grant, PI**
Evaluation of The Interaction of Novel Norepinephrine Reuptake Inhibitors At the Norepinephrine Transporter 2005-2006
40. **Forest Research Institute, Research Grant, PI**
Interactions of Escitalopram and R-Citalopram With Human Serotonin Transporters 2005-2006
41. **NIH/NIMH Silvio O. Conte Center P50 MH078028, PI**
Genes Controlling Assembly and Function of Serotonin Systems 2007-2012
42. **NIH/NHLBI, PO1 HL56693, Co-Inv (D. Robertson, Vanderbilt PI)**
Autonomic Cardiovascular Regulation 2007-2012
43. **NIH/NIMH T32 MH065215, PI**
Postdoctoral Training Program in Functional Neurogenomics, PI 2008-2018
44. **Forest Research Institute, Research Grant, PI**
Dissection of the SSRI Actions at Serotonin Transporters using Integrated Structural Biology, Biochemical, and Transgenic Approaches 2008-2009
45. **NIH/NIDA R21 DA027739, PI**
Forward Genetics and the Presynaptic Dopamine Transporter 2009-2011
46. **NIH/NICHD R01 HD065278, PI**
Transgenic Mouse Model to Address Heterogeneity in Autism Spectrum Disorders 2009-2011
47. **NIH/NIMH R01 MH086530, Co-Inv (M. Sarter, U Michigan, PI)**
Choline Transporter Capacity Limits Motivated Behavior on Mice, Rats and Humans 2010-2015
48. **NIH/NCRR P41RR028133 Project Leader (R. Caprioli, Vanderbilt, PI)**
Imaging Mass Spectrometry Research Resource 2011-2015
49. **NIH/NIMH R21MH086033, PI**
Interleukin-1 (IL1) Receptor-Mediated Modulation of Serotonin Transporters 2011-2012
50. **AMGEN Research Project, PI**
Proline Transporter Neurobiology 2012-2013
51. **NIH/NIMH R01 MH095044, PI**
Presynaptic Regulation of *C. elegans* Dopamine Transporter 2012-2017
52. **NeuroDetective/Prexa, PI**
Impact of Novel Agents of Mutant Dopamine Transporters 2013-2013
53. **NeuroDetective/Prexa, PI**

Mechanisms of Action of DAT Inhibitors 2013-2014

54. **Lundbeck, Research Project, PI**
Dissection of the Role of the Presynaptic Serotonin Transporter in the Actions of Vortioxetine 2013-2014

55. **Institute for Psychiatric Neuroscience, PI**
Immune System Signaling Impact on Depression and Social Defeat Behaviors 2013-2014

56. **Dystonia Medical Research Foundation Research Award, PI**
Development of Novel Reagents to Augment Cholinergic Signaling in Dystonia 2014-2016

57. **Silvio O. Conte Center NIH/NIH P50 MH096972, PI**
Enduring Effects of Early-Life Serotonin Signaling 2012-2017

58. **Simons Foundation SFARI Research Award, PI**
Immune p38 MAPK Activation: Convergent Mechanism Linking ASD Models 2014-2017

59. **Pew Charitable Trusts, PI**
Procurement of Leading Technologies in Neuroscience 2017-2019

60. **NIH/NINDS R01NS116914, Co-Inv (N. Quan, FAU PI)**
Neuroinflammation, Neuronal IL-1R1 and Behavior 2020-2025

ACTIVE OR PENDING

1. **NIH/NIMH R01 MH094527 (Blakely, PI)**
Regulation of Serotonin Transporters 1992-2022

2. **NIH/NIMH R01 MH086530 (Blakely PI)**
Knock-In Mouse Model of Dopamine Dysfunction Underlying Traits of ADHD 2014-2020

3. **ASCEND Program**
Advancing STEM-Community Engagement through Neuroscience Discovery
Stiles-Nicholson Foundation 2018-2022

4. **Community Foundation, (Blakely PI)**
Research on Addiction and Depression 2019-2022

5. **FAU-Israel Pilot Grant Initiative** (**Blakely, PI)**
Impact of HBOT on Neuroinflammatory Signaling and Anxiety/Depressive Behavior in Adult Mice Subjected to Neonatal Maternal Separation 2020-2021

7. **Hemp, Inc (Quan, PI)**
Anti-neuroinflammatory mechanisms of CBD and CBG 2020 pending

8. **State of Florida Ed and Ethel Moore Alzheimer's Research** (Blakely, PI) 2021 pending

TRAINING HISTORY

HIGH SCHOOL RESEARCHERS

1. Josh Kutsko, University School of Nashville
2. Victor Borza, University School of Nashville
3. Mira Wasserman, University School of Nashville
4. Sam Fisher, University School of Nashville

UNDERGRADUATE RESEARCHERS

1. Melody Grey, Emory University
2. Andrea Bauman, Emory University
3. Julie Field, Vanderbilt University
4. Ben Waldorf, Vanderbilt University
5. Chelly Hines (Dykes), Vanderbilt University
6. Ariana Lichtenstein, Vanderbilt University
7. Katie Emerson, Vanderbilt University
8. Kristina Patterson, Vanderbilt University

9. Malav Chakravorti, Vanderbilt University
10. Michael McNeil, Brigham Young University
11. Nathan Richtand, Vanderbilt University
12. Chesney Oravec, Vanderbilt University
13. Faizzan Ahmad, Vanderbilt University
14. Meghan Randy, Vanderbilt University
15. Alec Knight, Vanderbilt University
16. Spencer Barrett, Vanderbilt University
17. Peter Reisz, Vanderbilt University
18. Peter Chisnell, Vanderbilt University
19. Raymond Rivera, University of Puerto Rico
20. Jillian Berkman, Bowdoin College
21. William Waters, Lipscomb University PharmD Program
22. Hussain Jinnah, Vanderbilt University
23. Lise Harbom, Vanderbilt University
24. Francisco Ochoa-Vargas, Vanderbilt University
25. Kristen Bater, Vanderbilt University
26. Ryan Glynn, Vanderbilt University
27. Austin Wheeler, Vanderbilt University
28. Claire Miller, Eckard College
29. Evan Pohl, Vanderbilt University
30. Alexandra Moussa-Tooks, Vanderbilt University
31. Jarrod Smith, Vanderbilt University
32. Angela Rao, Vanderbilt University
33. Tessa Popay, University of Auckland
34. Sam Snider, Vanderbilt University
35. Helyn Grissom, Vanderbilt University
36. Michael Levin, Vanderbilt University
37. Alexie Poch, Vanderbilt University
38. Lance Lehman, Vanderbilt University
39. David Roberts, Vanderbilt University
40. Austin McMeekin, Vanderbilt University
41. Joseph Balbona, Vanderbilt University
42. Robert Bruner, Emory University
43. Peace Odiase, Fisk University
44. Megan Kechner, Michigan State University
45. Victoria Hester, Vanderbilt University
46. David Botschner, Vanderbilt University
47. Justin Riele, Vanderbilt University
48. Nina Vaswani, Vanderbilt University
49. Anne Walker, Vanderbilt University
50. Victoria Hester, Vanderbilt University
51. Olivia Lee, Vanderbilt University
52. Jason Thome, Vanderbilt University
53. Emily Xu, Vanderbilt University
54. Peter Rodriguez, Barry University
55. Elizabeth Potts, Florida Atlantic University (Honors College)
56. Divyesh Doddapaneni, Florida Atlantic University (Honors College)
57. Ashleigh Ellis, Florida Atlantic University (Honors College)
58. Rodeania Pert, Florida Atlantic University (Honors College)
59. Edward Jackson, Florida Atlantic University (Honors College)
60. Jason Baluja, Florida Atlantic University
61. Abbie Nwiloh, Florida Atlantic University (Honors College)
62. Faakhira Dilijohn, Florida Atlantic University (Honors College)

63. Alaina Tillman, Florida Atlantic University
64. James Floyd, Florida Atlantic University
65. Zayna Gichi, Florida Atlantic University
66. Camden Weist, Florida Atlantic University (Honors College)
67. Michelle Velez, Florida Atlantic University (Honors College)
68. Angelica Bodine, Florida Atlantic University (College of Science)
69. Jitesh Persaud, Florida Atlantic University (Honors College)

UNDERGRADUATE HONORS STUDENTS

1.	Melody (Mindy) Grey, Emory University (*summa cum laude*)	1995
2.	Julie Field, Vanderbilt University (*summa cum laude*)	2003
3.	Katie Emerson, Vanderbilt University (*summa cum laude*)	2009
4.	Peter Reisz, Vanderbilt University (*cum laude*)	2011
5.	Peter Chisnell, Vanderbilt University (*summa cum laude*)	2011
6.	Hussain Jinnah, Vanderbilt University (*summa cum laude*)	2012
7.	Lise Harbom, Vanderbilt University (*cum laude*)	2012
8.	Kristin Bater, Vanderbilt University (*summa cum laude, Founder's Medal*)	2014
9.	Jarrod Smith, Vanderbilt University (*summa cum laude*)	2015
10.	Sam Snider, Vanderbilt University (*summa cum laude*)	2015
11.	Joseph Balbona, Vanderbilt University (*cum laude*)	2017
12.	Alaina Tillman. FAU/Max Plank Honors Program	2019

POST-BAC, MASTERS, MEDICAL AND DOCTORAL STUDENTS

1.	Haley Melikian, **Ph.D. Advisor**, **Neuroscience** Emory SOM	1991-1995
2.	Yan Qian, **Ph.D. Advisor**, **Neuroscience** Emory SOM	1992-1996
3.	Chris Bradley, **Ph.D. Advisor**, **Neuroscience** Emory SOM	1992-1997
4.	Andrea Bauman, **Ph.D. Advisor**, **Pharmacology**, Vanderbilt SOM	1995-2000
5.	Nancy Flattem, **MS Advisor**, **Pharmacology**, Vanderbilt SOM	1996-2001
6.	Erika Adkins, **Ph.D. Advisor**, **Pharmacology**, Vanderbilt SOM	1996-2000
7.	Shawn Ferguson, **Ph.D. Advisor, Neuroscience**, Vanderbilt SOM	1999-2004
8.	Michelle Mazei-Robison, **Ph.D. Advisor,** Pharmacology, Vanderbilt SOM	2000-2005
9.	Heather Farmer, **MS Advisor**, **Pharmacology**, Vanderbilt SOM	2000-2003
10.	Paul McDonald, **Ph.D. Advisor**, **Neuroscience**, Vanderbilt SOM	2001-2006
11.	Mihaela Bazalakova, **Ph.D. Advisor**, **Neuroscience**, Vanderbilt SOM	2001-2007
12**.**	Jennifer A. Steiner, **Ph.D. Advisor, Neuroscience,** Vanderbilt SOM	2003-2009
13.	Brett English, **Ph.D. Advisor**, **Pharmacology**, Vanderbilt SOM	2004-2009
14.	David Lund, **Ph.D. Advisor**, **Neuroscience**, Vanderbilt SOM	2005-2010
15.	Julie Field, **Ph.D. Advisor**, **Pharmacology**, Vanderbilt SOM	2005-2010
16.	Dhananjay Sakrikar, **Ph.D. Advisor, Neuroscience,** Vanderbilt SOM	2006-2012
17.	Jerry Chang, **Ph.D. Co-Advisor Chemistry** (Rosenthal), Vanderbilt	2006-2012
18.	Marc Mergy, **Ph.D. Advisor**, **Neuroscience**, Vanderbilt SOM	2007-2013
19.	Leda Ramoz, **Master's Advisor**, **Neuroscience**, Vanderbilt SOM	2008-2010
20.	James (Andrew) Hardaway, **Ph.D. Advisor**, **Neuroscience**, Vanderbilt SOM	2008-2013
21.	Oleg Kovtun, **Ph.D. Co-Advisor Chemistry** (Rosenthal), Vanderbilt	2009-2013
22.	Alexander Nackenoff, **Ph.D. Advisor, Pharmacology**, Vanderbilt SOM	2010-2016
23.	Rolicia Martin**, Mentor, IMSD Program**, Vanderbilt SOM	2010-2011
24.	Daniel Bermingham, **Ph.D. Advisor, Neuroscience**, Vanderbilt SOM	2011-2016
25.	Elizabeth Ennis, **Ph.D. Advisor, Pharmacology**, Vanderbilt SOM	2011-2016
26.	Gwynne Davis, **Ph.D. Advisor, Neuroscience**, Vanderbilt SOM	2012-2017
27.	Cassandra Retzlaff, **Ph.D. Advisor, Neuroscience**, Vanderbilt SOM	2012-2017
28.	Chelsea Gibson, **Ph.D. Advisor, Neuroscience**, Vanderbilt SOM	2013-2018
29.	Raajaram Gowrishankar, **Ph.D. Advisor, Neuroscience**, Vanderbilt SOM	2012-2018
30.	Meagan Quinlan, **Ph.D. Advisor, Pharmacology**, Vanderbilt SOM	2013-2019

31.	Isabel Stillman, **Medical Student**, FAU SOM	2016-2018
32.	Max Rabil, **Post-Bac**, Brain Institute FAU	2017-2019
33.	Samantha McGovern, **Master's Advisor, Integrative Biology**, FAU CoS	2018-present
34.	Peter Rodriguez, **Ph.D. Advisor, Integrative Biology**, FAU CoS	2018-present
35.	Samantha Stilley, **Ph.D. Advisor, Integrative Biology – Neuro,** FAU COS	2019-present
36.	Carina Arnold, **Ph.D. Advisor, IMPRS/Integrative Biology – Neuro**, FAU CoS	2019-present
37.	Sean McGlaughlin, **Ph.D. Mentor GNTP Rotation**	2020-Fall

POSTDOCTORAL FELLOWS/RESEARCH FACULTY

1.	Eric Barker, Ph.D. (Vanderbilt University)	1993-1998
2.	Mario Saltarelli, M.D., Ph.D. (Johns Hopkins University)	1993-1995
3.	Sally Schroeter, Ph.D. (University of Michigan)	1994-2000
4.	Subramanian Apparsundaram, Ph.D. (University Houston)	1995-2000
5.	Sammanda Ramamoorthy, Ph.D., (University of Madras)	1995-2000
6.	Jeffrey Fritz, Ph.D., (University of Wisconsin-Madison)	1996-1997
7.	Margaret Sutherland, Ph.D., (Cambridge University)	1996-1999
8.	Patricia Bauman, Ph.D., (University of Arizona)	1997-2002
9.	Alexandra Belous, M.D., Ph.D., (University of Moscow)	1999-2002
10.	Uhna Sung, Ph.D., (Rutgers University, NJ)	1998-2007
11.	Richard Nass, Ph.D., (Johns Hopkins University)	1998-2003
12.	Maureen Hahn, Ph.D., (Wayne State University)	1999-2005
13.	Valentina Savchenko, Ph.D., (Bogomoletz Inst. of Physiology, Kiev, Ukraine)	2000-2006
14.	L. Keith Henry, Ph.D., (University of TN Knoxville)	2000-2008
15.	Hemant Agarwal, M.D., Ph.D., (Vanderbilt University)	2002
16.	Chongbin Zhu, Ph.D., (Shanghai Medical University, China)	2002-2012
17.	Harish Prasad, M.D., Ph.D., (Gauhati University, India)	2002-2012
18.	John Mason, Ph.D., (Oregon Health Sciences University, Portland, OR)	2002-2007
19.	Ana Marin-Carneiro, Ph.D., (Federal University of Minas Gerais, Brazil)	2003-2010
20.	Dawn Matthies, Ph.D., (University of CA at Davis)	2003-2008
21.	Alicia Ruggiero, Ph.D., (Johns Hopkins University)	2004-2012
22.	Brent Thompson, Ph.D. (Vanderbilt University)	2005-2009
23.	Shannon Hardie, Ph.D. (University of Virginia)	2005-2009
24.	Jeremy Veenstra-VanderWeele, M.D. (University of Chicago)	2006-2009
25.	Jomo Claiborne, Ph.D. (Meharry Medical College)	2007-2008
26.	Leah Miller, Ph.D. (Meharry Medical College)	2008-2011
27.	Patricia Ritch, M.D., Ph.D. (University of Alabama at Birmingham)	2008-2009
28.	Ran Ye, Ph.D. (University of Montana)	2009-2015
29.	Nicole Baganz, Ph.D. (UT San Antonio Health Sciences Center)	2010-present
30.	Sarah Bass Robinson, Ph.D. (University of Georgia)	2010-2015
31.	Ericka Holmstrand, Ph.D. (University of Pittsburgh)	2010-2013
32.	Hideki Iwamoto, Ph.D. (Tokyo University)	2010-present
33.	Maureen Hahn, Ph.D. (Wayne State)	2014-present
34.	Tiffany Rogers, Ph.D. (Memphis State Univ)	2014-2015
35.	Matthew Robson, Ph.D. (West Virginia University)	2013-2017
36.	Adele Stewart, Ph.D. (University of Iowa)	2014-present
37.	Osama Refai, Ph.D. (University of Calgary)	2015-present
38.	Paula Gajewski-Kurdziel, Ph.D. (Michigan St.)	2017-present
39.	Felix Mayer, Ph.D. (University of Vienna)	2018-present
40.	Lorena Areal, Ph.D. (Federal University of Minas Gerais)	2018-present

VISITING SCIENTISTS

1.	Robert T. Fremeau, Jr., Ph.D., Duke University	1991
2.	Sammanda Ramamoorthy, Ph.D., Medical College of Georgia	1992-1993
3.	Sally Schroeter, Ph.D., Emory University	1993-1994

4.	Margaret Sutherland, Ph.D., Baylor School of Medicine	1994
5.	Joseph Justice, Jr., Ph.D., Emory University	1995-1996
6.	Twum-Ampofo Ansah, Ph.D., Meharry Medical College	1997-2003
7.	Robert Grammar, Belmont University	2001
8.	Michael Ivy, Ph.D. Tennessee St. Univ	2007-2009
9.	Jin Zingliang, Shanghai Univ	2010-2011
10.	Gabriela Horvath, M.D. Univ British Columbia	2011
11.	Phyllis Freeman, Ph.D., Fisk University	2011-2013

RESEARCH STAFF

1.	Margaret Peek	1990-1992
2.	Kim Moore	1992-1995
3.	Denise Malone	1995-2001
4.	Susan DeFelice	1998-2000
5.	Tammy Jessen	2000-2008
6.	Qiao Han	1998-2016
7.	Jane Wright	1999-2016
8.	Angela Hunt Steele	2000-2016
9.	Christina Svitek	2008-2016
10.	Kathryn Lindler	2009-2012
11.	Gail Ingle	2009-2012
12.	Sarah (Whitaker) Sturgeon	2009-2015
13.	Tracy Moore-Jarrett	2009-2016
14.	Romell Gletten	2013-2014
15.	Maria Davenport	2014-2015
16.	Kimberly Drake	2016
17.	Matthew Gross	2016-present
18.	Peter Rodriguez	2016-present
18.	Catherine Nettesheim	2016-2017
19.	Rania Katamish	2016-present
20.	Samara Vilca	2016-2017
21.	Erika Catriz	2017-present
22.	Sean Mellish	2017-present

WORK/STUDY STUDENTS

1. Christa Green
2. Donnie Zoz
3. Michelle Gilbert
4. Samuel Arthur Moore
5. Cody Carroll
6. Sarah Rachmiel
7. Sonya Sowerby
8. Shauna St. Clair
9. Jordan Knepper
10. Jonathan Dial
11. Terri Ellen Byrd
12. Wynter Foley
13. Spencer Barret
14. Tanner Strickland
15. Ryan Glynn
16. Grace Randazzo
17. Leah Caplan
18. Elliot Dean
19. Sam Snider

20. Victoria Hester
21. Christina Hwang
22. Nicholas Hyman
23. Keeley Spiess
24. Heather Butler

PUBLICATIONS (342 published/*in press* or *submitted*, h-index = 100 (Google Scholar), 29921 citations (Google Scholar)

1. Herndon, J.G., Allen, W.C., and Blakely, R.D. Increases in testosterone levels and in copulatory behavior of male rhesus monkeys following treatment with human chorionic gonadotrophin, **Horm Behav**, 14:337-347, 1980. [PMID: 7216185]

2. Lindsay, W.S., Herndon, J.G., Jr., Blakely, R.D., Justice, Jr., J.B., and Neill, D.B. Voltammetric recording from neostriatum of behaving rhesus monkey, **Brain Res,** 220:391-396, 1981. [PMID: 7284764]

3. Blakely, R.D., and Duvarney, R.C. A microcomputer controlled system for monitoring multiple voltammetric electrodes *in vivo*, **Brain Res Bull**, 10:315-320, 1983. [PMID: 6133600]

4. Justice, Jr., J.B., Wages, S.A., Michael, A.C., Blakely, R.D., and Neill, D.B. Interpretations of voltammetry based on chromatography of striatal dialysate, **J Liq Chrom**, 6:1873-1896, 1983.

5. Blakely, R.D., Wages, S.A., Justice, Jr., J.B., Herndon, J.G., and Neill, D.B. Neuroleptics increase striatal catecholamine metabolites but not ascorbic acid in dialyzed perfusate, **Brain Res**, 308:1-8, 1984. [PMID: 6206916]

6. Blakely, R.D., Ory-Lavollée, L., Thompson, R.C., and Coyle, J.T. Synaptosomal transport of radiolabel from N-acetyl-aspartyl-[$_3$H]glutamate suggests a mechanism of inactivation of an excitatory neuropeptide, **J Neurochem**, 47:1013-1019, 1986. [PMID: 2875126]

7. Coyle, J.T., Blakely, R.D., Zaczek, R., Koller, K.J., Abreu, M., Ory-Lavollée, L., Fisher, R., French-Mullen, J.M., Carpenter, D.O. Acidic peptides in brain: Do they act at putative glutamatergic synapses? **Adv Exp Med Biol**, 203:375-384, 1986. [PMID: 2878566]

8. Fisher, R.S., French-Mullen, J.M.H., Zaczek, R., Blakely, R.D., and Coyle, J.T. Dipeptides containing glutamate as endogenous neuroexcitatory agents, in **Neurotransmitters and Epilepsy**, Raven Press, New York, 1986.

9. Robinson, M.B., Blakely, R.D., and Coyle, J.T. Quisqualate selectively inhibits a brain peptidase which cleaves N-acetyl-L-aspartyl-L-glutamate *in vitro*, **Eur J Pharm**, 130:345-347, 1986. [PMID: 3539626]

10. Blakely, R.D., Ory-Lavollée, L., Grzanna, R., Koller, K.J., and Coyle, J.T. Selective immunocytochemical staining of mitral cells in rat olfactory bulb with affinity purified antibodies against N-acetyl-aspartyl glutamate, **Brain Res**, 402:373-378, 1987. [PMID: 2435366]

11. Ory-Lavollée, L., Blakely, R.D., and Coyle, J.T. Neurochemical and immunocytochemical studies on the distribution of N-acetyl-aspartylglutamate and N-acetyl-aspartate in rat spinal cord and some peripheral nervous tissues, **J Neurochem**, 48:895-899, 1987. [PMID: 3543223]

12. Robinson, M.B., Blakely, R.D., Couto, R., and Coyle, J.T. Hydrolysis of the brain dipeptide N-acetyl-L-aspartyl-L-glutamate: Identification and characterization of a novel N-acetylated a-linked acidic dipeptidase activity from rat brain, **J Biol Chem**, 262:14498-14506, 1987. [PMID: 3667587]

13. Blakely, R.D., Ory-Lavollée, L., and Coyle, J.T., Specific alterations in the levels of N-acetyl-aspartyl-glutamate in the nervous system of the dystrophic mouse, **Neurosci Lett**, 79:223-228, 1987. [PMID: 3670731]

14. Forloni, G., Grzanna, R., Blakely, R.D., and Coyle, J.T. Co-localization of N-acetyl-aspartyl-glutamate in central cholinergic, noradrenergic, and serotonergic neurons, **Synapse**, 1:455-460, 1987. [PMID: 3505373]

15. Blakely, R. D. The Neurobiology of N-acetyl-aspartyl-glutamate, *Doctoral Thesis*, Department of Neuroscience, The Johns Hopkins School of Medicine, Baltimore, MD, 1987.

16. Blakely, R.D., Robinson, M.B., Thompson, R.C., and Coyle, J.T. Hydrolysis of the brain dipeptide N-acetyl L-aspartyl-L-glutamate: Subcellular and regional distribution, ontogeny, and the effect of lesions on N-acetylated-alpha-linked acidic dipeptidase activity, **J Neurochem**, 50:1200-1209, 1988. [PMID: 3346674]

17. Guarda, A.S., Robinson, M.B., Ory-Lavollée, L., Forloni, G., Blakely, R.D., and Coyle, J.T. Quantitation of N-acetyl-aspartyl-glutamate in microdissected rat brain nuclei and peripheral tissues: Findings with a novel liquid phase radioimmunoassay, **Brain Res**, 427:223-232, 1988. [PMID: 3401700]

18. Blakely, R.D., Robinson, M.B., Guarda, A.S., and Coyle, J.T., A re-examination of the interaction N-acetyl-L-aspartyl-L-glutamate with a subpopulation of rat brain membrane L-[$_3$H]-glutamate binding sites, **Eur J Pharm**, 151:419-426, 1988. [PMID: 2850921]

19. Blakely, R. D., Robinson, M. B., and Amara, S. G. Expression of neurotransmitter transport from rat brain mRNA in *Xenopus laevis* oocytes, **Proc Natl Acad Sci USA**, 85:9846-9850, 1988. [PMID: 2904681]

20. Blakely, R.D., and Coyle, J.T., The neurobiology of N-acetylaspartylglutamate, in **International Review of Neurobiology,** (J.R. Smythies and R. Bradley, editors), Academic Press, New York, 39-100, 1988.

21. Pacholczyk, T., Blakely, R. D., and Amara, S. G. A device to rapidly core out tissue culture plates for autoradiographic visualization of cells transfected with cDNA libraries, **BioTechniques**, 9:557-558, 1990. [PMID: 2268421]

22. Coyle, J.T., Stauch-Slusher, B., Tsai, G., Rothstein, J., Meyehoff, J.L., Simmons, M., and Blakely, R.D., N-Acetyl-aspartylglutamate: Recent Developments, in **Excitatory Amino Acids**, (B.S. Meldrum, F. Moroni, R.P. Simon, and J.H. Woods, editors), Raven Press, New York, 69-77, 1991.

23. Blakely, R. D., Clark, J. A., Pacholczyk, T., and Amara, S. G., Distinct, developmentally regulated brain mRNAs direct the synthesis of neurotransmitter transporters, **J Neurochem**, 56:860-871, 1991. [PMID: 1671586]

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VIDEOS AND PODCASTS

1. Nikon Center of Excellence
   https://www.youtube.com/watch?v=KiquVAdzd2w
2. Building the future of neuroscience at the FAU Brain Institute,
   https://www.youtube.com/watch?v=-KEqH65jTqU
3. Genetics and ADHD, Science Friday Radio Interview
   http://ec2-23-21-117-9.compute-1.amazonaws.com/topics/biology/segment/07/11/2008/genetics-and-adhd.html
4. Clearing Your Mind of Neurotransmitters, NIH Neuroscience Lecture
   https://videocast.nih.gov/podcast/nss/nss091106/nss091106.m4v
5. People Behind the Science Podcast Interview
   http://www.peoplebehindthescience.com/dr-randy-blakely
6. Rare Misspellings of the Genome, Dopamine Mishandling and ADHD
https://www.bbrfoundation.org/event/rare-misspellings-genome-dopamine-mishandling-and-adhd
7. Research in the Blakely Lab at the FAU Brain Institute
   https://www.youtube.com/watch?time_continue=2&v=yd0rZ5Lg_x4
8. Study Pinpoints Pathway Impacting Features of Autism
   https://www.fau.edu/newsdesk/articles/blakely-autism-study.php
9. Seminar at Edmund and Lily Safra Center (ELSC), Hebrew University
   https://www.youtube.com/watch?v=nSp8BnBQ8HA
10. Animal Models of Psychiatric Disorders: Opportunities for Insights or a Fool's Paradise, Vanderbilt University, https://www.youtube.com/watch?v=PHWsL8Y9NqM&t=18s
11. Scientists pinpoint pathway that impacts features of autism
    https://www.newswise.com/articles/scientists-pinpoint-pathway-that-impacts-features-of-autism

CURRICULUM VITAE

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EDUCATION

1996 Visiting Fellowship in Functional MRI, Massachusetts General Hospital
1982 Ph.D., Physiology/Anatomy, University of California, Berkeley
1972 B.A. (Honors), Biopsychology, The Johns Hopkins University

PROFESSIONAL POSITIONS

2015-2019 Interim Director, Center for Complex Systems and Brain Sciences, Florida Atlantic University
2013-2018 Domain Curator for Large-Scale Computational Neuroscience, Neuroimaging Informatics Tools and Resources Clearinghouse (NITRC)
1997- Professor, Department of Psychology and Center for Complex Systems & Brain Sciences, Florida Atlantic University
1990-1997 Associate Professor, Department of Psychology and Center for Complex Systems, Florida Atlantic University
1986-1990 Senior Scientist, EEG Systems Laboratory, San Francisco, CA
19881990 Lecturer, Pacific Graduate School of Psychology, Palo Alto, CA
1982-1986 Postdoctoral Fellow, EEG Systems Laboratory, San Francisco, CA

PROFESSIONAL SERVICE

2017 Organizer, Symposium on Models of Memory and Anticipatory Coding, Society for Neuroscience
2016 Organizer, Conference on Brain Sciences from a Complex Systems Perspective, Center for Complex Systems and Brain Sciences, Florida Atlantic University
2014-2015 Executive Committee, Department of Psychology, Florida Atlantic University
2011-2017 Editorial Board, Computational Intelligence and Neuroscience
2009- Action Editor, Neural Networks
2011 Organizer, NSF Special Symposium, From Brains to Machines (IJCNN11) 2011 Special Sessions Chair, International Joint Conference on Neural Networks (IJCNN11)

2010 Organizer, NSF Conference on Neurocognitive Networks (Neurocognitive Networks 2010)
2009-2011 Board of Governors, International Neural Networks Society (INNS)
2009 Organizer, Symposium on Top-Down Mechanisms of Visual Attention, Computational Cognitive Neuroscience Conference
2008-2009 Program Co-Chair, International Joint Conference on Neural Networks (IJCNN09)
2008-2009 Program Committee, International Joint Conference on Neural Networks (IJCNN09)
2008 Scientific Committee, International Conference on Cognitive Neuroscience
2007 Co-Organizer, NSF Conference on Brain Network Dynamics
2007 Panel, NSF New Frontiers in Dynamic Systems
2004-2007 Program Committee, Organization for Computational Neurosciences
2004 Program Committee, Conference on Modeling Mental Processes and Disorders, Agora for Biosystems
2004 Review Committee, Computational Neuroscience Meeting (CNS'04) 2003 Review Committee, Computational Neuroscience Meeting (CNS'03)
2000 Review Committee, Computational Neuroscience Meeting (CNS'00)
1999 Review Committee, International Joint Conference on Neural Networks (IJCNN'99)

EXTRAMURAL FUNDING

2011- 2014 *Electrophysiological Studies of Human Attention*. NIMH (MH096482) ($93,506 total direct costs) [Co-PI]
2011 *From Brains to Machines: A Special Program at the 2011 International Joint Conference on Neural Networks*. NSF (1110883) ($19,990 total direct costs) [Co-PI]
2009-2014 *Distributed Cortical Processing in Visual Working Memory*. NIMH (MH081162) ($387,000 total direct costs) [Co-PI]
2009 *Conference on Neurocognitive Networks*. NSF (0924414) ($33,000 total direct costs) [PI]
2007 *Conference on Brain Network Dynamics*. NSF (0652375) ($30,000 total direct costs) [Co-PI]
2006-2009 *Attention Related Ensemble Activity in Visual Cortex*. NIMH (MH072034) ($485,000 total direct costs) [Co-Investigator]
2005-2009 *Quantitative Tools for the Analysis of Coordinated Activity in Brain Circuits*. NINDS (NS054314) ($950,000 total direct costs) [Co-Investigator]
2005-2008 *Single Trial Analysis of Event Related Signals*. NIMH (MH070498) ($475,000 total direct costs) [Co-Investigator]
2004-2006 *Granger Causality Spectra and Neural Oscillations*. NIMH (MH071620) ($200,000 total direct costs) [Co-Investigator]
2003-2005 *Corticocortical Interactions in Visual Working Memory*. NIMH (MH069374) ($200,000 total direct costs) [Co-Investigator]

2002-2007 *Dynamics of Large Scale Cortical Networks*. NIMH (MH64204) ($650,000 total direct costs) [Principal Investigator]
2002-2005 *Network for the Study of Brain Systems and Dynamics*. NINDS (NS045171) ($825,000 total direct costs) [Co-Investigator]
2001-2004 *Large-Scale Distributed Cortical Networks in Vision*. NSF (IBN0090717) ($257,695 total direct costs) [Principal Investigator]
1998-2000 *Development of Advanced Techniques for Analyzing Cortical Dynamics*. NIMH (MH58190) ($100,000 total direct costs) [Principal Investigator]
1997-2000 *Visuomotor Control by Large-Scale Distributed Cortical Networks*. NSF (IBN9723240) ($186,256 total direct costs) [Principal Investigator]
1995-1997 *Visuomotor Control by Large-Scale Distributed Cortical Networks*. NSF (IBN9511804) ($77,841 total direct costs) [Principal Investigator]
1992-2005 *Dynamic Patterns in Complex Biological Systems*, NIMH [EEG Project Director]
1990-1994 *Functional Topography of Primate Neocortex*. NIMH (MH44370) ($240,403 total direct costs) [Principal Investigator]
1988-1990 *Mass Action of Human Neocortex*, NIMH, [Co-Principal Investigator]

TEACHING EXPERIENCE

Graduate
Cognitive Neuroscience in Society
Advanced Cognitive Neuroscience
Cognitive Neuroscience
Computational Neuroscience
Seminar in Attention
Neurobiological Signal Processing
Physiological Psychology

Undergraduate
Cognitive Neuroscience
Cellular Neuroscience
General Psychology
Introductory Biological Bases of Behavior
Advanced Biological Bases of Behavior

REVIEW SERVICE

NIH/NSF
NIH/ZRG1F02B-D, June 2015 NSF/CNIC,
September, 2014
NIH/ZRG1F02B-D, May, 2014
NIH/CSR CP, June, 2012
NSF Neural Systems, DIOS, September, 2011
NSF SLC SVT, June, 2010
NSF IOSE PIRE RSV Panel, May, 2010

NSF Collaborative Research in Computational Neuroscience (CRCNS), January, 2009
NSF Emerging Frontiers in Research and Innovation, December, 2007
NIH/CSR IFCN-E (02) Scientific Review Group (Cognition), March, 2006
NIH NIMH B/START Program, Jan 28, 2005
NIH MDCN-G (55) Scientific Review Group (Human Brain Project/BIST), Sep 23-24, 2004
NIH Risk, Prevention & Health Behavior 20 L Integrated Review Group, July 12, 2004
NIH MDCN-G (55) Scientific Review Group (Human Brain Project/BIST), Feb 5-6, 2004
NIH Risk, Prevention & Health Behavior 20 L Integrated Review Group, Nov 3, 2003 NIH
SSS-E (95) Scientific Review Group (Human Brain Project), May 29-30, 2003
NIH Multidisciplinary Special Emphasis Panel, 2000
NIH Multidisciplinary Special Emphasis Panel, 1994

Other Agencies/Institutions

Air Force Office of Scientific Research
British Columbia Ministry of Advanced Education
Canadian Institutes of Health Research
Chinese University of Hong Kong Grants Committee
DOD/USAMRMC/PRMRP Neuroprosthetics
DOD/USAMRMC/TSCRP Cell and Molecular Biology
Vanderbilt University Central Discovery Grant Program

Journals

Annals of the New York Academy of Sciences
Biological Cybernetics
Brain Research
Brain Research Bulletin
Cerebral Cortex
Clinical Neurophysiology
Computational Intelligence and Neuroscience
Cognitive Brain Research
Current Biology
European Journal of Neuroscience
Experimental Brain Research
IEEE Transactions on Biomedical Engineering
International Journal of Neuroscience
Journal of Cognitive Neuroscience
Journal of Computational Neuroscience
Journal of Neurophysiology
Journal of Neuroscience
Journal of Neuroscience Methods
Nature
Nature Reviews Neuroscience
Neural Networks
Neurocomputing
Neuroimage
Neuroinformatics
Neuron
NeuroReport
Neuroscientist
PLoS Biology
PLoS Computational Biology
Proceedings of the National Academy of Sciences
Scholarpedia
Science
Trends in Cognitive Sciences

INVITED LECTURES (124)

Top-Down Interareal Cortical Coupling in Cognition. Biomedical Engineering Department, Florida International University, October 6, 2017.

Anticipatory Top-Down Cortical Coupling. ICCN, Seville, Spain, August 4, 2017.

Executive Control by the Prefrontal Cortex. IFISC, Universitat de les Illes Balears, May 9, 2017.

Olfactory Interdependency. IFISC, Universitat de les Illes Balears, May 17, 2017.

Complex Dynamic Brain Networks. IFISC, Universitat de les Illes Balears, May 17, 2017.

Anticipatory Top-Down Coupling of V1 and Extrastriate Cortex in Visual Expectation. Society for Neuroscience Nanosymposium, San Diego, CA, November 15, 2016.

The Clinical Potential of EEG Functional Connectivity Analysis. EEG Source Imaging Session. International Organization of Psychophysiology. Havana, Cuba, August 31, 2016.

AutoRegressive Modeling of Directed Functional Connectivity in the Brain. Havana, Cuba, August 30, 2016.

The Wave Packet in Multi-Area Cortical Modeling. Organization for Computational Neuroscience, Jeju, South Korea, July 7, 2016.

The Potential of EEG Functional Connectivity Analysis in the Clinic. Society for Brain Mapping and Therapeutics, Miami, FL, April 9, 2016.

Functional Connectivity Analysis of Neural Data for Therapeutics. Society for Brain Mapping and Therapeutics, Miami, FL, April 9, 2016.

Top-Down Processing in Neurocognitive Networks. BrainModes Conference: Oscillations and Large-Scale Networks, Georgia State University, Atlanta, GA, December 11, 2015.

Source-Resolved Connectivity Analysis. 14th International Workshop on Brain Connectivity, UC San Diego, La Jolla, CA, June 12, 2015.

Spectral Methods in EEG Analysis. Keynote Address, Brainstorm Workshop, Florida International University, October 13, 2014.

Top-Down Processing in Neurocognitive Networks. Quantitative Theories of Learning, Memory and Prediction: National Science Foundation Workshop, Arlington, VA, May 8, 2014.

Beta Synchrony in Visual Expectation. Krasnow Institute, George Mason University, May 7, 2014.

Beta Synchrony and Top-Down Feedforward Processing in Visual Expectation. Workshop on Connections & Communications in the Brain, Banbury Center, Cold Spring Harbor Laboratory, April 7, 2014.

Neurocognitive Networks and Task Set. Purdue University, February 3, 2014.

Dynamic Function Interactions in Cerebral Cortex. FAU Neuroscience Colloquium Series, January 14, 2014.

Dynamic Function Interactions in Cerebral Cortex. Laboratory of Cognitive Neuroscience, Ecole Normale Superieure, Paris, France, December 13, 2013.

Dynamic Function Interactions in Cerebral Cortex. SFB Lecture Series, Medical University Hamburg-Eppendorf, Hamburg, Germany, December 9, 2013.

Workshop on Directed Functional Connectivity Analysis using Wiener-Granger Causality. SFB Methods Academy, Medical University Hamburg-Eppendorf, Hamburg, Germany, December 5, 2013.

Neurocognitive Networks and Set. NSF-Sponsored Special Workshop on Cognitive Science: The Computational Paradigm Symposium, International Joint Conference on Neural Networks, Dallas, Texas, August 6, 2013.

Set-Related Neurocognitive Networks and Neurodynamic Processing. 4_{th} International Conference on Cognitive Neurodynamics, Sigtuna, Sweden, June 24, 2013.

Large-Scale Synchronous Beta Rhythms. Mathematical Biosciences Institute Workshop, Ohio State University, March 20, 2013.

Directed Functional Connectivity Analysis Based on Granger Causality. MURI Winter School on Dynamics of Multifunction Brain Networks, UC San Diego, January 11, 2013.

Set-Related Neurocognitive Networks and Neurodynamic Processing. MURI Winter School on Dynamics of Multifunction Brain Networks, UC San Diego, January 10, 2013.

Top-Down Modulation of Visual Cortex in Visual Spatial Attention. Department of Psychology, University of Amsterdam, September 20, 2012.

Top-Down Modulation of Visual Cortex in Visual Spatial Attention. Netherlands Institute for Neuroscience, Amsterdam, The Netherlands, September 19, 2012.

Top-Down Modulation of Visual Cortex in Visual Spatial Attention. Maastricht Brain Imaging Center, Maastricht, The Netherlands, September 17, 2012.

Anticipatory Top-Down Modulation in a Large-Scale Brain Network. Symposium on Complex Systems and Brain Networks, Hanse-Wissenschaftskolleg Institute for Advanced Study, Delmenhorst, Germany, September 14, 2012.

Anticipatory Top-Down Modulation of Visual Cortex in Visual Spatial Attention. Ernst Strüngmann Institute, Frankfurt, Germany, September 10, 2012.

Top-Down Attentional Control in Posner Spatial Cueing. Symposium in Honor of Michael I. Posner, Center for Complex Systems & Brain Sciences, Florida Atlantic University, December 8, 2011.

The Cerebral Cortex as an Anticipatory System. CLION 2011 Symposium, University of Memphis, October 13, 2011.

The Expectant Cortex. Washington University School of Medicine, August 14, 2011.

The Expectant Cortex. Plenary Talk. Eighth International Conference on Complex Systems, June 30, 2011.

Dynamic Neurocognitive Network Organization from Autoregressive Modeling of Neural Signals. Department of Psychiatry & Behavioral Neurosciences, Wayne State University School of Medicine, October 12, 2010.

Neurocognitive Networks in Health and Disease. Chairman's Grand Rounds Lecture, Department of Psychiatry & Behavioral Neurosciences, Wayne State University School of Medicine, October 13, 2010.

Anticipatory Cortical Function. FAU Neuroscience Colloquium Series, March 23, 2010.

Anticipatory Cortical Function. Helen Wills Neuroscience Institute, University of California, Berkeley, March 12, 2010.

Anticipatory Cortical Function. Department of Radiology and Biomedical Imaging, University of California, San Francisco, March 11, 2010.

Understanding Large-Scale Cortical Coordination. Brain Coordination Dynamics Conference, Florida and Western Caribbean, March 4, 2010.

Top-Down Influences in Visual Attention: An Overview. Symposium on Top-Down Mechanisms of Visual Attention, Computational Cognitive Neuroscience Conference, Boston, Mass, November 18, 2009.

The Neurocognitive Network: A Bridge from Brain to Mind. Institute of Cognitive Neuroscience, Centre National de la Recherche Scientifique (CNRS), Marseille, France, July 1, 2009.

Predictive Top-Down Processing in Vision. Department of Neurophysiology and Pathophysiology, University Medical Center Hamburg-Eppendorf, Hamburg, Germany, June 29, 2009.

Control of Visual Spatial Attention. International Workshop on Complex Dynamics in Large-Scale Interacting Brain Systems: Towards Physical Models of Sleep and Consciousness. Max Planck Institute for the Physics of Complex Systems, Dresden Germany, June 25, 2009.

Dynamic Neurocognitive Network Organization from Autoregressive Modeling of Neural Signals. Institute for Psychology, University of Leipzig, Leipzig, Germany, June 17, 2009.

Top-Down Modulation Carried by High-Frequency Oscillatory Synchronization. International Conference on Cognitive Neuroscience (ICONX), Bodrum, Turkey, September 3, 2008.

The Amazing Power of Attention. Learning Brain Expo, Orlando, FL, July 26, 2008.

The Neuroscience of Cognition. Learning Brain Expo, Orlando, FL, July 26, 2008.

Directed Influences in Neurocognitive Networks. Washington University School of Medicine, June 16, 2008.

Top-Down Influences in Neurocognitive Networks. National Institute of Mental Health, May 22, 2008.

Neurocognitive Networks of Synchronized Cortical Oscillations. Stanford Cognitive and Systems Neuroscience Laboratory, Stanford University School of Medicine, January 17, 2008.

Neurocognitive Networks of Synchronized Cortical Oscillations. Institute for Psychology, Otto-von-Guericke University, Magdeburg, Germany, August 6, 2007.

Functional Cortical Networks of Synchronized Beta Oscillations in Steady-State Behavior. Neurologic University Clinic, University of Freiburg, Freiburg, Germany, July 19, 2007.

Oscillatory Cortical Network Dynamics. Minisymposium on Dynamical Systems Approaches in Neuroscience: Theory, Experiments, and Applications, 6_{th} International Congress on Industrial and Applied Mathematics, Zurich, Switzerland, July 17, 2007.

Granger Causality in Large-Scale Cortical Networks. Workshop on Mathematical Aspects of Neuroscience, Department of Mathematics, Indian Institute of Science, Bangalore, India, July 14, 2007.

Signal Processing in the Central Nervous System. Meeting of the Association of Physiologists and Pharmacologists of India, National Institute of Mental Health and Neurosciences, Bangalore, India, July 13, 2007.

Large-Scale Cortical Networks. Workshop on Mathematical Aspects of Neuroscience, Department of Mathematics, Indian Institute of Science, Bangalore, India, July 9, 2007.

Cortical Electrophysiology. Workshop on Mathematical Aspects of Neuroscience, Department of Mathematics, Indian Institute of Science, Bangalore, India, July 9, 2007.

Dynamic Brain Network Assessment of Cognitive Function. Center for Computational Biology, University of California at Los Angeles, June 7, 2007.

Charting the Dynamics of Neurocognitive Networks. University of Southern California, June 6, 2007.

Connectivity, Coordination, Coupling and Causality. Sixth International Workshop on Brain Connectivity, Universitat Pompeu Fabra, Barcelona, Spain, May 29, 2007.

The Role of Interdependency Analysis in the Assessment of Brain Function and Dysfunction. Allen Institute for Brain Science, February 16, 2007.

The Dynamic Formation of Large-Scale Cortical Networks by Coordination of Oscillatory Assemblies. Conference on Brain Network Dynamics, UC Berkeley, January 26, 2007.

Phase Synchronization as the Basis for Large-Scale Cortical Network Organization. Workshop on Brain Physics and Mind Dynamics. Mar del Plata, Argentina, December 6, 2006.

Derivation of Network Graphs by Autoregressive Spectral Analysis of Neuroelectric Data. XV Conference on Nonequilibrium Statistical Mechanics and Nonlinear Physics. Mar del Plata, Argentina, December 6, 2006.

Granger Causality in Neuroscience: Scope and Limits. KFKI Research Institute Workshop, Csilleberc, Hungary, September 1, 2006.

Large-Scale Cortical Oscillatory Network Graphs. US-Hungarian Workshop on LargeScale Random Graph Methods for Modeling Mesoscopic Behavior in Biological and Physical Systems, Budapest, Hungary, August 29, 2006.

Top-Down Cortical Influences in Visual Expectation. Workshop on Neurodynamics of Higher-Level Cognitive Behavior, WCCI 2006, Vancouver, Canada, July 17, 2006.

Granger Causality Analysis as a Tool in the Neural Modeling of Emotion. Workshop on Neural Modeling of Emotion, WCCI 2006, Vancouver, Canada, July 17, 2006.

Cortical Functional Network Organization from Analysis of Local Field Potential Oscillations, Third Workshop on Statistical Analysis of Neuronal Data (SAND3), Carnegie Mellon University, Pittsburgh, May 13, 2006.

Multivariate Autoregressive Modeling of Neural Data. Dynamic Neuroimaging Laboratory, University of California, San Francisco, July 11, 2005.

Dynamics of Large-Scale Cortical Networks. Brain Dynamics and Cognition Conference, Izmir, Turkey, May 17, 2005.

Large-Scale Neural Coordination in Cognitive Function. Center for Computational Biology, Montana State University, May 5, 2005.

The Evolution of Large-Scale Neural Coordination State in Cognitive Function. Department of Psychology, Indiana University, April 22, 2005.

Multifunctionality of Beta Oscillations in Macaque Cerebral Cortex. Workshop on "Computational Perspectives on Neural Oscillations", Computational & Systems Neuroscience Meeting, March 22, 2005.

Coordination and Causality Patterns of Beta-Frequency Cortical Local Field Potentials Associated with Readiness and Anticipation in a Visuomotor Discrimination Task. University of California, Irvine. October 28, 2004.

Synchronized Sensorimotor Beta Oscillations in Motor Maintenance Behavior. Advances in Computational Motor Control III Symposium at the SFN Conference. San Diego, October 22, 2004.

Beta-Oscillatory Cortical Networks and Motor Maintenance Behavior. Agora for Biosystems Workshop on "Modeling Mental Processes and Disorders". Kusadasi, Turkey, May 28, 2004.

Inferential Constraint Sets in the Organization of Visual Expectation. Symposium on Intentional Dynamic Systems (IDS'04), University of Memphis, April 25, 2004.

Evidence for Top-Down Influences in Anticipatory Large-Scale Cortical Networks. Redwood Neuroscience Institute, July 30, 2003.

Causal Influences Between Beta-Frequency Oscillatory Neuronal Assemblies in

Monkey Sensorimotor Cortex. Dynamic Neuroimaging Laboratory, UCSF, July 29, 2003.

Attentional Allocation in Large-Scale Cortical Networks. Workshop on "Attention: Theory and Mechanism". CNS'03, Alicante, Spain, July 9, 2003.

Coordination Dynamics in Neurocognitive Networks. Workshop on "Nonlinear SpatioTemporal Neural Dynamics - Experiments and Theoretical Models". CNS'03, Alicante, Spain, July 8, 2003.

Spatiotemporal Organization and Functional Relations of Cortical Phase-Synchronized Oscillations in Visuomotor Processing. Functional Brain Connectivity Workshop, Cambridge University, May 3, 2003.

Computational Investigation of Neurocognitive Network Dynamics. Joint Science Department, The Claremont Colleges, February 27, 2003.

The Dynamics of Large-Scale Neurocognitive Networks. International School for Advanced Studies, Trieste, Italy, November 28, 2002.

Multivariate Statistical Analysis of Cortical Network Dynamics. Cornell University Medical School, New York NY, May 20, 2002.

Cortical Coordination Dynamics and Cognition. 57th Annual Convention, Society of Biological Psychiatry, Philadelphia, PA, May 18, 2002.

Cortical Coordination Dynamics and Cognition. Montana State University, Bozeman MT, May 14, 2002.

The Role of Synchronized Beta Oscillations in Anticipatory Visuomotor Behavior. International Conference and Workshop on Cooperative Dynamics of Neural Systems. Pucon, Chile, April 3, 2002.

Statistical Analysis of Fast Cortical Network Dynamics. International Conference and Workshop on Cooperative Dynamics of Neural Systems. Pucon, Chile, April 1, 2002.

Disruption of Cortical Coordination Dynamics as a Putative Contributor to Cognitive Disorders. Agora Workshop on Modeling Mental Disorders and Processes. Abisko, Sweden, January 18, 2002.

Competition for Attentional Resources in Distributed Neocortical Networks Revealed by Local Field Potential Analysis. Karolinska Institute, Stockholm Sweden, January 15, 2002.

Competition for Attentional Resources in Distributed Neocortical Networks Revealed by Local Field Potential Analysis. Swedish University of Agricultural Sciences, Ultuna Sweden January 14, 2002.

Competition for Attentional Resources in Distributed Neocortical Networks Revealed by Local Field Potential Analysis. David Bodian Seminar in Neuroscience. Zanvyl Krieger Mind/Brain Institute, Johns Hopkins University, October 22, 2001.

The Emergence of Cognitive Function from the Operation of Large-Scale Cortical Networks. James S. McDonnell Foundation Workshop on "What Does the Brain Think of the Mind?". Toronto, ON, March 23, 2001.

Fast Dynamics of Large-Scale Cortical Networks in Visual Anticipation and Perception. Fourth Annual Pan Pacific Workshop on Brain Topography, Irvine, CA, November 11, 2000.

Neurocognitive Principles in Large-Scale Brain Modeling. Workshop on Large-Scale Models in Computational Neuroscience. Brugge, Belgium, July 19, 2000.

Separation of Feedforward and Feedback Causal Influences in the Primate Visual Cortex. Computation and Neural Systems '00, Brugge, Belgium, July 17, 2000.

Using Multivariate Autoregressive Modeling to Investigate the Dynamic Functional Organization of the Primate Visual Cortex. Institute of Experimental Physics, Warsaw University, July 12, 2000.

Coordination Dynamics of Large-Scale Cortical Networks as the Basis for Cognitive Function, 12th Annual Convention, American Psychological Society, Miami, FL, June 10, 2000.

Large-Scale Synchronization Phenomena in the Primate Visual Cortex. Conference on Nonlinear Synchronization in Neuroscience, Krasnow Institute, George Mason University, May 19, 2000.

Insights into Cortical Functional Dynamics from Ultra-Short-Time MVAR-Based Spectral Analysis. Medical Neurology Branch, Division of Intramural Research, National Institute of Neurological Disorders and Stroke, May 18, 2000.

The Organization and Reorganization of Large-Scale Cortical Networks in Visual Anticipation and Perception. Workshop on Functional Neuroimaging and Theories of Cognitive Dynamics, Duke University, March 17, 2000.

Interdependency Dynamics of Large-Scale Networks in the Cerebral Cortex, The Fourth Tamagawa International Dynamic Brain Forum, Pacific Grove, CA, September 14, 1999.

Coordination Dynamics in Large-Scale Cortical Networks, 1999 International Joint Conference on Neural Networks (IJCNN'99), July 13, 1999.

EEG as a Window on Brain Function: EEG Synchronization and Brain Self-Organization, Psychology Department, Chinese University of Hong Kong, June 8, 1999.

Dynamic Analysis of Distributed Neocortical Systems, David Bodian Seminar in Neuroscience, Zanvyl Krieger Mind/Brain Institute, Johns Hopkins University, December 7, 1998.

The Role of Large-Scale Cortical Coordination Dynamics in Cognitive Function, International Conference on Complex Systems, October 29, 1998.

Charting the Functional Interdependence of Cortical Areas, Boston University, October 28, 1998.

Cortical Field Potentials: Their Genesis and Functional Role, Workshop on Analysis of Neural Data, Woods Hole, MA, August 21, 1998.

Investigation of Cooperative Cortical Dynamics by Multivariate Autoregressive Modeling of Event-Related Local Field Potentials, Computation and Neural Systems ’98, Santa Barbara, July 27, 1998.

The Dynamic Manifestation of Cognitive Structures in the Cerebral Cortex, International Workshop on "New Trends in Cognitive Science", Austrian Society for Cognitive Science, Vienna, Austria, May 14, 1997.

The Basis for Aperiodic Cortical Population Activity and its Putative Information Processing Role, Winter Conference on Brain Research, January 30, 1996.

The Characterization of Cognitive State by Mapping Transient Inter-Areal Cortical Synchronization, Keynote address, Symposium on Alzheimer Disease, University of North Dakota Medical Education Center, September 8, 1995.

Synchrony and Oscillations in Neural Circuits, Looking Ahead in Sensorimotor Control: Big Questions for 2001, Human Frontiers Science Program, Queens University, June 23, 1995.

Cortico-cortical Chaotic Synchronization as a Sign of Constraint Satisfaction in Cognitive Information Processing, ONR Workshop on Dynamics of Neuronal Ensembles II, Woods Hole, MA, June 3, 1995.

Broad-band Synchronization as the Basis for Large-Scale Cortical Integration, NIMH Symposium on Multiscale Time and Space Coherence in Brain Function, Washington, D.C., November 12, 1993.

Dynamic Self-Organization in the Brain as Observed by Transient Cortical Coherence, Appalachian Conference on Behavioral Neurodynamics, Radford University, October 5, 1993.

Inter-Areal Synchronization in Rhesus Macaque Neocortex During a Visual Pattern Discrimination Task, Computation and Neural Systems '92, San Francisco, July 28, 1992.

Coherent Fractal Time Activity in the Brain, Workshop on Temporal-Spatial Nonlinear Dynamics of Brain, Florida Atlantic University, May 12, 1992.

Cooperative Dynamics in Primate Neocortex, Workshop on Dynamics of Complex Systems, Florida Atlantic University, April 27, 1992.

Mechanisms of Integration in Distributed Cortical Networks, Summer Atelier in Theoretical Neurobiology, The Neurosciences Institute, July 18, 1991.

Mechanisms of Chaotic Dynamics in the Olfactory System Shown by Studies of Olfactory Bulb and Cortex, Conference on Measuring Chaos in the Human Brain, Florida State University, April 4, 1991.

PROFESSIONAL ASSOCIATIONS

American Psychological Society
Behavioral and Brain Sciences, Associate
Cognitive Neuroscience Society
International Brain Research Organization
International Neural Network Society
Society for Neuroscience

FACULTY MENTORED

Summer Sheremata, Florida Atlantic University, 2016-

POST-DOCTORAL FELLOWS AND GRADUATE STUDENTS MENTORED

Timothy West, Welcome Trust Centre and Centres for Maths and Physics in the Life Sciences, University College London, UK. Visiting Scholar supported by Bogue Fellowship, November 1, 2017 – May 31, 2018.
Raudel Sanchez-Campusano, Universidad Pablo de Olavide, Seville, Spain. Visiting Scholar supported by Fulbright Scholarship/Spanish Ministry of Education (MECD) Award, February 1 – July 31, 2016.
Sreenivasan Rajamoni, Research Fellow at NIMH MEG Core Facility, DIRP, NIMH, Bethesda MD
Anders Ledberg, Department of Information and Communication Technologies, Universitat Pompeu Fabra, Barcelona, Spain

Emmanuelle Tognoli, Center for Complex Systems and Brain Sciences, Florida Atlantic University, Boca Raton FL

Andrea Brovelli, Researcher at Institute for Cognitive Neuroscience, INCM, CNRSUniversite de la Mediterranee, Marseille, France

Hualou Liang, Associate Professor at School of Biomedical Engineering, Drexel University, Philadelphia PA

Maciej Kaminski, Assistant Professor at Institute of Experimental Physics, Warsaw University, Warsaw, Poland

Gonzalo Viana Di Prisco, Assistant Professor in Department of Neuroscience, Baylor College of Medicine, Houston TX

DOCTORAL DISSERTATIONS SUPERVISED

Michael Mannino, *Measuring Causality in Simulations of Large-Scale Brain Networks using The Virtual Brain*, Florida Atlantic University, 2018

Timothy Meehan, *Large-Scale Cortical Functional Connectivity Underlying Visuospatial Attention*, Florida Atlantic University, 2016

Avisa Asemi, *The Role of Dorsal Anterior Cingulate Cortex in Motor Control*, Florida Atlantic University, 2015

Tracy Romano, *Time-Frequency Classification of Gamma Oscillatory Activity in the Frontoparietal System During Working Memory*, Florida Atlantic University, 2014

Wei Tang, *Investigation of Human Visual Spatial Attention with fMRI and Granger Causality Analysis*, Florida Atlantic University, 2011

Craig Richter, *Functional Consequences of Top-Down Anticipatory Modulation of Primary Visual Cortex*, Florida Atlantic University, 2009

Edward Modestino, *The Neural Correlates of Endogenously Cued Covert Visuospatial Attentional Shifting in the Cue-Target Interval: An Electroencephalographic Study*, Florida Atlantic University, 2009

Debra Taylor, *Behavioral and Electroencephalographic Analysis of Visuomotor Coordination***,** Florida Atlantic University, 2005

Wilson A. Truccolo-Filho, *Statistical Analysis of Dynamic Interdependence Patterns in the Cortex*, Florida Atlantic University, 2001

Gene V. Wallenstein, *Spatiotemporal Dynamics of the Human EEG Associated with Transitions in Coordination Timing*, Florida Atlantic University, 1995

DOCTORAL DISSERTATIONS, EXTERNAL EXAMINER

Donald L Rowe, *Neurophysiological Modelling and Analysis of Psychopathology*, Department of Psychological Medicine and the School of Physics, University of Sydney, 2004

Andrea Brovelli, *Cortical Networks for Sensorimotor and Visuomotor Processes in the Human Brain*, International School for Advanced Studies (SISSA-ISAS), 2002

MASTERS THESES SUPERVISED

Stacey Nash, *Insulin-Dependent Diabetes Mellitus and Cognitive Dysfunction*, Florida Atlantic University, 2002

HONORS AND AWARDS

2013 Plenary Speaker, International Conference on Cognitive Neurodynamics 2011 Outstanding Service Award, International Joint Conference on Neural Networks
2006 Best Presentation Award, International Joint Conference on Neural Networks
2001 Teaching Incentive Program Award, Florida Atlantic University
1999 Best Presentation Award, International Joint Conference on Neural Networks
1982 Shev Award, Western EEG Society
1980 Shev Award, Western EEG Society
1972 Phi Beta Kappa, Johns Hopkins University

FELLOWSHIPS

1974-78 USPHS Predoctoral Fellowship, University of California, Berkeley
1973 Earl C. Anthony Fellowship, University of California, Berkeley
1972 NSF Undergraduate Fellowship, Massachusetts Institute of Technology

PUBLICATIONS

Meehan P, **Bressler SL**, Astafiev SA, Sylvester CM, Shulman GL, Corbetta M. Interhemispheric imbalances in intrahemispheric functional connectivity in spatial neglect. 2020, submitted.

Muzik O, Michel C, Vuilleumier P, Baajour S, **Bressler SL**, Diwadkar VA. Directional influences between constituents of the human large-scale thermoregulatory network. *Brain Topography*, 2020.

West TO, Halliday DM, **Bressler SL**, Farmer SF, Litvak V. Measuring directed functional connectivity using non-parametric directionality analysis: Validation and comparison with non-parametric Granger Causality. *NeuroImage*, 2020, 218: 116796.

Baajour S, Chowdury A, Thomas P, Rajan U, Khatib D, Zajac-Benitez C, Falco D, Haddad L, Amirsadri A, **Bressler S**, Stanley J, Diwadkar V. Disordered directional brain network interactions during learning dynamics in schizophrenia revealed by multivariate autoregressive models. *Human Brain Mapping*, 2020, dx.doi.org/10.1002/hbm.25032.

Falco D, Chowdury A, Rosenberg DR, **Bressler SL**, Diwadkar VA. ALE meta-analysis, its role in node identification and the effects on estimates of local network organization. *Brain Structure and Function*, 2020, doi 10.1007/s00429-020-02061-2.

Minnerly C, **Bressler SL**, Shokry IM, Tao R. Estimating mental health conditions of patients with opioid use disorder. *Journal of Addiction*, 2019, 8586153.

Grajski KA, **Bressler SL**. Differential default-mode network functional connectivity and morphometric changes in Alzheimer's disease. *NeuroImage: Clinical*, 2019, 23:101860.

Falco D, Chowdury A, Rosenberg DR, Diwadkar VA, **Bressler SL**. From nodes to networks: How methods for defining nodes influence inferences regarding network interactions, *Human Brain Mapping*, 2018, 8:1-12.

Mannino M, **Bressler SL**. Freeman's nonlinear brain dynamics and consciousness. *Journal of Consciousness Studies*, 2018, 25(1-2):64-88.

Bressler S, Kay L, Kozma R, Liljenstrom H, Vitiello G. Freeman neurodynamics: The past 25 years. *Journal of Consciousness Studies*, 2018, 25(1-2):13-32.

Richter CG, Coppola R, **Bressler SL**. Top-down signaling conveys behavioral context to primary visual cortex. *Scientific Reports*, 2018, doi:10.1038/s41598-018-25267.1.

Mannino M, Bressler SL. The wave packet in multi-area cortical modeling: History, theory and empirical evidence. Chaos and Complexity Letters, 2017, 11:105-116.

Lee M, **Bressler S**, Kozma R. Advances in cognitive engineering using neural networks. *Neural Networks*, 2017, 92:1-2.

Morris A, Ravishankar M, Pivetta L, Chowdury A, Falco D, Damoiseaux JS, Rosenberg DA, Bressler SL, Diwadkar VA. Response hand and motor set differentially modulate the connectivity of brain pathways during simple uni-manual behavior. Brain Topography, 2017, doi:10.1007/s10548-018-0664-5.

Meehan TP, Bressler SL, Tang W, Astafiev SA, Sylvester CM, Shulman GL, Corbetta M. Top-down cortical interactions in visuospatial attention. Brain Structure and Function, 2017, doi:10.1007/s00429-017-1390-6.

Diwadkar VA, Asemi A, Burgess A, Chowdury A, Bressler SL, Potentiation of motor subnetworks for motor control but not working memory: Interaction of dACC and SMA revealed by resting-state directed functional connectivity. PLoS One, 2017, doi: 10.137/journal.pone.0172531.

Silverstein BH, **Bressler SL**, Diwadkar VA. Inferring the dysconnection syndrome in schizophrenia: Interpretational considerations on methods for the network analyses of fMRI data. *Frontiers in Psychiatry*, 2016, doi:10.3389/fpsyt.2016.00132.

Richter CG, Coppola R, **Bressler SL**. Top-down signaling conveys behavioral context to primary visual cortex. *BioRxiv*, 2016, doi:10.1101/074609.

Bressler SL, Kelso JAS. Coordination dynamics in cognitive neuroscience. *Frontiers in Neuroscience*, 2016, 10:397.

Mannino M, Bressler SL. Foundational perspectives on causality in large-scale brain networks. Physics of Life Reviews, 2015, 15:107-123.

Mannino M, Bressler SL. Reply to comments on “Foundational perspectives on causality in large-scale brain networks. Physics of Life Reviews, 2015, 15:148-152.

Montani F, Rosso OA, Matias F, Bressler SL, Mirasso CR. A symbolic information approach to determine anticipated and delayed synchronization in neuronal circuit models. Philosophical Transactions A, 2015, 373(2056):20150110.
Asemi A, Diwadkar VA, Bressler SL. Anterior cingulate cortex modulates supplementary motor area in coordinated unimanual behavior. Frontiers in Human Neuroscience, 2015, 9:309.

Fuster JM, Bressler SL. Past makes future: role of pFC in prediction. Journal of Cognitive Neuroscience, 2015, 27:639-654.

Bressler SL, Richter CG. Interareal oscillatory synchronization in top-down neocortical processing. *Current Opinion in Neurobiology*, 2015, 31:62-66.

Jackson J, Amilhon B, Goutagny R, Bott J-B, Manseau F, Kortlevel C, **Bressler SL**, Williams S. Reversal of theta rhythm flow through intact hippocampal circuits. *Nature Neuroscience*, 2014, doi:10.1038/nn.3803.

Bressler SL. The function of neurocognitive networks. Comment on "Understanding brain networks and brain organization" by Pessoa. *Physics of Life Reviews*, 2014, 11:438-439.

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Liang H, **Bressler SL**, Buffalo EA, Desimone R, Fries P. Empirical mode decomposition of local field potentials from macaque v4 in visual spatial attention. *Soc. Neurosci. Abstr.*, 2004, 30:921.15.

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Bressler SL, Ding M, Ledberg A, Brovelli A, Chen Y, Nakamura R. Granger causality analysis of sensorimotor cortex in motor maintenance behavior. *Computational and Systems Neuroscience Abstr.*, 2004, 27.

Ledberg A, **Bressler SL**, Ding M, Nakamura R. Distributed cortical networks in response selection. *Soc. Neurosci. Abstr.*, 2003, 29:722.28.

Liang H, **Bressler SL**, Desimone R, Fries P. Attention-modulated gamma frequency activity in macaque V4 reflects task timing and performance. *Soc. Neurosci. Abstr.*, 2003, 29:385.13.

Taylor D, **Bressler SL**, Ding M. Distinct modes of sensory information processing in visuomotor integration revealed by high density EEG in humans. *Soc. Neurosci. Abstr.*, 2003, 29:620.15.

Knuth KH, Shah AS, Truccolo WA, Ding M, **Bressler SL**, Schroeder CE. Differentially variable component analysis (dVCA): A new tool for understanding single-trial brain responses. *Soc. Neurosci. Abstr.*, 2003, 29:430.19.

Bressler SL, Brovelli A, Ledberg A, Ding M. Charting causal influences between cortical sites associated by synchronized beta-frequency oscillations. Computational Neuroscience Meeting, Alicante, Spain, 2003.

Bressler SL, Ding M, Liang H, Nakamura R. Large-scale motor maintenance network in macaque cerebral cortex. *Soc. Neurosci. Abstr.*, 2002, 28:62.7.

Yue X, **Bressler SL**, Ding M. From stimulus to response: Differential involvement of cortical areas in visuomotor performance. *Soc. Neurosci. Abstr.*, 2002, 28:57.23.

Shah AS, Knuth KH, Truccolo WA, Mehta AD, Fu KG, Johnston TA, Ding M, **Bressler SL**, Schroeder CE. Estimating single-trial responses in EEG. *Soc. Neurosci. Abstr.*, 2002, 28:506.5.

Knuth KH, Clanton ST, Shah AS, Truccolo WA, Ding M, **Bressler SL,** Trejo LJ, Schroeder CE. Multiple component event-related potential (mcERP) estimation. *Soc. Neurosci. Abstr.*, 2002, 28:506.4.

Bressler SL, Liang H, Ding M. Top-down influence on early visual processing by an anticipatory large-scale network in macaque prefrontal cortex. *Soc. Neurosci. Abstr.*, 2001, 27:533.1.

Liang H, **Bressler SL**, Ding M, Desimone R, Fries P. The time course of attentionmodulated gamma frequency synchronization in macaque V4. *Soc. Neurosci. Abstr.*, 2001, 27:722.10.

Truccolo WA, Knuth KH, Ding M, **Bressler SL.** Bayesian estimation of single trial cortical evoked potential components: Applications to the analysis of functional connectivity. *Soc. Neurosci. Abstr.*, 2001, 27:721.14.

Knuth KH, Truccolo WA, Shah AS, Ding M, **Bressler SL**, Schroeder CE. Facing up to trial-to-trial variability of evoked responses. *Soc. Neurosci. Abstr.*, 2001, 27:721.13.

Shah AS, Knuth KH, Mehta AD, Fu KG, Johnston TA, Dias EC, Truccolo WA, Ding M, **Bressler SL**, Schroeder CE. Functional connectivity between visual structures in behaving monkeys. *Soc. Neurosci. Abstr.*, 2001, 27:721.3.

Truccolo W, Knuth KH, Ding M, **Bressler SL.** Bayesian estimation of amplitude, latency and waveform of single trial cortical evoked components. *Workshop on Bayesian Inference and Maximum Entropy Methods in Science and Engineering (MaxEnt)*. Johns Hopkins University, Baltimore, MD, 2001.

Bressler SL, Ding M, Liang H. Bottom-up and top-down influences in the primate visual cortex. *Fourth Annual Vision Research Conference: Functional Brain Imaging in Vision*. Fort Lauderdale, FL, 2000.

Bressler SL, Ding M, Liang H, Kaminski M. Separation of feedforward and feedback causal influences in the primate visual cortex. *Computation and Neural Systems '00*, Brugge, Belgium, 2000.

Liang H, Ding M, **Bressler SL.** Temporal dynamics of information flow in the cerebral cortex. *Computation and Neural Systems '00*, Brugge, Belgium, 2000.

Liang H, Ding M, **Bressler SL.** The detection of cognitive state transitions by stability changes in event-related cortical field potentials. *Computation and Neural Systems '00,* Brugge, Belgium, 2000.

Truccolo-Filho WA, Ding M, **Bressler SL.** On the variability of the cortical evoked responses and its implications for correlation and spectral coherence analysis of local field potentials. *Computation and Neural Systems '00*, Brugge, Belgium, 2000.

Truccolo-Filho WA, Ding M, **Bressler SL.** Dynamical analysis of oscillatory cortical neural networks. *International Joint Conference on Neural Networks,* Washington D.C., 2000.

Bressler SL, Ding M, Liang H, Kaminski M. Dynamics of a large-scale attentive network during visuomotor performance in macaque monkeys. *Soc. Neurosci. Abstr.*, 1999, 25.

Liang H, Ding M, **Bressler SL.** On the tracking of dynamic functional relations in monkey cerebral cortex. *Computation and Neural Systems '99*, Pittsburgh, PA, 1999.

Truccolo-Filho W, Ding M, **Bressler SL.** Stability and bifurcation analysis of a generic cortical area model. *Computation and Neural Systems '99*, Pittsburgh, PA, 1999.

Truccolo-Filho WA, Ding M, **Bressler SL.** Dynamics and information processing in a generic cortical area model. *Proc. Intl. Conf. on Complex Systems*, 1998, 68-69.

Bressler SL, Vianna Di Prisco G, Coppola R, Nakamura R. Spectral composition of cortical field potential interdependency during a visuomotor task in macaque monkey. *Soc. Neurosci. Abstr.*, 1997, 23:1551.

Vianna Di Prisco G, Coppola R, Nakamura R, **Bressler S.** Time-frequency coherence of multiregional cortical field potentials during a visuomotor task in macaque monkey. *Soc. Neurosci. Abstr.*, 1997, 23:1551.

Bressler SL, Wallenstein GV, Kelso JAS. Frontal lobe involvement in the spontaneous emergence of anticipatory visuomotor behavior. *Soc. Neurosci. Abstr.*, 1996, 22:1451.

Meaux JR, Wallenstein GV, Nash AJ, **Bressler SL**, Kelso JAS. Cortical dynamics of the human EEG associated with behavioral phase transitions in an auditory-motor task. *Soc. Neurosci. Abstr.,* 1996, 22:890.

Wallenstein GV, Kelso JAS, **Bressler SL.** Spatial mode dynamics of the human EEG in relation to a sensorimotor phase transition. *Soc. Neurosci. Abstr.*, 1994, 20:444.

Bressler SL. Neurocognitive evidence for time-locked multiregional binding in large-scale cortical networks. *Cognit. Neurosci. Soc*., 1994, 1:66.

Wallenstein GV, **Bressler SL**, Fuchs A, Kelso JAS. Spatiotemporal dynamics of phase transitions in the human brain. *Soc. Neurosci. Abstr.*, 1993, 19:1606.

Anderson CM, Holroyd T, **Bressler SL**, Nakamura R, Selz KA, Mandell AJ. Broadband 1/f-like coherence spectra in cortex: a possible marker of behavioral state-dependent selforganization. *Soc. Neurosci. Abstr.*, 1993, 19:780.

Bressler SL, Nakamura RK. Changes in gamma-band activity of rhesus macaque neocortex during a visual pattern discrimination task. *Soc. Neurosci. Abstr.*, 1991, 17:1210.

Kelso JAS, **Bressler SL**, Buchanan S, DeGuzman GC, Ding M, Fuchs A, Holroyd T. A sensorimotor phase transition in the human brain revealed by multiple low temperature SQUIDS. *Soc. Neurosci. Abstr.*, 1991, 17:657.

Bressler S, Cutillo B, Gevins A. Dynamics of somatosensory-motor integration in human neocortex. *Soc. Neurosci. Abstr.*, 1990, 16:244.

Cutillo B, **Bressler S,** Gevins A. Spatiotemporal dynamics of human working memory. *Soc. Neurosci. Abstr.*, 1990, 16:578.

Bressler SL, Gevins AS. Early response priming in parallel with visual stimulus evaluation. *Psychophysiology*, 1988, 25:437 (Abstr.).

Gevins AS, **Bressler SL**, Illes J, Cutillo BA. Effects of sustained mental work on functional networks of the human brain. *Psychophysiology*, 1988, 25:449 (Abstr.).

Freeman W, Davis G, **Bressler S.** A priori and a posteriori tuning of a spatial filter for odorinduced input to the olfactory bulb of rabbits subjected to classical delayed conditioning. *Soc. Neurosci. Abstr.*, 1982, 12:314.

Bressler S. Response of olfactory bulb and cortex to conditioned odor stimulation. *Soc. Neurosci. Abstr.*, 1982, 12:314.

Bressler S. Examination of coupling between EEGs of two olfactory structures. *Soc. Neurosci. Abstr.*, 1981, 11:662.

Bressler S. Crosscorrelation of EEG signals from olfactory bulb and cortex. *Soc. Neurosci. Abstr.*, 1978, 8:379.

Curriculum Vitae

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FAU Brain Institute
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Jupiter, FL 33458
E-mail lcarvelli@health.fau.edu

Education

Ph.D. in Molecular Pharmacology	1999
Institute of Pharmacological Research Mario Negri, Milan (Italy)	
Laura in Biological Science, University of Calabria (Italy)	1995
B.S. Liceo Scientifico Raffaele Lombardi Satriani (Italy)	1988

Appointments

Associate Professor FAU Brain Institute Florida Atlantic University	2017-present
Associate Professor Neuroscience, Harriet L. Wilkes Honors College Florida Atlantic University	2017-present
Associate Professor Department of Biomedical Sciences University of North Dakota, School of Medicine and Health Sciences	2016-2017
Assistant Professor Department of Pharmacology, Physiology & Therapeutic/Biomedical Sciences University of North Dakota, School of Medicine and Health Sciences	2010-2016
Assistant Professor Department of Pharmacology Vanderbilt University Medical School	2005-2010
Research Associate Department of Pharmacology Vanderbilt University Medical School,	2001-2004
Postdoctoral Fellow Department of Pharmacology University of Texas H.S.C.	1999-2001
Teaching Assistant Department of Molecular Pharmacology and Biochemistry Institute of Pharmacological Research Mario Negri, Milan (Italy)	1998-1999
Teaching Assistant Department of Cellular Biology University of Calabria (Italy)	1995-1996

Honors and Awards

2018 Regular Member of Neurotransporters, Receptors and Calcium Signaling Study Section, National Institute of Health
2017 Ad hoc Member of Avenir Program for Genetics or Epigenetics of Substance Use Disorders
2017 Travel Award at the International Brain-in-Flux Conference (Maintenon, France)
2015 AURA Award (EPSCoR)
2014 *Editor in Chief* of the special issue Epigenetic Mechanisms of Drugs Addiction at the Journal Addiction and Prevention
2014 Elected Councilor for the International Transmembrane Transporter Society
2014 ASBMB THEMATIC Best Poser at the Experimental Biology Meeting
2013 AURA Award (EPSCoR)
2012 Ad hoc Member, Biophysics of Neuronal System Study Section, National Institute of Health
2012 Elected Councilor for Catecholamine Society
2011 UND Senate Scholarly Activity Committee (SSAC) Travel Award
2011 AURA Award (EPSCoR)
1999 Best PhD Student/Alfredo Leonardi Award - Milan (Italy)

Professional Societies
International Transmembrane Transporter Society
Catecholamine Society
Genetic Society of America
Biophysical Society
Society for Neuroscience

Editorial Responsabilities
Editor

Journal of Clinical Epigenetics	2015 - present

Editor in Chief	2014
Special issue Epigenetic Mechanisms of Drugs Addiction	
Journal Addiction and Prevention	

Reviewer

PNAS	2015 - present
Plos One	2012 - present
Journal of Neurochemistry	2012 - present
International Journal of Biochemistry & Cell Biology	2015 - present
Neurochemistry International	2013 - present
Neuroscience Letters	2013 - present
Life Science	2013 - present
Journal of Visualized Experiments	2013 - present
Prion	2013 - present
The Canadian Journal of Physiology and Pharmacology	2010 - present

Educational Activities
Medical School Teaching
Limbic System
Medical School, UND
Lecture, “Emotional States and Addiction”

Pathobiology III and Intro to Patient Care VIII
Medical School, UND
Instructor/Facilitator

Graduate School Teaching
Neurophysiology
Graduate School of Biomedical Sciences, UND Medical School
Instructor of Record

Excitable Membrane
Graduate School of Biomedical Sciences, UND Medical School
Instructor of Record

Research Techniques
Graduate School of Pharmacology, Physiology and Therapeutics, UND Medical School
Lecture, "Invertebrate Model System in Research"

Research Literature Tutorial
Graduate School of Pharmacology, Physiology and Therapeutics, UND Medical School
Instructor/Discussion Leader

Undergraduate Teaching
FAU Wilkes Honors College
Science of Addiction
Instructor of Record

Doctoral Committees

Peter Rodriguez	Biomedical Science (FAU)
Christina K. Johnson	Physiology & Biophisics (UM)
Jared J. Schommer	Biomedical Sciences
Amber C. Chevalier	Pharmacology, Physiology & Therapeutics
Danielle E. Rastedt.	Biochemistry & Molecular Biology
Sathyavathi Challa Siva Kanaka.	Biochemistry & Molecular Biology
Nicholas I Cilz.	Pharmacology, Physiology & Therapeutics
Danielle Pinsonneault.	Pharmacology, Physiology & Therapeutics
Bruce Felts.	Pharmacology, Physiology & Therapeutics

Graduate Committees

Serena Sossi	Biomedical Sciences (Chair)
Nafisa Ferdous.	Biomedical Sciences (Chair)
Talus J. McCowan.	Biomedical Sciences (Chair)
Amritendu Chakraborty.	Biochemistry & Molecular Biology

Undergraduate Teaching
Science of Addiction (Advanced course)

Undergraduate Research Thesis

Gabrielle Byrd	Biology Department (Honors College, FAU)
Dayana Torres	Biology Department (Honors College, FAU)
Ian Wilson	Biology Department (Honors College, FAU)
Michelle Patregnani	Biology Department (UND)

Advising & Supervision
Postdoctoral Fellow
Oshadhi Vinhya Nawaratne 2020-present

Sirisha Madem	2017- 2020
Ganesh Amigapathy	2015 – 2017
GuangYong Tong	2013 – 2015
Murad Hossain	2010 – 2013

Lab Technicians

Zayna Gichi	2020-present
Sean Mellish	2017 - 2020
Mihir Sheldy	2016 - 2017
Bryan Safratowich	2010 - 2016

Master Students

Serena Sossi	2018 -present
Talus McCowan	2014 – 2017
Nafisa Ferdous	2015 – 2016

Medical Students Supervised

Bethany Kaemingk	2012
Nathan Carpenter	2011

Graduate Rotation Students Supervised

Adeline Martinez	2020
Nafisa Ferdous	2015
Talus McCowan	2013
Amber Chevalier	2012
Shaneabbas Raza	2012
Nicholas Cilz	2012
Bruce Felt	2011

Undergraduate Students Supervised

Andre Rajoo	2020 - present
Nikita Bansal (FAU)	2019 - present
Gabrielle Byrd	2018 - present
Jessica Fairley	2014 - 2016
Eric Flint	2013 - 2014
Michelle Patregnani	2014 - 2015
Alexis Walker	2013
Alan Davis	2012 - 2013
Chee Lor	2012
Rochelle Wrickamasekara	2010 - 2012

GRANTS

Active Grants
NIH/R01 (DA042156)
PI: **Carvelli L**
Award period: 2016-2021
The goal of this grant is to characterize the long-term and transgenerational effects of chronic amphetamine exposure during early development.

Completed Grants:
NIH/Cobre Grant (PA-GM104360) Epigenomics of Development and Disease *$10,500,000*

Project Leader: **Carvelli L** Trans-generational Epigenomics Inheritance of Addiction
Award Period: September 10th 2013-2018
The goal of this grant is to identify epigenetic factors responsible of amphetamine-induced transgenerational effects in *C. elegans*.

NIH/NIDA R21 (DA024797)
PI: **Carvelli L**
Award period: 8/01/09 – 7/30/11
The goals of the project are to investigate the regulation of the dopamine transporter by amphetamine.

NIH/NCRR COBRE (PA-GM103329) Pilot Grant
PI: **Carvelli L**, J. Ohm, L.K. Henry
Award period: August 2010-2011
The goal of this project is to generate transgenic *C. elegans* animals resistant to amphetamine.

NIH/NCRR COBRE (PA-GM103329) Pilot Grant
PI: **Carvelli L** and J. Ohm,
Award period: August 2011-2012
The goal of this project is to investigate whether amphetamine generates epigenetic and behavioral changes in progenies originated by parental animals exposed to amphetamine.

NIH/NCRR COBRE (PA-GM103329) Pilot Grant
PI: **Carvelli L**
Award period: August 2012-2013
The goal of this grant is to characterize an amine-gated ion channel as a potential target of MAO-B inhibitors.

UND Internal Grant
PI: **Carvelli L**
Award period: May 2012-2013
The goal of this grant is to clone an unknown human protein which has high homology with a recently identified *C. elegans* amine-gated chloride channel.

PUBLICATIONS

Peer-reviewed publications

Ambigapathy G, McCown T, Dasarathy A, **Carvelli L**. Embryonic exposure to amphetamine causes epigenetic, functional and behavioral changes in *C. elegans* offspring. (*in preparation*)

Torres Valladares D, Kudumala S, Hossein M, Carvelli L. *Caenorhabitis elegans* as an *in vivo* model to assess amphetamine tolerance. *Brain Behavior and Evolution* 2020 (*accepted*)

Ferdous N, Kundumala S, Sossi S, **Carvelli L**. Prolonged amphetamine treatments cause long-term decrease of dopamine uptake in cultured cells. *Neurochem Res* 2020 Jun;45(6):1399-1409

Kudumala S, Sossi S, **Carvelli L**. Swimming Induced Paralysis to Assess Dopamine Signaling in *Caenorhabditis Elegans*. J Vis Exp. 2019 Apr 3;(146)

Lanzo A, Safratowich BD, Gallotta I, Zampi G, Di Schiavi E, **Carvelli L**. Silencing of syntaxin 1A in the dopaminergic neurons decreases the activity of the dopamine transporter and prevents amphetamine-induced behavior in *C. elegans*. *Front Physiology* 2018; 22(9):576

McCowan T, Dhasarathy A and **Carvelli L**. Epigenetics mechanisms of amphetamine. *Journal Addiction and Prevention*. 2015; S(1):7

Hardaway AJ, Whitaker SM, Snarrenberg CL, Li Z, Xu S, Bermingham DP, Odiase P, Spencer WC, Miller DM III, **Carvelli L**, Hardie SL, Blakely RD. Glia expression of the *Caenorhabditis elegans* gene Swip-10 supports glutamate dependent control of extrasynaptic dopamine signaling. *J. Neurosci.2015;35(25):9409-23*

Carvelli L. Amphetamine activates/potentiates a ligand-gated ion channel. *Channels* 2014; 8(4): 294-5

Safratowich BD, Hossain M, Bianchi L and **Carvelli L.** Amphetamine potentiates the effects of β-Phenylethylamine through activation of an amine-gated chloride channel. *J. Neurosci.* 2014; 34(13):4686-91

Hossain M, Wickramasekara RN and **Carvelli L**. β-phenylethylamine requires the dopamine transporter to increase extracellular dopamine in *C. elegans* dopaminergic neurons. *Neurochem Internat* 2014 Jul;73:27-31

Safratowich BD, Lor Chee, Bianchi L and **Carvelli L**. Amphetamine activates an amine-gated chloride channel to generate behavioral effects in *Caenorhabditis elegans*. *J Biol Chem.* 2013 Jul 26;288(30)21630-7

Akula Bala P, Foster J, **Carvelli L** and Henry LR. SLC6 Transporter: Structure, Function, Regulation, Disease Association and Therapeutics. *Molecular Aspect of Medicine*. 2012 Jul.

Carvelli L, Matthies D.S. and Galli A. Molecular Mechanisms of Amphetamine Action in C. elegans. *Mol. Pharmacol*. 2010 Jul; 78(1):151-6.

Carvelli L., Blakely R.D. and DeFelice L.J. Dopamine Transporter/Syntaxin 1A Interactions Regulate Transport Channel Activity and Dopaminergic Synaptic Transmission. *PNAS. 2008*; 105(37):14192-97.

McDonald, P.W., Hardie S.L., Jessen T.N., Matthies D.S., **Carvelli L**. and Blakely R.D., Vigorous Motor Activity in Caenorhabditis elegans Requires Efficient Clearance of Dopamine Mediated by Synaptic Localization of the Dopamine Transporter DAT-1. *J.Neurosci*., 2007 Dec 19; 27(51):14216-27)

Elger B., Schneider M., Winter E., **Carvelli L.**, Bonomi M., Fracasso C., Guiso G., Colovic M., Caccia S., and Mennini T. Optimized Synthesis of AMPA Receptor Antagonist ZK 187638 and Neurobehavioral Activity in Mouse of Neuronal Ceroid Lipofuscinosis. *ChemMedChem* 2006; 1, 1142-1148;

Nass R, Hahn M., Jessen T., McDonald P., **Carvelli L.** and Blakely R.D. A genetic screen in *C. elegans* for dopamine neuron insensitivity to 6-Hydroxydopamine identifies dopamine transporter mutants impacting transporter biosynthesis and trafficking. *J Neurochem*. 2005 Aug; 94(3):774-85.

Carvelli L, McDonald PW, Blakely RD, DeFelice LJ. Caenorhabditis elegans Dopamine Transporters depolarize neurons by a channel mechanism. *PNAS*. 2004 Nov 9;101(45):16046-51

Mennini T, Bigini P, Cagnotto A, **Carvelli L**, Di Nunno P, Fumagalli E, Tortarolo M, Buurman WA, Ghezzi P, Bendotti C. Glial activation and TNFR-I upregulation precedes motor dysfunction in the spinal cord of mnd mice. *Cytokine*. 2004 Feb 7;25(3):127-35.

Carvelli L., Moron JA, Kahlig KM, Ferrer JV, Sen N, Lechleiter JD, Leeb-Lundberg LM, Merril G, Lafer EM, Ballou LM, Shippenberg TS, Javitch JA, Lin RZ and Aurelio Galli. PI 3-Kinase Regulation of Dopamine Uptake. *J Neurochem*. 2002 May, 81(4):859-69.

Bendotti C, Tortarolo M, Suchak S, Calvaresi N**, Carvelli L**, Bastone A, Rizzi M, Rattray M, Mennini T. Transgenic SOD1 G93A mice develop reduced GLT-1 in spinal cord without alterations in cerebrospinal fluid glutamate levels. *J. Neurochem*, (2001) 79, 737.

Saunders C., Ferrer JV., Shi L., Chen L., Merril G., Lamb ME., L.M. Leeb-Lundberg F, **Carvelli L.**, Javitch JA. and Galli A. Amphetamine-induced loss of human dopamine transporter activity: an internalization-dependent and cocaine-sensitive mechanism. *PNAS* 97(12):6850-6855. (2000).

D. Agnello, **L. Carvelli**, V. Muzio, P. Villa, B. Bottazzi, N. Polentarutti, T. Mennini, A. Mantovani, P. Ghezzi. Increased peripheral benzodiazepine binding sites and pentraxin 3 expression in the spinal cord during EAE: relation to inflammatory cytokines and modulation by dexamethasone and rolipam. *J. Neuroimmunol*. (2000) 109, 105-111

T.Mennini, A.Cagnotto, **L.Carvelli**, D.Comoletti, C.Manzoni, V.Muzio, M.Rizzi and A.Vezzani. Biochemical and pharmacological evidence of a functional role of AMPA receptors in motor neuron dysfunction in mnd mice. *Eur.J.Neurosci*.(1999).May;11(5):1705-10.

Invited Book Chapters

Carvelli L. β-phenylethylamine increases synaptic dopamine by interacting with the dopamine transporter in *Caenorhabditis elegans*, in Trace Amines and Neurological Disorders: Potential Mechanisms and Risk Factors, edited by Tahira and Akhlaq Farooqui (Elsevier Imprint)

Carvelli L. Molecular effects of amphetamine in *C. elegans*, in Neuropathology of Drug Addictions and Substance Misuse edited by Victor R Preedy, King College London, D.I. Editor, Academic Press (Elsevier Imprint)

PRESENTATIONS

Invited Speaker at International Conferences

1. Gordon Research Conference in Membrane Transport Proteins, Jun 2020 – Spain (*cancelled due Covid-19*)
2. Karger Symposium in Evolutionary Neuroscience, Oct 2019 – Chicago (IL)
3. The Brain in Flux, Aug 2019 – Saint-Paulin Quebec (Canada)
4. International Behavioral Neuroscience Society (IBNS), Jul 2018 – Boca Raton (FL)
5. International Conference on Neurology and Brain Disorders (INBC), June 2018 – Rome, Italy
6. Neurological Disorders Conference - San Francisco CA, Jul 2015.
7. International Meeting on Expression, Structure, and Function of Membrane Proteins - Florence (Italy), Jun 2015.
8. Molecular Psychiatry Conference - San Francisco CA, Nov 2014.
9. Transmembrane Transporters in Health and Disease Symposium - Vienna (Austria), Sept 2014.
10. International Neuroscience and Biology Psychiatry “Stress and Behavior Conference, St. Petersburg (Russia) May 2014

Invited Speaker at National Conferences

11. North Dakota INBRE Annual Symposium - Grand Forks (ND), Nov 2013. Can your lifestyle affect your grandchildren’s health?
12. UND Foundation of Biochemical Science (Seminar Program) - Grand Forks (ND), Oct 2010. How and why are channels in transporters?
13. UND Neuroscience Symposium - Grand Forks (ND), Aug 2010. The split personality of the dopamine transporter.

Invited Speaker at National Universities

14. University of Massachusetts Medical School (UMASS) – Department of Neurobiology. Mar 2019
15. Syracuse University (NY) – Department of Neuroscience. Feb 2018
16. University of Montana (MT) – Department of Biomedical and Pharmaceutical Sciences, Center of Structural and Functional Neuroscience, March 2016. Caenorhabditis elegans as model system to study the molecular and epigenetic mechanisms of amphetamine
17. Illinois State University (IL) - Department of Biochemistry and Biophysics, Apr 2015. Amphetamine and its multiple targets: an *in vitro* and *in vivo* study
18. University of North Dakota Grand Forks (ND) - Department of Biology, Oct 2014. *C. elegans* as model system for studying the molecular mechanism of amphetamine.
19. University of Miami (FL) - Department of Physiology and Biophysics, Jan 2012. A new class of ionotropic receptors mediates phenylethylamine-induced behaviors in *C. elegans*.

Abstracts Selected for Oral Presentations at International Conferences

20. EMBO - C. elegans development, cell biology and gene expression. June, 2018. Barcellona, Spain
21. Brain in Flux – Maintenon (France), Aug 2017. Embryonic exposure to amphetamine reduces exression of the dopamine transporter.
22. ***Gordon Research Conference*** in Membrane Transporter Proteins - Mount Snow Resort in West Dover (VT), Jul 2014. Amphetamine decreases expression of the dopamine transporter: an *in vivo* study.
23. Experimental Biology Meeting - San Diego (CA), Apr 2014. Amphetamine exposure during development causes trans-generational drug sensitivity in *C. elegans*.
24. Brain in Flux: ISN Satellite Conference - Cancun (Mexico), Apr 2013. Beyond the dopamine transporter: discovering a new amphetamine target.

Committee Assignments and Administratitve Servises

Grant Review Committees

2018-present	NIH study section (NTRC)
2018	Brain Institute-FAU Pilot Grants
2017	FAU - Medical Sciences Dept. Internal Grants
2013	NIH Study Section - The Biophysics of Neural Systems (BPNS)
2012	Ohio University's Baker Fund Grant

Society Acivities

Catecholamine Society *Elected Councilor*	2012 - present
International Trasmembrane Transporter Society *Elected Councilor*	2014 - 2018

Internal Servises

FAU-MPHP Admission Committee	2018-present
Undergraduate Student Advisory Committee	2017-present
Neuroscience Concentratiion Committee	2017-present
Biology Concentration Committee	2017-present
UND Graduate Student Advisory Committee	2010-2017
UND Graduate Student Admission Committees	2014-2017
UND Medical School Academic Performance Committee	2012-2017

UND Institutional Biosafety Committee	2011-2017
UND New Building Basic Research Sub-Committee	2012-2013
UND Member PPT Graduate Program Committee	2010-2013

Predrag Cudic

Professional:
Florida Atlantic University
Charles E. Schmidt College of Science
Department of Chemistry and Biochemistry
5353 Parkside Drive, Building MC17, Room 208
Jupiter, FL 33458
Phone: 561-799-8375
E-mail: pcudic@fau.edu

Home:
7585 Silverwoods Ct.
Boca Raton, FL, 33433
Phone (H): (561) 391-6915
Phone (C): (561) 702-1879
E-mail: predrag.cudic@gmail.com

Education

1987-1991	Bachelor of Science, University of Zagreb, Faculty of Science, Zagreb, Croatia
1991-1996	Ph.D. in Organic Chemistry, University of Zagreb, Rudjer Boskovic Institute, Zagreb, Croatia

Appointments

1991-1996	Research Associate, Rudjer Boskovic Institute, University of Zagreb, Croatia
1996-1998	Postdoctoral Fellow, College of France, France (*Laboratory of Professor Jean-Marie Lehn, 1987 Nobel Laureate in Chemistry*)
1998-2003	Postdoctoral Fellow, University of Pennsylvania, School of Medicine, Philadelphia, PA (*Laboratory of Professor Dewey G. McCafferty, currently at Duke University)*
2003-2009	Tenure-Track Assistant Professor, Department of Chemistry and Biochemistry, Florida Atlantic University (FAU), Boca Raton, FL
2005-present	Graduate Faculty, C. E. Schmidt College of Science, FAU, Boca Raton, FL
2006-2010	Member, University of Miami Sylvester Comprehensive Cancer Center, Miami, FL
2007-2010	Adjunct Assistant Professor, Department of Basic Science, College of Biomedical Science, FAU, Boca Raton, FL
2009-2010	Tenured Associate Professor, Department of Chemistry and Biochemistry, FAU, Boca Raton, FL
2010-present	Affiliate Research Associate Professor, Department of Chemistry and Biochemistry, FAU, Boca Raton, FL
2010-2016	Associate Member, Torrey Pines Institute for Molecular Studies, Port St. Lucie, FL
2016	Full Member, Torrey Pines Institute for Molecular Studies, Port St. Lucie, FL
2016-present	Tenured Professor, Department of Chemistry and Biochemistry, FAU, Boca Raton, FL
2016-present	Member, Center for Molecular Biology and Biotechnology, FAU, Jupiter, FL
2016-present	Member, The Brain Institute, FAU, Jupiter, FL
2018-2022	Affiliate Professor of Chemistry and Biochemistry, Harriet L. Wilkes Honors College, FAU, Jupiter, FL
2018-present	Member, Center for Molecular Biology and Biotechnology Executive Committee, FAU, Jupiter, FL
2019-	Member, FAU Institutional Biosafety Committee, FAU, Boca Raton, FL
2020-	Chair, FAU Institutional Biosafety Committee, FAU, Boca Raton, FL
2019-	Chair, Department of Chemistry and Biochemistry, FAU, Boca Raton, FL (started in August 2019)

Honors

1989-1991	Rudjer Boskovic Institute Scholarship, University of Zagreb, Croatia
1996-1997	French Government Scholarship

Relevant Professional Activities

2004-2005	Reviewer for the National Science Foundation (NSF), including Faculty Early Career Development (CAREER) Program
2004	Reviewer for the Oak Ridge Associated Universities (ORAU) Junior Faculty Proposals
2004-present	Manuscript reviewer for Tetrahedron Letters, Journal of Biological Chemistry, Biochemistry, Bioorganic and Medicinal Chemistry Letters, Medicinal Chemistry, Chemical Biology and Drug Design, Biopolymers: Peptide Science, Organic Letters, Key Opinions, Journal of Medicinal Chemistry, Organic and Biomolecular Chemistry, Bioorganic Chemistry, Beilstein Journal of Organic Chemistry, Protein and Peptide Letters, International Journal of Peptide Research and Therapeutics, BBA–Biomembranes, Antimicrobial Agents and Chemotherapy, Chemistry-A European Journal, PLOS ONE.
2005	Book review, Practical Techniques and Experiments for the Biochemical Laboratory, Houghton Mifflin Company
2009	Reviewer for the National Institutes of Health (NIH), Recovery Act Limited Competition: NIH Challenge Grants in Health and Science Research (RC1)
2009	FAU Internal Reviewer for the Harbor Branch Oceanographic Institute grant proposals
2009-2016	American Peptide Society Newsletter Editor
2011	22nd American Peptide Symposium, Young Investigator Poster Competition Judge
2011	American Peptide Society Nominating Committee Chair
2012	Reviewer for the Netherlands Organizations for Scientific Research, ECHO - Chemistry in Relation to Biological and Medical Sciences
2012-2016	Participating Investigator in the Consortium for Functional Glycomics
2012-present	Editorial Board, International Journal of Peptide Research and Therapeutics
2013	Reviewer for the Cottrell College Science Award Proposals
2014	Reviewer for the Society for the Advancement of Science and Technology in the Arab World (SASTA)
2015	Reviewer for the Shota Rustaveli National Science Foundation (SRNSF), Republic of Georgia
2015-present	Reviewer for the NIH/NCI Cancer Drug Development and Therapeutics (CDDT) study section
2016-present	Reviewer for the FAU Office of Undergraduate Research and Inquiry
2017	Reviewer for the NIH/NIDA IAM review panel, Chemical Discovery for Substance Use Disorders
2017-2018	FAU Internal Reviewer for the Charles E. Schmidt College of Science seed grant proposals
2017-present	Associate Editor for Current Protein and Peptide Science, Bentham Science Publishers
2017-present	Regional Editor for Protein and Peptide Letters, Bentham Science Publishers
2020-present	Topic Editor for Antibiotics journal, MDPI Publisher

Courses Taught at Florida Atlantic University

Undergraduate Courses

Biochemistry Laboratory (typical enrolment: 20 students, taught 11 semesters)

- Course included lecture on experimental techniques commonly used in biochemistry, practical demonstration and experimental work.

Organic Chemistry 1 (typical enrolment: >300 students, taught 5 semesters)

- Course covered basic concepts in organic chemistry.

Organic Chemistry 2 (typical enrolment: 50 students, taught 1 semester)

- Course covered basic concepts in organic chemistry.

Bioanalytical Instrumentation (typical enrolment: 20 students, taught 1 semester)

- Course covered theory, design, and operation of advanced instrumentation used in research and quality control/quality assurance laboratories for the analysis and characterization of biomolecules.

Drug Design (typical enrolment: 10 students, taught 2 semesters)

- Course covered basic principles of medicinal chemistry and biochemistry vital to drug design and drug action.

Graduate Courses

Synthesis and Characterization (typical enrolment: 10 students, co-taught 1 semester)

- Lectured on recent advances in synthetic glycochemistry and peptide chemistry.

Medicinal Chemistry (typical enrolment: 10 students, co-taught 3 semesters)

- Lectured on synthetic methodologies commonly used to improve pharmacological properties of peptides.

Advanced Organic Chemistry (typical enrolment: 10 students, taught 1 semester)

- Course covered fundamental structural topics in organic chemistry and basic mechanisms of organic reactions.

Kinetics and Energetics of Reactions (typical enrolment: 19 students, taught 1 semester)

- Lectured on how the fundamentals of energetics influence chemical processes, illustration of their relevance, and applications to biological systems.

Chemical Biology (typical enrolment: 12 students, co-taught 3 semesters)

- A comprehensive introduction to the origins and emerging frontiers of chemical biology. This course covered protein design, molecular evolution, chemical genetics, metabolic engineering, and methods in genomics and proteomics research.

Drug Design (typical enrolment: 10 students, taught 2 semesters)

- This course provides an in-depth overview of the approaches utilized by medicinal chemists to design novel, pharmacologically active molecules to treat human diseases.

Participation in the Department, College and University Governance

Standing Committees

Chair, Institutional Biosafety Committee, FAU, (*current*)
Center for Molecular Biology and Biotechnology Executive Committee, CoS, (*current*)
Chair, Graduate Program, Department of Chemistry and Biochemistry
Chair, Graduate Admissions Committee
Sustained Performance Evaluation Committee, Dept. of Chemistry and Biochemistry
Graduate Committee, C. E. Schmidt College of Science
Recruitment Committee, FAU Brain Institute
Instrumentation Supervising Committee, Department of Chemistry & Biochemistry
Department of Chemistry & Biochemistry Future Directions Committee

Advising

Thesis advisor: 3 M.Sc., and 3 Ph.D. students (FAU)
Directed Independent Study advisor: 24 undergraduate students (FAU)
Postdoctoral researcher advisor: 4 postdoctoral researchers (FAU and TPIMS)
Thesis committee member: 5 M.Sc. and 14 Ph.D. thesis committees (FAU)
Internship advisor: 9 undergraduate students (Indian River State College and FAU)
Honors Thesis Advisor: 5 students (Harriet L. Wilkes Honors College, FAU)

Memberships

American Peptide Society
American Chemical Society

Publications

1. P. Cudic, B. Klaic, Z. Raza, D. Sepac, V. Sunjic, Synthesis and Properties of Some Rh(I) Catalytic Complexes with Dinitrogen Ligands from 5-Pyrido-1,4-benzodiazepin-4-ones, *Tetrahedron*, **47** (1991) 5295-5308.
2. M. Zinic, P. Cudic, V. Skaric, J. P. Vigneron, J. M. Lehn, Cyclo-bis-intercaland Receptors with Phenanthridine Subunits, *Tetrahedron Lett*. **33** (1992) 7417-7420.
3. P. Cudic, M. Zinic, V. Tomisic, Vl. Simeon, J. P. Vigneron, J. M. Lehn, Binding of Nucleotides in Water by Phenanthridinium Bis(intercaland) Receptor Molecules, *J. Chem. Soc. Chem. Commun.* (1995) 1073-1075.
4. P. Cudic, M. Zinic, V. Skaric, R. Kiralj, B. Kojic-Prodic, J. P. Vigneron, J. M. Lehn, Synthesis of Cyclo-bis-intercaland Receptor Molecules with Phenanthridinium Units, *Croat. Chem. Acta*. **69** (1996) 569-583.
5. P. Cudic, M. Zinic, Supramolecular Chemistry. Artificial Receptors for Binding and Recognition of Nucleotide in Aqueous Media, *Period. Biol*. **98** (1996) 283-294.
6. P. Cudic, J. P. Vigneron, J. M. Lehn, M. Cesario. T. Prange, Molecular Recognition of Azobenzene Dicarboxylate by Acridine-based Receptor Molecules. Crystal Structure of the Supramolecular Inclusion Complex of *trans*-3,3'-Azobenzene Dicarboxylate with Cyclo-bis-intercaland receptor, *Eur. J. Org. Chem*. (1999) 2479-2484.
7. G. McCafferty, **P**. Cudic, M. K. Yu, D. C. Behenna, R. G. Kruger, Synergy and Duality in Peptide Antibiotic Mechanism, *Curr. Opin. Chem. Biol.* **3** (1999) 672-680.
8. P. Cudic, J. K. Kranz, D. C. Behenna, R. G. Kruger, A. J. Wand, D. G. McCafferty, Complexation of Peptidoglycan Intermediates by the Lipoglycodepsipeptide Antibiotic Ramoplanin: Structural Requirements for Intermolecular Complexation and Fibril Formation, *Peptides: The Wave of the Future,* edited by R. Hougten, American Peptide Society, (2001) 512-514.
9. P. Cudic, D. C. Behenna, M. K. Yu, R. G. Kruger, L. Szewczuk, D. G. McCafferty, Synthesis of P^1-Citronellyl-P^2-α-D-pyranosyl Pyrophosphate as Potential Substrates for the *E. coli* Undecaprenyl-pyrophosphoryl-*N*-acetylglucoseaminyl transferase MurG, *Bioorg. Med. Chem. Lett.* **11** (2001) 3107-3110.
10. Piantanida, B. S. Palm, P. Cudic, M. Zinic, H. J. Schneider, Phenanthridinium Cyclobisintercalands. Fluorescence Sensing of AMP and Selective Binding to Single-stranded Nucleic Acids, *Tetrahedron Lett*. **42** (2001) 6779-6783.
11. P. Cudic, J. K. Kranz, D. C. Behenna, R. G. Kruger, H. Tadesse, Y. I. Veklich, J. W. Weisel, A. J. Wand, D. G. McCafferty, Complexation of Peptidoglycan Intermediates by the Lipoglycodepsipeptide Antibiotic Ramoplanin: Minimal Structural Requirements for Intermolecular Complexation and Fibril Formation, *Proc. Nat. Acad. Sci. USA* **99** (2002) 7384-7389.
12. P. Cudic, D. C. Behenna, J. K. Kranz, R. G. Kruger, A. J. Wand, Y. I. Veklich, J. W. Weisel, D. G. McCafferty, Functional Analysis of the Lipoglycodepsipeptide Antibiotic Ramoplanin, *Chem. Biol*. **9** (2002) 897-906.
13. G. McCafferty, P. Cudic, B. A. Frankel, S. Barkallah, R. G. Kruger, W. Li, Chemistry and Biology of the Ramoplanin Family of Peptide Antibiotics, *Biopolymers (Peptide Science)* **66** (2002) 261-284.
14. Piantanida, B. S. Palm, P. Cudic, M. Zinic, H. -J, Schneider, Interactions of Acyclic and Cyclic Bis-Phenanthridinium Derivatives with *ss*- and *ds*-Polynucleotides, *Tetrahedron*, **60** (2004) 6225-6231.
15. R. Rawat, R. T. Martello, P. Y. Jean-Charles and P. Cudic, Progress Toward Total Solid-Phase Synthesis of Cyclic Lipodepsipeptide Antibiotic Fusaricidin A, In *Understanding Biology Using Peptides, American Peptide Society*, edited by S. E. Blondelle, American Peptide Society, (2005) 271-272.

16. L. Otvos, Jr., V. De Olivier Inacio, J. D. Wade, P. Cudic, Prior Antibacterial Peptide-Mediated Inhibition of Protein Folding in Bacteria Mutes Resistance Enzymes**,** *Antimicrob. Agents Chemother.* **50** (2006), 3146-3149.
17. M. Stawikowski and P. Cudic, A Novel Strategy for the Solid-phase Synthesis of Cyclic Lipodepsipeptides, *Tetrahedron Lett*. **47** (2006) 8587-8590.
18. L. Otvos, Jr., V. de Olivier Inacio, M. Cassone, J. D. Wade, and P. Cudic, Synergy between Antibacterial Peptides and Antibiotics, In *Peptides 2006,* edited by K. Rolka, P. Rekowski, and J. Silberring, Kenes International, Geneva, Switzerland, *,* (2007) 104-105.
19. M. Stawikowski and P. Cudic, Optimization of the Total Solid-Phase Synthesis of Lipodepsipeptide Antibiotic Fusaricidin A, In *Peptides 2006,* edited by K. Rolka, P. Rekowski, and J. Silberring, Kenes International, Geneva, Switzerland, (2007) 321-322.
20. C. James-Johnson, P. Cudic, Bicyclic Organo-Peptides as Models for Carbohydrate Binding Proteins, In *Peptides for Youth,* edited by E. Escher, W. D. Lubell, S. Del Valle, American Peptide Society, (2007) 593-594.
21. M. Stawikowski, P. Cudic, Lipodepsipeptide Antibiotic Fusaricidin and its Analogues: Total Solid-Phase Synthesis and Biological Activity, In *Peptides for Youth,* edited by E. Escher, W. D. Lubell, S. Del Valle, American Peptide Society, (2007) 383-384.
22. R. Stawikowska, M. Stawikowski, P. Cudic, Progress toward Total Solid-Phase Synthesis of Depsipeptide Antibiotic Katanosin B, In *Peptides for Youth,* edited by E. Escher, W. D. Lubell, S. Del Valle, American Peptide Society, (2007) 385-386.
23. L. Otvos, Jr., M. Cassone, V. De Olivier Inacio, P. Noto, J. J. Roux, J. D. Wade, P. Cudic, Synergy Between a Lead Proline-Rich Antibacterial Peptide Derivative and Small Molecule Antibiotics, In *Peptides for Youth,* edited by E. Escher, W. D. Lubell, S. Del Valle, American Peptide Society, (2007) 375-378.
24. L. Otvos, Jr., M. Cassone, M. Terrasi, S. Cascio, G. Mateo, D. Knappe, R. Hoffmann, P. Cudic, J. D. Wade, E. Surmacz, Agonist and Partial Antagonists Acting on the Leptin-Leptin Receptor Interface, *Peptides for Youth,* edited by E. Escher, W. D. Lubell, S. Del Valle, American Peptide Society, (2007) 497-498.
25. P. Cudic, M. Stawikowski, Pseudopeptide Synthesis *via* Fmoc Solid-Phase Synthetic Methodology, *Mini. Rev. Org. Chem*. **4** (2007) 268-280.
26. L. Otvos, Jr., M. Terrasi, S. Cascio; M. Cassone, G. Abbadessa, F. De Pascali, L. Scolaro, D. Knappe, M. Stawikowski, P. Cudic, J. D. Wade, R. Hoffmann, E. Surmacz, Development of a Pharmacologically Improved Peptide Agonist of the Leptin Receptor, *BBA-Mol. Cell. Res*. **1783** (2008) 1745-1754.
27. M. Cassone, P. Vogiatzi, R. La Montagna, V. Inacio, P. Cudic, J. Rux, L. Otvos, J. Wade, Scope and Limitations of the Designer Proline-rich Antibacterial Peptide Dimer, A3-APO, Alone or in Synergy with Conventional Antibiotics, *Peptides* **29** (2008) 1878-1886.
28. N. Bionda, D. Treitl, M. Stawikowski**, P. Cudic,** Structure-Antibacterial Activity Relationship of Cyclic Lipodepsipeptide Antibiotic Fusaricidin A, *Braking Away: Proceedings of the 21st Peptide Symphosium*, M. Lebl Ed.: American Peptide Society, (2009) 272-273.
29. N. Bionda, D. Binetti, P. Cudic, M. Cudic, Total Fmoc Solid-phase Synthesis of Naturally occurring Depsipeptide Antibiotic Katanosin B, *Braking Away: The Proceedings of the 21st Peptide Symphosium*, edited by M. Lebl, American Peptide Society, (2009) 276-277.
30. P. Cudic, A. Jakas, N. Bionda, M. Cudic, Peptide Based Receptors for Carbohydrate Recognition, edited by M. Lebl, M. Meldal, K. J. Jensen, T. Hoeg-Jensen, *Tales of Peptides*: *Proceedings of the 31st European Peptide Symposium,* European Peptide Society, (2010) 88-89.
31. N. Bionda, M. Cudic, P. Cudic, Exploring the Spectrum of Biological Activities of Fusaricidins and Their Analogs, In *Building Bridges: The Proceedings of the 22nd American Peptide Symposium,* edited by M. Lebl, American Peptide Society, (2011) 212-213.
32. A. A. Mensah, P. Cudic, 1,8-Naphthiridine Based Artificial Receptors for Selective Monosaccharide Binding in Water, *Cur. Org. Chem.* **15** (2011) 1097-1104.
33. M. C. Rodriguez, P. Cudic, Carbohydrate Recognition: Peptide-based Biomimetic Receptors, *Chimica Oggi/Chemistry Today,* **29** (2011) 36-39. *Invited review.*

34. N. Bionda, P. Cudic, Cyclic Lipodepsipeptides in Novel Antimicrobial Drug Discovery, *Croat. Chem. Acta*. **84** (2011) 315-329. *Invited review.*
35. N. Bionda, M. Cudic, L. Barisic, M. Stawikowski, R. Stawikowska, D. Binetti, P. Cudic, A Practical Synthesis of N^{α}-Fmoc Protected L-*threo*-β-hydroxyaspartic Acid Derivatives for Coupling *via* α- or β-Carboxylic Group, *Amino Acids* **42** (2012) 285-293.
36. N. Bionda, M. Stawikowski, R. Stawikowska, M. Cudic, F. López-Vallejo, D. Treitl, J. Medina-Franco, P. Cudic, Effects of Cyclic Lipodepsipeptide Structural Modulation on Stability, Antibacterial Activity and Human Cell Toxicity, *ChemMedChem*, **7** (2012) 871-882. *VIP article and featured on the inside cover*.
37. M. Cudic, M. C. Rodriguez, A. Yongye, K. Martinez, **P. Cudic**, Molecular Modeling Studies of Peptide Based Lectinomimics, Proceedings of the 23rd American and 6th International Peptide Symposium, M. Lebl Ed., American Peptide Society, (2013) 150-151.
38. N. Bionda, J. P. Pitteloud, P. Cudic, Solid-phase Synthesis of Fusaricidin/LI-F Class of Cyclic Lipopeptides: Guanidinylation of Resin-bound Peptidyl Amines, *Biopolymers Pept. Sci*. **100** (2013) 160-166.
39. J. P. Pitteloud, N. Bionda, P. Cudic, Direct Access to Side chain *N,N'*-diaminoalkylated Derivatives of Basic Amino Acids Suitable for Solid-phase Peptide Synthesis, *Amino Acids,* **44** (2013) 321-333.
40. N. Bionda, J. P. Pitteloud**,** P. Cudic, Cyclic Lipodepsipeptides: A New Class of Antibacterial Agents in Battle Against Resistant Bacteria, *Future Med. Chem*. **5** (2013) 1311-1330. *Invited review.*
41. N. Bionda, R. M. Fleeman, L. N. Shaw, P. Cudic, Effect of Ester to Amide or *N*-Methyl Amide Substitution on Bacterial Membrane Depolarization and Antibacterial Activity of Novel Cyclic Lipopeptides, *ChemMedChem*, **8** (2013) 1394-1402.
42. Y. Li, N. Bionda, A. Yongye, P. Geer, M. Stawikowski, P. Cudic, K. Martinez, R. A. Houghten, Dissociation of Antimicrobial and Hemolytic Activities of Gramicidin S through *N*-Methylation Modification, *ChemMedChem*, **11** (2013) 1865-1872.
43. N. Bionda, I. Pastar, S. C. Davis, P. Cudic, *In vitro* and *in vivo* Activities of Novel Cycliclipopeptides Against Staphylococcal Biofilms, *Protein Peptide Lett.* **21** (2014) 352-356.
44. L. Otvos, S. W. Vetter, M. Koladia, D. Knappe, R. Schmidt, E. Ostorhazi, I. Kovalszky, N. Bionda, P. Cudic, E. Surmacz, J. D. Wade, R. Hoffmann, The Designer Leptin Antagonist Peptide Allo-aca Compensates for Short Serum Half-life with Very Tight Binding to the Receptor, *Amino Acids,* **46** (2014) 873-882.
45. L. Otvos, D. Knappe, R. Hoffmann, I. Kovalszky, J. Olah, T. Hewitson, R. Stawikowska, M. Stavikowski, P. Cudic, F. Lin, J. D. Wade, E. Surmacz, S. Lovas, Development of Second Generation Peptides Modulating Cellular Adiponectin Receptor Responses, *Frontiers in Chemistry,* **2:93** (2014) 1-15.
46. A. Jakas, M. Perc, J. Suc, M. C. Rodriguez, M. Cudic, P. Cudic, Synthesis of Anthrose Lipidic Derivative as Mimic of *B. anthracis* BclA Glycoprotein for Use in ELISA-like Binding Assays, *J. Carb. Chem.* **35** (2016) 69-85.
47. P. Cudic, N. Joshi, D. Sagher, B. T. Williams; M. J Stawikowski, H. Weissbach, Identification of activators of methionine sulfoxide reductases A and B, *BBRC*, **469** (2016) 863-867.
48. N. Bionda, R. M. Fleeman, C. de la Fuente-Nunez, M. C. Rodriguez, F. Reffuveille, L. N. Shaw, I. Pastar, S. C. Davis, R. E. W. Hancock, P. Cudic, Identification of novel cyclic lipopeptides from a positional scanning combinatorial library with enhanced antibacterial and antibiofilm activities, *Eur. J. Med. Chem.* **108** (2016) 354-363.
49. M. C. Rodriguez, A. Yongye, M. Cudic, J. Medina-Franco, E. Liu, B. M. Mueller, T. Karabencheva-Christova, C. Z. Christov, M. Cudic, P. Cudic, Targeting cancer-specific glycans by cyclic peptide lectinomimics, *Amino Acids*, **49** (2017) 1867-1883.
50. K. R. Min, A. Galvis, B. Williams, R. Rayala, P. Cudic, D. Ajdic, Antibacterial and Anti-biofilm Activities of a Novel Synthetic Cyclic Lipopeptide Against Cariogenic *Streptococcus mutans* UA159, *Antimicrob. Agents Chemother*., **61** (2017), e00776-17.
51. M. C. Rodriguez, N. Bionda, C. A. Johnson, A. Jakas, P. Cudic, Bicyclic Peptide Based Lectinomimic, *Croat. Chem. Acta*., **90** (2018) 699–705.

52. R. K. Sajja, P. Cudic, L. Cucullo, *In vitro* characterization of odorranalectin for peptide-based drug delivery across the blood-brain barrier, *BMC Neuroscience*, **20** (2019), 22.
53. A. Tiller, R. Rayala, P. Cudic, Effect of DMSO on solid-phase intramolecular disulfide bond formation, *Protein and Peptide Letters* (2020), *in preparation*.

Book Chapters

1. M. Stawikowski and P. Cudic, Depsipeptide Synthesis, In *Methods in Molecular Biology*, edited by G. B. Fields, Humana Press, Springer: New York, (2006) vol. 386, p. 321-339.
2. P. Cudic, M. Stawikowski, Peptidomimetics: Fmoc Solid-Phase Pseudopeptide Synthesis, In *Methods in Molecular Biology*, edited by L. Otvos, Jr., Humana Press, Springer: New York, (2008) p. 223-246.
3. J.P. Pitteloud, P. Cudic, Synthesis of Side-Chain *N,N'*-Diaminoalkylated Derivatives of Basic Amino Acids for Application in Solid-Phase Peptide Synthesis, In *Methods in Molecular Biology*, edited by P. Cudic, Humana Press, Springer: New York, (2013) p. 61-75.
4. N. Bionda, P. Cudic, Solid-Phase Guanidinylation of Peptidyl Amines Compatible with Standard Fmoc-Chemistry: Formation of Monosubstituted Guanidines, In *Methods in Molecular Biology*, edited by P. Cudic, Humana Press, Springer: New York, (2013) p. 151-165.

Books

P. Cudic**,** Peptide Modifications to Increase Metabolic Stability and Activity, *Methods in Molecular Biology series*, Humana Press, Springer: New York, (2013). ISBN: 978-1-62703-651-1

Patents

1) P. Cudic, Artificial carbohydrate receptors that binds sialic acid and methods of detecting cancer cells, (2010), WO 2010005737
2) H. Weissbach, P. Cudic**,** Identification of activators of methionine sulfoxide reductases A and B, enzymes known to protect cells against oxidative damage, (2015), Provisional Application No.: 62/197,892
3) P. Cudic, D. Ajdic, Cyclic lipopeptides and methods of use in the treatment of bacterial infections, (2017) U.S. Patent Application No.: 62/579,504 and 62/579,536
4) P. Cudic, J. McLaughlin, Cyclic peptides, cyclic peptide conjugates and methods of use thereof, (2019), US Patent Application No.: 16/257,580

Research Support

Current support

1. Agency: NIH/NEI, R15, 1R15EY027527-01A1
   Title: Activators of MsrA and MsrB: potential use for diseases of the retina
   The goal of this project is to design and synthesize compounds that can activate methionine sulfoxide reductases, MsrA and MsrB. The Msr system plays an important role in protecting cells against oxidative damage and our goal is to develop drugs that can be used to treat diseases of the retina.
   Dates of Award: September 1, 2017-August 31, 2020
   Grant total: $442,560
   Role: Co-PI Predrag Cudic (PI Herbert Weissbach, Florida Atlantic University)

2. Nutrapharm Health, LLC., (Contract), AWD-001457, 09/01/2019-8/31/2020
   Title: Effect of CBD on Normal and Cancer Cells Exposed to Oxidative Stress.

Our role in this contract is to design and synthesize novel drug delivery platform for intranasal delivery of CBD to the brain.
Grant total: $60,000
Role: PI Predrag Cudic

3. Agency: FAU-Ariel University, Israel, Pilot Project
   Title: Dual Acting peptide-sensitizer Antibiotics Against Multidrug-resistant bacteria.
   The overall goal of the proposed research is to synthesize a series of dual-action peptide sensitizer antibiotics and assess their in vitro activity and nonspecific toxicity.
   Dates of Award: January 1, 2020-May 31, 2021.
   Grant total: $ 30,000 ($15,000 P. Cudic)
   Role: PI Predrag Cudic

Pending

1. Agency: NIH/NIAID (initial impact score: 21)
   Title: Targeting polymicrobial infections of diabetic foot ulcers with a novel antimicrobial peptide therapy
   This application proposes to identify novel cyclic lipopeptides (CLPs) with antibacterial and antibiofilm activities for the treatment of diabetic foot ulcers (DFUs).
   Dates of Award: July 1, 2021-August 31, 2022
   Direct cost: $275,000 (Grant total: $449,738)
   Role: Co-PI Predrag Cudic (PI D. Ajdic, University of Miami)

Grants Completed

1. Agency, NIH/NIDA, 1R21DA039722-01A1
   Title: Novel Opioid Peptides for Nose to Brain Delivery
   The goal of this project is to improve intranasal delivery of therapeutic peptides to the brain by grafting a bioactive sequence into the carrier cyclic peptide scaffold that exhibits bio-adhesive properties. To achieve this goal, we proposed synthesis of a focused positional scanning combinatorial library based on odorranalectin sequence in order to identify novel cyclic opioid-like peptides suitable for intranasal delivery to the brain as proof of concept for the odorranalectin delivery strategy as much as for further preclinical evaluations.
   Dates of Award: September 1, 2016-February 28, 2019
   Direct cost: $275,000 (Grant total: $519,747)
   Role: PI Predrag Cudic

2. Agency: DoD FY14 DMRDP Military Infectious Diseases Applied Research Award, Dept. of the Army –USAMRAA, DM140052
   Title: Novel Cyclic Lipopeptides for Treating Complicated Wound Infections
   The overall goal of the proposed research is to develop novel cyclic lipopeptide antibiotics as an alternative to the existing options for topical treatment of infected acute and chronic wounds, including those caused by MDR organisms and biofilms.
   Dates of Award: October 1, 2015-September 29, 2018
   Direct cost: $190,000 (Grant total: $ 2,000,000)
   Role: Sub-award to Predrag Cudic

3. Agency: NIH/NIAID, R21/R33, 1R21AI119288-01
   Title: Novel Cyclic Lipopeptides for Treating Gram-negative Bacterial Infections

Our overall goal of this project is to further modify lead peptide *cyclo*-[D-Lys-(12-guanidinododecanoil)Dap-D-Leu-Leu-D-Ile] using a combinatorial chemistry approach in order to optimize its antibacterial and antibiofilm activities against Gram-negative bacteria typically found in chronic wounds and to minimize nonspecific toxicity. The R21 phase is dedicated to preparation of the proposed cyclic peptide combinatorial library and library screening for antibacterial/antibiofilm activity and nonselective toxicity. The goal of the R33 phase is to develop an optimal cyclic lipopeptide/gelatin formulation for topical delivery, assess the therapeutic potentials of this formulation in a porcine model of wound infection and to elucidate the mode of action for the most potent peptides.
Dates of Award: July 1, 2015-June 30, 2016
Direct cost: $150,000, R21 phase (Grant total, R321/R33: $1,572,125)
Role: PI Predrag Cudic

4. Agency: DoD FY14 DMRDP Military Infectious Diseases Applied Research Award, Dept. of the Army –USAMRAA, DM140052
   Title: Novel Cyclic Lipopeptides for Treating Complicated Wound Infections
   The overall goal of the proposed research is to develop novel cyclic lipopeptide antibiotics as an alternative to the existing options for topical treatment of infected acute and chronic wounds, including those caused by MDR organisms and biofilms.
   Dates of Award: September 30, 2015-June 1, 2016
   Direct cost: $1,460,057 (Grant total: $ 2,000,000)
   Role: PI Predrag Cudic

5. Agency: Multiple Sclerosis National Research Institute
   Title: Novel Antimicrobial Peptides with a Minimal Effect on the Gut Commensal Flora to Prevent Development and/or Progression of MS
   The goal of this proposal is to generate a positional-scanning combinatorial library based on cyclic lipohexapeptide scaffold in order to identify novel antimicrobials capable of targeting bacterial infections with a minimal impact on normal gut microflora that plays an important role in the education of the immune system and thus in the susceptibility to multiple sclerosis.
   Dates of Award: January 1, 2016-June 30, 2016
   Direct cost: $34,853 (Grant total: $34,853)
   Role: PI Predrag Cudic

6. Agency: Arthritis & Chronic Pain Research Institute, PC5213
   Title: Novel Analgesic Peptides for Direct Nose to Brain Delivery
   The goal of this project is to optimize solid-phase synthesis of odorranalectin cyclic peptide analogs (17-mer cyclic peptides with lectin-like properties), in particular cyclization of the resin-bound linear precursor via disulfide bond.
   Dates of Award: January 1, 2015-June 30, 2015
   Direct cost: $15,000 (Grant total: $15,000)
   Role: PI Predrag Cudic

7. Agency: State of Florida Department of Health
   Title: Florida Drug Discovery Acceleration Program
   The goal of this project is to provide TPIMS compound libraries and expertise to Florida Institutions to accelerate drug discovery and commercialization statewide.
   Dates of Award: July 1, 2013-June 30, 2015
   Grant total: $6,000,000
   Role: Co-PI Predrag Cudic (PI: R. Houghten, TPIMS)

8. Agency: NATO, Science for Peace Grant, Grant ID: SfP-983154
   Title: Artificial Receptors for *Bacillus anthracis* Specific Anthrose Detection

The goal of this research proposal was to design a simple and robust assay for detection of *Bacillus anthracis* spores based on specific sensing of anthrose monosaccharide.
Dates of Award: January 1, 2009-January 31, 2013
Direct cost: 300,000 EUR (Grant total: 300,000 EUR)
Role: PI Predrag Cudic

9. Agency: NIH, 1S06-GM073621-01, SCORE Pilot Project
   Title: New Depsipeptide Antibiotics and Their Bacterial Targets
   The goal of this proposal was to synthesize naturally occurring cyclic lipodepsipeptide antibiotic fusaricidin A and its analogs and assess their antibacterial activities, nonselective toxicity and mode of action.
   Dates of Award: June 1, 2005-May 31, 2009
   Direct cost: $200,000 (Grant total: $281,000)
   Role: PI Predrag Cudic

10. Agency: Unity through Knowledge Fund, Republic of Croatia, Ministry of Science, Education and Sport, Postdoctoral Training Grant
    Title: Antibiotic plusbacin A_3: total solid-phase synthesis and structure-activity relationship study
    The main goal of this proposal was to develop a synthetic strategy toward plusbacin A_3 unusual amino acid building blocks, to synthesize plusbacin A_3 using solid-phase approach and to assess this synthetic compound antibacterial activity.
    Dates of Award: October 1, 2008-April 30, 2009
    Direct cost: 10,000 EUR (Grant total: 10,000 EUR)
    PI/Postdoctoral Researcher: Lidija Barisic, University of Zagreb, Zagreb, Croatia
    Role: PI/Mentor Predrag Cudic

11. Agency: NIH/NIAID, R21/R33, 1R21AI119288-01
    Title: Novel Cyclic Lipopeptides for Treating Gram-negative Bacterial Infections
    Our overall goal of this project is to further modify lead peptide *cyclo*-[D-Lys-(12-guanidinododecanoil)Dap-D-Leu-Leu-D-Ile] using a combinatorial chemistry approach in order to optimize its antibacterial and antibiofilm activities against Gram-negative bacteria typically found in chronic wounds and to minimize nonspecific toxicity. The R21 phase is dedicated to preparation of the proposed cyclic peptide combinatorial library and library screening for antibacterial/antibiofilm activity and nonselective toxicity. The goal of the R33 phase is to develop an optimal cyclic lipopeptide/gelatin formulation for topical delivery, assess the therapeutic potentials of this formulation in a porcine model of wound infection and to elucidate the mode of action for the most potent peptides.
    Dates of Award: July 1, 2016-June 30, 2017
    Direct cost: $45,218 (Grant total: $150,000)
    Role: Sub-award to Predrag Cudic

12. Agency: American Heart Association (AHA), National Center Research Program, Grant ID: 0630175N
    Title of Project: New Antibiotic Therapy for the Treatment of Infective Endocarditis
    The goal of this proposal was to develop a synthetic route to naturally occurring cyclic lipodepsipeptide antibiotic katanosin B and its analogs and assess their structure-activity relationship.
    Dates of Award: January 1, 2006-December 31, 2009
    Direct cost: $260,000 (Grant total: $283,636)
    Role: PI Predrag Cudic

13. Agency: NATO, Science for Peace Planning Grant, Grant ID: SfP-983154
    Title of Project: Artificial Receptors for *Bacillus anthracis* Specific Anthrose Detection
    The goal of this planning grant was to coordinate activities between the PI and his collaborators related to the experimental design, writing and submission of the full proposal.
    Dates of Award: January 1, 2008-May 22, 2008

Direct cost: 7,000 EUR (Grant total: 7,000 EUR)
Role: PI Predrag Cudic

Presentations

Invited Speaker

2003 Rudjer Boskovic Institute, University of Zagreb, Zagreb, Croatia
2003 Pliva Research Institute Ltd./GlaxoSmithKline Research Center Zagreb, Croatia
2004 Barry University, Chemistry Department, Miami Shores, Florida
2005 Florida Atlantic University, Department of Mathematical Sciences, Boca Raton, Florida
2005 Organic Faculty of Florida Meeting, Carbohydrate recognition in Water by Artificial Receptors, Tampa, Florida.
2006 National Research Council, Charlottetown, Prince Edwards Island, Canada
2006 Organic Faculty of Florida Meeting, University of Tampa, Tampa, Florida
2006 Temple University, Sbarro Institute, Philadelphia, Pennsylvania
2007 ACS, Florida Annual Meeting and Exposition (FAME), Orlando, Florida
2007 University of Texas at San Antonio, Chemistry Department, San Antonio, Texas
2007 University of Texas Health Science Center at San Antonio, San Antonio, Texas
2007 Florida Annual Meeting and Exposition (FAME), Fmoc Solid-phase Synthesis of Cyclic Lipodepsipeptides, ACS, Orlando, Florida.
2008 Rudjer Boskovic Institute, University of Zagreb, Zagreb, Croatia
2008 University of Zagreb, Faculty of Science, Department of Chemistry, Zagreb, Croatia
2008 NATO Science for Peace Plenum, Brussels, Belgium
2008 Frontiers in Science Seminar, C. E. Schmidt College of Science, FAU, Boca Raton, Florida
2008 Bugs and Drugs Conference, San Diego, California
2008 Florida International University, Chemistry and Biochemistry Department, Miami, Florida
2009 Nova Southeastern University, Rumbaugh-Goodwin Institute for Cancer Research, Fort Lauderdale, Florida
2010 Nova Southeastern University, Farquhar College of Arts and Sciences, Fort Lauderdale, Florida
2012 Florida Atlantic University, Center for Molecular Biology and Biotechnology Seminar Series, Boca Raton, Florida
2012 University of South Florida, Department of Cell Biology, Microbiology and Molecular Biology, University of South Florida, Tampa, Florida
2013 St. Lucie County Economic Development Board Meeting, Port St. Lucie, Florida.
2013 Florida Atlantic University, Department of Chemistry and Biochemistry Seminar Series, Boca Raton, Florida
2014 Texas Tech University Health Science Center, School of Pharmacy, Department of Pharmaceutical Sciences, Amarillo, Texas
2014 Re-Entering Antibacterial Drug Development Summit, Boston, Massachusetts.
2015 Nova Southeastern University, Farquhar College of Arts and Sciences, Fort Lauderdale, Florida
2015 Florida International University, Chemistry and Biochemistry Department, Miami, Florida
2015 Florida Atlantic University, FAU Chemistry Club Annual Banquet and Research Symposium, Boca Raton, Florida
2016 University of Florida, School of Pharmacy, Department of Medicinal Chemistry, Gainesville, Florida.
2017 UF Drug Discovery Conference, UF Hilton Conference Center, Gainesville, Florida.
2018 BIT'S 11th Annual World Protein and Peptide Conference, Miami Marriott Dadeland, Miami, Florida.

2018 5th Annual Personalized Nanomedicine Symposium, Personalized Nano-Medicine approach for Opioid Addiction/Substance Abuse Session, The Society of Personalized Nano-Medicine, Pullman Hotels and Resort, Miami, Florida

2019 2019 Military Health System Research Symposium (MHSRS), Pain Management for the Future Fight Session, Gaylord Palms Resort and Convention Center, Kissimmee, Florida.

Conference Participations

March, 2004 A. Addo-Mensah, C. Thivierge, P. Cudic, Molecular Recognition of Biologically Important Monosaccharides in Aqueous Media, Florida Academy of Sciences Meeting, Orlando, FL, poster presentation.

June, 2004 P. Cudic, Tetrahedron Symposium, New York, NY

June, 2005 R. Rawat, R. T. Martello, P. Y. Jean-Charles and P. Cudic, Progress Toward Total Solid- Phase Synthesis of Cyclic Lipodepsipeptide Antibiotic Fusaricidin A,19th American Peptide Symposium, San Diego, CA, poster presentation.

August, 2005 A. Addo-Mensah, P. Cudic, Molecular Recognition of Biologically Important Carbohydrates by Artificial Receptors in Water, 230th American Chemical Society Meeting, Washington, DC, poster presentation.

March, 2005 P. Cudic, Carbohydrate recognition in Water by Artificial Receptors, Organic Faculty of Florida Meeting, Tampa, FL, *invited speaker*

September, 2006 M. Stawikowski and P. Cudic, Optimization of the Total Solid-Phase Synthesis of Lipodepsipeptide Antibiotic Fusaricidin A. 29th European Peptide Symposium, Gdansk, Poland, poster presentation.

October, 2006 P. Cudic, Florida SUS Homeland Security Consortium Meeting, Florida Golf Coast University, Fort Myers, FL.

May, 2007 P. Cudic, Fmoc Solid-phase Synthesis of Cyclic Lipodepsipeptides, ACS, Florida Annual Meeting and Exposition (FAME), Orlando, FL, *invited speaker*

May, 2007 A. A. Mensah, R. Stawikowska, P. Cudic, Synthetic Macrocyclic Receptors for Selective Carbohydrate Binding, ACS, Florida Annual Meeting and Exposition (FAME), Orlando, FL, *A. A. Mensah oral presentation.*

June, 2007 L. Otvos, Jr., M. Cassone, V. De Olivier Inacio, P. Noto, J. J. Roux, J. D. Wade, P. Cudic, Synergy Between a Lead Proline-Rich Antibacterial Peptide Derivative and Small Molecule Antibiotics, 20th American Peptide Society Symposium, Montreal, Canada, poster presentation.

June, 2007 L. Otvos, Jr., M. Terrasi, D. Knape, P. Cudic, J. D. Wade, R. Hoffmann, E. Surmacz, Leptin-Based Agonists and Acting on the Leptin-Leptin Receptor Interface, 20th American Peptide Society Symposium, Montreal, Canada, poster presentation.

June, 2007 C. James-Johnson, P. Cudic, Bicyclic Organo-Peptides as Models for Carbohydrate Binding Proteins, 20th American Peptide Society Symposium, Montreal, Canada, poster presentation.

June, 2007 M. Stawikowski, P. Cudic, Lipodepsipeptide Antibiotic Fusaricidin and its Analogues: Total Solid-Phase Synthesis and Biological Activity, 20th American Peptide Society Symposium, Montreal, Canada, poster presentation.

June, 2007 R. Stawikowska, M. Stawikowski, P. Cudic, Progress toward Total Solid-Phase Synthesis of Depsipeptide Antibiotic Katanosin B, 20th American Peptide Society Symposium, Montreal, Canada, poster presentation.

September, 2008 N. Bionda, M. Cudic, P Cudic, Bugs and Drugs Conference, Small Cyclic Lipodepsopeptides as Promising Lead Structures for New Antibiotics Discovery, San Diego, CA, *invited speaker* and poster presentation.

June, 2009 N. Bionda, D. Treitl, M. Stawikowski, P. Cudic, Structure-Antibacterial Activity Relationship of Cyclic Lipodepsipeptide Antibiotic Fusaricidin A, 21st American Peptide Society Symposium, Bloomington, IN, poster presentation.

June, 2009 N. Bionda, D. Binetti, P. Cudic, M. Cudic, Total Fmoc Solid-phase Synthesis of Naturally Occurring Depsipeptide Antibiotic Katanosin B, 21st American Peptide Society Symposium, Bloomington, IN, poster presentation.

September, 2010 P. Cudic, N. Bionda, A. Jakas, M. Cudic, Peptide Based Artificial Receptors for Carbohydrate Recognition, 31st European Peptide Society Symposium, Copenhagen, Denmark, poster presentation.

January, 2011 M. Cudic, M. Rodriguez, N. Bionda, P. Cudic, Exploring Carbohydrate Recognition for Selective Cancer Cell Targeting, Nano in Cancer: Linking Chemistry, Biology, and Clinical Applications *In Vivo*, Miami, FL, poster presentation.

June, 2011 N. Bionda, M. Cudic, P. Cudic, Exploring the Spectrum of Biological Activities of Fusaricidins and Their Analogs, 22nd American Peptide Society Symposium, San Diego, CA, poster presentation.

November, 2011 J. P. Pitteloud, N. Bionda, P. Cudic, Small Molecule Recognition of Tumor-Associated Carbohydrate Antigens sLe$^{x/a}$, Annual Conference of the Society for Glycobiology, Seattle, WA, poster presentation.

September, 2012 N. Bionda, P. Cudic, Novel Cyclic Lipopeptides Effective Against Biofilm-producing *Staphylococcus aureus*, 6th ASM Conference on Biofilms, Miami, FL, poster presentation.

September, 2012 A. Jakas, P. Cudic, N. Bionda, J. Suc, K. Vlahovcek-Kahlina, M. Cudic, 32st European Peptide Symposium, Athens, Greece, poster presentation.

October, 2012 J. P. Pitteloud, N. Bionda, P. Cudic, Novel Cyclic Peptides Effective Against Multidrug-resistant Gram-negative Bacteria, The Sixths Peptide Engineering Meeting, Atlanta, GA, poster presentation.

February, 2013 J. P. Pitteloud, N. Bionda, C. de la Fuente-Nunez, F. Reffuveille, R. E. W. Hancock, P. Cudic, Novel cyclic peptides effective against multidrug-resistant bacteria, Antimicrobial Peptides, Gordon Research Conferences, Ventura, CA, poster presentation.

June, 2013 M. Cudic, M. C. Rodriguez, A. Yongye, K. Martinez, P. Cudic, Molecular Modeling Studies of Peptide Based Lectinomimics, 23rd American peptide Symposium and 6th International Peptide Symposium, Hilton Waikoloa Village, Hawaii, poster presentation.

November, 2013 M. C. Rodriguez, M. Cudic, P. Cudic, Cell-Surface Glycan-Lectin Interactions for Biomedical Applications, Vaccine and Gene Therapy Institute (VGTI), Port St. Lucie, Florida, poster presentation.

October, 2014 P. Cudic, Re-Entering Antibacterial Drug Development Summit, Cambridge Healthtech Institute, Hilton Boston Back Bay, Boston, MA, *invited speaker.*

August, 2015 Military Health System Research Symposium, Marriott Harbor Beach Resort and Spa, Fort Lauderdale, FL.

June, 2016 B. Williams, S. Eans, M. Rodriguez[1], M. Cezares, C. Dooly, J. P. McLaughlin, P. Cudic, Novel Opioid Peptides for Nose to Brain Delivery, Chemistry and Pharmacology of Drugs of Abuse Conference, Northeastern University, Boston, MA, poster presentation.

August, 2017 B. Williams, M. Cezares, C. Dooly, P. Cudic, Novel Approach to Peptide-Based Drug Delivery to Brain, Chemistry and Pharmacology of Drugs of Abuse Conference, Northeastern University, Boston MA, poster presentation.

September, 2017 R. Rayala**,** P. Cudic, Tryptophan and Arginine Rich Antibacterial Cyclic Peptides, UF Drug Discovery Symposium, UF Hilton Conference Center, Gainesville, FL, poster presentation.

September, 2017 P. Cudic, Novel Approach for Peptide-Based Drug Delivery to Brain, UF Drug Discovery Conference, UF Hilton Conference Center, Gainesville, FL, *invited speaker.*

March, 2018 P. Cudic, Novel opioid peptides for intranasal delivery to brain, BIT'S 11th Annual World Protein and Peptide Conference, Miami Marriott Dadeland, Miami, FL, *invited speaker.*

November, 2018 P. Cudic, Intranasal drug delivery, 5th Annual Personalized Nanomedicine Symposium, Personalized Nano-Medicine approach for Opioid Addiction/Substance Abuse Session, The Society of Personalized Nano-Medicine, Pullman Hotels and Resort, Miami, FL, *invited speaker.*

March, 2019 R. Rayala, BV. Williams, S. Majumder, J. P. McLaughlin P. Cudic, Novel odorranalectin based opioid-like peptides: synthesis, intranasal delivery to brain, and activity against opioid receptors, ACS Spring 2019 National Meeting and Exposition, Orange County Convention Center, West Concourse, Orlando, FL, poster presentation.

April, 2019 P. Cudic, Novel multifunctional cyclic peptide analgesics for intranasal delivery to brain, UF Drug Discovery Conference, Hotel Indigo, Gainesville, FL.

August, 2019 P. Cudic, Novel Multifunctional Cyclic Peptide-based Analgesics Suitable for Intranasal Delivery to Brain, 2019 Military Health System Research Symposium (MHSRS), Pain Management for the Future Fight Session, Gaylord Palms Resort and Convention Center, Kissimmee, FL, *invited speaker.*

Meeting Session Chaired

Chair of Session: Conformation, Folding and Self-Assembly, 2nd International Peptide Symposium/17th American Peptide Symposium, San Diego, CA, 2001

Community Recognition

1. 06/20/2005, The Palm Beach Post, FAU Hopes $4 Million Grant Boosts Research Reputation, by Kimberly Miller.
2. 07/06/2005, South Florida Business Journal, FAU's Charles E. Schmidt College of Science Received $4 Million Score Grant from the NIH, by Fran Schwartz.
3. Manuscript N. Bionda, M. Cudic, L. Barisic, M. Stawikowski, R. Stawikowska, D. Binetti, P. Cudic, A Practical Synthesis of N^{α}-Fmoc Protected L-*threo*-β-hydroxyaspartic acid Derivatives for Coupling *via* α- or β-Carboxylic Group, *Amino Acids,* **42** (2012) 285-293 is cited on the Sigma-Aldrich web-site as a part of technical documentation for hydroxyaspartic acid:

   http://www.sigmaaldrich.com/catalog/papers/21082204
4. Work described in the manuscript N. Bionda, M. Stawikowski, R. Stawikowska, M. Cudic, F. López-Vallejo, D. Treitl, J. Medina-Franco, P. Cudic, Effects of Cyclic Lipodepsipeptide Structural Modulation on Stability, Antibacterial Activity and Human Cell Toxicity, *ChemMedChem*, **7** (2012) 871-882 was selected by the reviewers as a VIP and it was featured on the inside cover of the May 2012 issue of ChemMedChem, one of top journals for research at the interface of chemistry, biology and medicine. Our research was chosen for the unique approach we took in identifying new compounds that may fight against drug-resistant infections.
5. Manuscript N. Bionda, R. M. Fleeman, L. N. Shaw, P. Cudic, Effect of Ester to Amide or *N*-Methylamide Substitution on Bacterial Membrane Depolarization and Antibacterial Activity of Novel Cyclic Lipopeptides, *ChemMedChem*, **8** (2013) 1394-1402 is featured in the March 2014 edition of Global Medical Discovery Series (ISSN 1929-8536) as a key scientific article contributing to excellence in biomedical research. The readership of Global Medical Discovery includes pharmaceutical and related industries, universities, colleges, research institutions, and libraries.
6. Manuscript L. Otvos, S. W. Vetter, M. Koladia, D. Knappe, R. Schmidt, E. Ostorhazi, I. Kovalszky, N. Bionda, P. Cudic, E. Surmacz, J. D. Wade, R. Hoffmann, The Designer Leptin Antagonist Peptide Allo-aca Compensates for Short Serum Half-life with Very Tight Binding to the Receptor, *Amino Acids,* **46** (2014) 873-882 is featured in the May 2014 edition of Global Medical Discovery Series (ISSN 1929-8536) as a key scientific article contributing to excellence in biomedical research. The readership of Global Medical Discovery includes pharmaceutical and related industries, universities, colleges, research institutions, and libraries.

7. 06/04/2015 TC Palm, Torrey Pines' Predrag Cudic awarded $1.3 million+grant. (http://www.tcpalm.com/ugc/st-lucie-county-ugc/torrey-pines-predrag-cudic-awarded-13-million-grant_84282003).

8. 12/09/2016, Opioid Epidemic Roundtable, Greater Delray Beach Chamber of Commerce (organized by Congresswoman Lois Frankel).

CURRICULUM VITAE

ALI A. DANESH, Ph.D., CCC-A, FAAA
Board Certified, American Board of Audiology
Professor of Communication Sciences and Disorders
Professor of Clinical Biomedical Sciences

Academic Address:

Department of Communication Sciences & Disorders
Florida Atlantic University
777 Glades Rd
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Phone: (561) 297-2071 (OFFICE)
(561) 297-2258 (CLINIC)
Fax: (561) 297-2268
E-mail: danesh@fau.edu
WEB: http://www.coe.fau.edu/faculty/danesh/

Academic Training:

Ph.D. 1994-1998

Audiology, with emphasis on Auditory Electrophysiology
School of Audiology and Speech-Language Pathology,
The University of Memphis, Memphis, Tennessee, August 1998.
Dissertation Title:
Topographic Analysis of Late Auditory Evoked Potentials (LAEPs) to Linguistic and Acoustically Similar Non-Linguistic Stimuli (Dissertation Major Professor: Herbert Gould, PhD)

Collaterals: Basic neuroscience (University of Tennessee, College of Medicine, Memphis, Tennessee) & Communication Disorders (University of Memphis).

Clinical Fellowship 1997

Methodist Hospitals of Memphis, Department of Audiology
(Supervisor: David A. Zapala, PhD)

M.S. 1993-1994

Audiology
Department of Speech Pathology and Audiology
Idaho State University, Pocatello, Idaho, 1994.
Thesis Title:
Comparison of the Effects of Target Probability and Interstimulus Interval on Amplitude of the P300 Auditory Event-Related Potentials (Thesis Advisor: Thayne C. Smedley, PhD).

B.Sc. 1983-1987

Audiology
Department of Audiology, School of Rehabilitation Sciences,
Iran University of Medical Sciences, Tehran-Iran, 1987.
Thesis Seminar Title:
Prosthetic Management of Tinnitus (Advisor: Mr. A.A. Tahaee)

SPECIALITY/ FIELDS OF INTEREST:

Audiology
Auditory Electrophysiology/Auditory Evoked Potentials
Auditory and Vestibular Neuroscience
Tinnitus
Sound Sensitivity Disorders (Hyperacusis & Misophonia)
Vestibular Assessment & Rehabilitation
Topographic Brain Mapping
Auditory Profiles in Autism Spectrum Disorders (ASD)
Genetics of Hearing Impairments
Cochlear Hair Cell Regeneration

PROFESSIONAL EMPLOYMENT/AFFILIATIONS:

Florida Atlantic University:

Professor, Department of Communication Sciences and Disorders, Florida Atlantic University, May 2013-present.

Professor, Clinical Biomedical Science (Secondary), Schmidt College of Medicine, Florida Atlantic University, April 2014-present. (Joint Appointment)

Associate Professor and Director of Audiology Clinic, Department of Communication Sciences and Disorders, Florida Atlantic University, August 2004-present.

Affiliate Faculty, Neurology Residency Program, Schmidt College of Medicine, Florida Atlantic University, 2017-present.

Affiliate Faculty, Department of Psychology, Schmidt College of Science, Florida Atlantic University, 2017-present.

Affiliate Associate Professor of Medicine, Schmidt College of Medicine, Florida Atlantic University, January 2005- April 2014.

Assistant Professor, Department of Communication Sciences and Disorders, Florida Atlantic University, August 1998-2004.

Other Academic Activities/Settings:

Royal Surrey County Hospital. Honorary Contract Consultant, Audiology Department, Surrey, United Kingdom (2018-present)

Voluntary Associate Professor of Otolaryngology, Leonard M. Miller School of Medicine,

University of Miami, September 2016-present.
Chief Audiologist, Private Practice, Labyrinth Audiology, Boca Raton, FL, 2005-Present.

Adjunct Professor, Audiology Department, Nova Southeastern University (NSU), Fort Lauderdale, FL. 2003- Present.

Voluntary Assistant Professor of Otolaryngology, Leonard M. Miller School of Medicine, University of Miami, September 2005-2016.

Adjunct Professor, Audiology Department, Salus University, George S. Osborne College of Audiology, International Doctor of Audiology, AuD-Bridge Degree Program, Elkins Park, PA, 2012- Present.

Graduate Faculty, Department of Communication Sciences and Disorders, Missouri State University, Springfield, MO, 2013-Present.

Graduate Research Assistant, Auditory Electrophysiology Laboratory, School of Audiology & Speech-Language Pathology, The University of Memphis, August 1994-August 1998.

Clinical Fellow in Audiology, Department of Audiology, Methodist Hospitals of Memphis, February 1997- January 1998.

Graduate Teaching Assistant, Department of Speech Pathology and Audiology, Idaho State University, 1994.

Audiology Instructor, Department of Audiology, Faculty of Paramedical Sciences, Shahid Beheshti University of Medical Sciences, Tehran-Iran 1989-1992.

TEACHING AND ADMINISTRATIVE EXPERIENCE:

@Florida Atlantic University:

Graduate Teaching

Introduction to Audiological Sciences
Neural Bases of Human Communication
Aural Habilitation/Rehabilitation
Genetics for Communication Disorders
Clinical Supervision, Audiology Practicum

@Other Academic Settings:

- Physiology of the Auditory and Vestibular Systems, Miller School of Medicine University of Miami @ Florida Atlantic University (*first year medical students*)

- Anatomy & Physiology of the Auditory System, Charles E. Schmidt College of Medicine, Florida Atlantic University (*first year medical students*)
- Anatomy & Physiology of the Vestibular System, Charles E. Schmidt College of Medicine, Florida Atlantic University (*first year medical students*)
- Auditory system, Neuroscience 2 PSB 6346, College of Science, Graduate and Doctoral students, Florida Atlantic University
- Vestibular system, Neuroscience 2 PSB 6346, College of Science, Graduate and Doctoral students, Florida Atlantic University
- Genetics of Hearing Impairment, Salus University (*doctoral students, AuD Bridge Program*)
- Genetics of Hearing Impairment, Nova Southeastern University (*doctoral students*)
- Instrumentation in Audiology, Nova Southeastern University
- Anatomy and Physiology of the Hearing Mechanism, The University of Memphis
- Evaluation and Prescription of Amplification, Shahid Beheshti University of Medical Sciences
- Calibration of Audiologic Instruments, Shahid Beheshti University of Medical Sciences

ADMINISTRATION:

Florida Atlantic University:

Director of Audiology Clinic
Chair, Petitions Committee, Department of Communication Sciences & Disorders
Chair, Research Committee, College of Education (Term expired in 2014)
Member, Curriculum Committee, College of Education (2010-present)
Member Graduate Committee, College of Education (2010-present)
Member University Graduate Programs (2015-present)
Member University Graduate Council (2015-present)
Member, University Research Council (Term expired in 2014)
Member, Institutional Review Board (IRB) (Term expired in 2013)
Coordinator of University wide Hearing Screenings
Coordinator of Tinnitus Awareness Day at FAU

PUBLISHED MANUSCRIPTS (PEER-REVIEWED)

Peer Reviewed National & International Journals:

1. Aazh, H, Moore, BCJ & **Danesh**, AA (2020). Internal Consistency and Convergent Validity of the Inventory of Hyperacusis Symptoms. Ear and Hearing. In Press.
2. Porcaro, C. et al. (2020). Perceived Voice Disorders in Older Adults and Impact

on Social Interactions. Perspectives of the ASHA Special Interest Groups. In Press.

3. Aazh, H & **Danesh**, AA (2020). Tinnitus and Insomnia, The Hearing Journal: June 2020 - Volume 73 - Issue 6 - p 14,15. https://journals.lww.com/thehearingjournal/Fulltext/2020/06000/Tinnitus_and_Insomnia__Management_via.5.aspx

4. **Danesh,** AA & Aazh, H (2020). Misophonia: A Neurologic, Psychologic, and Audiologic Complex. The Hearing Journal. Vol 73, pp20-23. https://journals.lww.com/thehearingjournal/Fulltext/2020/03000/Misophonia__A_Neurologic,_Psychologic,_and.5.aspx

5. Aazh, H., Landgrebe, M., **Danesh,** AA & Moore, BCJ. Cognitive Behavioral Therapy For Alleviating The Distress Caused By Tinnitus, Hyperacusis And Misophonia: Current Perspectives. Psychol Res Behav Manag. 2019 Oct 23;12:991-1002. https://www.ncbi.nlm.nih.gov/pubmed/31749641

6. **Danesh,** AA (2019). Incorporating Tinnitus Management Services into your Audiology Practice. The Hearing Journal. Vol 72, pp22-23. https://journals.lww.com/thehearingjournal/Fulltext/2019/11000/Incorporating_Tinnitus_Management_Services_into.8.aspx

7. Aazh, H., Landgrebe, M & **Danesh**, AA. (2019). Parental mental illness in childhood as a risk factor for suicidal and self-harm ideations in adults seeking help for tinnitus and/or hyperacusis. Am J Aud. https://pubs.asha.org/doi/10.1044/2019_AJA-18-0059; https://www.ncbi.nlm.nih.gov/pubmed/31184510

8. Porcaro, C.K., Alavi, E., Gollery, T., & **Danesh,** A.A. (2019). Misophonia: Awareness and Responsiveness Among Academics. Journal of Postsecondary Education and Disability, 108-118, 32 (2). https://www.ahead.org/professional-resources/publications/jped

9. Aazh, H., Langguth, B. & **Danesh**, AA (2018). Parental separation and parental mental health in childhood and tinnitus and hyperacusis disability in adulthood: a retrospective exploratory analysis. Int J of Aud. 2018 Oct 1:1-6. doi: 10.1080/14992027.2018.1514470. https://www.ncbi.nlm.nih.gov/pubmed/30272507

10. Aazh, H., **Danesh**, AA & Moore, BCJ (2018). Parental mental health in childhood as a risk factor for anxiety and depression among people seeking help for tinnitus and hyperacusis. J of Am Acad Aud. https://www.ncbi.nlm.nih.gov/pubmed/30446035

11. Aazh H, Knipper M, **Danesh** AA, Cavanna AE, Andersson L, Paulin J, Schecklmann M, Heinonen-Guzejev M, & Moore BCJ (2018). Insights from the Third International Conference on Hyperacusis: Causes, Evaluation, Diagnosis, and Treatment. Noise Health. 2018 Jul-Aug ;20(95):162-170. http://www.noiseandhealth.org/article.asp?issn=1463-

1741;year=2018;volume=20;issue=95;spage=162;epage=170;aulast=Aazh;type=0

12. Ocak, M, Eshraghi, R, **Danesh**, AA, Mittal, R & Eshraghi E (2018). Central Auditory Processing Disorders in Individuals with Autism Spectrum Disorders. Balkan Medical Journal, June 2018. https://www.researchgate.net/publication/326028400_Central_Auditory_Processing_Disorders_in_Individuals_with_Autism_Spectrum_Disorders?ev=project

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11. **Danesh**, A.A., & Gooraby, M. (1989). Value of Masking, A case report. *Bulletin of Rehabilitation*, Publication office of The School of Rehabilitation Sciences. (In Persian)

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FUNDED RESEARCH & GRANT APPLICATIONS:

1. Graves, B. Sue (PI), **Danesh**, AA, Pandya, A & Pelah, A. (2020). Artificial Intelligence and Virtual Reality for Technology Engagement in Exercise & Medicine. Seed Grant, College of Engineering, FAU ($25000, Funded).

2. **Danesh,** AA & Mannino, M (2020). tDCS and tVNS stimulation for Misophonia. REAM foundation (Under Review).

3. **Danesh,** A**.** (2020). Balance Research grant from the Let's Have a Smile Foundation ($50000, Funded).

4. **Danesh,** A**.** (2020). Tinnitus Research grant from The Blakeley Foundation ($10000, Funded).

5. **Danesh,** AA & Mannino, M (2019). tDCS and tVNS stimulation for Misophonia. REAM foundation (Not funded but had a good review).

6. **Danesh,** A**.** (2018). Tinnitus Research funding from Walter and Lucille Rubin Foundation ($25000, Funded).

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8. Eshraghi, A. et al. (2017). Developing effective novel interventions for Autism Spectrum Disorder patients. Grant submitted to U-Link (University of Miami Laboratory for Integrative Knowledge) request for Phase I (Developmental Applications for Innovative

Interdisciplinary Research Projects. (Role: Co-Investigator)

9. **Danesh,** A & Mannino, M. (2016). Measuring and Demonstrating Efficacy and Safety of NERVANA Headphones Using Transcutaneous Vagus Nerve Stimulation: A Pilot Study. (Funds pending from NERVANA, Inc).

10. **Danesh**, A. & Keintz, C. (2012). Healthy Aging Research Initiative (HARI) seed grant. *Healthy Aging of Human Communication*. (Funded, $2500)

11. Large, E. & **Danesh**, A. (2012). FAU College of Science Grant Award. *Understanding the Central Auditory System: Dynamics of Normal and Abnormal Percepts*. (Funded, $10000).

12. **Danesh**, A. (2012). FAU College of Education Grant Award. *Acquisition of Neuroscan system for Auditory Neuroscience at Florida Atlantic University* (2012) (Funded $4176 for 64 channel EEG electrocap)

13. Nagashino, H., Akutagawa, A., Emoto, E., **Danesh**, A. & Pandya, P. (2012) Japan Society of Promotion of Science (JSPS). *Analysis of plastic brain activities by EEG measurement and mathematical models*. . Grant-in-Aid for Scientific Research #24560498 (Funded in Japanese Yen equivalent to ~$36000 per PI)

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15. Large, E. (PI) & **Danesh**, A. (Co-PI) (2011). National Science Foundation (2011). *MRI: Acquisition of Neuroscan system for Auditory Neuroscience at Florida Atlantic University.*

16. Ouslander, J. & Tappen, R. (2010) Research Collaborator: **Danesh**, A. FAU Research Theme proposal "*Healthy Aging Research Initiative*". The proposal was awarded and selected as a Research Priority Area for Florida Atlantic University. ($150,000, Funded).

17. **Danesh**, A. Pandya, A. (2010). FAU Research Theme proposal "*Aging Auditory and Vestibular Systems*". The proposal was selected as one of the top ten Research Priority Proposal at Florida Atlantic University.

18. Huang, S., Pavlovic, M. & **Danesh**, A. *Autism Treatment Software,* National Institute of Health (2010).

19. **Danesh**, A., Pavlovic, M. & Pandya, A. Autism Speaks,: *Effects of Iodine on Neural Integrity of Individuals with Asperger's Syndrome: An Electrophysiological Study* (2009)

20. **Danesh**, A., Pavlovic, M. & Pandya, A Army Division *Idea* Award: *Electrophysiological responses to linguistic and non-linguistic stimuli as a measure of impaired communication in individuals with Asperger's Syndrome (AS)* (2009)

21. Nagashino, H., Akutagawa, **Danesh**, A. & Pandya, A. (in Japanese).Japan Society for the Promotion of Science (JSPS). *Analysis of auditory activities in the brain using electroencephalogram measurement and computational models* (2009) . Grant-in-Aid for Scientific Research #21560429 (Funded in Japanese Yen equivalent to ~ $36000 per PI).

22. Elias, M. et al. *Center of Excellence in Healthcare Technologies*, College of Engineering **Danesh**, A. Research Collaborator (Topic: *Preventing hearing loss*)

23. Elias, M. et al. Earmark proposal, **Danesh**, A. Research Collaborator (Topic: *Early Intervention for Speech, Language, and Hearing Disorders)* (2008)

24. Zhu, X, Ph.D. (PI) *NSF REU* (Research for Undergraduate Students Grant). **Danesh**, A. Research Collaborator (2008).

25. Large, E. & **Danesh**, A.A. National Institute of Health, R21 grant:, *A dynamical Model of Abnormal Auditory Percepts* (2006).

26. Large, E. & **Danesh**, A.A Tinnitus Research Consortium: *A Mathematical Model for Tinnitus: Theory to Experiment* (2006).

27. **Danesh**, A.A .Florida Atlantic University, College of Education Faculty Seed Grant: *Effects of Tinnitus on Auditory Processing* (2005). (Funded, $5000).

28. **Danesh**, A.A. & Large, E. Florida Atlantic University, Center for the Study of Neurological Disabilities:, *Study of Central Auditory System in Individuals with and without Tinnitus* (2005).

29. **Danesh**, A.A. & Pandya, A. Florida Atlantic University, Center for the Study of Neurological Disabilities:, *Neurological attributions of Efferent Auditory Pathway in Individuals with Tinnitus* (2005).

30. **Danesh**, A.A. & Fuchs, A. American Tinnitus Association:., *Residual Inhibition: Can it be Re-Discovered by fMRI?* (2002).

31. **Danesh**, A.A. & Wener, D. Tinnitus Research Consortium:, *Contralateral Suppression of OAEs in a Group of Normal Hearing to Mildly Hearing Impaired Individuals with Bilateral or Unilateral Tinnitus*. (2002).

32. **Danesh**, A.A. American Academy of Audiology: *Contralateral Suppression of OAEs in a Group of Normal Hearing to Mildly Hearing Impaired Individuals with Bilateral or Unilateral Tinnitus*. (2002).

33. **Danesh**, A.A., and Fuchs, A., Tinnitus Research Consortium: *Imaging Unusual Types of Tinnitus: An fMRI Investigation*. (2002).

34. **Danesh**, A. et al**.** National Institute of Health, *Shared Instrumentation Grant, NEUROSCAN SYSTEM*, in collaboration with The Center of Complex Systems and Brain Sciences and the University of Miami (2001)

35. **Danesh**, A. Office of Sponsored Research, Florida Atlantic University: *Effects of Stimulus on Latency and Amplitude of P300 Auditory Event-Related Potential.* (2000). (Funded, $3000)

PRESENTATIONS/PUBLISHED ABSTRACTS

(From Peer Reviewed State/National/International Presentations, poster or oral presentations):

1. **Danesh**, A.A. (2020). Evaluation and Management of Hyperacusis and Misophonia (Decreased Sound Tolerance Disorders). Virtual invited lecture for Missouri Academy of Audiology Scope of Practice Meeting.

2. **Danesh**, A.A. (2020). Virtual invited lecture for Florida Academy of Audiology, The Year of Best Practice.

3. **Danesh**, A.A. (2020). Tinnitus and its Management for THE Enthusiastic and Caring Clinicians! Virtual presentation. Invited Speaker and Moderator, July 11, 2020, Zoom virtual presentation for The Audiology Vestibular Science Academy Forum (15000 members).

4. **Danesh**, A.A., Hall, JW, Manchaiah, V, Scaglione, T, Marghzar, S, Kuzbyt, B., Crosby, N., & Aazh, H. (March 2020). Tinnitus: Where are we now in 2020. Oral presentation prepared for the Annual Convention of the American Academy of Audiology. New Orleans, LA. (Convention has been postponed due to COVID 19)

5. **Danesh, A.A.** (Feb 2020). Pathophysiology of Hyperacusis. Puerto Rico Academy of Audiology. Annual Convention, San Juan, PR.

6. **Danesh, A.A.** (Feb 2020). Tinnitus Management from an Audiology Perspective. Invited Speaker. Puerto Rico Academy of Audiology. Annual Convention, San Juan, PR.

7. **Danesh**, AA (2020). Tinnitus: Why we should not say NO to our patients! Invited Speaker, Grand Rounds, Boca Raton Community Hospital. Boca Raton, FL.

8. **Danesh**, AA (2019). Accommodations for Students with Misophonia in Academic Settings. Misophonia Association Convention. Invited Speaker (online attendance), Denver, Colorado. https://misophonia-association.org/2019-convention-schedule/

9. **Danesh**, AA (2019). Misophonia at School (and College). Invited Speaker, Misophonia International, (online webinar attendance), moderated by Jennifer Brout. https://misophoniaeducation.com/product/workshop-misophonia-at-school/

10. **Danesh, AA**, Eshraghi, AA, Scaglione, T (2019). How to manage patients with tinnitus. Invited Speaker. French American Otolaryngology Meeting. University of Miami.

11. **Danesh,** A.A. (2019). Incorporating Tinnitus Services to your Practice. Invited Speaker, Annual Convention of Florida Academy of Audiology, Orlando, FL.

12. **Danesh,** A.A & Porcaro, C. (2019). Reasonable Adjustments (Accommodations) for Decreased Sound Tolerance Disorders in Academic Settings. Accepted for presentation at the Fourth International Conference on Hyperacusis/Mini seminar on Misophonia: Causes, Evaluation, Diagnosis and Treatment, July 2019, London, UK. https://hyperacusisresearch.co.uk/

13. **Danesh**, A.A., Aazh, H., Langguth, B. & Moore, BCJ (2019). The effects of Parental Mental Health in childhood in coping with tinnitus and hyperacusis in adulthood. Tinnitus Research Initiative Conference, Taipei, Taiwan.

14. **Danesh**, A.A., Hall, JW, Manchaiah, V, Scaglione, T, Marghzar, S, Kuzbyt, B., & Aazh, H. (March 2019). Tinnitus: Contemporary Matters, Management Strategies, and Case Studies. Oral presentation at the Annual Convention of the American Academy of Audiology. Columbus, OH.

15. **Danesh,** A.A. (2018). Hyperacusis and its Management. Invited Speaker, Annual Convention of Florida Academy of Audiology, Orlando, FL.

16. **Danesh**, A.A. (2018). Hyperacusis: Underlying pathologies and current state of our knowledge. eAudiology, Invited Seminar Presentation. American Academy of Audiology.

17. **Danesh**, A.A., Wasiuk, P., Marghzar, S & Eshraghi, A. (April 2018). Neural Correlates, Underlying Pathologies, and Clinical Case Studies in Hyperacusis. Annual Convention of the American Academy of Audiology. Nashville, TN.

18. Porcaro, C.K., Alavi, E., Gollery, T., & **Danesh**, A.A. (November, 2017). Faculty

Awareness of Misophonia and Receptivity to Provide Classroom Accommodations. Technical session presented at the American Speech-Language-Hearing Association Convention, Los Angeles, CA

19. **Danesh,** A.A (2017). Neural Correlates, Underlying Pathologies and Audiologic Characteristics of Hyperacusis. Invited Speaker, 3rd International Conference on Hyperacusis Causes, Evaluation, Diagnosis and Treatment, 6-7 July 2017, Guildford, UK.

20. **Danesh,** A.A (2017). Sound Tolerance Issues and other Auditory Manifestations in the Autism Spectrum Disorders. Invited Speaker, 3rd International Conference on Hyperacusis Causes, Evaluation, Diagnosis and Treatment, 6-7 July 2017, Guildford, UK.

21. **Danesh,** A.A (2017). Misophonia and Tinnitus: A tale of two cities. Oral presentation. XII International Tinnitus Seminar, 22-24 May, 2017, Warsaw, Poland.

22. **Danesh,** A.A., Kennett, S.E., Martin, J., Fulton, S., Hall III, J.W., & Atcherson, S.R. (2017, April 5-8). Grand Rounds: Adult Diagnostics. Invited featured session at the 2017 AudiologyNOW! Convention, Indianapolis, IN.

23. **Danesh,** A.A. (2017) Current Scientific Findings about Misophonia. Invited Speaker. Misophonia Association annual convention, Las Vegas, NV.

24. **Danesh**, A. A. (2016) Why Audiology? The joy of helping others! Oral presentation. 15th Iranian Congress of Audiology. May 17-19, 2016 Tehran, Iran.

25. **Danesh**, A. A. & Aazh, H. (2016) Hyperacusis: Underlying pathologies, neurophysiological correlates and its psycho-audiological management. Oral workshop presentation. 15th Iranian Congress of Audiology. May 17-19, 2016 Tehran, Iran.

26. Aazh, H. & **Danesh**, A. A. (2016). How to explain the underlying causes of bothersome tinnitus and hyperacusis for your patient? Oral workshop presentation. 15th Iranian Congress of Audiology. May 17-19, 2016 Tehran, Iran.

27. **Danesh**, A. A. (2016) Underlying Pathologies and Neural Correlates of Hyperacusis. Invited Speaker. Tinnitus Practitioners Association (TPA) Sound Sensitivity Conference at Sea. March 2016.

28. **Danesh**, A. A. (2016). Hyperacusis: Audiologic Manifestations, Neural Correlates and Underlying Pathologies. Invited Speaker. Department of Otolaryngology Grandrounds, Miller School of Medicine, University of Miami, April 7, 2016.

29. Naharci, M., **Danesh,** A.A., Keintz, C., Engstrom, G.,Tappen, R. & Ouslander, J. (2016). Correlations between self-reported hearing loss and frailty in four ethnic groups. Poster

presentation. Annual Convention of the American Academy of Audiology, Phoenix, AZ, April 2016.

30. **Danesh**, A.A. Genetic aspects of sensorineural hearing loss. Oral Presentation. Audiology in Practice. Nov 8-10 2015, Tehran, Iran.

31. Nagashino, H., Kinouchi, Y., **Danesh**, A. & Pandya, A. (2015). A Computational Framework with Simplified Tonotopicity for Tinnitus Generation and Its Management by Sound Therapy, Proceedings of the 6th International Multi-Conference on Complexity, Informatics and Cybernetics, Orlando, USA, March 10-13, 2015.

32. Keintz, C., Singer, C., Newman, D., **Danesh**, A., Engstrom, G., Ouslander, O. Tappen, R. (2015). Dysphagia and Fatigue: Self-perceptions in Healthy Aging Adults. Annual ASHA convention, Nov 2015, Denver Colorado.

33. Nagashino, H., Kinouchi, Y., **Danesh**, A. & Pandya, A. (2015). Simulation of tinnitus generation and its relief by sound therapy with a realistic time scale, in Advances in Biotechnology and Bioscience, Proceedings of the 6th International Conference on Bioscience and Bioinformatics, Dubai, UAE, February 22-24, 2015.

34. **Danesh**, A. A. Misophonia and its audiologic management. Oral presentation. 14th Iranian Congress of Audiology. 19-21 May. 2015 Tehran, Iran.

35. **Danesh**, A.A. Gene therapy and hair cell regeneration for sensorineural hearing loss. Oral Presentation. 14th Iranian Congress of Audiology. 19-21 May 2015, Tehran, Iran.

36. Aazh, H, **Danesh**, A. & Mahmoudian, S. Sound Therapy for Tinnitus. Workshop presentation. 14th Iranian Congress of Audiology. 19-21 May 2015, Tehran, Iran.

37. Singer, C., Keintz, C., **Danesh**, A., Engstrom, G., Ouslander, O. Tappen, R. (2014). Perceived Swallowing Disorders in Healthy Aging Individuals: Impact on Quality of Life, poster presentation, Annual ASHA convention, Nov 2014, Orlando, Florida.

38. Sohn, H. & **Danesh**, A. (2014). Building Connections: Medical Maladies & Communication Complications. Florida Association of Speech & Hearing Association. Oral Presentation, Annual Convention. Lake Buena Vista, FL. May 22-24, 2014.

39. Nagashino, H., Kinouchi, Y., **Danesh**, A. & Pandya, A. (2014). A computational model with simplified tonotopicity for tinnitus and its management by sound therapy. Poster Presentation. XI International Tinnitus Seminar, Berlin, Germany May 21-24, 2014.

40. Sheehan, T. & **Danesh**, A. (2014). Complex Tinnitus Cases- I've Tried It All, Now What? Oral Presentation at the Annual Convention of the American Academy of Audiology (AAA), Orlando, FL, March 2014.

41. **Danesh**, A., Keintz, C., Singer, C., Lieberman, M., Ouslander, J. & Tappen, R. (2014). The effects of Social Engagement and Self Awareness on Communication. Poster Presentation. Annual Convention of the American Academy of Audiology (AAA), Orlando, FL, March 2014.

42. Wilson, U. Kaf, W., Lichtenhan, J & **Danesh, A.** (2014). Sinusoidal ASSR is better than tone-burst evoked ABR for estimating low-frequency hearing thresholds. Submitted (accepted) to the Associative Research in Otolaryngology (ARO) midwinter meeting.

43. Keintz, C., **Danesh**, A., Singer, C., Ouslander, J. & Tappen, R. (2013). Perceived Voice Disorders in the Elderly and Impact on Social Interaction. Poster Presentation. Annual Convention of American Speech-Language & Hearing Association. Chicago, Nov 2013.

44. Nagashino, H., Kinouchi, Y., **Danesh**, A. & Pandya, A. (2013).: "A neuronal network model with simplified tonotopicity for tinnitus generation and its management by sound therapy" to BEBI2013 (6th WSEAS International Conference on Biomedical Electronics and Biomedical Informatics) Baltimore, USA, September 17-19, 2013.

45. **Danesh, A.** & Hall, J.W, III (2013). Tinnitus Technology Roundtable. Presentation at the 17th annual convention of the Florida Academy of Audiology, Orlando, FL, USA, August 6-8, 2013.

46. Kaf, W.A., Rafael, K., Ross, A. & **Danesh, A.** (2013). Binaural Interaction Component of Click ABR and 80-Hz ASSR in Normal-Hearing Adults", IERASG, New Orleans, LA, USA. June 2013

47. **Danesh, A.,** Nagashino, H. & Pandya, A. Neural Network Models of Sound Therapy for Tinnitus: Audiologic Perspectives. Poster presentation at the 25th annual convention of the American Academy of Audiology, Anaheim, CA, USA April 3-6, 2013.

48. Nagashino, H., Kinouchi, Y., **Danesh**, A. & Pandya, A. (2012). A neuronal network model with homeostatic plasticity for tinnitus generation and management by sound therapy, Proceedings of 2012 Shikoku-Section Joint Convention of the Institutes of Electrical and Related Engineers, Takamatsu, Japan, p. 254, September 29, 2012.

49. Nagashino, H., Kinouchi, Y., **Danesh**, A. & Pandya, A. (2012). A Neuronal Network Model with Homeostatic Plasticity for Tinnitus Generation and Its Management by Sound Therapy. IEEE EMBS CBES to be held in Langkawi, Malaysia, December 17-19, 2012.

50. **Danesh**, A & Eshraghi, A. (2012). *Otology and Audiology Case Studies*. Oral presentation to the Florida Academy of Audiology annual convention in St Augustine, FL, August 2012.

51. Eshraghi, A. & **Danesh**, A. (2012). *Neurotology and Audiology Case Studies*. Oral presentation to the Florida Academy of Audiology annual convention in St Augustine, FL, August 2012.

52. Nagashino, H., Kinouchi, Y., **Danesh**, A. & Pandya, A. (2012). A neuronal network model with plasticity of inhibition for tinnitus management by sound therapy. Submitted to MACMESE2012 (The 14th WSEAS International Conference on Mathematical & Computational Methods in Science & Engineering). Malta, September 7-9, 2012. http://www.wseas.us/conferences/2012/Malta/macmese/

53. Nagashino, H., Kinouchi, Y., **Danesh**, A. & Pandya, A. (2012). A neuronal network model with STDP for tinnitus and its management by sound therapy, Proceedings of the IEEE-EMBS International Conference on Biomedical and Health Informatics, Hong Kong and Shenzhen, China, 2-7 January 2012, pp. 428-431. http://bhi2012.embs.org/programme.php

54. Nagashino, H., Kinouchi, Y., **Danesh**, A . A. & Pandya, S. (2011). A neuronal network model with STDP for tinnitus management by sound therapy, Recent Advances in Applied &Biomedical Informatics and Computational Engineering in Systems Applications, Proceedings of The Fourth WSEAS International Conference on Biomedical Electronics and Biomedical Informatics, Florence, Italy, August 23-25.

55. Nagashino, H., Kinouchi, Y., **Danesh,** A. A. & Pandya, S. (2011). A computational model with plasticity for tinnitus and its management by external stimuli. The X International Tinnitus Seminar. Florianapolis, SC, Brazil. March 2011

56. **Danesh**, A.A. (2011) Superior Semicircular Canal Dehiscence, Diagnosis and Intervention. Invited Speaker 10th Congress on Audiology, April 23-26. Tehran-Iran.

57. **Danesh**, A.A. (2011) Update from the 10th International Tinnitus Seminar in Brazil. Invited Speaker 10th Congress on Audiology, April 23-26. Tehran-Iran.

58. **Danesh**, A.A. (2011) Auditory Characteristics in Autism Spectrum Disorders: Evaluation and Intervention. Invited Speaker 10th Congress on Audiology, April 23-26. Tehran-Iran.

59. **Danesh**, A.A. (2010). Tinnitus: Seeing it, Assessing it, and Lessening it. Invited Speaker, Florida Speech , Language, and Hearing Association. FLASHA Convention. Orlando, FL.

60. Nagashino, H., Kinouchi, Y., **Danesh,** A. A. & Pandya, S. (2010). Improvement of a neuronal network model for tinnitus management process by sound therapy, Proceedings of 2010 Shikoku-Section Joint Convention of the Institutes of Electrical and Related Engineers, Matsuyama, Japan, p. 184, September 25, 2010.

61. **Danesh,** A.A. & Cocchiola, E. (2010). Auditory Traits and Audiologic Intervention for Autism Spectrum. Annual Meeting of the American Academy of Audiology, San Diego, CA.

62. Nagashino, H., Kinouchi, Y., **Danesh**, A. , Pandya, A. (2009). Comparison of Neuronal Network Models for Tinnitus Management by Sound Therapy. Presentation at IEEE Engineering in Engineering in Medicine and Biology Society. September 2-6, 2009 Minneapolis, MN.

63. Nagashino, H., Kinouchi, Y., **Danesh**, A**.,** Pandya, A. (2009). Inhibition of oscillation in a computational model for tinnitus and its management by sound therapy. The Third TRI Meeting "From Clinical Practice to Basic Neuroscience and Back - An international conference on Tinnitus", June 2^{4th} to 2^{6th}, 2009, Stresa, Italy.

64. **Danesh**, A.A., Andreassen, W**.,** Kaf, W. & Scott, J. (2009). Auditory complications in cases with Asperger's Syndrome. Poster accepted for presentation at the Twenty first Annual Convention of the American Academy of Audiology. Dallas, Texas, April 1-4 2009.

65. Nagashino, H., Kinouchi, Y., **Danesh,** A**.**, Pandya, A. (2009). A neuronal network model with plasticity for tinnitus management by sound therapy. World Congress, Medical Physics and Biomedical Engineering. September 7-12, 2009, Munich, Germany.

66. Nagashino, H., Fujimoto, K., Kinouchi, Y., **Danesh,** A**.** , Pandya, A., & He, J. (2008). Oscillation and its Inhibition in A Neuronal Network Model for Tinnitus Sound Therapy. Presentation at IEEE Engineering in Medicine and Biology Society "Personalized Healthcare through Technology", August 20-24, 2008, Vancouver, British Columbia, Canada

67. **Danesh**, A. A., Andreassen, W., Scott, J., Kaf, W., Bennett, K., Flood, B. (2008). Tinnitus and Hyperacusis in Autism Spectrum Disorders with Emphasis on Asperger's Syndrome (AS). Oral presentation at the IXth International Tinnitus Seminars, Göteborg, Sweden, 15-18th of June 2008.

68. Nagashino, H., Fujimoto, K., Kinouchi, Y., **Danesh,** A**.** and Pandya, A. (2008). A computational model for tinnitus and its management by sound therapy. Poster presentation at the IXth International Tinnitus Seminars, Göteborg, Sweden, 15-18th of June 2008.

69. Kaf, W., **Danesh**, A. & Rahimi, F. (2008). Auditory Steady-State Response: Comparison of interchannel recording using 79 Hz and 39 Hz modulation frequencies. Oral Presentation at the 7th Iranian Congress of Audiology, May 22-24, Tehran-Iran.

70. Andreassen, W**.** & **Danesh**, A.A. (2008)Prevalence of Tinnitus and Hyperacusis in Individuals with Asperger's Syndrome (AS) poster presentation, Twentieth Annual Convention of the American Academy of Audiology. Carlotte, North Carolina (travel cancelled due to budget cut).

71. Hall, J.W., III & **Danesh**, A.A. (2007). Audiologic Assessment & Management of Tinnitus: Good News for a Bad Problem. The 11th Annual convention of Florida Academy of Audiology. St Petersburg, FL.

72. Nagashino, H., Fujimoto, K., Kinouchi, Y., **Danesh,** A**.** & Pandya, A. (2007). Dynamical Properties of a Plastic Neural Network Model for Tinnitus Therapy and Inhibition of Oscillation Using Noise Stimulus. Proceedings of the 29th Annual International Conference of the IEEE EMBS Cité Internationale, Lyon, France. August 23-26, 2007.

73. **Danesh,** A.A. (2007). Tinnitus: From computational models to clinical management. Workshop on Biomedical Signal Processing. The University of Tokushima, Tokushima, Japan (Invited speaker/ Featured talk).

74. **Danesh,** A**.**, Fujimoto, K., Nagashino, H., Kinouchi, Y. & Pandya, A. (2007). A Plastic Neural Network Model for Tinnitus Inhibition. Poster Presentation in Advances in Tinnitus Assessment, Treatment and Neuroscience Basis Conference, Grand Island, New York. June 22-24, 2007.

75. **Danesh**, A.A. & Andreassen, W. (2007). Sudden Hearing Loss: Audiological Diagnosis and Management. One hour oral lecture, Annual Convention of the American Academy of Audiology. Denver, Colorado.

76. Andreassen, W & **Danesh**, A.A. (2007). Tinnitus Management Outcomes Following Unilateral SSNHL poster presentation, Annual Convention of the American Academy of Audiology. Denver, Colorado.

77. Fujimoto, K., Nagashino, H., Kinouchi, Y., **Danesh,** A. & Pandya, A. (2007). Inhibition of Oscillation in a Plastic Neural Network Model Using Noise Stimulus, Proceedings of The 11th World Multi-Conference on systemics, Cybernetics and Informatics, Vol. IV, pp.108-112, Orlando, July 2007.

78. Fujimoto, K., Nagashino, H., Kinouchi, Y., **Danesh,** A. & Pandya, A. (2006) Oscillation and Its Inhibition in a Neural Oscillator Model for Tinnitus, *Proceedings of the 28th*

IEEE-EMBS Annual International Conference, pp.5547-5550, New York, Aug. 2006.

79. Fujimoto, K., Nagashino, H., Kinouchi, Y., **Danesh**, A. & Pandya, A. (2006). Analysis of a Neural Oscillator Model With Plasticity for Treatment of Tinnitus, *Proceedings of World Congress On Medical Physics and Biomedical Engineering*, Vol.14, pp.3413-3416, Seoul, Aug. 2006.

80. Adachi, D., Araki, T., Fujimoto, K., Nagashino, H., Kinouchi, Y., **Danesh,** A. & Pandya, A: Inhibition of Oscillation by Noise in a Neural Network Model for Treatment of Tinnitus, *Journal of Shikoku-Section Joint Convention of the Institutes of Electrical and Related Engineers*, p.188, Sep. 2006.

81. Suzuki, R., Fujimoto, K., Nagashino, H., Akutagawa, M., Kinouchi, Y., **Danesh,** A. & Pandya, A. (2006). A Method of Analysis for alpha-wave in EEG under Tinnitus, *Journal of Shikoku-Section Joint Convention of the Institutes of Electrical and Related Engineers*, p.180, Sep. 2006.

82. Higashi, S., Fujimoto, K., Nagashino, H., Akutagawa, M., Kinouchi, Y., **Danesh,** A. & Pandya, A. (2006). Development of a Measurement System of EEG and Its Spectrogram, *Journal of Shikoku-Section Joint Convention of the Institutes of Electrical and Related Engineers*, p.181, Sep. 2006.

83. **Danesh,** A. (2005). Abiding residual inhibition in a case with chronic tinnitus. Oral Presentation. The 8th International Tinnitus Seminar. September 2005, Pau-France.

84. **Danesh,** A. & Wener, D. (2005). A multifactorial analysis of differences between unilateral and bilateral tinnitus. Oral Presentation. The 8th International Tinnitus Seminar. September 2005, Pau-France.

85. **Danesh,** A.A. & Anderson, B. (2004). Auditory Processing Disorders workshop from Diagnosis to Treatment. Palm Beach County and Martin County study group. Boynton Beach, FL (Invited Speaker).

86. **Danesh,** A.A. (2004). Tinnitus: Epidemiology, Pathology, and Management. Cognitive Brown Bag Lecture Series, Dep of Psychology, Florida Atlantic University.

87. **Danesh**, A.A. (2004) A multidisciplinary approach to Tinnitus. One hour seminar. Florida Academy of Audiology annual meeting, August, Orlando, FL (Invited Speaker).

88. **Danesh**, A. A. (2004). Tinnitus: is there a cure for it? Iranian American Medical Association, 9th annual meeting, Miami, FL.

89. **Danesh**, A.A. (2004). Neuroaudiological Applications of Auditory Event-Related

Potentials. Presented at the International Congress on Neurotology, Neuroaudiology & Skull Base Surgery, May 14-18, Tehran-Iran (Invited Speaker).

90. **Danesh**, A.A. (2004). Electrophysiological Aspects of Cranial Nerves Monitoring in Skull Base Surgeries. Presented at the International Congress on Neurotology, Neuroaudiology & Skull Base Surgery, May 14-18, Tehran-Iran.

91. **Danesh**, A.A. (2004). Tinnitus: Masking, Habituation, or Retraining? Presented at the International Congress on Neurotology, Neuroaudiology & Skull Base Surgery, May 14-18, Tehran-Iran.

92. **Danesh**, A.A. (2004). Cohort and Single Subject Study Designs. Presented at the International Congress on Neurotology, Neuroaudiology & Skull Base Surgery, May 14-18, Tehran-Iran.

93. **Danesh**, A. A. (2004) Anatomical and Functional Imaging of Tinnitus. 34th Midsouth Conference on Communicative Disorders. Memphis-Tennessee.

94. **Danesh,** A.A (2003). Functional Imaging of Tinnitus. One hour seminar. Presented at the Florida Association of Speech Pathologists and Audiologists, May 24, Marco Island, FL.

95. **Danesh,** A.A, Scott, J. (2003). DPOAE Findings in Children with Asperger's Syndrome. Poster Presentation. Presented at the Florida Association of Speech Pathologists and Audiologists, May 24, Marco Island, FL.

96. **Danesh,** A.A (2003). Anatomical and Functional Neuroimaging of Tinnitus. One hour seminar. Florida Academy of Audiology annual meeting, August, Fort Lauderdale, FL.

97. **Danesh**, A. A., Kinouchi, Y, Wener, D. & Pandya, A. (2003). Functional Imaging of Tinnitus: Seeing of the Unseeable. Submitted as an oral presentation to KES'2003 Seventh International Conference on Knowledge-Based Intelligent Information & Engineering Systems 3, 4 & 5 September 2003 University of Oxford, UK.

98. **Danesh,** A.A. (2002). Neuroimaging of Tinnitus. The 4th Iranian Congress on Audiology, Tehran-Iran.

99. **Danesh,** A.A. (2002). Clinical and Research Applications of OAEs. The 4th Iranian Congress on Audiology, Tehran-Iran.

100. **Danesh,** A.A. (2002). OAE workshop. The 4th Iranian Congress on Audiology, Tehran-Iran.

101. **Danesh,** A.A., Fries, B., & Shahnaz, N. (2002) Otoacoustic Emission Findings in

children with Asperger's Syndrome. International Neonatal Hearing Screening meeting, Milan-Italy.

102. **Danesh,** A.A., Scott, J. (2002) Contralateral Suppression of DPOAEs in children with Asperger's Syndrome. Poster presentation. American Academy of Audiology Convention, Philadelphia.

103. **Danesh**, AA. & Afarin, M. (2002). Contralateral Suppression of OAEs in a Group of Individuals with Bilateral or Unilateral Tinnitus. Poster presentation at the International Academy of Audiology Convention, Melbourne, Australia.

104. **Danesh**, A., Gould, H., Pandya, A. (2001). Response Source to Speech and Noise as Revealed by EEG-Based Tomograms. KES'2001 *Fifth International Conference on* Knowledge-Based Intelligent Information Engineering Systems & Allied Technologies (September 2001 Osaka-Kyoiku University, Osaka, Japan).

105. **Danesh,** A. (2001). Research in Audiology. Invited Speaker, Workshop Presentation. School of Rehabilitation Sciences, Iran University of Medical Sciences, Tehran, Iran.

106. **Danesh,** A. (2001). Auditory Event-Related Potentials (AERP). Invited Speaker, Workshop Presentation. School of Rehabilitation Sciences, Iran University of Medical Sciences, Tehran, Iran.

107. **Danesh,** A. (2001). Topographic Brain Mapping. Invited Speaker, Workshop Presentation. School of Rehabilitation Sciences, Iran University of Medical Sciences, Tehran, Iran.

108. **Danesh,** A. (2001). Advanced Hearing Aid Technology. Invited Speaker, Workshop Presentation. School of Rehabilitation Sciences, Iran University of Medical Sciences, Tehran, Iran.

109. **Danesh,** A. (2001). Auditory System and Speech Processing. Invited Speaker, Workshop Presentation. School of Rehabilitation Sciences, Iran University of Medical Sciences, Tehran, Iran.

110. **Danesh,** A. (2001). Global Aspects of Audiology: Questions and Answers . Invited Speaker. School of Rehabilitation Sciences, Shahid Beheshti University of Medical Sciences, Tehran, Iran.

111. **Danesh,** A. (2001). Topographic Brain Mapping 101. One-hour instructional course. American Academy of Audiology. San Diego, CA.

112. **Danesh,** A., Scott, Jack (2001). Otoacoustic Emission (OAE) findings in Children with Autism. Poster Presentation. American Academy of Audiology. San Diego, CA.

113. Jacobster, H. & **Danesh,** A. (2001). Efficacy of Chirp Stimuli to Obtain Frequency Specific ABRs. Poster Presentation. American Academy of Audiology. San Diego, CA.

114. **Danesh**, A., & Saul, R. (2000). Auditory Event-Related Potentials, Research and Clinical Applications. One Hour Oral Seminar, Florida Academy of Audiology, Coral Springs, FL.

115. **Danesh**, A., & Gould, H. (2000). Determination of Response Source to Speech and Noise as Detected by Low Resolution Electromagnetic Tomography Algorithm (LORETA). Poster Presentation , American Academy of Audiology, Chicago, Illinois.

116. Mahecha, N., **Danesh**, A., & Saul, R. (2000). CAPD/Language Asymmetries in Fraternal Twins. Oral Presentation, Florida Association of Speech-Language Pathologists and Audiologists, Spring Convention, Orlando, FL.

117. **Danesh** A., Gould, H., Rose, D., Buder, E., Mendel, M., & Ethington, C. (1999). Scalp Distribution of LAEPs to Speech and Noise, poster presentation, American Speech-Language and Hearing Association (ASHA) convention, San Francisco, CA, 1999.

118. **Danesh** A., Gould, H., Rose, D., Buder, E., Mendel, M., & Ethington, C. (1999). The N1 Response to Nonsense Syllables and Acoustically Similar Noise, oral presentation, XVIth International Evoked Response Audiometry Study Group Bennial Symposium Trompso, Norway.

119. **Danesh**, A. (1999). Topography of Late Auditory Evoked Potentials (LAEPs) to Linguistic and Non-Linguistic Stimuli, oral presentation, SSW Study Group held prior to the annual convention of the American Academy of Audiology, Miami, FL 1999.

120. **Danesh** A., Gould, H., Rose, D., Buder, E., Mendel, M., & Ethington, C. (1999). Localization of Brain Activity Following Auditory Stimulation with Speech and Acoustically Similar Noise, poster presentation, Dynamical Neuroscience II conference, Delray Beach, FL.

121. **Danesh**, A.A., and Smedley, T.C. (1996). Effects of Target Probability and Interstimulus Interval on the Amplitude of P300 AERP, poster session, The 26th Mid-South Conference on Communicative Disorders, Memphis, TN.

122. **Danesh**, A.A., & Wark, D.J. (1996), Audiological Management of the Tinnitus

Patient: A Model, poster session, The 26th annual Mid-South Conference on Communicative Disorders, Memphis, TN.

123. Smedley, T.C., and **Danesh**, A.A. (1995). Effects of Target Probability and Interstimulus Interval on the Amplitude of P300 AERP, poster session, ASHA annual convention, Orlando, Florida.

124. Gould, H, Pousson, M, **Danesh**, A., & Rose, D. (1995). Auditory Evoked Potentials exhibition. The 25th Mid-South Conference on Communicative Disorders, Memphis, TN.

SERVICE

Professional Affiliations and Responsibilities:

1) President, Florida Academy of Audiology (2013-2014)
2) President-Elect, Florida Academy of Audiology (2012)
3) Vice President of Education, Florida Academy of Audiology (2004-2008).
4) Member of American Speech-Language and Hearing Association (1997-present).
5) Member of American Academy of Audiology (1999-present).
6) Member of Florida Association of Speech Pathologists and Audiologists (1998-2005).
7) Member of Florida Academy of Audiology (1999-present).
8) Member of American Tinnitus Association (2000-present).
9) Member of Tinnitus Practitioners Association (2014-Present)
10) Member of American Auditory Society (2003-present).
11) Member of Iranian-American Medical Association (2004-present).
12) Member of International Audiology Society (2006-present)
13) Help Network Volunteer, American Tinnitus Association (2000- present)
14) Advisory Board Member, American Tinnitus Association (2009- present)
15) Member of International Tinnitus and Hyperacusis Society (2005-present)

EDITORIAL BOARD AND EDITORIAL REVIEWER:

1) Associate Editor for International Journal of Audiology (2019-Present)
2) Reviewer for International Journal of Pediatric Otorhinolaryngology
3) Reviewer for Journal of American Academy of Audiology
4) Reviewed articles for Journal of Cerebral Blood Flow and Metabolism
5) Reviewed articles for The Journal of Neuroscience, The Official Journal of the Society for Neuroscience
6) Associate Editor, Iranian Audiology Journal. 2002-Present.
7) Editorial Board, Iranian Journal of Otolaryngology, 2012-present.
8) International Editorial Board Member, MD Medical Data, Republic of Serbia. http://www.md-medicaldata.com/index.html
9) Reviewed articles for The New Zealand Journal of Speech Therapy

10) Reviewer for Iranian Medical Journal (English)
11) Reviewer for International Journal of Audiology

GRANT REVIEWER:

1) National Health Services (NHS), National Institute for Health Research, United Kingdom, Post doc reviewer (2018)
2) Medical Research Council (MRC), United Kingdom, Post doc reviewer (2018)
3) National Science Foundation (NSF) (2009)
4) Pennsylvania Department of Health (2009)

RESEARCH PODIUM AND RESEARCH POSTER REVIEWER:

1) American Academy of Audiology annual Convention, Phoenix, AZ (2016)
2) American Academy of Audiology annual Convention, Nashville, TN (2018)

PUBLIC/COMMUNITY SERVICES:

1) Coordinator of campus-wide hearing screenings.
2) Coordinator of International Noise Awareness Day at FAU.
3) American Tinnitus Association, Help Network Volunteer, Palm Beach County, FL.
4) American Tinnitus Association, Advisory Board.
5) Coordinator of Tinnitus Awareness Day at FAU.

STUDENT-RELATED ACTIVITIES:

1) Advising (graduate and undergraduate)
2) Academic Advisor for Coung Nho student athletic club
3) Faculty advisor for FAU American Sign Language (ASL) Club
4) Volunteer advisor for the office of multicultural affairs.

LICENSE AND CERTIFICATION:

1) Certificate of Clinical Competence-Audiology, American Speech-Language and Hearing Association (ASHA) 1998-present.

2) Board Certified, American Board of Audiology, 2003-present.

3) Licensed Audiologist, state of Florida, 1999-present.

4) Licensed Audiologist, state of Tennessee, 1998.

AWARDS AND HONORS:

1) Researcher of the Year Award, College of Education. Florida Atlantic University (2018).
2) Scholar of the Year Award, College of Education. Florida Atlantic University (2016).
3) Distinguished Teacher of the Year Nominee, College of Education. Florida Atlantic University (2011).
4) Scholar of the Year Award, College of Education. Florida Atlantic University (2011).
5) Research Priority Proposal 2009-2010 Nominee. Ali A. **Danesh** (PI) and Abhi Pandya (CoPI) Project on the Aging Auditory and Balance Function in a Variety of Clinical Populations selected as one of the top ten proposals.
6) Fellowship award from the Deafness Research Foundation to attend Advanced Clinical Research Conference in Otolaryngology and Communication Sciences, Potomac, MD (2003).
7) Third place winner for poster presented at annual convention of Florida Association of Speech Pathologists and Audiologists (FLASHA), Marco Island, FL (2003). Poster title: DPOAE findings in Children with Asperger's Syndrome.
8) Teaching Incentive Program Award Recipient (2002) for outstanding and innovative teaching skills. Florida Atlantic University.
9) Professor of the Year (2002). Department of Communication Sciences and Disorders. NSSHLA chapter, Florida Atlantic University.
10) Grant award from the Office of Sponsored Research, Florida Atlantic University for research on the "Effects of Stimulus on Latency and Amplitude of P300 Auditory Event-Related Potential" (March, 2000).
11) Fellowship award for Electrophysiology research conference from American Speech-Language and Hearing Association (ASHA), Orlando, FL, 1995.
12) Second place winner of Graduate Research Forum in Life Sciences and Biomedical Engineering category, The University of Memphis, 1995.
13) Grant award from Office of Graduate School, Idaho State University for the research under the title of: Perception of Academic Interference from Tinnitus among University Students, 1993.

DISSERTATION/THESIS COMPLETED:

1) Rebecca Koszalinski, College of Nursing, Effect of the Use of Speak for Myself© With Voiceless Patients. College of Nursing, Florida Atlantic University. 2015

2) Saeid Mahmoudian, Medizinische Hochschule Hannover, Germany, Tinnitus Residual Inhibition By Means of Electrical/Acoustical Stimulations: An objective evaluation through topographic brain mapping of event related potentials for middle latency responses and mismatch negativity auditory responses, 2014.

3) Kristin Patton, The self-regulation of a child with cochlear implants within a school environment. College of Education, Florida Atlantic University. 2014.

4) Jamie Heidenreich, Communication Sciences and Disorders, Florida Atlantic University, Effects of visual feedback on stuttering (2012)

5) Carey Witkov, Center for Complex System sand Brain Sciences, Florida Atlantic University, Periodic amplitude and frequency variations in spontaneous otoacoustic emissions (2011).

6) Baishali Chaudhuri, Individual Profiling of Tinnitus Perception by Developing an Interactive Tinnitus Analyzer Software (2010). (Master's Thesis Completed)

7) Harriet Jacobster, AuD., Nova Southeastern University. Title: The efficacy of chirp stimuli in notched noise in obtaining frequency specific Auditory Brainstem Responses (2000). (Doctoral Thesis Completed)

PUBLIC/COMMUNITY PRESENTATIONS

1. **Danesh**, A. (2016). Tinnitus and Vertigo. Oral presentation. American Hearing Loss Association, Delray Beach/Boca Raton Chapter, February 2016.

2. **Danesh**, A. (2015). Genetics of hearing loss and Hearing Hair Cell Regeneration. Oral presentation. American Hearing Loss Association, Delray Beach/Boca Raton Chapter, October 2015.

3. **Danesh**, A. (2014). Hearing Hair Cell Regeneration: When Am I going to Get My Hearing Back, Doc? Oral presentation. Life Long Learning Center at Florida Atlantic University, Dec 2014.

4. **Danesh**, A. (2012). Buzzing Ears: The Neuroscience of Tinnitus (Invited Speaker). The Neuroscience Community of Florida Atlantic University.

5. **Danesh**, A. (2012). Hearing Issues for Musicians: Dangerous Decibels (Invited Speaker). Music Department, College of Arts and Letters, Florida Atlantic University.

6. **Danesh**, A. (2012). Tinnitus and its management (Invited Speaker). Presented for the Hearing Loss Association of America, The Delray Beach, FL Chapter.

7. **Danesh**, A. (2011). Vertigo and Balance Disorders (Invited Speaker). Presented for the Hearing Loss Association of America, The Delray Beach, FL Chapter.

8. **Danesh**, A. (2010). Gene Therapy and Hair Cell Regeneration for Hearing Loss (Invited Speaker). Presented for the Hearing Loss Association of America, The Delray Beach, FL Chapter.

9. **Danesh**, A. (2005). Lend me your ears: the amazing structure of human ear. Invited speaker, Searanch Country Club, Boca Raton, FL.

10. **Danesh**, A. & Daugherty, S.H. (2004).The amazing structure of human inner ear. Boca Raton Cochlear Implant Support Group. Boca Raton Community Hospital.

11. Daugherty, S.H. & **Danesh**, A. (2003). Music Perception with a Cochlear Implant. Boca Raton Cochlear Implant Support Group. Boca Raton Community Hospital.

12. **Danesh,** A. & Saul, R. (2002). Peripheral and Central Auditory Processing: How the Ear and the Brain Work Together? Boca Raton Cochlear Implant Support Group. Boca Raton Community Hospital.

13. **Danesh**, A. (2001) Hearing aids, Common Questions Self Help Hard of Hearing (SHHH) meeting, The Delray Beach, FL Chapter.

14. **Danesh**, A. (2000) Hearing aids, Self Help Hard of Hearing (SHHH) meeting, The Boca Raton, FL Chapter.

15. **Danesh**, A. (2000) Directional Microphone for Hearing aids, Self Help Hard of Hearing (SHHH) meeting, The Delray Beach Chapter.

16. **Danesh**, A. (2000) Tinnitus, Self Help Hard of Hearing (SHHH) meeting, The Lantana/Lake Worth Chapter.

17. **Danesh**, A. (2000) Hearing aids, Nursing home community, Delray Beach, FL.

18. **Danesh**, A. (2000) Hearing aids, Marriot/Brighton Nursing home community, Boca Raton, FL.

19. **Danesh**, A. (1999) Hearing aids, Nursing home community, Coconut Creek, FL.

CURRICULUM VITAE

Ken Dawson-Scully, Ph.D.

Citizenship: Canadian
Permanent Resident: USA

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Webpage: http://biology.fau.edu/directory/dawson-scully/index.php

Administrative Appointments (details to follow)

2018-present Associate Vice President for Strategic Initiatives, Divisions of Academic Affairs and of Financial Affairs, Florida Atlantic University, Boca Raton, FL.

2018-present Head of Institutional Partnerships, Max Planck Florida Institute for Neuroscience, Jupiter, FL.

2018-present Director, FAU Max Planck Honors Program, Jupiter, FL.

2018 Associate Dean for Graduate Studies, Charles E. Schmidt College of Science, Florida Atlantic University (I was also acting AD w/signing authority from 2016-2018).

2016-2018 Associate Director, FAU Brain Institute, Florida Atlantic University, Boca Raton, FL.

2013-2016 Associate Director, Integrative Biology PhD Program, Florida Atlantic University, Boca Raton, FL.

2010-2013 Director, Honors Program, Biological Sciences, Florida Atlantic University, Boca Raton, FL.

Faculty Positions

2020-present
Professor, tenured
Florida Atlantic University
Department of Biological Sciences
Boca Raton, FL 33431 USA

2012-present
Visiting Investigator,
The Scripps Research Institute,

Dept. of Metabolism and Aging (2012-2017),
Dept. of Neuroscience (2017-present),
Jupiter, FL 33458 USA

2014-2020
Associate Professor, tenured
Florida Atlantic University
Department of Biological Sciences
Boca Raton, FL 33431 USA

2008-2014
Assistant Professor, tenure track
Florida Atlantic University
Department of Biological Sciences
Jupiter, FL 33458 USA

Industry Positions

2015-2019 Founder/Chief Scientific Officer
Neuro Pharmalogics Inc,
FAU Tech Runway,
Boca Raton FL

2013-2016 Founder/Chief Scientific Officer
Eco Neurologics Inc,
FAU Research Park,
Boca Raton FL

2003-2004 Scientific Imaging Consultant
Olympus Canada, Toronto, Ontario.
151 Telson Road,
Markham, Ontario
L3R 1E7, Canada

2002-2003 Long-Term Care Administrator (OLTCA certified)
The Wenleigh
2065 Leanne Blvd.
Mississauga Ontario
L5K-2L6, Canada

Education

Heart and Stroke Post-Doctoral Fellow Completed 2008
University of Toronto (UTM)
3359 Mississauga Rd.
Mississauga, Ontario, Canada, L5L 1C6.

Prof. Marla B. Sokolowski FRSC, CRC Tier I Genetics
Department of Biology

Ph.D. **University of Toronto** **Completed 2003**
College of Medicine
Areas of Specialization: Neuroscience
Thesis: The role of Cysteine String Proteins in the neuromuscular junction of Drosophila melanogaster.
Prof. Harold L. Atwood FRSC (Supervisor)
University of Toronto
Toronto, Ontario Canada M5S 1A8

M.Sc. **Queen's University** **Completed 1998**
Department of Biology
Area of Specialization: Neuroscience
Thesis: Protective effects of heat shock on synaptic transmission in the flight system of Locusta migratoria.
Prof. R. Meldrum Robertson (Supervisor)
3118 Biosciences Complex,
Kingston, Ontario, Canada, K7L 3N6

B.Sc. (Hon.) **Queen's University** **Completed 1996**
Department of Biology
Thesis: Motor patterns involved in the auditory avoidance of ultrasound in Locusta migratoria.
Prof. R. Meldrum Robertson (Supervisor)

Administrative Appointment Details: 2010-present in reverse chronological order

Associate Vice-President for Strategic Initiatives, Office of the Provost FAU
2018-present, 50% appointment (shared)

Responsibilities: Report directly to the Provost to develop, drive, and maintain special projects at the University to advance international prominence, recruit and retain top students including National Merit Scholar finalists, attract advancement opportunities, and programmatically bridge the University to world renowned external institutes. Serve on the Provost Advisory Council and lead the development of University-wide strategic academic programs as through facilitating collaborations at the level of the Colleges through the Deans. Develop a task force to facilitate the successful movement of laboratory instruction to remote but facilitating the most FAU-specific and immersive experience for the student. Strategically develop a long-term roadmap for the University to become the top choice of Nation Merit Scholars by creating and managing a pathway for unique opportunities unmatched by other universities. Intersect with donors, stakeholders, and government to garner increased financial support to increase student success.

Initiatives
1. Work in partnership with the Max Planck Florida Institute

    a. see **Head of Institutional Partnerships** below
2. Develop unique academic pathways for NMS through Deans and Colleges
    a. To date, we have increased the University NMS from 6 in 2018 to 50 for Fall 2020
    b. Med Direct Pathway (BS/MD program)
    c. Business Pathway (BA/MBA program; in development)
    d. Numerous 4+1 (BA/MA, BS/MS programs)
    e. Health Administration (BS/MHA; in development)
    f. BS/PhD programs (in development)
3. Collaborate with local, state, national and international government to increase student success.
4. Enhance opportunities with advancement and development team by active as a facilitator for the needs of the donor across academic, research and facility units
5. Special projects to accommodate global needs of the University through the Provost
    a. Develop University-wide strategic academic programs
        i. BS in Data Science and AI spanning 5 Colleges
    b. Lead task force for bringing laboratories online due to COVID while maintaining FAU-specific curriculum and student immersion
    c. Develop office for exceptional students to support numerous initiatives such as NMS, external Scholars applications/programs, and grant facilitation.

Strategic Planning and Priorities

1. Lobby for the University in Tallahassee to inform government officials of the strategic strides for FAU's accelerating programs for national merit scholar recruitment through our world-class academic programming.
2. Develop international strategic partnerships in Israel as legislative sister institutions
3. Support the University's School of Distinction in AI and Data Science through the collaborative development of the Bachelor of Science in Data Science and Analytics across five colleges.
    a. The collaborative development and project management of the Gruber Sandbox as a University-wide plan for AI and Data Science which was initiated through a $1M gift.
4. Policy development of shared scientific core infrastructure across multiple institutions on Jupiter campus.
5. Developed internal fiscal methods for enhancing graduate student stipends
6. Serve on internal fiscal group to facilitate health insurance for graduate students.

Increase student success and graduation rates

1. Support of Key Performance Indices through the reduction of DFW rates, retention rates of high performing students, increased GPA, increased % of graduation in 4 years through the recruitment and retention of high performing students into programs such as the FAU Max Planck Honors Program and the incentive of a Presidential Grant managed through Strategic Initiatives.
2. Work closely with the FAU Highschool to recruit and retain these students to complete the BS at the University.

3. The collaborative development and project management of a dual enrollment high school, the FAU Max Planck Academy, on the Jupiter campus. Academic flight plans were developed across two colleges and four degree programs, renovations of a student support center were completed over a 12 month renovation phase, and a unique research driven curriculum was developed.
4. Created and manage a presidential grant for the recruitment of NMS.

Head of Institutional Partnerships at Max Planck Florida Institute (MPFI)

2018-present; 50% appointment (shared)

Responsibilities: Report directly to the CEO and Scientific Director to closely working with the Executive Leadership Team of MPFI to develop, plan, and then lead the implementation of key initiatives that emerge from the strategic planning process. Collaborate to secure funding for these initiatives as well as other Institutes and University priorities by leading, developing and sustaining strong relationships with foundations, corporations, government, and community groups nationally and internationally. Strive for increased funding, international recognition, increased recruiting of world class students and faculty, and increased student success.

Initiatives

1. Develop umbrella entity for training within the Max Planck Florida Institute (MPFI)
    a. Created the Max Planck Academy which houses all training programs within the institute
    b. Postdoctoral Fellows
    c. Graduate Student Programs (MS and PhD)
    d. Post-Bac Program
    e. FAU Max Planck Honors Program
    f. Research internships in laboratories
    g. Highschool Programs
    h. Specifically manage any program that falls into partnership between FAU and MPFI
2. Strategically develop co-branding initiatives between MPFI and FAU
3. Develop and manage multiple relationship touchpoints between MPFI and FAU
4. Serve on the Senior Management Team to advise on partnership initiatives, challenges, and SOPs
5. Serve on COVID crisis committee to advise on synergies and "news" between institutions
6. Participate in outreach and marketing
7. Energize the Board of Directors twice a year on accomplishments and plans for partnerships
8. Interface with administration in the Max Planck Society to apprise of traditional and novel advances in MPFI practices
9. Interface the FAU high school with enrichment from the Max Planck Academy

Strategic Planning and Priorities

1. Develop and manage educational programs between FAU and MPFI to enhance student success and world class training

    a. Integrative Biology PhD (Neuro)
    b. IMPRS
    c. MD/PhD Program (in dev)
    d. FAU MP Honors Program
    e. FAU Data Science Enrichment Program
    f. FAU Highschool in Jupiter in partnership with the Max Planck Academy
2. Advise and serve on the Education leadership team at MPFI
3. Advise on co-branding opportunities and challenges
4. Work with legal for Contract, MoU, and consulting development

Development/Advancement, Outreach, Public Affairs, Government Affairs

1. Interface with local, state, national and international government leaders to inform and advise on state University and MPFI partnership success
2. Work with advancement teams from both FAU and MPFI for SOP for partnership opportunities
    a. Work with Foundation Board members from both institutions
    b. Directly interact with donors on partnership opportunities for fundraising
    c. Collaboratively create materials to enhance outreach and donor interests
3. Manage and develop legislative funding projects between MPFI and FAU
4. Interface between Public Affairs of both institutions to develop marketing campaigns.
    a. Successful digital campaign in 2018 for record 2019 recruitment

Director, FAU Max Planck Honors Program
2018-present, 50% assignment (shared)

Responsibilities: Report Directly to the Provost to tactically build and currently direct the undergraduate FAU Max Planck Honors Program across the college of science and the honors college, and across four degree programs including majors in Biology, Psychology, Neuroscience and Behavior, and a variety of concentrations in a liberal arts and/or science degree.

Initiatives

1. Developed framework for upper division undergraduate Honors Program across two Colleges and 4 Departments.
    a. Facilitated collaboration between the Honors College and the College of Science.
2. Engage and collaborated with faculty to embrace and support program with top-rated cutting-edge enrichment courses co-taught by FAU and Max Planck scientists/
3. Successfully integrated and facilitated program proposal through departmental, college, University and senate program committees.
4. Successfully integrated NMS recruitment with FAU Max Planck Honors Program.

Strategic Planning and Priorities

1. Created and chaired Max Planck Honors Program development committee
2. Developed and implemented recruitment program for upper year undergraduates and freshmen NMS as a recruiting tool for the University

3. Increase retention and graduation rate through immersion into undergraduate research using academic program paradigms, including a thesis and defense onsite at the Max Planck Institute
4. Increase graduate student recruitment from top-ranked students in undergraduate pool where 50% of the students in the program are NMS

Increase student success and graduation rates

1. The FAU Max Planck Honors Program is the only undergraduate program in the world officially sponsored by the Max Planck Society, and the students that matriculate through this program are given this designation
2. Students in this program enhance their network across the world
3. Students are exposed to state-of-the-art research and individuals such as Nobel Laureates
4. Students perform research and disseminate this at the Max Planck Florida Institute as a defense of their thesis
5. Increase the recruitment of exceptional students thereby increasing graduation rates and student retention.

Associate Dean of Graduate Studies, College of Science, FAU

Jan-May 2018 (responsibilities and signing authority from 2016-2018 due to faculty retirement).
50% Assignment

Responsibilities: Report directly to the Dean as an administrative officer for 350+ PhD and MS graduate students across 8 departments managing a budget of ~$2Million. The associate dean for graduate studies provides vision, leadership and strategic direction, including the management of the College of Science graduate program administration and faculty governance. Responsibilities include fiscal management, student success and retention, curricular management and development, assessment, advising, coordinator supervision, enrollment management, and executive leadership. Served on the executive committee for the College of Science. I also managed a Program Coordinator.

Initiatives

1. Development and execution of the Master of Science in Marine Sciences degree program. This is a multi-college/campus MS degree centralized at with the research pillar: The Harbor Branch Oceanographic Research Institute (HBOI).
2. Aggregated current Master-Teacher resources through the College and developed strategic plan for enhancing this group
    a. Developed application for a Master-Teacher grant from the Provost office which was successfully awarded to develop strategic plan.
3. Work across administrative hierarchy to develop proper management of University credit-hours to enhance fiscal efficiency.

Strategic Planning and Priorities

1. Development of the PhD for Neuroscience through the integration of portions from three existing PhD programs in the College of Science. This is a strategic initiative to align the

College of Science with the Neuroscience research pillar, the FAU Brain Institute, which will use an enormous influx of monetary resources to pay higher stipends, health insurance, and relocation costs to recruit the best students across the nation.
2. Strategic committee leadership across the University in the University Senate, University Graduate Council, University Graduate Programs Committee (chair).
3. Developed a streamlined method for research non-tenure track faculty from the HBOI to become full rather than associate graduate faculty to allow our students the freedom to choose their thesis chair.

Increase student success and graduation rates

1. Worked with departments to create streamlined process for MS degree along the way of the PhD matriculation. This increased the number of graduate degrees in the college by over 30% in a single year.
2. Developed a centralized master teacher program incentivized by a successful internal grant.
3. Streamlined credit usage for graduate students. Worked with program directors to reduce number of credit hour overages in programs and reduced this by 20% leading to an overall savings in tuition dollar utilization and allowing us to grow our graduate programs on a flat budget. Further developed policies with the registrar for full-time enrollment categorization when credit hours were reduced for full-time thesis students.

Associate Director FAU Brain Institute

2016-2018, 50% Assignment, Directly Reporting the Executive Director

Leadership

1. Hired, trained, and managed FAU Brain Institute Program Coordinator

Initiatives

1. Promoted the education and research programs of the Institute to members of the State of Florida Legislature and local government groups, business associations, companies and foundations
2. Coordinated broad advertising of the FAU Neuroscience PhD and affiliated programs at national meetings, scientific conferences and to potential donors
3. Identified opportunities for coordination and integration of the Neuroscience PhD Program with MPFI and Scripps
4. Served on the Brain Institute Internal Advisory Committee comprised of faculty holding other leadership positions within the Institute (e.g. Director of Administrative Operations, Director of Research Operations, Director of Community Outreach)

Strategic Planning and Priorities

1. Represented the Director at FAU programmatic meetings and at off-campus events in the event that the Director is unable to represent the Institute and FAU.
2. Advised the Director on the formation of a Neuroscience PhD steering committee, which the Associate Director will oversee, with the Director serving ex officio

3. Oversaw the recruitment and matriculation of graduate students for the Neuroscience PhD Program
4. Advised the Director on appointments of faculty to serve as mentors within the PhD Program and work with the Director on formal procedures for review of the training faculty.
5. Worked with the Director to insure opportunities for entrance and training of underrepresented populations across all Institute-sponsored training programs.

Fiscal Resource Management

1. Worked with Director to identify sources of support (e.g. TAships, RAships, external fellowships) for Neuroscience PhD students from institutional, federal, foundation and industry sources.
2. Worked with the Director on the construction, administration and funding of a summer program to attract and mentor future neuroscience researchers whose exposure to FAU can enhance matriculation of talented trainees into the Neuroscience PhD program, as well as increase awareness of Institute educational programming nationally.

Increase student success and graduation rates

1. Worked with the Director to develop a new, comprehensive FAU Neuroscience PhD Program, merging existing programs, unifying existing coursework, identifying opportunities to enhance state-recognized performance metrics, identifying needs for new courses and didactic roles for existing and newly recruited faculty, developing procedures for academic advancement, qualification, and the tracking of student performance in accordance with approved academic practices of the University and under the oversight of the office of the Provost.
2. Worked with the Director to develop formal procedures for graduate student mentoring (e.g. committee meetings) and ensure students are informed of needs and opportunities for Responsible Conduct in Research compliance.
3. Developed and served as advisor to a Neuroscience Student Organization (NSO) comprised of Neuroscience PhD program students and other students pursuing Masters and PhDs on neuroscience-relevant projects
4. Worked with Director to determine opportunities to facilitate growth and visibility of the undergraduate neuroscience major.
5. Advised the Director on the structure and execution of an integrated FAU Neuroscience seminar series organized for the benefit of the graduate students and Brain Institute-associated faculty
6. Worked with the Director, NSO and staff on the organization of an annual Neuroscience program retreat

Associate Director, Integrative Biology PhD Program
2013-2016, 25% Assignment, Directly Reporting to the Chair

Initiatives

1. Broadened the accessibility and utility of IB PhD program to students and faculty across numerous scientific areas.
2. Consolidated stakeholders into a fulfilling membership of program
    a. Develop concentrations that could be managed by nontraditional units
3. Increased visibility of program across the University and the state.
4. Leveraged joint PhD program between Max Planck Florida Institute for national and international recognition, marketing and recruiting
    a. Develop one of the few International Max Planck Research Schools in North America (IMBRS in Brain and Behaviour)
5. Created a program inclusion environment for faculty and students with an annual retreat.

Strategic Planning and Increase student success and graduation rates

1. Built out concentrations in different areas of biological science as concentrations within the IB PhD program
    a. Successfully expanded from one concentration in Neuroscience to Environmental Science, Marine Science, Biomedical Science, and lastly having core IB as a separate option for students (no concentration).
    b. Electives were managed by concentration steering committees
    c. Streamlined committee hierarchy and management across IB degree
2. Deepened partnership with Max Planck Florida Institute for Neuroscience to create program layer (IMPRS) of existing IB Neuroscience PhD.
    a. Brought in $1M euros/year to support two PhD program
    b. Created partnership between FAU, Max Planck Florida Institute, Max Planck Caesar Institute, Bonn, and the University of Bonn Germany.
3. Developed annual Integrative Biology PhD Retreat Day
    a. Created a "home" for all faculty and students across our numerous disciplines across Integrative Biology.
    b. Facilitated IB student driven steering committee
    c. Promoted ownership of event and evolved into a deeper relevance for student leadership within the program.
    d. Faculty were dragged to this by their students in the beginning years, but now faculty too have a feeling of responsibility and ownership to participate in retreat.
    e. Successfully worked with students to bring high-end speakers to even such as Nobel Laureates and international prize winners.

Director, Biological Sciences Honors Program
2010-2013, 10% Assignment, Directly Reporting to the Chair

Initiatives

1. Developed framework for upper division undergraduate Honors Program in the Department of Biological Sciences
2. Engaged and collaborated with faculty to embrace and support program.
3. Successfully integrated and facilitated program proposal through departmental, college, University and senate program committees.

Strategic Planning and Priorities

1. Created and chaired Honors Program development committee
2. Developed and implemented recruitment program for upper year undergraduates
3. Increase retention and graduation rate through immersion into undergraduate research using academic program paradigms, including a thesis and defense.
4. Increase graduate student recruitment from top-ranked students in undergraduate pool.

Broader Impact

1. Drove the co-development of the Quality Enhancement Plan (QEP) for University Accreditation that incorporates research plans from successful honors program for the entire University
    a. This became OURI exemplifying undergraduate research and scholarship as a platform initiative at FAU
2. Coordinate with University Honors Council to develop framework and SoP for upper division Honors Programs at FAU and begin to recruit cross-College and Departmental support.
    a. We grew the upper division honors programs from 7 to 45 across the University over five years with a framework predicated on the Department of Biological Science honors program.

Scholarship/Research/Creative Activity

Summary of Research Area

Adapted animals, such as insects, employ genetic, molecular, and physiological strategies to prevent specific neurological pathologies resulting from stressors such as low oxygen (anoxia), high temperatures (hyperthermia), and high levels of free radicals (oxidative stress). My research program is poised to take advantage of this through the use of a genetically tractable model system, the fruit fly *Drosophila melanogaster*. Our goal is to develop novel methods for maintaining both neural function and survival during such instances.

Refereed Journal Publications (my laboratory underlined)

Robertson RM, Dawson-Scully KD, Andrew RD. 2020 Neural shutdown under stress: an evolutionary perspective on spreading depolarization. *J Neurophysiol.* Mar 1;123(3):885-895. doi: 10.1152

Mahneva O, Risley MG, John C, Milton SL, Dawson-Scully K, Ja WW. 2020 *In vivo* expression of peptidylarginine deiminase in Drosophila melanogaster. *PLoS ONE* Jan 15;15(1):e0227822. doi: 10.1371/journal.pone.0227822.

Mahneva O, Caplan SL, Ivko P, Dawson-Scully K, Milton SL. 2019 NO/cGMP/PKG activation protects *Drosophila* cells subjected to hypoxic stress. *Comp Biochem Physiol C,* May 28. pii: S1532-0456(19)30186-3

Kelly S, Dawson-Scully K. 2019 Natural polymorphism in protein kinase G modulates functional senescence in *Drosophila melanogaster*. *J Exp Biol.* Apr 9;222(Pt 7). pii: jeb199364. doi: 10.1242/jeb.199364.

Bollinger WL, St Germain EJ, Maki SL, Sial NK, Lepore SD, Dawson-Scully K. 2019 Resveratrol-Inspired Bridged Bicyclic Compounds: A New Compound Class for the Protection of Synaptic Function from Acute Oxidative Stress. *ACS Chem Neurosci*. Jan 6. doi: 10.1021/acschemneuro.8b00577.
Impact Factor (2017) 4.21

Bollinger WL, Sial N, Dawson-Scully K. 2018 BK channels and a cGMP-dependent protein kinase (PKG) function through independent mechanisms to regulate the tolerance of synaptic transmission to acute oxidative stress at the *Drosophila* larval neuromuscular junction. *J Neurogenet*. Sep;32(3):246-255.
Times Cited: 2; Impact Factor (2017) 1.536

Risley MG, Kelly SP, Minnerly J, Jia K, Dawson-Scully K. 2018 egl-4 modulates electroconvulsive seizure duration in *C. elegans. Invert Neurosci*. May 30;18(2):8.
Impact Factor (2017) 1.625

Kelly SP, Risley MG, Miranda LE, Dawson-Scully K. 2018 Contribution of a natural polymorphism in protein kinase G modulates electroconvulsive seizure recovery in *Drosophila melanogaster*. *J Exp Biol.* 2018 Jul 18;221(Pt 14)
Impact Factor (2017) 3.32

Opperman K, Mulcahy B, Giles A, Risley M, Bimbaum R, Tulgren E, Dawson-Scully K, Zhen M, Grill B, 2017 The HECT family ubiquitin ligase EEL-1 regulates neuronal function and development. *Cell Reports*. CELL-REPORTS-D-17-00602R1
Times Cited 14; Impact Factor (2015) 7.87

Risley M, Kelly S, Dawson-Scully K, 2017 Electroshock Induced Seizures in Adult C.elegans. *Bio-Protocol*.

Murphy KR, Deshpande SA, Yurgel ME, Quinn JP, Weissbach JL, Keene AC, Dawson-Scully K, Huber R, Tomchik SM, Ja WW., 2016 Postprandial sleep mechanics in Drosophila. *Elife*. Nov 22;5. pii: e19334.
Times Cited 24; Impact Factor (2015) 8.303

Krill JL, Dawson-Scully K., 2016 cGMP-Dependent Protein Kinase Inhibition Extends the Upper Temperature Limit of Stimulus-Evoked Calcium Responses in Motoneuronal Boutons of Drosophila melanogaster Larvae. *PLoS ONE*. Oct 6;11(10):e0164114.
Times Cited 4; Impact Factor (2014) 3.23

Risley MG, Kelly SP, Jia K, Grill B, Dawson-Scully K., 2016 Modulating Behavior in C. elegans Using Electroshock and Antiepileptic Drugs. *PLoS ONE*, Sep 26;11(9):e0163786.
Times Cited 7; Impact Factor (2014) 3.23

Caplan SL, Zheng B, Dawson-Scully K, White CA, West LM., 2016 Pseudopterosin A: Protection of Synaptic Function and Potential as a Neuromodulatory Agent. *Mar Drugs.* Mar 10;14(3).
Times Cited: 12; Impact Factor (2015) 3.345

Benasayag-Meszaros R, Risley MG, Hernandez P, Fendrich M, Dawson-Scully K., 2015 Pushing the limit: examining factors that affect anoxia tolerance in a single genotype of adult D. melanogaster. *Nature: Sci Rep* Mar 17;5:9204.
Times Cited: 10; Impact Factor (2015) 5.525

Wang R, Palavicini JP, Wang H, Maiti P, Bianchi E, Xu S, Lloyd BN, Dawson-Scully K, Kang DE, Lakshmana MK, 2014 RanBP9 Overexpression Accelerates Loss of Dendritic Spines in a Mouse Model of Alzheimer's Disease. *Neurobiol Dis*. 2014 Sep;69:169-79.
Times Cited: 12; Impact Factor (2012) 5.624

Palavicini JP, Lloyd BN, Hayes CD, Bianchi EB, Kang DE, Dawson-Scully K, Lakshmana MK, 2013 RanBP9 plays a critical role in neonatal brain development in mice. *PLoS ONE* 8(6), e66908.
Times Cited: 10; Impact Factor (2014) 3.23

Milton SL, Dawson-Scully K, 2013 (Peer Reviewed Review). Alleviating brain stress: what alternative animal models have revealed about therapeutic targets for hypoxia and anoxia. 8 (3), 287-301, *Future Neurology*
Times Cited: 5

Caplan, SL, Milton, SL., Dawson-Scully K, 2013. cGMP-dependent protein kinase G (PKG) activity controls synaptic transmission tolerance during acute oxidative stress 109(3):649-58, *J. Neurophys.*
Times Cited: 15; Impact Factor (2010) 3.1

Ayyanathan, K, Kesaraju, S, Dawson-Scully, K, and Weissbach, H, 2012. Combination of Sulindac and Dichloroacetate Kills Cancer Cells via Oxidative Damage. PLoS ONE 7(7): e39949.
Times Cited: 43; Impact Factor (2010) 4.411

Armstrong GA, Xiao C, Krill, J, Dawson-Scully K and Robertson RM, 2011. Glial hsp70 protects K+ homeostasis during anoxia-induced spreading depression in the Drosophila brain. *PLoS ONE* 6(12): e28994.
Times Cited: 32; Impact Factor (2010) 4.411

Chen, A., Kramer, E., Krill, J., Purpura, L., Zars, T., Dawson-Scully, K., 2011, Influence of natural variation at the foraging gene on thermotolerance in adult Drosophila in a narrow temperature range. *J. Comp. Physiol.* A 197(12):1113-8.
Times Cited: 14; Impact Factor (2010) 2.134

Dawson-Scully K, Bukvic D, Chakaborty-Chatterjee M, Ferreira R, Milton SL, and Sokolowski MB 2010. Controlling anoxic tolerance in adult Drosophila via the cGMP-PKG pathway. *J Exp Biol.* Jul 15;213(Pt 14):2410-6.
Times Cited: 42; Impact Factor (2010) 3.04

Armstrong GA, López-Guerrero JJ, Dawson-Scully K, Peña F, Robertson RM. 2010, Inhibition of protein kinase G activity protects neonatal mouse respiratory network from hyperthermic and hypoxic stress. *Brain Res* 1311:64-72.
Times Cited: 15; Impact Factor (2010) 2.623

Dawson-Scully K, Armstrong GAB, Kent C, Robertson RM, and Sokolowski MB, 2007. Natural variation in the thermotolerance of neural function and behavior due to a cGMP dependent protein kinase. *PLoS ONE* 2(8): e773.
Times Cited: 51; Impact Factor (2010) 4.411

Dawson-Scully K, Lin YQ, Imad M, Marin L, Zhang J, Horne JA, Meinertzhagen IA, Karunanithi S, Zinsmaier KE, and Atwood HL. 2007 Morphological and functional effects of altered Cysteine String Protein at the Drosophila larval neuromuscular junction *Synapse* Oct; 61(1):1-16. [Cover Art].
Times Cited: 34; Impact Factor (2010) 2.925

Douglas S, Dawson-Scully K, and Sokolowski MB. 2005 (Peer Review Review). The neurogenetics and evolution of food-related behaviour. *Trends Neurosci*. Dec; 28(12):644-52.
Times Cited: 36; Impact Factor (2010) 13.32

Bronk P, Nie ZP, Klose MK, Dawson-Scully K, Zhang JH, Robertson RM, Atwood HL, and Zinsmaier KE. 2005. The multiple functions of Cysteine-string protein analyzed at Drosophila nerve terminals. *J Neurosci*. 25(9): 2204-2214.
Times Cited: 59; Impact Factor (2010) 7.178

Song W, Ranjan R, Dawson-Scully K, Bronk P, Marin L, Seroude L, Lin YJ, Nie ZP, Atwood HL, Benzer S, and Zinsmaier KE 2002. Presynaptic regulation of neurotransmission in Drosophila by the G protein-coupled receptor Methuselah *Neuron* 36(1): 105-119.
Times Cited: 64; Impact Factor (2010) 14.027

Bronk P, Wenniger JJ, Dawson-Scully K, Guo XF, Hong S, Atwood HL, and Zinsmaier KE 2001. Drosophila Hsc70-4 is critical for neurotransmitter exocytosis in vivo. *Neuron* 30(2): 475-488.
Times Cited: 121; Impact Factor (2010) 14.027

Dawson-Scully K, Bronk P, Atwood HL, and Zinsmaier KE 2000. Cysteine-string protein increases the calcium sensitivity of neurotransmitter exocytosis in Drosophila. *J Neurosci*. 20(16): 6039-6047.
Times Cited: 99; Impact Factor (2010) 7.178

Dawson-Scully K, and Robertson RM. 1998. Heat shock protects synaptic transmission in flight motor circuitry of locusts. *NeuroReport* 9(11): 2589-2593.
Times Cited: 44; Impact Factor (2010) 1.822

Dawson JW, Dawson-Scully K, Robert D, and Robertson RM. 1997. Forewing asymmetries during auditory avoidance in flying locusts. *J. Exp. Biol*. 200(17): 2323-2335. [Cover Art]
Times Cited: 27; Impact Factor (2010) 3.04

Robertson RM, Xu H, Shoemaker KL, and Dawson-Scully K. 1996. Exposure to heat shock affects thermosensitivity of the locust flight system. *J. Neurobiol*. 29(3): 367-383.
Times Cited: 42; Impact Factor (2008) 3.84

Patents

Dawson-Scully, K.; Lepore, S. D.; St. Germain, E. J., **Bollinger, W**.; Maki, S. L. **Sial, N.** (2020) Bridged bicyclic compounds and their derivatives as neuroprotective agents and methods of use thereof. **Granted** July 2020 ***United States Patent Office,*** **Serial number US10759735B2**

Kenneth DAWSON-SCULLY, Sarah Louise MILTON (2015) NEUROPROTECTION FROM BRAIN ANOXIA AND REPERFUSION INJURY DURING STROKE AND COMPOSITIONS OF PKG PATHWAY ACTIVATORS AND METHOD OF USE THEREOF. Pending. April 1, 2015 ***United States Patent Office,*** **Serial number** 20150202219 **Pending**

Dawson-Scully K, Armstrong GAB, Robertson RM., Sokolowski MB (2011). COMPOSITIONS AND METHODS FOR TREATING NEURAL ANOXIA AND SPREADING DEPRESSION **Granted** Sept. 27th, 2011. ***United States Patent Office,*** **Serial number US 8,026,217**.

Dawson-Scully K, Armstrong GAB, Kent C, Robertson RM., Sokolowski MB (2005). THERMOPROTECTIVE COMPOSITIONS OF PKG PATHWAY INHIBITORS AND METHOD OF USE THEREOF. **Granted** Dec 28th 2010. ***United States Patent Office***. **Serial number US 7,858,579, B2.**

Times Cited: 1

Books

Dawson-Scully K., et al. 2015 Neurophysiology (Lab Manual), 102 pages, Dept. of Biological Sciences, FAU Boca Raton, FL – 2nd edition distributed 2017

Dawson-Scully K, Roy A. 2004. Medical Alert, 47 pages, Bold Print (Learning Through Literacy), ***Harcourt Publishing***, Toronto, Ontario - ISBN: 1897096518 [Secondary School Publication]

Research Grants Received

Current Funding: $1,761,000 in active grants

NIH R15 GM110651-03
Synthesis of a Bridged Bicyclic Natural Product Using Allenyl Esters **(2020-2023)**
co-PI (PI: Salvatore Lepore)

NSF 1829243
Type I - Florida Atlantic University National Science Foundation I-Corps Site
Advancing Entrepreneurship and Innovation **(2019-2021)**
PI: Dawson-Scully

NSF 1829243
Type I - Florida Atlantic University National Science Foundation I-Corps Site
COVID-19 **Supplement:** Advancing Entrepreneurship and Innovation **(2020-2021)**
PI: Dawson-Scully

Ariel University and FAU Division of Research
Use of increased HSP expression to reduce seizure activity in *C. elegans*. (**2019-2021**)
PIs: Ken Dawson-Scully and Michael Sherman (Ariel)

Completed Funding:

NIH R15 GM110651-02
Synthesis of a Bridged Bicyclic Natural Product Using Allenyl Esters **(2017-2020)**
co-PI (PI: Salvatore Lepore)

Pfizer WI225058: Compound Transfer Program Grant (CTP) **(2017-2019)**
Establishing a role for Viagra® as an antiepileptic drug using two invertebrate model systems
PI: Dawson-Scully

Aker Foundation: Medical Scholars Foundation Grant for Post-Bac N. Sial. **(2017-2019)**
PI: Dawson-Scully

FAU Brain Institute Seed Grant: Synthesis of a Bridged Bicyclic Natural Product Using Allenyl Esters **(2018-2019)**
PI: Dawson-Scully (Co-PI Lepore)

FAU Brain Institute
Administrative Brain Institute (non-competitive) **(2016-2017)**
PI Dawson-Scully

Eco Neurologics Inc., Neuroprotection via the PKG Pathway (**2013-2018; defunded 2016**)
Lead Investigator: Ken Dawson-Scully

Division of Research SEED Grant, Selective manipulation of hippocampal PKG activity to modulate memory processes (**2013-2014**)
Lead Investigators: Ken Dawson-Scully and Robert W. Stackman

Division of Research SEED Grant, Protecting Stroke-like Injury in Mammals (**2012-2013**)
Lead Investigator: Ken Dawson-Scully and Sarah Milton

Research Priorities Grant, Neuroprotection of Anoxia in Mammalian Neurons (**2011-2013**; Renewed for 2 years)
Lead Investigators: Sarah Milton and Ken Dawson-Scully

American Cancer Society, The Discovery of New Anticancer Drugs from Marine Organisms (**2011-2012**)
Lead Investigator: Ken Dawson-Scully, coPIs Lyndon West, Ayyanathan Kasirajan

Research Priorities Grant, Comparison of *C.elegans and D.melanogaster* and Anoxic Neuroprotection via the PKG Pathway (**2010-2011**)
Lead Investigators: Ken Dawson-Scully and Kailiang Jia

FAU Department of Biological Sciences: Start-up Funds **(2008-2012)**
PI Dawson-Scully

Ontario Research Commercialization Program (ORCP) sponsored through BioDiscovery Canada: Neuroprotective Therapeutics for Heat Stroke (**2007-2008**)
Lead Investigator: Ken Dawson-Scully

Honors, Award and Fellowships

2018: Inducted into the FAU National Academy of Inventors, FAU
2018: Welcome Speaker, College of Science Graduate Student Association, FAU
2017: Distinguished Researcher of the Year Award, FAU Research Park
2016: FAU Tech Runway Business Competition Winner: Neuroscience Designee
2016: Outstanding Faculty Award, FAU Northern Campuses
2013: Outstanding Academic Advisor of the Year, FAU GSA
2012: Research: Assistant Professor of the Year, CES College of Science, FAU
2012: Save a Student Award, FAU

Heart and Stroke Foundation of Canada Research Fellowship (2005-2007) $80k
Canadian Institute of Health Research Fellowship (2004-2005) $18k
Ontario Graduate Scholarship (OGS) - University of Toronto (2001-2002) $19k
Department of Physiology Scholarship, University of Toronto (1999-2001) $38k
Medical Research Council Studentship, University of Toronto (1998-1999) $19k
Queen's Graduate Award, Queen's University (1996-1998) $16k

Invited Scientific Presentations

2020

Drug Discovery Using Invertebrates: Model system for dissecting mechanisms of stroke damage. Baptist Health: Marcus Stroke Institute, Boca Raton, FL

2019

Protein Kinase G modulates seizure duration in C. elegans using a novel electroconvulsion assay, Bar Ilan University, Israel, June 23rd, 2019

Protein Kinase G modulates seizure duration in C. elegans using a novel electroconvulsion assay, Ariel University, Israel, June 25th, 2019

Protein Kinase G modulates seizure duration in C. elegans using a novel electroconvulsion assay, Hebrew University, Jerusalem, Israel June 24th, 2019

Drug Discovery Using Invertebrates: Insects as a model system for dissecting mechanisms of migraine. Life Science South Florida Conference Keynote Speaker, FL

2018

Keynote and Moderator: BioFlorida Annual Conference: Drug Discovery Panel, FL

Novel Models for Drug Discovery for Epilepsy, Epilepsy Foundation, Fort Lauderdale,

Use of a PP2A inhibitor to arrest spreading depolarization as a clinical treatment, SIGA, NY

2016

Invertebrates, Drug Discovery, and Neuroprotection, BioFlorida Expert Panel (Neurodegeneration), Jacksonville, FL

PODCAST People Behind the Science: The Science Behind the Survival Skills of Cells Under Stress, interview, Episode 218, Marie McNeely.
http://www.peoplebehindthescience.com/dr-ken-dawson-scully/

2015

Eco Neurologics Inc., Novel drug targets for Migraine: Exploiting PP2A. Pivotal Therapeutics Inc, Toronto, Canada

Invertebrate Models of Epilepsy: Uncovering Drugs and Targets for Febrile and Electroconvulsive Seizure. Department of Biology, Florida International University, Fort Laud FL.

2014

Invertebrate Models of Epilepsy: Uncovering Drugs and Targets for Febrile and Electroconvulsive Seizure. Department of Neuroscience, TSRI Scripps, Jupiter FL

Ca^{2+} dynamics in the glia of the NMJ of Drosophila melanogaster. CSHL, Summer Course, NY.

2013

From Genes to Drugs: The fruit fly as a model system for the discovery of molecules to rescue neural dysfunction and survival from stroke-like injury. Neurons & Networking, Life Science Technology Hub, Max Planck, Jupiter FL

Eco Neurologics Inc., a novel drug discovery company exploiting the adaptations of organisms to harsh environments to produce human therapeutics. MAKO Surgical Corporation, BioFlorida, Ft. Lauderdale, FL

From Bench side to Bed side, a novel drug discovery platform for drug discovery for neuroprotection. University of Toronto, Department of Zoology, PKGIS, Toronto, Canada

From Genes to Drugs: The fruit fly as a model system for the discovery of molecules to rescue neural dysfunction and survival from stroke-like injury. Florida Atlantic University, Department of Chemistry and Biochemistry, FL

2012

A novel approach for the treatment of neurological disease. Pivotal Therapeutics, Toronto Ontario, Canada

2011

Gleaning *Drosophila* Adaptations: A model for anoxic and hyperthermic neuroprotection., Ave Maria University, Immokalee, FL

Neuroprotection: Using *Drosophila* for Drug Discovery, Enterprise Development Corporation, Boca Raton, FL

Rescuing Stroke-Like Injury in Adult *Drosophila*, Max Planck Institute, Gottingen, Germany

Controlling Environmental Stress on the Nervous System, Scripps Institute, Jupiter, FL

2010

Controlling Stress: The Spineless Sheds Light on the Vertebrate, Max-Planck Florida Institute and FAU Neuroscience Symposium, FAU, Boca Raton, FL.

Function vs. Survival: Neuroprotection and the cGMP-PKG Pathway, Department of Biology, University of Miami, Miami, FL.

Drug delivery and screens using a novel volatilization technique: Torrey Pines Research Institute, Port St. Lucie, FL

2009

The PKG pathway and its overlap with preconditioning during anoxic stress, SE Florida *Drosophila* Consortium, Florida Atlantic University, Boca Raton, FL.

2008

Rapid mechanisms for the protection of neural function during hyperthermic stress, Department of Biology, Florida Atlantic University, Boca Raton, FL.

2007

Uncovering endogenous protection mechanisms of neural function during hyperthermic stress, Department of Biology, York University, Toronto, ON.

2006

Genes to Behaviour: Testing the Limits of Neural Function during Stress, Department of Biology, University of Western Ontario, London, ON.

The Inheritance and Genetic Analysis of Complex Phenotypes, Department of Biology, University of Western Ontario, London, ON.

Protein Kinase G (PKG) Pathways Mediate Neural Thermoprotection as well as Foraging Behaviours in *Drosophila*, Division of Cell Biology, MRC Laboratory of Molecular Biology, Cambridge UK.

Upper Body Motion Analysis and Anatomy of Over-arm Throwing, Brock University, Department of Physical Education and Kinesiology.

Perspectives on Rapid Thermoprotection of Synaptic Transmission. University of Toronto, Department of Physiology, Neuroscience Grouping.

2005

Beating the Heat: Rapid Thermoprotection of Synaptic Transmission. University of Toronto at Mississauga (UTM), Biology Department.

Conference Presentations

2019

Kelly, S and Dawson-Scully K. Assessing locomotion and survival of Drosophila melanogaster in an age-related hypoxia tolerance assay IBANGS 21st International Behavioral and Neural Genetics Society, Edinburgh, Scotland.

Sial N, Bollinger W, St. Germain E, Maki S, Lepore S, Dawson-Scully K. A novel resveratrol analog protects synaptic transmission from acute oxidative stress at the Drosophila neuromuscular junction, Jupiter FL, Scripps Research Institute Drosophila Research Consortium [ORAL]

John C., Nambu, J., Dawson-Scully K, Flies on Fire: Capsaicin mediated grooming in Drosophila melanogaster Flies on the Beach 2019, May 2019; Scripps Research Institute; Jupiter, FL [Poster]

John C., Nambu, J., Dawson-Scully K, Capsaicin mediated grooming in Drosophila melanogaster FAU Graduate Association Research Day 2019, April 2019; FAU; Boca Raton, FL [Poster]

John C., Nambu, J., Dawson-Scully K, Flies on Fire: Capsaicin mediated grooming in Drosophila melanogaster Max Planck Sunposium 2019, March 2019; Max Planck Florida Institute for Neuroscience; Palm Beach, FL [Poster]

John C., Nambu, J., Dawson-Scully K, Analysis of pruritogen induced grooming behavior in Drosophila melanogaster Synapse 2019, January 2019; Max Planck Florida Institute; Jupiter, FL [Poster]

John C., Nambu, J., Murphey R.K. Dawson-Scully K, Flies on Fire: Capsaicin mediated grooming in Drosophila melanogaster FAU Graduate Association Research Day 2019, April 2019; FAU; Boca Raton, FL [Poster]

Sial N, Bollinger W, St. Germain E, Maki S, Lepore S, Dawson-Scully K. A novel resveratrol analog protects synaptic transmission from acute oxidative stress at the Drosophila neuromuscular junction, Society for Neuroscience (SfN), San Diego, CA. [POSTER]

Sial N, Bollinger W, Dawson-Scully K. BK channels and cGMP-dependent protein kinase (PKG) function via independent mechanisms to protect synaptic transmission from acute oxidative stress, Synapse, Max Planck Florida Institute for Neuroscience. [POSTER]

Maki S, Bollinger W, St. Germain E, Sial N, Dawson-Scully K, Lepore S.
Bridged bicyclic compounds and their derivatives as neuroprotective agents, Tech Runway Inaugural Research Showcase, Florida Atlantic University. [POSTER]

Gurtejpal Ghuman, Samantha Maki, Elijah St Germain, Wes Bollinger, Ken Dawson-Scully, Salvatore Lepore Synthesis and optimization of [3.2. 1] bicyclic compounds as potential neuroprotective agents Abstracts of Papers of the American Chemical Society

2018

Samantha*, Wesley Bollinger, Ken Dawson-Scully, Pradip Maity, Salvatore Lepore. "Studies toward the total synthesis of vitisinol D and evaluation of its analogs as neuroprotective agents." Abstracts of Papers of the American Chemical Society
255. [POSTER]

John C., Nambu, J., Murphey R.K. Dawson-Scully K, Flies on Fire: Capsaicin mediated grooming in Drosophila melanogaster Flies on the Beach 2018, May 2018; Florida International University; Miami, FL [Student Talk]

Murphey, K., Ja, WW., Dawson-Scully, K. 2018 Using light to control meal size, Frontiers in Science Public Lecture Series, Osher Lifelong Learning Institute, Boca Raton FL [(Student Talk)]

Kelly S. Dawson-Scully K., Flies on the Beach Symposium Assessing locomotion and survival of Drosophila melanogaster in an age-related hypoxia tolerance assay [POSTER]

Kelly S. Dawson-Scully K., Synapse, Society for Neuroscience Chapter Conference at MPFI, Jupiter, FL Assessing locomotion and survival of Drosophila melanogaster in an age-related hypoxia tolerance assay [POSTER]

John C., Nambu, J., Murphey R.K. Dawson-Scully K, Analysis of pruritogen induced grooming behavior in Drosophila melanogaster Integrative Biology PhD Retreat 2018, February 2018; FAU; Boca Raton, FL [Poster]

John C., Nambu, J., Dawson-Scully K, Analysis of pruritogen induced grooming behavior in Drosophila melanogaster Synapse 2018, February 2018; Max Planck Florida Institute; Jupiter, FL [Poster]

2017

Singh S, Nambu R., Dawson-Scully K., Investigating the role of SoxN in the development of adult nervous system development, Max Planck Sunposium, Florida

Risley M, Dawson-Scully K Modulating behavior in C. elegans using electroshock and antiepileptic drugs Max-Planck Florida Institute (MPFI) Sunposium, West Palm beach, FL: Poster

Mahneva O and Dawson-Scully PKG Fest International Meeting, Boca Raton, oral presentation

Mahneva O and Dawson-Scully Sunposium Neuroscience Conference, West Palm Beach, Florida, poster presentation

Mahneva O and Dawson-Scully 3MT Heat Competition participant, oral presentation “Oxygen: life, death, and flies”

Mahneva O and Dawson-Scully Integrative Biology Course at FAU, invited speaker

Bollinger, Wesley* and Ken Dawson-Scully. 2017. "Protein Kinase G (PKG) Functions Through Downstream K+ Channels to Modulate Synaptic Transmission's Tolerance for Acute Oxidative Stress at the Drosophila Neuromuscular Junction". Sunposium, West Palm Beach, Florida, February, 2017.

John C., Nambu, J., Dawson-Scully K, Analysis of pruritogen induced grooming behavior in Drosophila melanogaster Brain Institute NSO 2017, December; FAU; Boca Raton, FL [Poster]

John C., Nambu, J., Dawson-Scully K, Analysis of pruritogen induced grooming behavior in Drosophila melanogaster Integrative Biology Retreat 2017, February; FAU; Boca Raton, FL [Poster]

John C., Nambu, J., Dawson-Scully K, Analysis of pruritogen induced grooming behavior in Drosophila melanogaster Max Planck Sunposium, February; Max Planck Florida Institute; Palm Beach, FL [Poster]

John C., Nambu, J., Dawson-Scully K, Analysis of pruritogen induced grooming behavior in Drosophila melanogaster Flies on the Beach, May; Jupiter, FL [Poster]

2016

John C, Rodney K. Murphey and Ken Dawson-Scully and John R. Nambu, 2016, Analysis of pruritogen induced grooming behavior in Drosophila melanogaster, Genetics Society of America (GSA), Orlando FL [Poster]

Singh S, Ken Dawson-Scully and John R. Nambu, 2016, Investigating the role of Sox Neuro in the development of adult nervous system, Genetics Society of America (GSA), Orlando FL [Poster]

John C., Nambu, J., Murphey R.K. Dawson-Scully K, Pruritic (Itch) response in the nervous system of Drosophila melanogaster Max Planck Sunposium, March, Palm Beach FL [Poster]

Murphy KR, Sonali A. Deshpande, James P. Quinn, Jennifer L. Weissbach, Alex C. Keene, Ken Dawson-Scully, Robert Huber, Seth M. Tomchik, William W. Ja, 2016, Postprandial sleep mechanics in Drosophila. Genetics Society of America (GSA), Orlando FL [Poster]

2015

Singh S, Nambu R., Dawson-Scully K., Expression and function of Sox Neuro (a Group B Sox gene) in the development of the Drosophila adult nervous system, Society of Neuroscience, Chicago-IL.

Singh S, Nambu R., Dawson-Scully K., Expression of Sox Neuro in the development of the adult nervous system, Max Planck Sunposium, Jupiter-FL

Singh S, Nambu R., Dawson-Scully K., Expression and function of Sox Neuro (a Group B Sox gene) in the development of the Drosophila adult nervous system, Genetics Society of America Drosophila Research Conference, March, Orlando, FL [Poster]

Caplan S, Zheng B, Krill J, White C, Dawson-Scully K, West L, 2015, Discovery of marine natural products using Drosophila Calcium Imaging and Optogenetics. American Society for Pharmacology (ASP), Boulder, CO [Poster and Oral]

Risley M, Dawson-Scully K Bonn International Symposium 2015, Invited Talk November 2015 Awarded Presentation and DAAD Travel Grant. Controlling electroconvulsion in *D. melanogaster* and *C. elegans* Diez, Germany [Funded Invited Talk]

Risley, M, Kelly S, Minnerly J, Jia K, Dawson-Scully K, 2015, PKG decreases electroconvulsive seizure recovery time in D. melanogaster and C. elegans NEURIZONS, Max Planck, Gottingen, Germany [Poster]

Risley M, Dawson-Scully K Controlling electroconvulsive seizure recovery time in D. melanogaster and C. elegans Max-Planck Florida Institute (MPFI) Sunposium, Palm Beach Gardens, FL: Poster

Risley M, Dawson-Scully K Controlling electroconvulsive seizure recovery time in D. melanogaster and C. elegans Synapse, Society for Neuroscience Chapter Conference at MPFI, Jupiter, FL: Poster

Kelley T, Snyder S, Dawson-Scully K, 2015 Assessment of Neuroprotective Properties of Trans-Resveratrol and Its Oligomeric Natural Products in Drosophila melanogaster, Drosophila SE Consortium, Jupiter FL [Poster]

Krill J., Dawson-Scully K. 2015 Glial and neuronal contributions to neuroprotection during acute stress March Max Planck Florida Institute Sunposium: Poster Presentation

Krill J., Dawson-Scully K. 2015 Glial and neuronal mechanisms of neuroprotection via PKG pathway modulation, November BIGS Neuroscience Symposium, Diez Germany: Invited International Talk

Krill J., Dawson-Scully K., Characterization of novel stimulus-induced glial Ca2+ waves in the Drosophila peripheral nervous system Flies on the Beach (Drosophila Neuroscience) Jupiter FL: Poster Presentation

John C., Nambu, J., Murphey R.K. Dawson-Scully K, Pruritic (Itch) response in the nervous system of Drosophila melanogaster Society for Neuroscience, October, Chicago IL [Poster]

John C., Nambu, J., Murphey R.K. Dawson-Scully K, Behavioral Analysis of Pruritus Response in Drosophila, Synapse Conference, January, Jupiter FL [Poster]

John C., Nambu, J., Murphey R.K. Dawson-Scully K, Analysis of Pruritic (Itch) Response in Drosophila Genetics Society of America Drosophila Research Conference, March, Orlando, FL [Poster]

2014

Risley M, Dawson-Scully K, Electroconvulsive seizure duration is mediated by the cGMP/PKG pathway Flies On The Beach (Drosophila neuroscience), The Scripps Research Institute, Jupiter, FL: Talk

Risley M, Dawson-Scully K, Electroconvulsive seizure duration is mediated by the cGMP/PKG pathway Graduate and Professional Student Association Research Day: Poster

Risley M, Dawson-Scully K, Electroconvulsive seizure duration is mediated by the cGMP/PKG pathway FAU College of Science Research Day: Poster

Murphey K, Bruce K, Dawson-Scully K, Ja, W 2014 Core clock genes modify sleep-feeding axis, TSRI Scripps, Jupiter FL [Poster]

John C., Nambu, J., Murphey R.K. Dawson-Scully K, Behavioral Analysis of Pruritus Response in Drosophila Genetics Society of America Drosophila Research Conference, March, San Diego CA [Poster]

Singh S, Nambu R., Dawson-Scully K., Characterization of Group B Sox genes in Development of Drosophila Adult Nervous System, Genetics Society of America, San Diego-CA.

Risley, M, Kelly S, Minnerly J, Jia K, Dawson-Scully K, 2014, PKG decreases electroconvulsive seizure recovery time in D. melanogaster and C. elegans HORIZONS, Max Planck, Gottingen, Germany [Funded Invited Talk]

Krill J., Dawson-Scully K Glial and neuronal mechanisms of neuroprotection via PKG pathway modulation Max Planck Florida Institute Symposium: Poster Presentation

John C., Nambu, J., Murphey R.K. Dawson-Scully K, Behavioral Analysis of Pruritus Response in Drosophila, College of Science Research Day, March, Boca Raton FL [Poster]

2013

Murphy, KR, JL Weissbach, CF Trivigno, A Amador, BE Hunter, M Madrigal, KD Dawson-Scully, WW Ja. 2013 Drosophila prandial behavior—a new paradigm for invertebrate feeding. SSIB, New Orleans, LA [Poster]

Trivigno, CF, Murphy, KR, Amador, A, Hunter, BE, Madrigal M, Dawson-Scully K, and Ja WW 2013 Genetic dissection of adult Drosophila prandial behavior. Cell Symposia: Genes, Circuits and Behavior, Toronto ON [Poster]

Krill J, Rossano A, Macleod GT, and Dawson-Scully K. 2013 The characterization of glial and neuronal mechanisms in the modulation of neuroprotection via the PKG pathway. Cell Symposia: Genes, Circuits and Behavior, Toronto ON [Poster]

Makhnyeva, O, Dawson-Scully, K and Milton, SL, Effects of cGMP-dependent protein kinase signaling in Drosophila S2 cells subjected to anoxia and oxidative stress, Cell Symposia: Genes, Circuits and Behavior, Toronto ON [Poster]

Risley M, Murphey K., Dawson-Scully, Automated measurement of the modulation of anoxia tolerance in adult Drosophila via protein kinase G (PKG), Cell Symposia: Genes, Circuits and Behavior, Toronto ON [Poster]

Murphy, KR, JL Weissbach, CF Trivigno, A Amador, BE Hunter, M Madrigal, KD Dawson-Scully, WW Ja. 2013 Drosophila prandial behavior—a new paradigm for invertebrate feeding. PKGIS, Toronto [Oral]

Krill J, Rossano A, Macleod GT, and Dawson-Scully K. 2013 The characterization of glial and neuronal mechanisms in the modulation of neuroprotection via the PKG pathway. PKGIS, Toronto [Oral]

Makhnyeva, O, Dawson-Scully, K and Milton, SL, Effects of cGMP-dependent protein kinase signaling in Drosophila S2 cells subjected to anoxia and oxidative stress, PKGIS, Toronto [Oral]

Risley M, Murphey K., Dawson-Scully, Automated measurement of the modulation of anoxia tolerance in adult Drosophila via protein kinase G (PKG), PKGIS, Toronto [Oral]

Benasayag R and Dawson-Scully K. 2013 Neuroprotection during anoxic stress in Drosophila melanogaster: the role of PKG Pathway on protection of function and survival. South Florida Drosophila Consortium Meeting, University of Miami [Oral]

Caplan S, Milton, SL, and Dawson-Scully K. 2013 A cGMP-dependent kinase (PKG) controls synaptic transmission tolerance to acute oxidative stress at the Drosophila larval neuromuscular junction. Harbor Branch, FL. Center of Excellence in Biomedical and Marine Biotechnology Symposium. [Oral]

Caplan S, Milton, SL, and Dawson-Scully K. 2013 A cGMP-dependent kinase (PKG) controls synaptic transmission tolerance to acute oxidative stress at the Drosophila larval neuromuscular junction. Sunposium, Max Planck FL [Poster]

Krill J, Rossano A, Macleod GT, and Dawson-Scully K. 2013 The characterization of glial and neuronal mechanisms in the modulation of neuroprotection via the PKG pathway. Sunposium, Max Planck FL [Poster]

Benasayag R and Dawson-Scully K. 2013 Neuroprotection during anoxic stress in Drosophila melanogaster: the role of PKG Pathway on protection of function and survival. Sunposium, Max Planck [Poster]

Rios L, Dawson-Scully K, and Stackman, W. 2013 Modulating rodent spatial memory by altering hippocampal PKG. Sunposium, Max Planck FL [Poster]

2012

Makhnyeva, O, Dawson-Scully, K and Milton, SL, Effects of cGMP-dependent protein kinase signaling in Drosophila S2 cells subjected to anoxia and oxidative stress, Sunposium, Max Planck FL [Poster]

Benasayag R and Dawson-Scully K. 2012 Neuroprotection during anoxic stress in Drosophila melanogaster: the role of PKG Pathway on protection of function and survival. South Florida Drosophila Consortium Meeting, Boca Raton [Poster]

Krill J, Rossano A, Macleod GT, and Dawson-Scully K. 2012 The characterization of glial and neuronal mechanisms in the modulation of neuroprotection via the PKG pathway. South Florida Drosophila Consortium Meeting, Boca Raton [Oral]

Caplan, SL., Milton, SL., Dawson-Scully K, 2012, Rapid Neuroprotection from Acute Oxidative Stress. South Florida Drosophila Consortium Meeting, Boca Raton [Poster]

Benasayag R and Dawson-Scully K. 2012 Neuroprotection during anoxic stress in Drosophila melanogaster: the role of PKG Pathway on protection of function and survival. IBRO Max Planck Symposium, FL [Poster]

Krill J, Rossano A, Macleod GT, and Dawson-Scully K. 2012 The characterization of glial and neuronal mechanisms in the modulation of neuroprotection via the PKG pathway. IBRO Max Planck Symposium, FL [Poster]

Caplan, SL., Milton, SL., Dawson-Scully K, 2012, Rapid Neuroprotection from Acute Oxidative Stress. IBRO Max Planck Symposium, FL [Poster]

2011

Caplan, SL., Milton, SL., Dawson-Scully K, 2011, Rapid Neuroprotection from Acute Oxidative Stress. Enterprise Development Corporation, Boca Raton, FL [Poster]

Krill, C. Xiao, R. Robertson, K. Dawson-Scully, 2011, Expression of Hsp70 in neurons or glia protect neural function during acute hyperthermia, South East Neuroscience Conference, St. Augustine, FL. [Poster]

Benasayag-Meszaron, R, M. Fendrich, R. Murphey, K. Dawson-Scully, 2011, Temperature and aging: Factors that affect the "protective coma" adaptation during drowning of adult Drosophila, South East Neuroscience Conference, St. Augustine, FL. [Poster]

Chen, A.J. E. Kramer, L. Purpura, J. Krill, J. Atallah, J. Levine, T. Zars, K. Dawson-Scully, 2011, Natural variation at the foraging locus influences thermotolerance in adult Drosophila melanogaster, South East Neuroscience Conference, St. Augustine, FL. [Poster]

2010

Caplan, SL., Milton, SL., Dawson-Scully K, 2010, Rapid Neuroprotection from Acute Oxidative Stress. South Florida *Drosophila* Consortium Meeting. University of Miami. [Oral].

Bartlett, R., Dawson-Scully K., Milton SL., 2010., The Effects of Manipulating the PKG Pathway in the Anoxia Tolerant Freshwater Turtle (*Trachemys scripta*). South Florida Biomedical Conference, Miami [Poster]

Milton, SL., Dawson-Scully K., 2010, Neuroprotection by cGMP/PKG mechanisms in two anoxia tolerant animal models: fruit fly and freshwater turtle. Society for Experimental Biology, Prague. [Oral]

2009

Trivigno, C., Haerry, T.E. and Dawson-Scully, K., 2009 Mutations in the Drosophila mitochondrial translation elongation factor iconoclast result in developmental abnormalities and increased sensitivity to acute stress. Neurobiology of Drosophila Meeting, Cold Spring Harbor Laboratories. [Poster]

Trivigno, C., and Dawson-Scully, K., 2009 Identification and characterization of the Drosophila mitochondrial translation elongation factor iconoclast. 1st Annual South Florida Drosophila Consortium Meeting, Boca Raton. [Oral]

Krill, J., Xiao, C., Robertson, R.M., Dawson-Scully, K, 2009 Expression of HSP70 in neurons or glia protect neural function during acute hyperthermia, Society for Neuroscience, Chicago: 776. [Poster]

Kesaraju S, Weissbach H, Dawson- Scully K, Ayyanathan K 2009 SULINDAC ENHANCES DCA MEDIATED CANCER KILLING THROUGH INCREASED OXIDATIVE STRESS, Poster, Cell Death Meeting, Cold Spring Harbor. [Poster]

2008

Armstrong, Gary A.B., Juan Lopez-Guerrero, Ken Dawson-Scully, Fernando Pena, Meldrum Robertson. 2008 PKG ACTIVATION INCREASES SENSITIVITY OF MOUSE RESPIRATORY RHYTHM GENERATION TO HYPOXIC AND HYPERTHERMIC STRESS. Second Annual Meeting of the Canadian Association for Neuroscience. Abstract No.: A-E1168 [Poster]

2007

Dawson-Scully K, Ferreira F, Sokolowski MB. 2007 Coping with Stress: Comparative analyses of stress tolerance of neural function and survival in adult *Drosophila melanogaster* due to natural alleles of the *foraging* gene. Cold Spring Harbor Meeting of *Drosophila* Neurobiology: p.55.

2006

Dawson-Scully K. Kent C, and Sokolowski MB, 2006, Protein Kinase G (PKG) pathways mediate neural thermoprotection as well as foraging behaviours in *Drosophila*, The University of Manchester UK, 2nd Annual Conference on the Neurogenetics of Behaviour (Manchester Maggot Meeting). P.5.

2005

Dawson-Scully K, Kent C, Armstrong GAB, Robertson, RM, Sokolowski MB. 2005 Rapid protection of neural function via PKG inhibition. Cold Spring Harbor Meeting of *Drosophila* Neurobiology: p.51.

2002

Dawson-Scully K, P. Bronk, Z. Nie, H.L. Atwood, KE. Zinsmaier 2002 Functional domains of *Drosophila* cysteine string protein mediate differential effects at nerve terminals. Heat Shock Protein Symposium, Erindale, University of Toronto: p.32.

2001

Bronk P, KD. Dawson-Scully, Z. Nie, HL. Atwood, KE. Zinsmaier. 2001 Opposing functions of *Drosophila* cysteine string protein at nerve terminals. Cold Spring Harbor meeting of *Drosophila* Neurobiology. p.22.

Song W, R. Ranjan, P. Bronk, Z. Nie, K. Dawson-Scully, Y. Lin, L. Seroude, HL. Atwood, S. Benzer, and KE. Zinsmaier 2001 Methuselah, a putative G protein-coupled receptor, regulates

excitatory neurotransmitter exocytosis at the larval neuromuscular junction of *Drosophila*. Cold Spring Harbor meeting of *Drosophila* biology, p.251.

Macleod GT, S. Karunanithi, KD. Dawson-Scully, MP. Charlton, HL. Atwood. 2001 New calcium imaging techniques for the neuromuscular junction of *Drosophila*: Testing the need for synaptic vesicles in calcium channel function. Cold Spring Harbor meeting of *Drosophila* Neurobiology. p.35.

Bronk, P, K Dawson-Scully, J. Wenniger, X Guo, HL. Atwood, and KE. Zinsmaier. 2001 Cysteine-String Protein Cooperates with Hsc70-4 in Neurotransmitter Exocytosis. 42nd Annual *Drosophila* Research Conference, Washington, D.C.

2000

Bronk, P, K Dawson-Scully, J. Wenniger, HL. Atwood, and KE. Zinsmaier. 2000 Cysteine-String Protein Cooperates with Hsc70 to Mediate Multiple Functions in Neurotransmitter Exocytosis. Gordon Conference: “Cell Biology of the Neuron”, Plymouth, NH.

Dawson-Scully K, AG. Millar, KE. Zinsmaier, P. Bronk, and HL. Atwood 2000 Resting intracellular calcium levels increase with temperature in boutons of the neuromuscular junction of *Drosophila* lacking cysteine string proteins. Society for Neuroscience. 398.2.

Dawson-Scully K, AG. Millar, KE. Zinsmaier, P. Bronk, and HL. Atwood 2000 Resting intracellular calcium levels increase with temperature in boutons of the neuromuscular junction of *Drosophila* lacking cysteine string proteins. University of Western, Southern Ontario Neuroscience Association, London, Ontario, June. p. 16.

Bronk P, KD. Dawson-Scully, HL. Atwood, KE. Zinsmaier 1999 The loss of evoked neurotransmitter release in *Drosophila* cysteine string protein null-mutants cannot solely be attributed to a defect in calcium entry. Cold Spring Harbor meeting of *Drosophila* Neurobiology. p.37.

1999

Dawson-Scully K, KE. Zinsmaier, H. Kwan, and HL. Atwood 1999 Lack of calcium influx does not explain temperature sensitive block of synaptic transmission in *Drosophila* lacking cysteine string proteins. Society for Neuroscience. 694.7.

Dawson-Scully K, Zinsmaier, K., Robertson, RM., Atwood, HL. 1999 Lack of calcium influx does not explain temperature sensitive block of synaptic transmission in *Drosophila* lacking cysteine string proteins. Frontiers in Physiology, University of Toronto, Toronto, Ontario. p.15.

1998

Dawson-Scully K. 1998 Protective effects of heat shock on synaptic transmission in the flight circuitry of *Locusta migratoria.* Meeting of the East Coast Nerve Net, Woods Hole, MA.

1996

Robertson RM., Gray, JR. and Dawson-Scully, K. 1996 Adaptive responses to heat stress in the neural system controlling locust flight. Proceedings 17th Annual conference: European Society for Comparative Physiology and Biochemistry. p.60.

Teaching Responsibilities and a Brief Course Description - FAU

Cold Spring Harbor Laboratory (2014)

In 2014 I coordinated the Ca^{2+} imaging component of the ***Drosophila* Neurobiology course at CSHL as an invited Speaker**. This was a two-day component that taught 15 students advanced neurophysiological and behavioral preparations. Experts in the field are invited to this course each year to teach such components and our travel, accommodations, and expenses were paid.

BSC 6936: Advanced / Neurophysiology, Spring 2012-present (Instructor)

This is an advanced course developed and taught with Max Planck designed to teach graduate students both the theory and the actual practice of using complex neurophysiological techniques. This is likely one of the only courses in the state of Florida where students can learn the skill of recoding from a single cell using patch-clamp and sharp electrodes, but as well as recording from the brain of a freely moving mouse at the hippocampus.

PSB 6345: Neuroscience 1, Fall 2010-2013 (co-Instructor)

This course gives graduate students the foundation to understand Neuroscience from the single cell to the whole brain. This is a critical gateway course for all graduate neuroscience students.

PCB 4843C/BSC 6936: Practical Cell Neuroscience, Spring/Summer 2010-present (Instructor)

I developed this course to incorporate both cellular neurophysiological theory with practical application using computer lab simulations. This course is designed to give the students a foundation of cellular neuroscience along with a tool to test their scientific inquiries. A major component of this course is the novel development of a research question the students test and write a major report on. Topics have varied from the attempt to cure multiple sclerosis to the effect of climate change on fish behavior.

BSC 6905: Neuroscience Journal Club, Summer 2010-2011 (co-Instructor)

This course was co-developed to introduce graduate students pursuing neuroscience degrees to the most cutting-edge research in the field through the review of current manuscripts.

BSC 6905: Neuroscience Seminar, Fall 2009, Fall 2010, Spring 2011 (co-Instructor)

Neuroscience Seminar is a responsibility of neuroscience faculty on a voluntary rotating basis to expose both students and faculty to cutting edge unpublished research through external speakers.

BSC 4917/4918 Honors Research/Thesis Program: Spring 2009, Fall 2009, Spring 2010, Fall

2010, Spring 2011, Fall 2011 (co-Instructor)

I co-developed this program with Rod Murphey and Evelyn Frazier to build a resilient Honors Program in Biological Sciences that teaches undergrads the techniques and skills required to perform independent laboratory research. This program was extremely successful and used as a model for the University-wide QEP now implemented.

BSC 4930/6936: Cellular Neuroscience and Disease, Fall 2008, Fall 2009 (co-Instructor)

CN&D was taught to expose students to the basis of a number of neurological diseases in both humans and animals. This course had a mixed curriculum of standard lectures, manuscript discussions, proposals, and final reports.

Mentoring and Training (bold = current)

Post-docs, visiting Fellows, post Bacs, Technicians

Raquel Benasayag	**(Spring 2018 – present; technician)**
Shweta Singh	(Fall 2016 – Fall 2018; postdoctoral fellow)
Nadia Sial	(Fall 2017 – Spring 2019; post-bac)
Stacee Lee Caplan	(Dec 2015 - Spring 2017; postdoctoral fellow)

Chair/PI for Ph.D. Students (further detail below)

Paola Gonzalez	**(Spring 2021-)**	**GNTP Student**
Paul Scarpinato	**(Fall 2019- present)**	**IB Student**
Nirthieca Suthakaran	**(Spring 2019 – present)**	**IB Student**
Akshay Naraine	**(Fall 2018 – present)**	**IBNS student**
Ciny John	(Fall 2014 – Sumer 2019)	IB Student Graduated [10]
Rachel St. Clair	(Fall 2018-Spring 2019)	Rotation
Wesley Bollinger	(Fall 2016 – Summer 2018)	IBNS Graduated [9]
Stephanie Kelly	(Fall 2014 – Spring 2019)	IB Graduated [8]
Monica Risley	(Fall 2012 - 2018)	IBNS/IMPRS Graduated [7]
Keith Murphy	(Fall 2012 - 2018)	IBNS Graduated [6]
Olena Maknyeva	(Fall 2010 – 2018)	IB Graduated [5]
Jennifer Krill	(Spring 2009 - 2018)	IB Graduated [4]
Shweta Singh	(Spring 2012 - Fall 2016)	IB Graduated [3]
Camilo Yepes	(Fall 2015)	Rotation
Stacee Caplan	(Spring 2009 – Summer 2015)	IB Graduated [2]
Catherine Trivigno	(Spring 2009 – Fall 2011)	IB Graduated [1]
Lauren Purpura	(Fall 2008-Spring 2010)	Rotation

Chair/PI for M.Sc. Students

Yasmine Zerrouki	**(Spring 2021-)**	**Biological Sciences Thesis**
Jessica Baran	**(Summer 2020- present)**	**Biological Sciences Thesis**
Jonathon Wiggins	**(Fall 2019 - present)**	**Biomedical Sciences Thesis**
Alec Simonson	**(Fall 2019 – present)**	**Biological Sciences Thesis**
Julieta Di Mase	(Fall 2015-Spring 2018)	Transferred to Guthrie lab

Shannon Dougherty	(Fall 2015-Fall 2018)	Graduated/Non-Thesis
Kent Fairchild	(Spring 2013 – Summer 2016)	Graduated/Non-Thesis
Tanya Kelley	(Fall 2013 – Fall 2015)	Thesis Chemistry Dept.
Raquel Benasayag	(Fall 2011 – Spring 2013)	Graduated/Thesis
Richard Barrett	(Fall 2012 – Spring 2013)	Graduated/Non-Thesis
Zachary Anderson	(Fall 2012 – Spring 2013)	Graduated/Non-Thesis

Undergraduate Students in Lab

Jack Dunn	**(Fall 2019-present)**	**Max Planck Honors Program**
Isis Sweeny	**(Fall 2018-present)**	**Biological Sciences**
Zacharia John	**(Fall 2018-present)**	**Biological Sciences**
Taylor Selman	**(Fall 2016-present)**	**RESEARCH Honors Program**
Justin Xie	**(Fall 2018-present)**	**Max Planck Honors Program**
Yasmine Zerrouki	(Fall 2018-Spring 2021)	Biological Sciences
Jonathon Wiggins	(Fall 2018-Summer 2019)	Biological Sciences
Alec Simonson	(Fall 2018-Spring 2019)	Max Planck Honors Program
Natasha Ramnauth	(Fall 2018-Spring 2019)	Biological Sciences
Yichen (Ruby) Huang	(Fall 2017-Spring 2018)	NSF Learn
Samantha Berner	(Fall 2016-Spring 2019)	RESEARCH Honors Program
Madison Caldwell	(Spring 2019-Fall 2019)	Biological Sciences
Amanda Devoto	(Fall 2017-Spring 2019)	Biological Sciences
Leonor Matilda	(Summer 2016-Spring 2017)	THESIS Honors Biology
Claudia Tinoco	(Summer 2015-Summer 2016)	Biological Sciences
Leslie Cutting	(Fall 2015-Spring 2016)	Biological Sciences
Jonathon Kovacks	(Fall 2015-Spring 2016)	Biological Sciences
Mckenzie Merritt	(Fall 2012-Spring 2016)	THESIS Honors College Thesis
Camilo Yepes	(Spring 2015-Fall 2015)	Biological Sciences
Rafaela De Negri	(Fall 2013-Spring 2015)	University of Kentucky (DVM)
Stephanie Kelly	(Summer 2013-Summer 2014)	Psychology
Natalie Builes	(Spring 2013-Fall 2013)	THESIS Honors College
Kent Fairchild	(Summer 2013-Spring 2013)	Biological Sciences
Priscilla Hernandez	(Fall 2011-present)	Honors Biological Sciences
Jennifer Weissbach	(Spring 2013-present)	Dartmouth/Scripps SURF
Colin Leach	(Spring 2012- Summer 2012)	USF
Matthew Lovelace	(Spring 2011-Fall 2011)	Biological Sciences
Adam Chen	(Fall 2010-Summer 2011)	THESIS Honors Biology
Rachel Leeman	(Summer 2011)	UF
Arleen Apotella	(Fall 2010-Spring 2011)	Honors Biological Sciences
Raquel Benasayag	(Summer 2010-Fall 2011)	Penn State
Sohail Karram	(Fall 2009-Spring 2010)	Biological Sciences
Marianna Borges	(Fall 2009-Spring 2010)	Biological Sciences
Bonnie Edwards	(Fall 2009-Spring 2010)	Biological Sciences
Guilhermie Favero	(Fall 2009-Fall 2010)	Biological Sciences

High School Students in Lab

Mary Elizabeth Gabrielle	**(Summer 2019, 2020)**	**Pine Crest**
David Baldwin	**(Summer 2017 – 2020)**	**Broward**

Isaac Lifert	(Summer 2019)	Pine Crest
Navan Parthasarathy	(Summer 2019)	American Heritage
JD Baldwin	(Summer 2015 & 2016)	Broward
Matthew Dardet	(Fall 2015-Spring 2016)	Pine Crest, Ft. Laud, FL
Charlotte Barock	(Summer 2015)	Benjamin, Jupiter
Madison Schmidt	(Summer 2015)	Sun Coast, FL
Samantha Stilley	(Summer 2014)	Benjamin, Jupiter
Anastasia Hediger	(Summer 2011, 2012)	Pine Crest, Ft.Laud
Mo Markowitz	(Summer 2012, 2014)	Donna Estridge, Boca
Sofia Karabas	(Summer 2011)	Sun Coast, FL
Kailine Lambert	(Summer 2010)	Atlantic HS, FL
Margo Fendrich	(Summer 2010)	Pine Crest, Ft Laud
James Peng	(Summer 2009)	American Heritage

Dawson-Scully Doctoral Student Details while in my Laboratory

(10 PhD Graduates)

Ciny John, MSc/PhD, IB, 2014-2019 (co-supervised with Dr. R. Murphey)

Current Occupation: Analytical Development Scientist at ADMA Biologics Inc.
Lab Summary: 14 Conferences, 13 Awards

Internal Awards

Dissertation Year Award:	January 2017
Grace Fait Asian Woman Education Scholarship:	September 2016, August 2015 and August 2014
Delores A. Auzenne Fellowship:	July 2016 and July 2014
Graduate Diversity Fellowship:	May 2016
FAU Graduate and Prof Assoc Award:	Summer 2016, Fall 2015, Spring 2014 and Spring 2013
Vincent Saurino Fellowship:	December 2015
FAU Graduate Grant:	August 2015

Stephanie Kelly, MSc/PhD, IB, 2015-2019

Current Occupation: Clinical Rater at Atlantic Center for Medical Research
Lab Summary: 15 Conferences, 12 Awards, 4 Press Releases

Internal Awards

FAU Graduate Academic Excellence Fellowship	June 2015
Dr. Daniel B. and Aurel B. Newell Fellowship	July 2016
Graduate Research Assistantship	Spring 2016
Graduate Research Assistantship	Summer 2018
Northern Campus Achievement Award 2015-2016	Spring 2016
First Runner-Up, Three Minute Thesis (3MT)	November 2016
First Runner-Up FINALS, Three Minute Thesis (3MT)	November 2016
Dr. Vincent R. Saurino Fellowship	December 2016
Dean Gary Perry College of Science Award	Spring 2018

External Awards

Golden Key International Honor Society chapter at FAU	Fall 2015
Phi Kappa Phi	Spring 2016
Omicron Delta Kappa National Leadership Honor Society	Fall 2016

Wesley Bollinger, PhD, IBNS, 2017-2019 (transfer from other lab)
Current Occupation: Medical Liaison at Pharmacovigilance
Lab Summary: 2 Conferences, 1 Awards, 1 Patent

Internal Awards
Identification of the Mechanism of Action of a Novel and Potent Neuroprotective Agent Inspired by the Natural Product Vitisinol D: A Potential New Therapy for Neurodegenerative Diseases. Internal seed grant funded June 2018 through Florida Atlantic University.

Patent
Maki, Samantha*, Elijah St. Germain, Wesley L. Bollinger, Ken Dawson-Scully, and Salvatore Lepore. 2018. "Bridged Bicyclic Compounds and Their Derivatives as Neuroprotective Agents." Florida Atlantic University technology department. March 6, 2018.

Keith Murphy, MSc/PhD, IBNS, 2012-2018 (co-supervised with W. Ja - Scripps)
Current Occupation: Postdoctoral Fellow at Stanford
Lab Summary: 6 Conferences, 3 Awards, 3 Press Releases

Internal Awards

First Place, Three Minute Thesis (3MT)	November 2016
Runner-Up FINALS, Three Minute Thesis (3MT)	November 2016

External Awards

National 3MT Competition Second Place	Fall 2016

Olena Mahneva, MSc/PhD, IB, 2010-2018 (co-supervised with S. Milton FAU)
Current Occupation: Postdoctoral Fellow at University of Miami
Lab Summary: 18 Conferences, 8 Awards

Internal Awards

The Dr. Daniel B. Newell & Aurel B. Newell Doctoral Fellowship Recipient	2013-2014
FAU Division of Research Dissertation Award	2014
FAU Alumni Association Scholarship	2015
FAU Graduate Grant	2015
Graduate and Professional Association 1st Place Winner	2015
The Dr. Daniel B. Newell & Aurel B. Newell Doctoral Fellowship Recipient	2015-2016

Jennifer Krill, MSc/PhD, IB, 2009-2018
Current Occupation: Assistant Professor College of Education at Florida Atlantic University
Lab Summary: 16 Conferences, 39 Awards

Internal Awards

FAU Making Waves Award	2015
FAU Making Waves in Research Billboard and Advertisements	2014-2015
FAU Making Waves in Research Award	2014
Executive Women of the Palm Beaches Scholarship	2014
FAU College of Science Research Day, 2nd Place Poster Presentation	2013
FAU Memorial Scholarship	2013
FAU OWL Awards: Smartest Owl, College of Science	2012

SFA Foundation Scholarship	2012
Anderson Scholarship	2012-2013
FAU Memorial Scholarship, in honor of Bryana Coleman	2010-2012
Dr. Daniel B. Newell & Aurel B. Newell Doctoral Fellowship, $5,000	2011-2012
FAU OWL Awards: Teaching Assistant of the Year Award	2010-2011
McGinty Foundation Grant for Research, All research costs	2010-2011
Dorothy & Marshall Anderson Scholarship	2010-2011
Graduate Fellowship for Academic Excellence, $10,000	2009-2010
FAU Alumni Scholarship	2010
Student Government Scholarship	2009-2013
Vincent Saurino Fellowship in Biological Science, $7,500	2009-2011
FAU Graduate Grant	2009-2012
Golden Key Honors Society	2009-2012
Science Scholarship	2009-2010

Monica Risley, MSc/PhD, IBNS, IMPRS, 2014-2018

Current Occupation: Scientist at Gateway Pharmaceuticals
Lab Summary: 12 Conferences, 13 Awards, 6 Press Releases

Internal Awards

Dissertation Year Award	February 2018
FAU Graduate Grant	August 2016
FAU Graduate Summer Grant	June 2016
Lifelong Learning Society Scholarship	April 2016
Alumni Association Fellowship	January 2016
Newell Doctoral Fellowship	July 2015
FAU Graduate Grant	June 2015
Outstanding Student in the College of Science,	April 2015
Presidential Attendance Award	November 2014
Vincent Saurino Doctoral Fellowship	October 2014

External Awards

#International Max Planck Research School Conference Travel Award, Bonn, Germany	March 2016
#DAAD (German Academic Exchange Service) Travel scholarship to Diez, Germany	October 2015
#Awarded Student Presentation and Full Travel scholarship to Göttingen, Germany	September 2014

Shweta Singh, MSc/PhD, IB, 2012-2016 (transfer from Nambu lab w/ R Murphey)

Current Occupation: Technology Transfer Analyst II at Cognate Bioservices
Lab Summary: 12 Conferences, 4 Awards

Internal Awards

Charles E. Schmidt College of Science Dissertation of the year Award 2015-2016
Awarded by Florida Atlantic University Research Enhancement Program
Vincent Saurino Fellowship for Graduate Student in Biological Sciences 2015
Awarded to four outstanding graduate students in Biological Sciences, FAU
Graduate Professional and Student Association Travel Award 2015
Awarded by Florida Atlantic University to present at Society of Neuroscience

External Awards

The Allied Genetics Conference Travel Award 2016
Awarded by Genetics Society of America and Drosophila

Stacee Caplan, MSc/PhD, IB, 2009-2015 (co-supervised with S. Milton FAU)
Current Occupation: Ph.D. Coordinator at Florida Atlantic University
Lab Summary: 13 Conferences, 5 Awards

Internal Awards

Florida Atlantic University Research Priorities Grant	2013
Florida Atlantic University Foundation (McGinty Family) Research Grant	2012
Dr. Vincent R. Saurino Graduate Fellowship in Biological Sciences	2011
Dr. Vincent R. Saurino Graduate Fellowship in Biological Sciences	2010
1 st Place in FAU Charles E. Schmidt College of Science Graduate Student Research Day	2009
Dr. Floyd F. Koch Graduate Fellowship in Science/Medicine	2009

Cathy Trivigno, MSc/PhD, IB, 2009-2011 (transfer from another lab)
Current Occupation: Instructor (Faculty) Wilkes Honors College at Florida Atlantic University
Lab Summary: 2 Conferences, 5 Awards

Internal Awards

Lifelong Learning Society Graduate Fellowship	2010
McGuinty Research Assistantship in Oxidative Stress	2009-2010
Weiss Memorial Fellowship, FAU Foundation	2009

External Awards

Travel Award for Cold Spring Harbor Course	2009

Graduate Student Thesis Committees (external to my lab)

Completed:

Julieta Dimase /MS / 2015 Defended 2018, FAU Biol Sciences – Guthrie
Morgan Slevin /PhD/ 2017 Supervisory Committee, Biological Science - Anderson
Ke Zhang /PhD/ 2016 Defended/ IMPRS Max Planck – Christie
Karlis Justs /PhD/ 2014 Defended 2020/ FAU Biological Sciences - Macleod
David Cinalli /PhD/ 2017 Defended 2020 / Psychology - Stackman
Sarah Kruessel /PhD/ 2017 transferred Johns Hopkins 2019 - Kwon
Kuo Sheng Lee/ PhD/ 2014 Defended 2019/ IMPRS Max Planck - Fitzpatrick
Melissa Reitterer/PhD/2009 Defended 2019/ FAU Biological Sciences - Milton
Brandon Lloyd/ PhD / 2010 Defended 2017 /FAU Biological Sciences – Murphey
Kyle Newton/ PhD/ 2010 Defended 2017 /FAU Biological Sciences – Kajiura
Dan Wilson/ PhD/ 2012 Defended 2018/ Max Planck - Fitzpatrick
Joan Lora/ PhD/ 2011 Defended 2018/ Biological Sciences – Stackman
Brittnee McDole/ PhD/ 2012 Defended 2018/ Biomedical Sciences – Guthrie
Diana Singkornrat/MSc / 2012 Defended 2017/ Biological Sciences - Binninger
Brati Das/ PhD/ 2010-Defended 2016/ Max Planck - Young
Deborah Han /MS/ 2012-Defended 2016/ Max Planck - Kwon
Shannon Sanguinetti/MS/ 2014-Defended 2016/ FAU Biological Sciences - Stackman
Claire Rice / MS / 2012- Defended 2016/ FAU Psychology-Stackman
Andrew Hall /PhD/ 2010-Defended 2016/ FAU Chemistry - West
Zhongmin Lu / PhD IBAN/ 2010-Defended 2015/ FAU Biological Sciences - Macleod

Sirisha Madem/ PhD/ 2009-Defended 2015/ FAU Biological Sciences - Godenschwege
Lyndsay Bruce / PhD/ 2010-Defended 2015/ FAU Biological Sciences - Binninger
Latasha Lee / PhD/ 2009-Defended 2014/ FAU Biological Sciences - Godenschwege
Caesar Hernandez / MSc / 2012-Defended 2014 /FAU Biological Science - Binninger
William Haussman, / MSc / 2012-Defended 2014 /FAU Biological Science - Binninger
Melissa Borgen/ PhD/ 2009-Defended 2014/ FAU Biological Sciences, - Murphey
Lauren Purpura, PhD/ 2009-Defended 2014/ FAU Biomedical Science, - Shen
Brian Orr / PhD/ 2009-Defended 2013/ FAU Biological Sciences, - Murphey
Monica Mejia / PhD/ 2008-Defended 2013/ FAU Biological Sciences - Godenschwege
Karin Schey / MSc/ 2010-Defended 2012/ FAU Biological Sciences - Binninger
Kim Rowland/ PhD/ 2008-Defended 2012/ FAU Biological Sciences - Murphey
Kelli Robbins/ MSc/ 2008-Defended 2010/ FAU Biological Sciences - Binninger
Lynsey Bruce/ MSc /2008-Defended 2010/ FAU Biological Sciences - Milton
Bazila Qureshi/ MSc/ 2008-Defended 2010/ FAU Biological Sciences - Ayyanathan
Stephanie Arredondo /MSc/ Non-Thesis/2009-2011/ FAU Biological Sciences
Kyle Vic/ PhD Comprehensive/ 2009/ FAU Psychology – Stackman

In Progress:

Raphael Heldman, Max Planck, PhD student, since 2019
Zidan Yang, Max Planck, PhD student, since 2019
Roberto Rodriguez Biological Sciences, PhD student, since 2017
Juan Lopez Biological Sciences, PhD student, since 2016
Ingo Gotthard , Max Planck, PhD student, since 2017
James Sullivan Complex Systems FAU, PhD student, since 2010
Clara Topol, Max Planck, PhD student, since 2018
Casey (Binninger) Biological Sciences, MSc student, since 2015
Timothy Holford, Max Planck, PhD student, since 2014

Service Contributions

Department

- **Budget Committee, Biological Sciences, FAU, 2019-present**
- **Admissions Committee: Integrative Biology (IB) PhD, FAU, 2013-present (Chair 2013-2016)**
- **Program Committee: Integrative Biology Neuroscience (IBNS) PhD, 2013-present**
- Premedical BS Committee, Biological Sci, FAU, 2018-2020
- Admissions Committees Biological Sciences MS Program, 2013-2017
- Program Committees (3): IB, IBES, MS Programs, FAU, 2013-2017 (Chair IB 2013-2016)
- Environmental Science Program Committee 2016-2017
- Personnel Committee, Biological Sciences, FAU, 2014-2017
- Integrative Biology PhD Retreat Committee, FAU, 2013-2016
- Undergraduate Honors Committee, FAU, 2010-2011 (Chair)
- Faculty Search Committee, Biological Sciences, FAU, 2009, 2010, 2011, 2012

College

- **Graduate College Dean Advisory Committee, 2019-present**
- **Promotion and Tenure Committee, College of Medicine (2018-present)**
- Associate Dean Search Committee, College of Science (CoS), 2018 (Chair)
- College of Science Executive Committee, CoS, 2017-2018
- College of Science Frontiers Speaker Committee, 2016-2020
- Undergraduate Appeals Committee, CoS, 2017
- M.Sc. Marine Science Degree Planning Committee, CoS, 2017-2019
- Graduate College 3MT Steering Committee, FAU, 2016-2020
- College of Science Honors Committee, FAU, 2015-2018
- College Graduate Program Committee, FAU 2014-2019 (Chair 2016-2019)
- Center for Biotechnology Advisory Board (CMBB), FAU, 2013-2018
- College Research Resource Committee, CoS, FAU 2010-2017
- College of Science Disciplinary Appeals Committee, FAU 2016
- Strategic Planning (Goal #1) Undergrad. Education, CoS, FAU 2012
- Undergraduate Neuroscience Curriculum Committee, CoS, FAU, 2010-2011
- Brain Damage and Repair Steering Committee, CoS, FAU 2010
- Undergraduate Academic Steering Committee, CoS, FAU 2010-2011

University

- **Circle of Chairs and Directors, Provost, 2020-present**
- **Task force for bringing laboratories to remote learning, Provost, 2020-present (Chair)**
- **Provost Advisory Committee, Provost, 2019-present**
- **Jupiter Campus Life Science Initiative Budget Committee, Provost, 2019-present**
- **Jupiter Campus Advisory/Coordination Council, President FAU, 2018-present**
- **Research Core Oversight Committee, Division of Research FAU, 2017-present**
- **National Merit Scholar Recruitment, Provost, 2018-present**
- **FAU Max Planck Program Committee (Chair 2018-present)**
- **FAU Max Planck Admissions Committee (Chair 2018-present)**
- **NSF LEARN Advisory Board, FAU, 2015-present**
- **Undergraduate Research OURI Grant reviewer, FAU 2016-present**
- BSc. Data Science Degree Planning Committee, Provost, 2019-2020 (Chair)
- MSc. Data Science Degree Planning Committee, Provost, 2018-2019
- Combine PhD Neuroscience Planning Committee, FAU, 2019
- Institutional Biosafety Committee, DoR, 2019-2020 (Chair)
- Jupiter Campus Life Science Complex Committee, President's Office, 2019
- External Biomedical Sciences MSc Program Review Cmtee, Col. of Medicine (Chair 2018)
- FAU Max Planck Honors Program Organization Committee (2017-2018)
- Graduate Associate Deans Committee (GADC), FAU, 2016-2018
- Neuroscience Student Organization Steering Committee, 2016-2018
- Brain Institute Advisory Committee, FAU, 2016-2018
- University Faculty Senator, FAU, 2016-2019
- Medical Pipeline Committee, FAU, 2016-2019
- University Financial Conflict of Interest Committee, FAU, 2016-2020
- University Graduate Program Committee, FAU, 2016-2019 (Chair 2017-2019)
- University Undergraduate Program Committee, FAU, 2016-2019
- University Graduate Council, FAU, 2015-2019
- University Honors Council, FAU, 2012-2019 (Chair 2012-2013; 2016-2017)
- Technology Review Advisory Committee (TRAC) for the FAU Research and Development Authority, 2011-2016

- University Research Misconduct Committee (Chair), FAU, 2016
- Neuroscience Pillar Executive Director Search Committee, FAU, 2014-2015 (Chair)
- i-Health Pillar Executive Director Search Committee, FAU, 2018-2019
- University Honors Coordinator Search Committee, FAU, 2012
- QEP Selection Committee, FAU, 2011 (Chair)

External

- **County Life Science Advisory Board, Palm Beach, FL, 2018-present**
- **Senior Management Team, Max Planck Florida, 2018-present**
- **Max Planck COVID Crisis Committee, 2020-present**
- **Education Team, Max Planck Florida, 2018-present**
- **International Max Planck Research School (IMBRS) for Brain and Behavior**
    - **Steering Committee,**
    - **Selection Committee,**
    - **Teaching Committee, Max Planck, Bonn Germany, 2015-present**
- **Legislative Committee, BioFlorida FAU representative, 2012-present**
- **Max Planck Institutional Biosafety Committee (IBC), MPFIN, 2013-present**
- **Scripps NSF REU Advisory Board, TSRI, 2013-present**
- adhoc Tenure and Promotion U Saskatoon, CANADA (year withheld)
- Business Growth Committee, BioFlorida FAU representative, 2012-2018
- Neuroscience Exchange Program, Max Planck, Gottingen Germany, 2011-2015

Reviewer

Editorships and Editorial Boards

Review Editor: Frontiers in Genomic Physiology, 2012-2013

Book Reviews

Neuroscience Textbook (name withheld), Garland Science, Taylor & Francis Group, 2016

Journals

American Chemical Society, Neuroscience
American Journal of Physiology-Regulatory, Integrative and Comparative Physiology
Comparative Biochemistry and Physiology
Communicative & Integrative Biology
eNeuro
Frontiers in Bioscience "Molecular pathways of aging and longevity"
Fly
Genes, Brain and Behavior
Integrative and Comparative Biology
International Journal of Development Neuroscience
Journal of Comparative Physiology A
Journal of Insect Behavior
Journal of Insect Physiology
Journal of Neurogenetics
Journal of Neurophysiology
Journal of Neuroscience
Journal of Neuroscience Methods
Journal of Visual Experimentation
Neuroscience

PLoS ONE
Pharmacology, Biochemistry and Behavior
Psychopharmacology
Reproductive Toxicology
Royal Society Open Science

Funding Agencies

National Institutes of Health (**NIH**), CSR Study Section, Synapses, Cytoskeleton and Trafficking, 2020
Biotechnology and Biological Sciences Research Council (**BBSRC**), UK, 2019
Medical Research Council (MRC), UK, 2020
College of Medicine Biomedical Seed Grants, FAU, 2018
FAU Brain Institute Seed Grants, 2017
i-Heal FAU Internal Seed Grants, 2017
Puerto Rico Science Trust Grants, Puerto Rico, 2016
FONDECYT, Chile, Research Grants, 2016
Natural Science and Engineering Research Council of Canada **NSERC**, 2014-2017, 2020
National Aeronautics and Space Administration **NASA**, 2013-2015
Swiss National Science Foundation **SNSF**, 2012
Canadian Foundation for Innovation **CFI**, 2010
National Science Foundation **NSF (IOS adhoc)**, 2008-2009

Other Relevant Activities

Member Society for Neuroscience 1998-**present**
American Physiological Society 2018-**present**
Council of Colleges of Arts & Sciences 2018-**present**

Organizer Protein Kinase G Integrative Symposium, University of Toronto, Toronto, Canada (2013), 35+ attendees

3 Exhibits at Tiger Woods Foundation, STEM Honors Conference (2014)

Co-Organizer South Florida Drosophila Research Consortium Meeting, Florida Atlantic University (2009, 2012, 2015), 60+ attendees

Community/Guest Non-Research Lectures

2020	Keynote: FAU Division of Research Speaker for Postdoctoral Fellows
2020	Career Panelist, Max Planck Outreach, Jupiter FL
2019	American Heritage Science Complex Opening Speaker, Delray FL
2018	Keynote: FAU Division of Research Speaker for Postdoctoral Fellows
2018	CoS panel Meeting of the Minds, FAU Student Organization
2018	Welcome Speaker, CGPSA, FAU
2018	BioFlorida Jupiter Life Science Outreach Speaker

2017-2019	National Merit Recruitment American Heritage School
2017	FAU High School Speaker: Drug Discover Techniques
2016	FAU Tech Runway Business Competition Pitch – Winner: Neuroscience Designee
2015	Association of Biology and Biotechnology in Science, FAU, Boca Raton FL
2015	Public Seminar to the Palm Beach Business Group: What's Happening at FAU in Jupiter and Why Flies Like Viagra Too. Jupiter, FL
2014	FAU Foundation Board, Jupiter, FL
2014	Angel Forum, Jupiter, FL
2013	Waterford Community Center, Jupiter, FL
2013	Academic Leadership Symposium, Scripps Research Institute, FL
2012	Choosing Academia over Industry, Scripps Research Institute, FL
2011	Protecting the effects of Stroke through the use of the fruit fly, Boca Raton Rotary Club.
2011	Protecting the effects of Stroke through the use of the fruit fly, The Boca Thinkers Club, Boca Raton FL.
2008-2012	Introduction to research in the Dawson-Scully lab, Biomedical Freshmen, FAU.
2008-2012	Introduction to research in the Dawson-Scully lab, Premedical Students, FAU.
2010	CMBB last minute class filler: Anoxia research and Drosophila, FAU.
2010	Cellular Neuroscience and Disease: 1 week of basic neurophysiology lectures, FAU.

Scientific Press

FAU Press: FAU Scientists Patent Protective Compound, 9/29/2020, http://www.fau.edu/research/fau-research-daily/fau-scientists-patent-protective-compound.php

Phys.org: Tolerance to stress is a 'trade-off' as fruit flies age, June 2019, Gisele Galoustian

Sun, Sand and Drugs: How a Beach Town Became a Biotech Hub, Pharmaceutical Executive, June 12, 2017, Bob Swindell

Scientists unravel how protein impacts intellectual disability, Eureka Alert, April 25, 2017

10 Up-and-Coming Life Science Startups in the Southeast, WRAL TechWire, March 3, 2017, Laura Baverman

Keep a Cool Head, BioCentury, Jan 18, 2017, Karen Tkach

Job Performance Clouds Sunshine State Biocluster, Genetic Engineering & Biotechnology News: GEN Magazine, Dec 16, 2016, Alex Philippidis

FAU licenses life science company's technology, Sun Sentinel, Dec 1 2016, Marcia Heroux Pounds

FAU Enters into Licensing Agreement with Neuro Pharmalogics, Inc. for Therapies to Treat Rare Neurological Diseases, Newswire, Nov 29 2016, Gisele Galoustian

Have A Food Coma? Blame Salt and Protein., Huffington Post, Nov 23, 2016, Sarah DiGiulio

“Food Comas” Turn Out to be Real, Physical Conditions, Genetic Engineering & Biotechnology News: GEN Magazine, Highlight, Alex Philippidis

Do YOU get the post-lunch slump? Go easy on the protein: Study explains how trend of protein-heavy meals and snacks is inducing more 'food comas', Daily Mail, Nov 23, 2016, Mia De Graaf

Study: Protein and salt could cause 'food comas', Food Dive, Nov 23, 106, Carolyn Heneghan

#Scientists discover why we love a snooze after dinner, Irish Times, Nov 23, 2016, Dick Ahlstrom

Can too much protein put you in a 'food coma?', Men’s Fitness, Nov 23, 2016, Erin Alexander

“Food Coma” Phenomenon Studied in Fruit Flies, The Scientist, Nov 23, 2016, Joshua A. Krisch

How worms are helping scientists understand the function of genes in the human brain, South China Post, Oct 17, 2016, Jeanette Wang

New Animal Model of Epilepsy Could Help Develop Novel AEDs, Epilepsy Research UK, Sep 29, 2016, Ozge Ozkaya

Good News: Worms May Help Developing Epilepsy Drug, MynahCare Journal, Sept 28, 2016, Yogesh Joshi

The 'worm' holds the key to treating epilepsy, Science Daily, Sept 26, 2016, Gisele Galoustian

FAU Names New Start-Ups for Tech Runway [Neuro Pharmacologics], Sun Sentinel, May 27 2016, Marcia Heroux Pounds

Stranger than Fiction: A Drowned Fly, Biotechniques Newsletter, August 3, 2015, Kristie Nybo

Fruit Flies Fall into Coma to Survive Three Day Drowning, Huffington Post, July 7 2015

Fruit flies 'push the limit' and lead researchers to an unexpected discovery, Science Daily by Gisele Galoustian, June 16 2015

Palm Beach Illustrated, magazine article, August 1, 2013, Research Roundup, by Mary Gibble

South Florida Business Journal, journal article, June 29, 2013, The Saturday Exchange: Cultivating the next generation of life science professionals, by Jane Teague

South Florida Business Journal, journal article, April 11, 2013, Drug company founded from Florida Atlantic University discoveries, by Brian Bandell

Florida Trend, journal article, May 2013, Neural Protection – University Snapshot, by Amy Keller

The Chronicle of Neurology & Psychiatry, journal article, October 2007, New data sheds light on the thermal sensitivity of nerve cells, by Louise Gagnon.

The Bulletin, newspaper article, Sept. 11, 2007, Genetic Manipulation Holds Key to Controlling Fever-Induced Seizures, by Nicole Wahl.

Queen's Gazette, newspaper article, Sept. 10, 2007, Beating the heat: it's in the genes, by Nancy Dorrance.

Science Daily, online article, Aug. 24, 2007, Feeling Hot, Hot, Hot: New Study Suggests Ways to Control Fever-induced Seizures.

The Mississauga News, newspaper Article, Aug. 22, 2007, Fruit fly gene may hold key to fighting fever.

The Kingston Whig-Standard, Newspaper Article, Sept. 1, 2007, Heat-beating locusts share their secret; Queen's research on insects locates gene associated with high fevers, by Jennifer Pritchett

Affiliations

2016-**present** Faculty: FAU Brain Institute
2015-**present** Faculty: International Max Planck Research School (IMPRS), Brain and Behavior, Bonn Germany
2013-**present** Affiliate Associate Professor, Department of Chemistry and Biochemistry, FAU,
2013-**present** Faculty: Jupiter Life Science Initiative
2011-**present** Faculty: Center of Excellence in Biomedical and Marine Biotechnology, FAU
2010-**present** Faculty: Environmental Science Program, FAU
2008-**present** Faculty: Center for Molecular Biology and Biotechnology (CMBB), FAU

DEGUO DU
Comprehensive Curriculum Vitae

Florida Atlantic University
Department of Chemistry and Biochemistry
Boca Raton, FL 33431

Phone: (561) 297-0094
Fax: (561) 297-2759
E-mail: ddu@fau.edu

Education/Employment History

Education

- Ph.D. in Biological Chemistry, University of Pennsylvania, Philadelphia, USA
  2001-2006
- M.S. in Analytical Chemistry, Tsinghua University, Beijing, China
  1998-2001
- B.S. in Chemistry, Tsinghua University, Beijing, China
  1994-1998

Employment

- Chair of the Graduate Programs in Chemistry, Florida Atlantic University
  2019-present
- Associate Professor, Department of Chemistry and Biochemistry, Florida Atlantic University
  2016-present
- Faculty Member, Brain Institute, Florida Atlantic University
  2018-present
- Faculty Member, Center for Molecular Biology and Biotechnology (CMBB), Florida Atlantic University
  2015-present
- Assistant Professor, Department of Chemistry and Biochemistry, Florida Atlantic University
  2010-2016
- Research Associate, Department of Chemistry, The Scripps Research Institute
  2007-2010

Scholarship/Research/Creative Activity

Selected Publications

1. Lantz, R., Busbee, B., Wojcikiewicz, E. P., **Du, D.*** "Flavonoids with Vicinal Hydroxyl Groups Inhibit Human Calcitonin Amyloid Formation." *Chemistry-A European Journal*

2020, doi: 10.1002/chem.202002027

2. Lantz, R., Busbee, B., Wojcikiewicz, E. P., **Du, D.*** "Effects of disulfide bond and cholesterol derivatives on human calcitonin amyloid formation." *Biopolymers* 2020, 111(5):e23343.
3. Li, H., Lantz, R., **Du, D.*** "Vibrational Approach to the Dynamics and Structure of Protein Amyloids." *Molecules* 2019, 24, 186-206.
4. He, Y., Huang, Z., Ma, Z., Yao, B., Liu, H., Hu, L., Zhao, Q., Yang, Q., Liu, D., **Du, D.** "Highly efficient photocatalytic performance and mechanism of α-ZnTcPc/g-C3N4 composites for methylene blue and tetracycline degradation under visible light irradiation." *Applied Surface Science* 2019, 498, 143834-143846.
5. Liu, H., Lantz, R., Kent, T. W., Elbassal, E. A., Wojcikiewicz, E. P. & **Du, D.*** "Residue-Specific Dynamics and Local Environmental Changes in Aβ40 Oligomer and Fibril Formation." *Angewandte Chemie International Edition* 2018, 57, 8017-8021.
6. Morris, C., Cupples S., Kent, T. W., Elbasssal, E. A., Wojcikiewicz, E. P., Yi, P.* & **Du, D.*** "N-terminal Charged Residues of Amyloid-β Peptide Modulate Amyloidogenesis and Interaction with Lipid Membrane." *Chemistry-A European Journal* 2018, 24, 9494-9498.
7. Rao, P. & **Du, D.** "In Silico Strategies to Design Small Molecules to Study Beta-Amyloid Aggregation." *Neuromethods* 2018, 132, 249-261.
8. Elbassal, E. A., Morris, C., Kent, T. W., Lantz, R., Wojcikiewicz, E. P. & **Du, D.*** "Gold Nanoparticles as a Probe for Amyloid-β Oligomer and Amyloid Formation." *Journal of Physical Chemistry C* 2017, 121, 20007-20015.
9. Elbassal, E. A., Liu, H., Morris, C., Wojcikiewicz, E. P., & **Du, D.*** "Effects of charged cholesterol derivatives on Aβ40 amyloid formation." *Journal of Physical Chemistry B* 2016, 120, 59-68.
10. Liu, H., Ojha, B., Morris, C., Jiang, M., Wojcikiewicz, E. P., Rao, P. P., & **Du, D.*** "Positively charged chitosan and N-trimethyl chitosan inhibit Aβ40 fibrillogenesis." *Biomacromolecules* 2015, 16, 2363-73.
11. Liu, H., Lantz, R., Cosme, P., Rivera, N., Andino, C., Gonzalez, W. G., Terentis, A. C., Wojcikiewicz, E. P., Oyola, R., Miksovska, J., and **Du, D.*** "Site-specific dynamics of amyloid formation and fibrillar configuration of Aβ1-23 using an unnatural amino acid." *Chemical Communications* 2015, 51, 7000-7003.
12. Markiewicz, B. N., Oyola, R., **Du, D.*** & Gai, F.* "Aggregation gatekeeper and controlled assembly of Trpzip β-hairpins." *Biochemistry* 2014, 53, 1146-1154.
13. Li, X., Zhang, X., Ladiwala, A. R., **Du, D.**, Yadav, J., Tessier, P., Wright, P., Kelly, J., & Buxbaum, J. N. "Mechanisms of transthyretin inhibition of Aβ aggregation in vitro." *Journal of Neuroscience* 2013, 33, 19423-19433.
14. Ojha, B., Liu, H., Dutta, S., Rao, P. P., Wojcikiewicz, W. P. & **Du, D.*** "Poly(4-styrenesulfonate) as an inhibitor of Abeta40 amyloid fibril formation." *Journal of Physical Chemistry B* 2013, 117, 13975-13984.
15. **Du, D.*,** Liu, H. & Ojha, B. "Study protein folding and aggregation using nonnatural amino acid p-cyanophenylalanine as a sensitive optical probe" *Methods in Molecular Biology.* 2013, 1081, 77-89.

16. Xu, Y., **Du, D.*** & Oyola R. "Infrared study of the stability and folding kinetics of a series of β-hairpin peptides with a common NPDG turn." *Journal of Physical Chemistry B* 2011, 115, 15332-15338.
17. **Du, D.,** Cohen, E., Kim, H., Simkovsky, R., Dillin, A. & Kelly, J. W. "A kinetic aggregation assay enabling sensitive and sensitive Abeat amyloid quantification in cells and tissues." *Biochemistry* 2011, 50, 1607-1617.
18. Cohen, E., **Du, D.,** Joyce, D., Kapernick, E. A., Volovik, Y., Kelly, J. W. & Dillin, A. "Temporal requirements of insulin/IGF-1 signaling for proteotoxicity protection." *Aging Cell* 2010, 9, 126-134.
19. van Ham, T. J., Holmberg, M. A., van der Goot, A. T., Teuling, E., Garcia, M., Kim, H., **Du, D.,** Thijssen, K. L., Wiersma, M., Burggraaff, R., van Bergeijk, P., van Rheenen, J., van Veluw, G. J., Hofstra, R. M. W., Rubinsztein, D. C., Nollen, E. A. A. "Identification of MOAG-4/SERF as a regulator of age-related proteotoxicity." *Cell* 2010, 142, 601-612.
20. Cohen, E., Paulsson, J. F., Blinder, P., Burstyn-Cohen, T., **Du, D.,** Estepa, G., Adame, A., Pham, H. M., Holzenberger, M., Kelly, J. W., Masliah, E. & Dillin, A. "Reduced IGF-1 signaling delays proteotoxicity in mice." *Cell* 2009, 139, 1157-1169.
21. Fuller, A. A., **Du, D.,** Liu, F., Davoren, J. E., Kroon, G., Dyson, H. J., Powers, E. T., Wipf, P., Gruebele, M. & Kelly, J. W. "Evaluating beta-turn mimics as beta-sheet folding nucleators." *Proceedings of the National Academy of Sciences of the United States of America* 2009, 106, 11067-11072.
22. Liu, F., **Du, D.,** Fuller, A. A., Davoren, J. E., Wipf, P., Kelly, J. W. & Gruebele, M. "An experimental survey of the transition between two-state and downhill protein folding scenarios." *Proceedings of the National Academy of Sciences of the United States of America* 2008, 105, 2369-2374.
23. **Du, D.,** Bunagan, M. R. & Gai, F. "The effect of charge-charge interactions on the kinetics of alpha-helix formation." *Biophysical Journal* 2007, 93, 4076-4082.
24. Wang, T., Zhou, Z., Bunagan, M. R., **Du, D.**, Bai, Y. & Gai, F. "Probing the folding intermediate of Rd-apocyt b_{562} by protein engineering and infrared T-jump." *Protein Science* 2007, 16, 1176-1183.
25. **Du, D.** & Gai, F. "Understanding the folding mechanism of helix-hairpin." *Biochemistry* 2006, 45, 13131-13139.
26. Gai, F., **Du, D.** & Xu, Y. "Infrared *T*-jump study of the folding dynamics of alpha-helices and beta-hairpins." *Methods in Molecular Biology* 2006, 350, 1-20.
27. **Du, D.,** Tucker, M. J. & Gai, F. "Understanding the mechanism of beta-hairpin folding via Φ-value analysis." *Biochemistry* 2006, 48, 2668-2678.
28. **Du, D.,** Zhu, Y., Huang, C. Y. & Gai, F. "Understanding the key factors that control the rate of beta-hairpin folding." *Proceedings of the National Academy of Sciences of the United States of America* 2004, 101, 15915-15920.
29. Wang, T., Xu, Y., **Du, D.** & Gai, F. "Determining beta-sheet stability by Fourier transform infrared difference spectra." *Biopolymers* 2004, 75, 163-172.

30. Snow, C. D., Qiu, L., **Du, D.,** Gai, F., Hagen, S. J. & Pande, V. S. "Trp zipper folding kinetics by molecular dynamics and temperature-jump spectroscopy." *Proceedings of the National Academy of Sciences of the United States of America* 2004, 101, 4077-4082.
31. Wang, T., Zhu, Y., Getahun, Z., **Du, D.,** Huang, C. Y., DeGrado, W. F. & Gai, F. "Length dependent helix-coil transition kinetics of nine alanine-based peptides." *Journal of Physical Chemistry B* 2004, 108, 15301-15310.
32. Wang, T., **Du, D.** & Gai, F. "Helix-coil kinetics of two 14-residue peptides." *Chemical Physics Letters* 2003, 370, 842-848.
33. Sun, S., **Du, D.,** Zhou, Q. Leung, H., & Yeung, H. "Quantitative analysis of rutin and ascorbic acid in compound rutin tablets by near-infrared spectroscopy." *Analytical Sciences* 2001, 17(Suppl.), a455-a458.
34. Sun, S., **Du, D.,** Liang, X. & Yang, X. "A rapid method for distinguishing the different Ganoderma lucidum products by FTIR spectroscopy." *Chinese Journal of Analytical Chemistry* 2001, 29, 309-312.
35. Wang, Z., Sun, S., Li, X., Zhou, Q., Lin, L. & **Du, D.** "Direct determination of Rhizoma cimicifuga by FTIR spectroscopy." *Spectroscopy and Spectral Analysis* 2001, 21, 311-313.
36. **Du, D.,** Sun, S., Zhou, Q., Liang, X. & Yang, X. "Quantitative analysis of Rutin and Vitamin C by NIR FTIR." *Spectroscopy and Spectral Analysis* 2000, 20, 474-476.
37. Zhou, Q., Sun, S., **Du, D.,** Liang, X. & Yang, X. "Real time monitor of Rutin stability during heating by Fourier transform infrared spectroscopy." *Spectroscopy and Spectral Analysis* 2000, 20, 195-198.

Selected Presentations at Scientific Meetings

- ACS National meeting, Orlando, FL March 31-April 4 2019
- ACS Florida Annual Meeting and Exposition, Tampa, FL, May 2019
- Annual World Protein and Peptide Conference, Miami, March, 2018
- ACS Annual Meeting and Exposition, New Orleans, March, 2018
- ACS Southeastern Meeting, Chalotte, Nov 7-11, 2017.
- Neural Engineering Research Symposium, Miami, October 2016
- ACS Florida Annual Meeting and Exposition, Tampa, FL, May 2015
- Florida Atlantic University 11th Annual Graduate Research Day, Boca Raton, FL, March 2015
- Florida Atlantic University 11th Annual Graduate Research Day, Boca Raton, FL, March 2015
- Biophysical Society 59th Annual Meeting, Baltimore, MD, January, 2015
- ACS Southeastern Meeting, Nashville, TN, October, 2014
- Gordon Research Conference on Proteins, Holderness, NH, June, 2013.
- Alzheimer's Association International Conference, Vancouver, British Columbia, July, 2012

Selected Invited Talks

- Department of Chemistry, University of Puerto Rico, Humacao, 21 March 2017.
- Department of Chemistry, Florida International University, USA October, 2015.
- Department of Chemistry, University of Miami, USA April, 2015.
- State Key Laboratory of Precision Spectroscopy, East China Normal University, China September, 2014
- School of Chemistry and Chemical Engineering, Nanjing University, China June, 2012
- College of Science, Ave Maria University, USA September, 2011.
- Department of Physics, Florida Atlantic University, USA March, 2011.
- Neuroscience Seminar Series, Florida Atlantic University, USA September, 2010.
- School of Medicine, Washington University in St Louis, USA November, 2009.
- Department of Chemistry, Lehigh University, USA October, 2009.
- State Key Laboratory for Structural Chemistry of Unstable and Stable Species, Peking University, China October, 2006.
- Department of Chemical Physics, University of Science and Technology of China, China September, 2006

Other Relevant Contributions

Ad hoc Reviewer for Grants

- The National Alzheimer's Association grant review panel, 2011-2014

Editorial Board Member for Journals

- Protein & Peptide Letters
- Scientific Reports

Ad hoc Reviewer for Journals

- PloS ONE
- ACS Chemical Neuroscience
- Current Medicinal Chemistry
- Journal of Physical Chemistry B
- Peptides
- Amino Acids
- Medicinal Chemistry
- Biophysical Chemistry
- Bioorganic & Medicinal Chemistry Letters
- Chemical Physics Letters
- Biomacromolecules
- Journal of Materials Chemistry B
- European Journal of Medicinal Chemistry

- MedChemComm
- Analytical Biochemistry
- Chemical Biology & Drug Design
- Biopolymers

BIOGRAPHICAL SKETCH

Provide the following information for the Senior/key personnel and other significant contributors.
Follow this format for each person. DO NOT EXCEED FIVE PAGES.

NAME: Duboué, Erik Rolando

eRA COMMONS USER NAME (credential, e.g., agency login): EDUBOUE

POSITION TITLE: Assistant Professor

EDUCATION/TRAINING *(Begin with baccalaureate or other initial professional education, such as nursing, include postdoctoral training and residency training if applicable. Add/delete rows as necessary.)*

INSTITUTION AND LOCATION	DEGREE *(if applicable)*	Completion Date MM/YYYY	FIELD OF STUDY
Tulane University, New Orleans, LA	B.A	05/2006	Philosophy
Tulane University, New Orleans, LA	B.S.	05/2006	Neuroscience
Tulane University, New Orleans, LA	M.S.	05/2007	Neuroscience
New York University	Ph.D.	01/2012	Biology
Carnegie Institution for Science	Postdoctoral	07/2017	

A. Personal Statement

A central goal of neuroscience is to understand how the brain modulates behavior, and how altered circuits, at the levels of neuronal function, anatomy, or circuitry, can result in changes in behaviors, as is in cases of psychological or neurological disorders. This has been a challenging problem, as even simple behaviors are coordinated by the dynamic interaction of many populations of neurons, in diverse regions of the brain. My lab uses small fish models to explore (1) how the brain modulates stress, (2) how these circuits are modified in models of anxiety, (3) and how stress responses can change as a consequence of evolution. My lab has also developed an unpublished model of early life stress for zebrafish, and we have developed the blind Mexican cavefish as a model for examining evolution of stress. As the lab uses small fish models, undergraduate students are a major part of the laboratory environment. Trainees have the opportunity to learn how to examine neural basis of behavior in fish using diverse techniques, such as behavioral analysis, optogenetic manipulation, and whole-brain calcium imaging. Currently, there are four undergraduate students in the lab, each working on independent of unique projects. Each student is paired with a graduate student or postdoc. All undergraduate students are required to present regularly at floor lab meeting (lab meeting with Duboue, Kowalko and Keene labs). Moreover, students are encouraged to present their work at international meetings.

1. Facchin, L*, **Duboué, E.R**.*, Halpern, M.E. (2015) Disruption of epithalamic left-right asymmetry increases anxiety in zebrafish. *J Neurosci*, 35(48): 15847-59
2. **Duboué, E.R.**, Hong, E, Eldred, K.C., Halpern, M.E. (2017) Left Habenular Activity Attenuates Fear Responses in Larval Zebrafish. *Curr Biol*, 27(14): 2154-2162.e3.
3. Chin, J.S.R., Gassant, C., Amaral, P., Lloyd, E., Stahl B.A., Jaggard, J.B., Keene, A.C., **Duboué, E.R.** (2018) Convergence on reduced stress behavior in the Mexican blind cavefish. *Dev Biol*. 441(2): 319-327

* indicates authors contributed equally

B. Positions and Honors

Positions and Employment

2007-2009	**Teaching Assistant**	**New York University**
2010-2011	**Teaching Adjunct**	**New York University**
2012 – 2017	Postdoctoral Associate	Carnegie Institution for Science
2017 – Present	Assistant Professor	Florida Atlantic University

Other Experience and Professional Memberships

2015-2016 Society for Neuroscience
2017-2018 NSF Grant Peer Review Committee

Honors

2006 Faculty for Undergraduate Neuroscience Travel Awards, Soc. For Neuroscience, Atlanta, GA
2007-2011 Henry M. MacCracken Fellowship, New York University,
2011 Society for Developmental Biology Travel Award, Astyanax International Mtg., Mexico,
2011 Steve Kazianis Research Award, for "*a senior doctorial student who presented the best research with the greatest potential to have a significant impact in his field*."

C. Contribution to Science

1. Functional imaging of the stress response in zebrafish

Stress is essential to all life, and is critical to the avoidance of dangerous cues. In chronic states, however, stress can become debilitating, as is seen in the roughly one-quarter of Americans suffering from stress-related disorders. Despite the prevalence of stress, an understanding of brain-wide neural networks that modulate stress, or what effects on these circuits leads to stress-related disorders, is not known. We have been approaching these questions using small fish models. During my post-doctoral fellowship with Marnie Halpern at the Carnegie Institution for Science, I developed a system to study stress in larval and adult zebrafish, and pioneered functional imaging-based approaches for examining brain-wide circuits modulating stress. Like mammals, stress in zebrafish is characterized by an initial induction of changes in behavior and physiology at the presentation of a stressful cue, and, once the cue has been evaded, a return to baseline states of behavior and physiology. My work showed that a conserved area of the brain, the dorsal habenulae (dHb), are critical for recovery from a stressor when the cue is no longer present. In zebrafish, the bilaterally paired dHb show dramatic left-right asymmetry. My work showed that the left dHb, which co-utilized glutamate and substance-P, is both sufficient and necessary for modulation stress recovery, or a return to baseline once a fearful cue is removed.

In my own lab, we have continued to identify neural circuits required for either induction of or recovery from stressful stimuli. Using whole-brain calcium imaging of zebrafish larvae, I have demonstrated that a region of the forebrain, which corresponds to the sub-pallium, is immediately active upon induction of shock. These findings suggest a brain-wide mechanisms underlying stress, whereby the sub-pallium is active during the induction phase, and the dHb are activated to promote recovery.

My lab has also developed a zebrafish model of early-life-stress. Animals that are subjected to chronic stress in early life have enhanced stress responses when tested later as adults. The enhanced stress effects are observed as early as 60 dpf. Moreover, we have generated imaging-based approached whereby we can perform brain-wide calcium imaging in 60 day old individuals. Together, the establishment of a brain-wide network modulated stress, a zebrafish model of early-life-stress, and imaging approached for performing imaging of the brains of juvenile animals puts my lab in a unique position to investigate the effects of early-life-stress on brain-wide neural circuits.

This work has led to two publications, three manuscripts submitted or in preparation, and a published, invited book chapter.

1. Facchin, L*, **Duboué, E.R.***, Halpern, M.E. (2015) Disruption of epithalamic left-right asymmetry increases anxiety in zebrafish. *J Neurosci*, 35(48): 15847-59
2. **Duboué, E.R.**, Hong, E, Eldred, K.C., Halpern, M.E. (2017) Left Habenular Activity Attenuates Fear Responses in Larval Zebrafish. *Curr Biol*, 27(14): 2154-2162.e3.
3. **Duboué, E.R.** and Halpern M.E. (2017) Genetic and transgenic approaches to study laterality in zebrafish. In *Lateralized Brain Functions*, Eds. Lesley Rogers and Giorgio Vallortigara, pp. 553-589. New York, NY: Humna Press, Springer.

* indicates authors contributed equally

2. Examination of evolutionary mechanisms underlying variation in stress

Stress is an evolutionarily adaptive behavior, required for animals to sense and avoid dangers in their environment. However, the sensitivity and degree of exhibiting stress varies across animals, often in accordance with ecological settings; for example, animals living in predator rich environments have enhanced stress responses compared to same-species controls raised in low predator environments. However, how these environmental pressures can alter stress circuits evolutionarily is an unexplored question. We have developed the Mexican cavefish, *Astyanax mexicanus*, as a model to examine how neural circuits modulating stress evolve. We have shown that blind, cave-dwelling *A. mexicanus* have dampened stress responses compared to their river-dwelling, sighted *A. mexicanus* cousins. Using this model, we are generating transgenic technology in *A. mexicanus*, and preforming whole brain imaging to understand how millions of years of evolution alter neural circuits underlying stress.

1. Chin, J.S.R., Gassant, C., Amaral, P., Lloyd, E., Stahl B.A., Jaggard, J.B., Keene, A.C., **Duboué, E.R.** (2018) Convergence on reduced stress behavior in the Mexican blind cavefish*. Dev Biol*. 441(2): 319-327
2. Chin JSR, Loomis CL, Albert LT, Medina-Trenche S, Kowalko J, Keene AC, **Duboué ER.** (2020). Analysis of stress responses in Astyanax larvae reveals heterogeneity among different populations. *Journal of Experimental Zoology, Part B.* 334(7-8):486-496
3. Loomis, C., Pueß, R., Jaggard, J.B., Raftopoulos, S.°, Raftopoulos, A.°, Whu, D.°, Green, M.°, McGaugh, S., Rohner, N, Keene, A.C., and **Duboué., E.R.** (2019). An adult brain atlas reveals broad neuroanatomical changes in independently evolved populations of Mexican cavefish. *Frontiers in Neuroanatomy.* 13:88

Complete List of Published Work in this Bibliography:
http://www.ncbi.nlm.nih.gov/pubmed?term=Duboue%20ER

D. Additional Information: Research Support and/or Scholastic Performance

Ongoing Research Support

R15MH118625-01 PI: Duboue, E.R. 09/24/2018 - 09/23/2021
Functional dissection of brain-wide circuits modulating recovery from stress
The goal of the project is to examine a recently identified forebrain to midbrain circuit important for restoring baseline states of behavior and physiology following a stressful event, and to further identify anatomical areas that act upstream and downstream of this identified circuit.
Role: PI

NSF 1923372 PI: Duboue, E.R. 09/01/2019 - 08/31/2022
EDGE CT: NSF-BSF: Functional Genotype-Phenotype Mapping in the Mexican Blind Cavefish, Astyanax mexicanus.
The goal of the project is to develop genetic and transgenic tools for the blind Mexican cavefish, Astyanax mexicanus and their surface dwelling conspecifics. This award is also funding an Astyanax stock center, as well as various outreach programs including the Research Diaries podcast. This award is a collaboration (co-PIs) with

Johanna Kowalko and Alex Keene (FAU), Suzanne McGaugh (University of Minnesota), Nicholas Rohner (Stowers) and Lior Appelbaum (Bar-Ilan, BSF Collaborator).
Role: PI

BSF 2019262 PI: Duboue, E.R. and Gothilf, Y. 06/15/2020 - 06/14/2024
The effect of early-life stress on the regulation of appetite in zebrafish.
The goal of the project is to understand how neuronal circuits that modulate stress can alter feeding systems. The project uses zebrafish, Danio rerio, and examines the role of AgRP in stress-induced hypophagia. This is a collaboration with Dr. Yoav Gothilf (Tel Aviv University).
Role: MPI

Completed Research Support

R21NS105071-01A1 PI: Keene, A.C.; co-PI: Duboue, E.R. 03/01/2018 - 02/28/2020
Development of genetic tools for functional analysis of sleep in cavefish
The goal of the project is to generate tools for the functional dissection of behaviors, principally sleep, in an emerging model system, the Mexican cavefish. Tools proposed include transgenic technologies, and the development of a brain-wide neuroanatomical atlas in several cavefish populations
Role: co-PI

Erik D. Engeberg, Ph.D.

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www: http://biorobotics.fau.edu/

EDUCATION

2008	**Ph.D. Mechanical Engineering**	University of Utah	Salt Lake City, UT.
2003	**B.S. Mechanical Engineering**	Walla Walla University	College Place, WA.

EMPLOYMENT HISTORY

Associate Professor (Tenured; Primary Appointment) 2016 - present
Florida Atlantic University, Ocean and Mechanical Engineering Department

Associate Professor 2016 - present
Florida Atlantic University, Center for Complex Systems and Brain Sciences

Affiliate Associate Professor 2019 - present
Florida Atlantic University, Department of Biological Sciences

Assistant Professor 2014 - 2016
Florida Atlantic University, Ocean and Mechanical Engineering Department

Assistant Professor (Joint Appointment) 2012 - 2014
The University of Akron, Department of Biomedical Engineering

Assistant Professor 2008 - 2014
The University of Akron, Department of Mechanical Engineering

Research Assistant and Mechatronics Laboratory Teaching Assistant 2003 - 2008
University of Utah, Department of Mechanical Engineering

EXTERNAL RESEARCH FUNDING

1. SCH: INT: Virtual Neuroprosthesis: Restoring Autonomy to People Suffering from Neurotrauma
   - NIH: NIBIB award # 1R01EB025819 (1st Percentile Ranking, Highest Priority for funding)
   - **E. Engeberg** (PI) with Drs. Du, Tognoli, Wei, and Hutchinson; from 9/15/2017-6/30/2021
   - **$1,788,186**
   - Includes Diversity Supplement of **~$140K** and Alzheimer's Supplement of **~$350K**)
2. Dexterous Robotic Manipulator and Adaptation of Exoskeleton Devices for Assisted Glovebox Operations to Reduce Human Fatigue and Injuries
   - Department of Energy: contract TOA#0000403076
   - **E. Engeberg** (Subcontract PI); 1/8/2019-10/30/2020

- **$275,000**

3. Interaction Between Surgical Interventions and Wearable Robotic Devices to Improve Patient Rehabilitation After Neurotrauma
    - Burroughs Wellcome Fund, 2019 Collaborative Research Travel Grant
    - **E. Engeberg** (PI); 6/1/2019-12/31/2021
    - **$8,302**
4. Dexterous Robotic Manipulator for Semi-Autonomous Glove box Tasks to Reduce Human Fatigue and Injuries
    - Department of Energy contract TOA#0000332969
    - **E. Engeberg** (Subcontract PI); 9/25/2017-1/31/2019
    - **$400,000**
5. Development of an Artificial Hand Exhibit
    - South Florida Science Center & Aquarium
    - **E. Engeberg** (PI); 9/1/2017-12/31/2018
    - **$84,433**
6. Research Engineering Undergraduate Site: Sensing and Smart Systems
    - National Science Foundation; award #1659484
    - Key Personnel: **Engeberg** (among others); PI: Hallstrom, 1/1/2017-12/31/2019
    - **$339,984**
7. Volumetric PIV system for research on flexible propulsors
    - Office of Naval Research
    - Co-PIs: **Engeberg**, Dhanak, Ellenrieder, Beaujean; PI: Curet; 8/15/2016 – 12/31/2017
    - **$258,080**
8. NRI: Small: EEG and EMG Human Model-Based Adaptive Control of a Dexterous Artificial Hand
    - National Science Foundation: National Robotics Initiative; award #1317952
    - **E. Engeberg** (PI); 9/15/2013 - 8/31/2017
    - **$250,000** total award amount
    - **$162,782** transferred to FAU under NSF award #1536136
9. I-Corps: Shape Memory Alloy Thermal Energy Harvesting
    - National Science Foundation: I-Corps Teams; award #1265145
    - **E. Engeberg** (PI) and S. I. Hariharan (co-PI); 10/15/2012 - 3/31/2014
    - **$50,000**
10. Development of a Prosthetic Hand Control System
    - Ohio State University sponsored
    - **E. Engeberg** (PI); 5/1/2013 - 8/31/2013
    - **$28,357**
11. Shape Memory Alloy Thermal Energy Harvesting
    - Great Lakes Innovation & Development Enterprise: Innovation Fund A
    - **E. Engeberg** (PI) and S. I. Hariharan (co-PI); 5/1/2013 - 5/1/2014
    - **$25,000**
12. Variable Frequency Stimulator for Electrosurgery
    - Austen BioInnovation Institute in Akron: Technology Development Fund; Project #170001
    - **E. Engeberg** (PI); 6/1/2011 - 8/31/2013
    - **$33,291**

13. Shape Memory Alloy Thermal Energy Harvesting
    - Ohio Third Frontier Phase 1 Technology Validation Grant #13-036
    - **E. Engeberg** (PI) and S. I. Hariharan (co-PI); 5/15/2012 - 1/31/2014
    - **$50,000**
14. Shadow Dexterous Hand for Lab Automation
    - Procter & Gamble
    - **E. Engeberg** (PI); 6/1/2010 – 6/1/2011
    - **$5,000**
15. Development of an Improved Instrument for Robotic Electrosurgery
    - Summa Health System
    - **E. Engeberg** (PI) and E. Espinal; 6/1/2010 – 8/31/2010 & 6/1/2011 – 8/31/2011
    - **$3,600**

AWARDS

1. **Researcher of the Year (2020)**
    - Florida Atlantic University, Associate Professor Level
2. **Outstanding Engineering Achievement Merit Award (2019)**
    - The Engineers' Council
3. **Outstanding Reviewer Award (2018)**
    - Journal of Neural Engineering
4. **Best Paper Award (2018)**
    - 2018 Florida Conference on Recent Advances in Robotics, Orlando, USA
5. **Best Presentation Award (2018)**
    - 2018 Florida Conference on Recent Advances in Robotics, Orlando, USA
6. **Most Cited Article Award (2015-2016)**
    - International Journal of Precision Engineering and Manufacturing
7. **Top 5 Most Cited Article Award (2013-2016)**
    - Sensors & Actuators A: Physical
8. **Top 25 Most Downloaded Article Award (January – March, 2013)**
    - ScienceDirect
9. **Outstanding Paper Award (2012)**
    - 2012 International Conference on Control and Automation Systems (Out of ~500 papers)
10. **Outstanding Innovator Award (2011)**
    - Summa Health System

JOURNAL PUBLICATIONS

1. S. Olson, M. Abd, and **E. Engeberg**, "Human-Inspired Robotic Eye-Hand Coordination Enables New Communication Channels Between Humans and Robots," *International Journal of Social Robotics*, accepted, 2020
2. M. Lin, M. Vatani, J. Choi, S. Dilibal, and **E. Engeberg**, "Compliant Underwater Manipulator with Integrated Tactile Sensor for Nonlinear Force Feedback Control of an SMA Actuation System," *Sensors and Actuators A: Physical*, 112221, 2020; DOI: https://doi.org/10.1016/j.sna.2020.112221
3. C. Ades, S. Dilibal, and **E. Engeberg**, "Shape Memory Alloy Tube Actuators Inherently Enable Internal Fluidic Cooling for a Robotic Finger Under Force Control," *Smart Materials and Structures*, accepted, 2020; DOI: https://doi.org/10.1088/1361-665X/ab931f

4. M. Abd, I. Gonzales, C. Ades, M. Nojoumian, and **E. Engeberg**, "Simulated Robotic Device Malfunctions Resembling Malicious Cyber-Attacks Impact Human Perception of Trust, Frustration, and Satisfaction," *International Journal of Advanced Robotic Systems*, *16*(5), 1729881419874962, 2019; DOI: https://doi.org/10.1177%2F1729881419874962
5. J. Frame, N. Lopez, O. Curet, and **E. Engeberg**, "Thrust Force Characterization of Free-Swimming Soft Robotic Jellyfish," *Bioinspiration & Biomimetics*, vol. 13, 064001, 2018; DOI: https://doi.org/10.1088/1748-3190/aadcb3
    - Altmetric Score: 208 (Top 5% of all publications)
    - ~5,000 downloads of this article in several days
6. Z. Ray and **E. Engeberg**, "Human-Inspired Reflex to Autonomously Prevent Slip of Grasped Objects Rotated with a Prosthetic Hand," *Journal of Healthcare Engineering*, vol. 2018, 11 pages, 2018; DOI: https://doi.org/10.1155/2018/2784939
7. B. Kent and **E. Engeberg**, "Robotic Hand Acceleration Feedback to Synergistically Prevent Grasped Object Slip," *IEEE Transactions on Robotics*, vol. 33, p. 492-499, 2017, DOI: http://dx.doi.org/10.1109/TRO.2016.2633574
8. J. Renna, J. Stukel, R. Willits, and **E. Engeberg**, "Dorsal root ganglia neurite outgrowth measured as a function of changes in microelectrode array resistance," *PLOS ONE*, 2017, DOI: https://doi.org/10.1371/journal.pone.0175550
9. S. Dilibal, H. Sahin, E. Dursun, and **E. Engeberg**, "Nickel-Titanium Shape Memory Alloy Actuated Thermal Overload Protection Relay System Designs," *Electrical Engineering*, 2017, DOI: http://dx.doi.org/10.1007/s00202-016-0458-2
10. A. Hegana, S. I. Hariharan, and **E. Engeberg**, "Electromechanical Conversion of Low Temperature Waste Heat via Helical Shape Memory Alloy Actuators," *IEEE/ASME Transactions on Mechatronics*, 2016, vol. 21, p. 1434-1444, DOI: http://dx.doi.org/10.1109/TMECH.2015.2481087
11. P. Kumar, R. Adams, A. Harkins, **E. Engeberg**, and R. Willits, "Stimulation frequency alters dorsal root ganglion neurite growth and directionality *in vitro*," *IEEE Transactions on Biomedical Engineering*, vol. 63, p. 1257-1268, 2016, DOI: http://dx.doi.org/10.1109/TBME.2015.2492998
12. **E. Engeberg**, S. Dilibal, M. Vatani, J. Choi, and J. Lavery, "Anthropomorphic Finger Antagonistically Actuated by SMA Plates," *Bioinspiration & Biomimetics*, vol. 10, 2015, DOI: http://dx.doi.org/10.1088/1748-3190/10/5/056002
13. M. Vatani, **E. Engeberg**, and J. Choi, "Combined 3D Printing Technologies and Materials for Fabrication of Tactile Sensors," *International Journal of Precision Engineering and Manufacturing*, vol. 16, p. 1375-1383, 2015, DOI: http://dx.doi.org/10.1007/s12541-015-0181-3
    - **Most Cited Article Award from 2015-2016**
14. M. Vatani, **E. Engeberg**, and J. Choi, "Conformal Direct-Print of Piezoresistive Polymer/Nanocomposites for Compliant Multi-Layer Tactile Sensors," *Additive Manufacturing*, 2015, DOI: http://dx.doi.org/10.1016/j.addma.2014.12.009
15. B. Kent and **E. Engeberg**, "Human-inspired feedback synergies for environmental interaction with a dexterous robotic hand," *Bioinspiration & Biomimetics*, vol. 9, 2014, DOI: http://dx.doi.org/10.1088/1748-3182/9/4/046008
16. B. Kent, N. Karnati, and **E. Engeberg**, "Electromyogram Synergy Control of a Dexterous Artificial Hand," *Journal of NeuroEngineering and Rehabilitation*, vol. 11, 2014, DOI: http://dx.doi.org/10.1186/1743-0003-11-41
17. M. Vatani, **E. Engeberg**, and J. Choi, "Detection of the position, direction and speed of sliding contact with a multi-layer compliant tactile sensor fabricated using direct-print technology," *Smart Materials and Structures*, vol. 23, 2014, http://dx.doi.org/10.1088/0964-1726/23/9/095008

18. B. Kent and **E. Engeberg**, "Grasp Dependent Slip Prevention for a Dexterous Artificial Hand," *International Journal of Humanoid Robotics*, vol. 11, 2014, DOI: http://dx.doi.org/10.1142/S0219843614500169
19. B. Kent, J. Lavery, and **E. Engeberg**, "Anthropomorphic Control of a Dexterous Artificial Hand via Task Dependent Temporally Synchronized Synergies," *Journal of Bionic Engineering*, vol. 11, p. 236-248, 2014, DOI: http://dx.doi.org/10.1016/S1672-6529(14)60044-5
20. N. Karnati, B. Kent and **E. Engeberg**, "Bioinspired Sinusoidal Finger Joint Synergies for a Dexterous Robotic Hand to Screw and Unscrew Objects of Different Diameters," *IEEE/ASME Transactions on Mechatronics*, vol. 18, p. 612-623, 2013, DOI: http://dx.doi.org/10.1109/TMECH.2012.2222907
21. R. Andrecioli and **E. Engeberg**, "Adaptive sliding manifold slope via grasped object stiffness detection with a prosthetic hand," *Mechatronics*, vol. 23, p. 1171-1179, 2013, DOI: http://dx.doi.org/10.1016/j.mechatronics.2013.10.006
22. M. Vatani, **E. Engeberg**, and J. Choi, "Force and slip detection with direct-write compliant tactile sensors using multi-walled carbon nanotubes/polymer composites," *Sensors and Actuators A: Physical*, vol. 195, p. 90-97, 2013, DOI: http://dx.doi.org/10.1016/j.sna.2013.03.019
    - **Among ScienceDirect top 25 downloaded articles from January – March, 2013**
    - **Among top 5 most cited articles in *Sensors & Actuators A: Physical* from 2013-2016**
23. **E. Engeberg**, "Human Model Reference Adaptive Control of a Prosthetic Hand," *Journal of Intelligent & Robotic Systems*, vol. 72, p. 41-56, 2013, DOI: http://dx.doi.org/10.1007/s10846-013-9815-9
24. **E. Engeberg**, "Adaptive Human Control Gains During Precision Grip," *International Journal of Advanced Robotic Systems*, vol. 12, p. 1-12, 2013, DOI: http://dx.doi.org/10.5772/55479
25. **E. Engeberg** and S. Meek, "Adaptive Sliding Mode Control for Prosthetic Hands to Simultaneously Prevent Slip and Minimize Deformation of Grasped Objects," *IEEE/ASME Transactions on Mechatronics*, vol. 18, p. 376-385, 2013, DOI: http://dx.doi.org/10.1109/TMECH.2011.2179061
26. **E. Engeberg**, "A physiological basis for control of a prosthetic hand," *Biomedical Signal Processing and Control*, vol. 8, p. 6-15, 2013, DOI: http://dx.doi.org/10.1016/j.bspc.2012.06.003
27. **E. Engeberg** and S. Meek, "Enhanced visual feedback for slip prevention with a prosthetic hand," *Prosthetics and Orthotics International*, vol. 36, p. 423-429, 2012, DOI: http://dx.doi.org/10.1177/0309364612440077
28. **E. Engeberg** and S. Meek, "Backstepping and Sliding Mode Control Hybridized for a Prosthetic Hand," *IEEE Transactions on Neural Systems and Rehabilitation Engineering*, vol. 17, p. 70-79, Feb. 2009, DOI: http://dx.doi.org/10.1109/TNSRE.2008.2006212
29. **E. Engeberg**, S. Meek, and M. Minor, "Hybrid Force-Velocity Sliding Mode Control of a Prosthetic Hand," *IEEE Transactions on Biomedical Engineering*, vol. 55, p. 1572-1581, May 2008, DOI: http://dx.doi.org/10.1109/TBME.2007.914672
30. **E. Engeberg** and S. Meek, "Improved Grasp Force Sensitivity For Prosthetic Hands Through Force Derivative Feedback," *IEEE Transactions on Biomedical Engineering*, vol. 55, p. 817-821, Feb. 2008, DOI: http://dx.doi.org/10.1109/TBME.2007.912675

PEER REVIEWED CONFERENCE PUBLICATIONS

1. M. Abd, M. Al-Saidi, M. Lin, G. Liddle, K. Mondal and E. Engeberg, "Surface Feature Recognition and Grasped Object Slip Prevention With a Liquid Metal Tactile Sensor for a Prosthetic Hand," *8th IEEE RAS/EMBS International Conference on Biomedical Robotics and Biomechatronics* (BioRob), New York, USA, 2020, accepted

2. M. Abd, I. Gonzales, T. Colestock, B. Kent, and E. Engeberg, "Direction of Slip Detection for Adaptive Grasp Force Control with a Dexterous Robotic Hand," *2018 IEEE/ASME Advanced Intelligent Mechatronics Conference*, Auckland, New Zealand; DOI: http://dx.doi.org/10.1109/AIM.2018.8452704
3. M. Abd, M. Bornstein, E. Tognoli, and E. Engeberg, "Armband with Soft Robotic Actuators and Vibrotactile Stimulators for Bimodal Haptic Feedback from a Dexterous Artificial Hand," *2018 IEEE/ASME Advanced Intelligent Mechatronics Conference*, Auckland, New Zealand; DOI: http://dx.doi.org/10.1109/AIM.2018.8452709
4. C. Ades, I. Gonzales, M. Al-Saidi, M. Nojoumian, O. Bai, A. Aravelli, L. Lagos and **E. Engeberg**, "Robotic Finger Force Sensor Fabrication and Evaluation Through a Glove," *2018 Florida Conference on Recent Advances in Robotics*, Orlando, USA
    - **Winner of Best Paper Award**
5. M. Holdar and **E. Engeberg**, "Soft Robotics: Fiber Reinforced Soft Pneumatic Multidirectional Manipulators, Designing, Fabricating, and Testing," *2018 Florida Conference on Recent Advances in Robotics*, Orlando, USA
    - **Winner of Best Presentation Award**
6. J. Ingicco, M. AlSaidi, M. Abd, C. Ades, and **E. Engeberg**, "Force and Pressure Control of Soft Robotic Actuators," *2018 Florida Conference on Recent Advances in Robotics*, Orlando, USA
7. M. Abd, I. Gonzales, M. Nojoumian, and **E. Engeberg**, "Trust, Satisfaction, and Frustration Measurements During Human-Robot Interaction," *2017 Florida Conference on Recent Advances in Robotics*, Boca Raton, USA
8. N. Lopez, and **E. Engeberg**, "Soft Robotic Jellyfish Steering Control," *2017 Florida Conference on Recent Advances in Robotics*, Boca Raton, USA
9. M. Abd, C. Ades, M. Shuqir, M. Holdar, M. Al-Saidi, N. Lopez, and **E. Engeberg**, "Impact of Soft Robotic Actuator Geometry on End Effector Force and Displacement," *2017 Florida Conference on Recent Advances in Robotics*, Boca Raton, USA
10. Z. Ray and **E. Engeberg**, "Hand Orientation Feedback for Grasped Object Slip Prevention with a Prosthetic Hand," *2016 Florida Conference on Recent Advances in Robotics*, Miami, USA, p. 57-62
11. T. Colestock and **E. Engeberg,** "Platform Development for Asynchronous Brain-Machine Interface Synergistic Robotic Control," *2016 Florida Conference on Recent Advances in Robotics*, Miami, USA, p. 27-32
12. L. Zheng, O. Curet, and **E. Engeberg,** "Soft Robotic Knifefish," *2016 Florida Conference on Recent Advances in Robotics*, Miami, USA, p. 118-122
13. C. Ades, S. Dilibal, and **E. Engeberg,** "Exoskeleton for Tubular Shape Memory Alloy Finger with Internal Cooling and A Superelastic SMA Spring Return," *2016 Florida Conference on Recent Advances in Robotics*, Miami, USA, p. 77-83
14. Z. Kakish, B. Kent, and **E. Engeberg,** "Grasp Synergy Subspaces to Use the Full Functionality of Dexterous Artificial Hands*," 2016 Florida Conference on Recent Advances in Robotics*, p. 246-254
15. J. Frame, O. Curet, and **E. Engeberg,** "Free-Swimming Soft Robotic Jellyfish," *2016 Florida Conference on Recent Advances in Robotics*, Miami, USA, p. 100-105
16. S. Dilibal and **E. Engeberg**, "Finger-Like Manipulator Driven by Antagonistic Nickel-Titanium Shape Memory Alloy Actuators," 2015 International Conference on Advanced Robotics, Istanbul, Turkey, p. 152-157, http://dx.doi.org/10.1109/ICAR.2015.7251448
    - Nominated for Best Paper Award
17. M. Vatani, Y. Lu, **E. Engeberg**, and J. Choi, "Combined 3D Printing Technologies and Materials for Fabrication of Tactile Sensors," 2014 International Symposium on Green Manufacturing and Applications, Busan, South Korea

18. A. Sengupta, A. Madanayake, R. Gomez-Garcia, **E. Engeberg**, "Wideband Aperture Array using RF Channelizers and Massively-Parallel Digital 2-D IIR Filterbank," *SPIE DSS*, 2014, Baltimore, USA, http://dx.doi.org/10.1117/12.2053050
19. B. Kent, Z. Kakish, N. Karnati, and **E. Engeberg**, "Adaptive Synergy Control of a Dexterous Artificial Hand to Rotate Objects in Multiple Orientations Via EMG Facial Recognition," *2014 IEEE International Conference on Robotics and Automation*, Hong Kong, China, p. 6719-6725, http://dx.doi.org/10.1109/ICRA.2014.6907851
20. M. Vatani, **E. Engeberg**, and J. Choi, "Hybrid Additive Manufacturing of 3D Compliant Tactile Sensors," *Proceedings of the ASME 2013 International Mechanical Engineering Congress & Exposition*, San Diego, USA, http://dx.doi.org/10.1115/IMECE2013-63064
21. J. Choi, M. Vatani, and **E. Engeberg**, "Direct-Write of Multi-layer Tactile Sensors," *Proceedings of the 2013 13th International Conference on Control, Automation and Systems*, Gwangju, South Korea, p. 164-168, DOI: http://dx.doi.org/10.1109/ICCAS.2013.6703884
22. **E. Engeberg**, M. Vatani, and J. Choi, "Detection of the Direction and Speed of Motion of Forces on the Surface of a Compliant Tactile Sensor," *Proceedings of the 2013 13th International Conference on Control, Automation and Systems*, Gwangju, South Korea, p.158-163, DOI: http://dx.doi.org/10.1109/ICCAS.2013.6703883
23. **E. Engeberg**, S. I. Hariharan, and B. Kent, "Electromechanical Conversion of Low-Grade Heat Into Electricity With Shape Memory Alloy Actuators," *IEEE EnergyTech 2013*, Cleveland, USA, p. 1-6, DOI: http://dx.doi.org/10.1109/EnergyTech.2013.6645313
24. J. Lavery, B. Kent, and **E. Engeberg**, "Biologically Inspired Grasp Primitives for a Dexterous Robotic Hand to Catch and Lift a Sphere," *2012 International Conference on Control and Automation Systems*, Jeju Island, South Korea, p. 1710-1715, available: www.ieeexplore.ieee.org
    - **Winner of the Outstanding Paper Award (~500 papers presented in total)**
25. N. Karnati, B. Kent, and **E. Engeberg**, "Adaptive Synergy Control for a Dexterous Hand Based On Grasped Object Orientation," *2012 International Conference on Control and Automation Systems*, Jeju Island, South Korea, p. 1927-1932, available: www.ieeexplore.ieee.org
26. **E. Engeberg**, M. Vatani and J. Choi, "Direction of Slip Detection For A Biomimetic Tactile Sensor," *2012 International Conference on Control and Automation Systems*, Jeju Island, South Korea, p. 1933-1937, available: www.ieeexplore.ieee.org
27. B. Kent, N. Karnati, and **E. Engeberg**, "EMG Sliding Mode Synergy Control of a Dexterous Artificial Hand," *Proceedings of the 2012 IEEE BioRob Conference*, Rome, Italy, p. 87-92, DOI: http://dx.doi.org/10.1109/BioRob.2012.6290789
28. R. Andrecioli and **E. Engeberg**, "Grasped Object Stiffness Detection for Adaptive PID Sliding Mode Position Control of a Prosthetic Hand," *Proceedings of the 2012 IEEE BioRob Conference*, Rome, Italy, p. 526-531, DOI: http://dx.doi.org/10.1109/BioRob.2012.6290752
29. **E. Engeberg**, "An Adaptive System Model of Human Precision Grip," *Proceedings of the 2012 IEEE Haptics Symposium*, Vancouver, Canada, p. 431-437, DOI: http://dx.doi.org/10.1109/HAPTIC.2012.6183827
30. B. Kent and **E. Engeberg**, "Biomimetic Myoelectric Control of a Dexterous Robotic Hand," *Proceedings of the 2011 IEEE ROBIO Conference*, Phuket Island, Thailand, p. 1555-1560, DOI: http://dx.doi.org/10.1109/ROBIO.2011.6181510
31. N. Karnati, B. Kent and **E. Engeberg**, "Backdrivable Periodic Finger Joint Synergies: Human Observations Applied to a Dexterous Robotic Hand," *Proceedings of the 2011 IEEE ROBIO Conference*, Phuket Island, Thailand, p. 1122-1127, DOI: http://dx.doi.org/10.1109/ROBIO.2011.6181438

32. B. Kent and **E. Engeberg**, "Robotic Hand Biomimicry: the Effect of Finger Force and Position Abduction Feedback During Contour Interaction," *Proceedings of the 2011 ROBIO Conference*, Phuket Island, Thailand, p. 650-655, DOI: http://dx.doi.org/10.1109/ROBIO.2011.6181360
33. J. Lavery, B. Kent, and **E. Engeberg**, "Bioinspired Grasp Primitives for a Dexterous Robotic Hand to Catch and Lift a Cylinder," *Proceedings of the 2011 IEEE ROBIO Conference*, Phuket Island, Thailand, p. 1102-1107, DOI: http://dx.doi.org/10.1109/ROBIO.2011.6181435
34. B. Kent and **E. Engeberg**, "Variable Feedback Configuration Control of a Robotic Finger to Produce Anthropomorphic Motions," *Proceedings of the 2011 IEEE ROBIO Conference*, Phuket Island, Thailand, p. 2943-2948, DOI: http://dx.doi.org/10.1109/ROBIO.2011.6181753
35. N. Karnati, B. Kent and **E. Engeberg**, "Backdrivable periodic finger joint synergies to unscrew and screw objects using human observations applied to a dexterous robotic hand," *Proceedings of the 2011 IEEE ROBIO Conference*, Phuket Island, Thailand, p. 2251-2252, DOI: http://dx.doi.org/10.1109/ROBIO.2011.6181632
36. B. Kent and **E. Engeberg**, "Biomimetic myoelectric control of a dexterous prosthetic hand," *Proceedings of the 2011 IEEE ROBIO Conference*, Phuket Island, Thailand, p. 2235-2236, DOI: http://dx.doi.org/10.1109/ROBIO.2011.6181624
37. J. Lavery, B. Kent and **E. Engeberg**, "Bioinspired grasp primitives for a dexterous artificial hand to catch and lift a cylinder," *Proceedings of the 2011 IEEE ROBIO Conference*, Phuket Island, Thailand, p. 2237-2238, DOI: http://dx.doi.org/10.1109/ROBIO.2011.6181625
38. B. Kent and **E. Engeberg**, "Robotic hand biomimicry: Lateral finger joint force and position feedback during contour interaction," *Proceedings of the 2011 IEEE ROBIO Conference*, Phuket Island, Thailand, p. 2245-2246, DOI: http://dx.doi.org/10.1109/ROBIO.2011.6181629
39. **E. Engeberg** and S. Meek, "Adaptive Sliding Mode Control of Grasped Object Slip for Prosthetic Hands," *Proceedings of the 2011 IEEE/RSJ IROS Conference, San Francisco, USA*, p. 4174-4179, DOI: http://dx.doi.org/10.1109/IROS.2011.6094500
    - 790 / 2,459 papers accepted into IROS 2011 (32.1% acceptance rate)
40. B. Kent and **E. Engeberg**, "Biomimetic Backstepping Slip Prevention for a Dexterous Hand via Wrist Velocity Feedback," *Proceedings of the 2011 IEEE Humanoids Conference*, Bled, Slovenia, p. 383-388, DOI: http://dx.doi.org/10.1109/Humanoids.2011.6100873
41. N. Karnati, B. Kent and **E. Engeberg**, "Human Finger Joint Synergies for a Constrained Task Applied to a Dexterous Anthropomorphic Hand," *Proceedings of the 2011 IEEE Humanoids Conference, Bled, Slovenia*, p. 664-669, DOI: http://dx.doi.org/10.1109/Humanoids.2011.6100877
42. B. Kent and **E. Engeberg**, "Biologically Inspired Posture Control for a Dexterous Artificial Hand," *Proceedings of the 2011 IEEE/ASME AIM Conference, Budapest, Hungary*, p.451-456, DOI: http://dx.doi.org/10.1109/AIM.2011.6027039
43. **E. Engeberg**, "Biomimetic Sliding Mode Control of a Prosthetic Hand," *Proceedings of the 2010 IEEE BioRob Conference*, Tokyo, Japan, p. 343-348, DOI: http://dx.doi.org/10.1109/BIOROB.2010.5626815
44. R. Andrecioli and **E. Engeberg**, "Grasped Object Stiffness Detection for Adaptive Force Control of a Prosthetic Hand," *Proceedings of the 2010 IEEE BioRob Conference*, Tokyo, Japan, p. 197-202, DOI: http://dx.doi.org/10.1109/BIOROB.2010.5626816
45. **E. Engeberg**, M. Frankel, and S. Meek, "Biomimetic Grip Force Compensation Based on Acceleration of a Prosthetic Wrist Under Sliding Mode Control," *Proceedings of the 2008 IEEE ROBIO Conference*, p. 210-215, Bangkok, Thailand, DOI: http://dx.doi.org/10.1109/ROBIO.2009.4913005
46. **E. Engeberg** and S. Meek, "Model-Based Feedforward Derivative Compensation For Prosthetic Hands," *Proceedings of the 2008 IEEE BioRob Conference*, Scottsdale, USA, p. 61-65, DOI: http://dx.doi.org/10.1109/BIOROB.2008.4762855

47. **E. Engeberg** and S. Meek, "Adaptive Object Slip Prevention For Prosthetic Hands Through Proportional-Derivative Shear Force Feedback," *Proceedings of the 2008 IEEE/RSJ IROS Conference*, Nice, France, p. 1940-1945, DOI: http://dx.doi.org/10.1109/IROS.2008.4651067

BOOK and BOOK CHAPTER

1. Y. Sun, J. Falco, N. Cheng, **E. Engeberg**, N. Pollard, M. Roa, and Z. Xia, "Robotic Grasping and Manipulation Competition: Task Pool," Robotic Grasping and Manipulation, ISBN 978-3-319-94567-5, 2018, https://doi.org/10.1007/978-3-319-94568-2
2. **E. Engeberg**, "Adaptive nonlinear control of hand prostheses," Proquest, Ann Arbor, MI, 2011, ISBN: 978-1243472137

PATENTS

1. **E. Engeberg** and S. Meek, "Signal Modulator for Visual Indicator," USA Patent No. 8,588,977 B2, 11/19/2013
2. S. I. Hariharan and **E. Engeberg**, "Thermal Energy Harvesting Device," USA Patent No. 9,745,967 B2, Aug. 29, 2017
3. **E. Engeberg** and S. Dilibal, "Antagonistically Actuated Shape Memory Alloy Manipulator," USA Patent No. 9,744,055 B2, Aug. 29, 2017
4. J. Choi, **E. Engeberg**, K. Lee and H. Kim, "Flexible Tactile Sensors and Method of Making," Patent No. 10,156,487 B2, Dec. 18, 2018
5. **E. Engeberg,** S. I. Hariharan, and B. Kent, "Thermal Energy Harvesting System," Patent No. US 9,909,573 B2, March 6, 2018
6. **E. Engeberg** and E. Espinal, "Variable-frequency stimulator for electrosurgery," Patent No. US10092349B2, October 9, 2018
7. **E. Engeberg**, "Biomimetic Controller For Increased Dexterity Prosthesis," USPTO Application Number: 14/075,175, granted in 2020

PROVISIONAL PATENTS (Unrelated to Patent Applications)

1. **E. Engeberg**, "Apparatus and Method for a Free-Swimming Soft Robotic Jellyfish Using Adaptive Three-Axis Depth Control to Monitor Marine Environments," 6/20/2020

TECHNICAL REPORT

1. **E. Engeberg**, "Final Proof of Concept Experiments for Procter & Gamble with the Shadow C6M Dexterous Hand, CyberGlove II, and FingerTPS Sensors"
    - Submitted to Procter & Gamble on 11/12/2010

INVITED PRESENTATIONS

1. BioRobotic Technology for Nuclear Waste Disposal
    - Department of Energy; Idaho National Lab, 7/29/2019
2. Recent Advances in Prosthetic Limbs
    - Research in Action Series; Boca Raton Public Library, 1/17/2019
3. Merging Mind and Machine: Robots to Aid the Disabled

- South Florida Science Center & Aquarium, West Palm Beach, FL, 3/12/2018

4. Dexterity With an Artificial Hand Provides Functional Improvements in Tasks of Daily Life
    - TechNeeds Robotics Seminar - Robots, Sensors & Humans – Benefits & Challenges to the Implementation of Robotic Systems in Hazardous Environments at Florida International University, 5/3/2017
5. Case Study: Additional Dexterity With an Artificial Hand Provides Functional Improvements in Tasks of Daily Life For Upper Limb-Absent People
    - Medical Bionics Summit, Washington, DC, 4/6/2016
6. BioRobotic Applications
    - Gedik University, Istanbul, Turkey, 7/24/2015
7. Human-Inspired Grasp and Feedback Synergies
    - 2015 International Conference on Robotics and Automation, Seattle, WA, 5/30/2015
8. BioRobotics
    - Nova Southeastern University, 10/2014
9. High Frequency Stimulation for Reduced Collateral Damage During Electrosurgery
    - Austen BioInnovation Institute in Akron, OH, 11/9/2012
10. Biologically Inspired Control of a Dexterous Artificial Hand Through Study of the Human Hand
    - University of Southern California, Viterbi School of Engineering, 2/27/2012
11. Control, Prosthetics, and Robotics with Biomedical Applications
    - NASA-Glenn Workshop at SUMMA Health System, 2010
12. Control of Dexterous Prostheses with Clinical Applications
    - Prosthetics Symposium at the Orthotics and Prosthetics Centre, Warren, Ohio, 2010

TEACHING

Classes taught at FAU from Fall 2014 onwards have student evaluations where 1.0 is best possible.

Year	Semester	Class	Average Student-Teacher Evaluation
2020	Spring	Advanced Control Systems	N/A
2020	Spring	Design Project	N/A
2019	Fall	Design Project	1.7 / 5.0 **[SPOT System (Best = 1.0)]**
2019	Spring	Engineering Design	2.6 / 5.0
2018	Fall	Introduction to Robotics	1.8 / 5.0
2018	Fall	Advanced Control Systems	N/A
2018	Spring	Electromechanical Devices (2 Sections)	2.3 & 2.8 / 5.0
2018	Spring	Innovative Sensing & Actuation Tech.	N/A (co-taught with 5 others)
2017	Summer	Dynamics	1.7 / 5.0
2017	Spring	Engineering Design 2	1.8 / 5.0
2017	Spring	Introduction to Robotics	1.6 / 5.0
2016	Fall	Electromechanical Devices	N/A
2016	Fall	Engineering Design 1	1.8 / 5.0
2016	Spring	Engineering Design 2	1.3 / 5.0
2016	Spring	Dynamic Systems	N/A
2015	Fall	Controls 6930	1.5 / 5.0
2015	Spring	Introduction to Robotics	2.2 / 5.0
2014	Fall	Dynamic Systems	1.63 / 5.0

2014	Spring	Dynamics	4.0 / 5.0	**[UA System (Best = 5.0)]**
2014	Spring	Mechanical Engineering Laboratory	N/A	
2013	Fall	Robot Design, Control, and Applications II	4.7 / 5.0	
2013	Fall	Control System Design	4.0 / 5.0	
2013	Spring	Robot Design, Control, and Applications	4.5 / 5.0	
2013	Spring	Dynamics	4.3 / 5.0	
2012	Fall	Control System Design (Morning Section)	4.0 / 5.0	
2012	Fall	Control System Design (Evening Section)	4.0 / 5.0	
2012	Spring	Dynamics	3.7 / 5.0	
2012	Spring	Control System Design	3.7 / 5.0	
2011	Fall	Robot Design, Control, and Applications II	4.6 / 5.0	
2011	Fall	Control System Design	4.1 / 5.0	
2011	Spring	Robot Design, Control, and Applications	4.2 / 5.0	
2011	Spring	Dynamics	3.7 / 5.0	
2010	Fall	Robot Design, Control, and Applications II	4.5 / 5.0	
2010	Fall	Control System Design	3.6 / 5.0	
2010	Spring	Robot Design, Control, and Applications	4.2 / 5.0	
2010	Spring	Dynamics	4.0 / 5.0	
2009	Fall	Kinematics of Machines	3.8 / 5.0	
2009	Fall	Control System Design	3.7 / 5.0	
2009	Spring	Control System Design	3.7 / 4.0	**[UA System (Best = 4.0)]**
2009	Spring	Robot Design, Control, and Applications	N/A	
2008	Fall	Kinematics of Machines	N/A	

POSTDOCTORAL SCHOLAR MENTORING

1. Dr. Maohua Lin — Supported by NIH award # 1R01EB025819 — 2019-current
2. Dr. Yuhao Qiang — Supported by NIH award # 1R01EB025819 — 2019-2020
3. Dr. Jinzi Deng — Supported by NIH award # 1R01EB025819 — 2019
    - Now Research Scientist at Yeshiva University
4. Dr. Kunal Mondal — Supported by NIH award # 1R01EB025819 — 2018-2019
    - Now Scientist at Idaho National Lab, Dept. of Energy
5. Dr. Savas Dilibal — Supported by NSF award # 1265145 — 2013-2014
    - Now Associate Professor at Gedik University, Istanbul, Turkey

CURRENT GRADUATE STUDENT ADVISING

1.	Moaed Abd	Ph.D. student	Mechanical Engineering	Committee Chair
2.	Craig Ades	Ph.D. student	Mechanical Engineering	Committee Chair
3.	Tom Colestock	Ph.D. student	Mechanical Engineering	Committee Chair
4.	Johnny Yuen	M.S. student	Mechanical Engineering	Committee Chair
5.	Genevieve Liddle	Ph.D. student	Integrated Biology	Committee Member
6.	D. Dieujuste	Ph.D. student	Mechanical Engineering	Committee Member
7.	Don Spragg	Ph.D. student	Ocean Engineering	Committee Member
8.	Enze Qian	Ph.D. student	Mechanical Engineering	Committee Member

9. Jordan Brennan	Ph.D. student	Mechanical Engineering	Committee Member
10. Travis Moscicki	Ph.D. student	Ocean Engineering	Committee Member

GRADUATE STUDENT ALUMNI (As Committee Chair)

1. Mostapha Al-Saidi M.S. Mechanical Engineering 2019 Fall
    - Semi-Autonomous Control of Robotic Arm with Haptic Feedback and Closed Loop Force Controller
2. Joe Ingicco M.S. Mechanical Engineering 2019 Summer
    - Interfacing and Control of Artificial Hands
3. Dan Luvisi M.S. Mechanical Engineering 2019 Spring
    - Free-Swimming Soft Robotic Jellyfish With Adaptive Depth Control
4. Md. Shuqir M.S. Mechanical Engineering 2018 Summer
    - Study on Reinforced Soft Actuator for Exoskeleton Actuators
5. Stephanie Olsen M.S. Mechanical Engineering 2018 Summer
    - Human-Inspired Robotic Hand-Eye Coordination
6. Md. Holdar M.S. Mechanical Engineering 2018 Spring
    - Soft Robotics: fiber reinforced soft pneumatic multidirectional manipulators, designing, fabricating, and testing
7. Benjamin Kent Ph.D. Mechanical Engineering 2017 Fall
    - Biologically Inspired Control Mechanisms With Application to Anthropomorphic Control of Myoelectric Upper Limb Prostheses
8. Jen Frame M.S. Mechanical Engineering 2016 Summer
    - Free-Swimming Soft Robotic Jellyfish
9. Zachary Ray M.S. Mechanical Engineering 2016 Summer
    - Hand Orientation Feedback for Grasped Object Slip Prevention with a Prosthetic Hand
10. Ashenafi Hegana Ph.D. Mechanical Engineering 2016 Spring
    - Low Temperature Waste Energy Harvesting By Shape Memory Alloy
11. Zahi Kakish M.S. Mechanical Engineering 2015 Summer
    - Grasp Synergy Subspaces to Use the Full Functionality of Dexterous Artificial Hands
12. Alex Mascioli M.S. Mechanical Engineering 2014 Fall
    - PID Control of a Prosthetic Hand
13. Ricardo Andrecioli M.S. Mechanical Engineering 2013 Spring
    - Grasped Object Stiffness Detection for Adaptive Control of a Prosthetic Hand
14. Charles Brackney M.S. Mechanical Engineering 2013 Summer
    - Design and Analysis of an Orthopedic Surgical Drill Guide
15. Nareen Karnati M.S. Mechanical Engineering 2012 Summer
    - Bioinspired Sinusoidal Finger Joint Synergies for a Dexterous Robotic Hand to Screw and Unscrew Objects
16. Justin Kopelos M.S. Mechanical Engineering 2011 Fall
    - Design and Development of a Prototype Electrosurgical Instrument

GRADUATE STUDENT ALUMNI (As Committee Member)

1. Jenny Sanchez Ph.D. Engineering 2020 Fall
    - Assist-as-Needed Exoskeleton for Post-Stroke Hand Rehabilitation

- Pontificia Universidad Javeriana, Bogota, Colombia

2. Xuesong Wang Ph.D. Mechanical Engineering 2019 Fall
   - Engineering Channels in Porous Calcium Phosphate Bioceramic Scaffolds for Bone Tissue Regeneration
3. Negar Firoozi Ph.D. Mechanical Engineering 2019 Summer
   - Development of an Elastic Polymer-based Drug Delivery System for Tissue Regeneration
4. Iker Gonzales M.S. Computer Science 2018 Summer
   - An Active Approach to Human-Robot Interaction Teams for Evaluating Trust, Satisfaction, and Frustration
     - This thesis was supported by DOE with Engeberg as subcontract PI
5. Tyler Fischer M.S. Ocean Engineering 2017 Summer
   - Analyzing the Effect of Fin Morphology on the Propulsive Performance of an Oscillating Caudal Fin Using a Robotic Model
6. Hanlin Liu Ph.D. Ocean Engineering 2017 Spring
   - Propulsive Performance and Maneuver Control of Undulatory Ribbon Fin Propulsion Using Bio-Inspired Robotic Systems
7. Ian English M.S. Ocean Engineering 2016 Spring
   - Momentum Enhancement with Undulating Underwater Actuator
8. Morteza Vatani Ph.D. Mechanical Engineering 2014 Spring
   - Additive Manufacturing of Stretchable Tactile Sensors: Processes, Materials, and Applications
9. Nymisha Mantha M.S. Mechanical Engineering 2013 Summer
   - Fabrication of PPF Based Drug Containing Microneedle Arrays By Microstereolithography
10. Pragya Kumar M.S. Biomedical Engineering 2013 Summer
    - Effects of AC Stimulation on Chick DRG Neurite Growth, Density and Directionality
11. Li Du Ph.D. Mechanical Engineering 2012 Fall
    - A Multichannel Oil Debris Sensor for Online Health Monitoring of Rotating Machinery
12. Yinan Li M.S. Electrical Engineering 2012 Fall
    - Design and Analysis of Energy Harvesting with Shape Memory Alloys
13. Vladimir Dzodzo M.S. non-thesis Mechanical Engineering 2012 Fall
    - Switching Operations in Wind Turbines

UNDERGRADUATE STUDENTS MENTORED

1. Soft Robotic Buoyancy Compensator for a Free-Swimming Jellyfish Robot
   - Jack Davine; supported by NSF award #1659484 2019
2. Robotic Arm Telemanipulation for Handling Irradiated Materials **(OURI Grant Winner: $1,200)**
   - Cristina Silva, J. Horta, C. Teti, B. Quadri, J. Oyler 2019
3. Flexible Myoelectric Socket Integrated with Soft Actuator Haptic Feedback for Bionic Actuation with Tactile Sensing **(OURI Grant Winner: $1,200)** 2019
   - Rudy Paul
   - Wen-Yu Cheng
4. Interface Development for Museum Patrons to Control a Prosthetic Hand 2018
   - Victor Coto; supported by South Florida Science Center & Aquarium grant
5. Conformable 3D Printed Prosthetic Socket for Haptic Feedback Integration 2018

- Wen-Yu Cheng; supported by NSF award #1659484 and NIH award # 1R01EB025819
- Winner of Best Presentation Award among FAU cohort of NSF REU Fellows
- FAU WAVE competition winner, Fall 2019 ($500)

6. Development of Microfluidic Chamber for Virtual Neuroprosthesis 2018
   - Napatarong Wannapaschaiyong; supported NIH award # 1R01EB025819
7. Multitasking Control of a Dexterous Artificial Hand By Limb Absent Person 2017
   - Michael Bornstein, supported by NSF award #1659484 and NIH award # 1R01EB025819
   - Winner of Best Presentation Award among FAU cohort of NSF REU Fellows
   - Presented research at the 2017 National Conference on Undergraduate Research
8. Heading Control for a Free-Swimming Soft Robotic Jellyfish **(OURI Grant Winner)** 2017
   - Nick Lopez
9. Bionic Glove (**OURI Grant Winner**) Spring 2016
   - Chad Coarsey (Grad student mentor)
   - Daniel Barba-Allison
   - Justin Cooke
   - Jacob Sherbondy
10. Limited Movement Osteoarthritic Assistant Hand (**OURI Grant Winner**) Spring 2015
    - Anthony Pippitone
    - Mike Foley
    - Amir Ferouz
    - Jonathon McAllister
11. Brain Machine Interface for a Robotic Arm Spring 2015
    - Chad Colestock
    - Christian Bhim
    - Brad Ferraro
12. Development of a Linear Shape Memory Alloy Thermal Energy Harvester Spring 2013
    - Mark Gauer
    - James Manoff
    - J. P. Flaherty
13. Electroencephalogram Control of a Prosthetic Hand Spring 2013
    - Zahi Kakish
14. Development of a Spiral Shape Memory Alloy Thermal Energy Harvester Spring 2013
    - Brad Carley
    - Pat Rooney
    - Daniel Cottrill
    - Michael Wright
15. Design of a Laparoscopic Light and Video Instrument Spring 2012
    - Hamza Al Nemer
16. Kinematic Model of a Human Hand for Prosthetics Applications Spring 2012
    - Cory Tederous
17. Transverse Lumbar Interbody Fusion Insertion Device Spring 2011
    - Branko Rogovic

18. Design, Analysis, and Fabrication of a Prosthetic Hand Socket — Fall 2010
    - Andy Capotosta
19. Manipulandum Design for a Dexterous Artificial Hand — Spring 2009
    - Ben Kent

DIRECTED INDEPENDENT STUDY CLASSES

1.	Embedded Microcontroller Design	Darryl Dieujuste	Spring	2020
2.	Marine Electronics Tool Development	J. Bornstein & K. Daino	Spring	2020
3.	Haptic Feedback Prosthetics	M. Cheng & L. Escobar	Spring	2020
4.	Biorobotic Control Interfaces	Craig Ades	Spring	2019
5.	Control of Underwater Vehicles	Dan Luvisi	Summer	2018
6.	Robotic Control & Automation	Mostapha Al-Saidi	Summer	2018
7.	Brain Machine Interfaces	J. Ingicco	Winter	2018
8.	Design of Innovative Actuators	S. Pop & R. Sharp	Summer	2017
9.	Robotic System Design	Kayan Nascimento	Summer	2017
10.	Innovative Actuator Design	M. Al-Saidi & J. Ingicco	Summer	2017
11.	Autonomous Controller Design	Kyle Muir	Summer	2017
12.	Robot Design and Control	Mohammad Holdar	Fall	2016

SERVICE TO TECHNICAL COMMUNITY

- Federal Research Program Panel Member
    - Defense Medical Research and Development Program, 2020
    - National Science Foundation, 2019
    - Congressionally Directed Medical Research Program, 2019
    - Department of Defense, 2017
    - National Science Foundation, 2015, Winter
    - National Science Foundation, 2015, Summer
- Associate Editor
    - 2014, 2017 and 2018 IEEE International Conference on Robotics and Automation
    - 2016 IEEE International Conference on Humanoids
    - 2019 IEEE/RSJ International Conference on Intelligent Robots and Systems
- Guest Co-Editor of special 3D Printed Sensor issue for the journal *Sensors* (2017)
- Chair of Robotics Conference Sessions
    - 2016 Florida Conference on Recent Advances in Robotics (Miami, USA)
    - 2011 IEEE ROBIO Conference (Phuket, Thailand)
    - 2008 IEEE/RSJ IROS Conference (Nice, France)
- Robotic Hand Grasping and Manipulation Competition Organizing Committee Member
    - Annual Competitions Held During the IEEE/RSJ IROS Conferences
        - 2016: Daejeon, South Korea
        - 2017: Vancouver, BC, Canada
- Peer Reviewer:
    - Nature Biomedical Engineering
    - Nature Communications
    - IEEE/ASME Transactions on Mechatronics

- IEEE Transactions on Robotics
- ASME Journal of Biomechanical Engineering
- IEEE Transactions on Industrial Electronics
- IEEE Transactions on Biomedical Engineering
- International Journal of Robotics Research
- IEEE Robotics and Automation Letters
- Bioinspiration & Biomimetics
- Experimental Brain Research
- Neuroscience Letters
- International Journal of Humanoid Robots
- Journal of Neural Engineering
- Robotica
- Mechatronics
- Measurement
- Experimental Brain Research
- Prosthetics & Orthotics International
- IET Control Theory & Applications
- International Journal of Systems Science
- Journal of Engineering Applications and Artificial Intelligence
- 2008, 2009, 2011, and 2013 IEEE/RSJ IROS conferences
- 2010 and 2012 IEEE BIOROB conferences
- 2009, 2011, 2012, 2013 and 2017, 2019 IEEE ICRA conferences
- 2018 IEEE/ASME Advanced Intelligent Mechatronics Conference
- 2019 World Haptics Conference

INSTITUTIONAL SERVICE

- Created Advanced Control Systems (core graduate class of Mechanical Engineering Dept. at FAU)
- Hosted Renowned Scholars as part of FAU Seminar Series
    - Gregory Clark, Ph.D., University of Utah, Jan. 2020; Neuroscience Seminar Series
    - Brock Wester, Ph.D., Johns Hopkins University, 2019; I-SENSE Seminar Series
    - Yu Sun, Ph.D., University of South Florida, 2018; I-SENSE Seminar Series
    - Douglas Hutchinson, M.D., University of Utah, 2017; I-SENSE Seminar Series
- Delivered presentation for Senior Engineering student seminar series 4/15/2017
- Judged undergraduate research poster presentations, 3/31/2017
- Designed Robotic Displays for Fort Lauderdale International Boat Show to promote FAU (11/6/2016)
- Provided many guided tours of my BioRobotics Lab, including those to
    - DARPA Director of Biological Technologies (Justin Sanchez, Ph.D.)
    - Air Force Research Laboratory Directors
    - Assistant Director of National Science Foundation
    - Mrs. Link, affluent philanthropist, on 4/22/2016
    - Visiting Engineering Dean Candidates on 3/14/2017, 3/16/2017, and 3/27/2017
    - Visiting High School Students (12 times)
- Organized Robotics Showcase and Demonstrated Systems for FAU fundraising event: “An Evening With President Kelly,” 4/22/16

- Provided guest lecture for Engineering Design 1 class (1/14/16)
- Demonstrated robotics lab equipment at the FAU Expo for High School Students (10/24/2015)
- Committee Member
    - Faculty Search Committee Member; 2 positions for OME Dept. (2019-2020)
    - Research Space Committee Member (2019)
    - Maker Space Design Group (2019)
    - OME Department Chair Search (2018-2019)
    - ABET Review Committee; Dynamics Group (2018, 2019)
    - Faculty Search OME and I-SENSE joint position (2016-2017)
    - Mechanical Engineering Curriculum Overhaul at FAU (Spring, 2016)
    - Mechanical Engineering Graduate Class Offering 3 Year Schedule (10/2/15)
    - Innovative Sensors and Actuators Research Intensive Class development (Fall, 2015)
    - Graduate Student Program in the College of Engineering & Computer Science at FAU (Spring 2015)
    - Graduate Student Program for Ocean & Mechanical Engineering Dept. FAU (2014-present)
    - For Mechanical Engineering Faculty Search, 2014
    - For 3 Electrical and Computer Engineering Faculty Searches, 2012-2013
    - To interview incoming high school students to the University of Akron (2/18/2011).
    - To assess campus wide writing abilities of students at the University of Akron (8/2010).
- Synthesized a new Introduction to Robotics class at the Senior/Graduate level at FAU (Spring 2015)
    - Created 2 new robotic lab exercises for the Introduction to Robotics Class
- Reviewer for the GRIP grant program at FAU (4/21/2015)
- Served as a judge for the Graduate and Professional Student Association poster day (3/13/2015)
- Gave robotics seminar presentation for Ocean & Mechanical Engineering (3/10/2015)
- Developed new graduate course: “Robot Design, Control, and Applications II”
- Delivered research seminar for the Biomedical Engineering Department at the University of Akron, 3/23/2012
    - Biomedical Signal Processing and Control: Applications to Prosthetics and Electrosurgery
- Volunteered to guide high school students for the Women In Engineering Program (6/18/2010, 6/2011).
- Gave research presentation at the ASME meeting at the University of Akron, 11/9/2008
    - Adaptive Nonlinear Control of Powered Prostheses With Neural and Enhanced Visual Feedback

CURRICULUM VITAE

GREGG B. FIELDS, Ph.D.

PERSONAL DATA

Date of Birth:	October 12, 1959
Place of Birth:	New York, NY
Home Address:	15 Carrick Road Palm Beach Gardens, FL 33418
Home Phone:	561-318-8277
Work Address:	Florida Atlantic University Department of Chemistry & Biochemistry 5353 Parkside Drive, Building MC17, Room 211 Jupiter, FL 33458
Work Phone:	561-799-8577 (Office) 561-297-2759 (Fax)
Electronic Mail Address:	fieldsg@fau.edu; gfields@scripps.edu
Web Site:	http://chemistry.fau.edu/directory/fieldsg.php http://www.fau.edu/i-health/about/

EDUCATION

1976-1979	A.A., Chemistry, Broward Community College, Davie, FL 33314
1979-1982	B.S., Department of Chemistry, University of Florida, Gainesville, FL 32611
1983-1988	Ph.D., Department of Chemistry, Florida State University (FSU), Tallahassee, FL 32306

SCIENTIFIC EMPLOYMENT/ACADEMIC APPOINTMENTS

5/82-9/82	Quality Control Analytical Chemist, Key Pharmaceuticals, Incorporated, North Miami Beach, FL 33161
5/83-4/84	Teaching Assistant in Biochemistry and Organic Chemistry, Department of Chemistry, FSU
5/84-11/88	Research Assistant, Department of Chemistry, FSU
12/88-1/91	Postdoctoral Scholar with Professor Ken A. Dill, Department of Pharmaceutical Chemistry, University of California, San Francisco, CA 94143
3/90-1/91	Visiting Scientist, Peptide Synthesis Research and Development, Applied Biosystems, Incorporated, Foster City, CA 94404
2/91-5/95	Assistant Professor, Department of Laboratory Medicine and Pathology, University of Minnesota, Minneapolis, MN 55455
2/91-5/95	Assistant Professor, Biomedical Engineering Center, University of Minnesota
2/93-5/95	Assistant Professor (Joint Appointment), Department of Biochemistry, University of Minnesota
5/95-12/97	Associate Professor, Department of Laboratory Medicine and Pathology, University of Minnesota
5/95-12/97	Associate Professor, Biomedical Engineering Center, University of Minnesota, Minneapolis
5/95-12/97	Associate Professor (Joint Appointment), Department of Biochemistry, University of Minnesota
1/96-12/03	Full Member, University of Minnesota Comprehensive Cancer Research Center
12/97-7/08	Professor, Department of Chemistry and Biochemistry, Florida Atlantic University (FAU), Boca Raton, FL 33431-0991
10/99-7/08	Professor, Department of Biomedical Science, FAU
8/00-7/08	Chair, Department of Chemistry and Biochemistry, FAU
7/05-12/14	Adjunct Professor, Advanced Technology, The Scripps Research Institute (TSRI)/Scripps Florida, Jupiter, FL 33458
3/06-7/08	Full Member, H. Lee Moffitt Comprehensive Cancer Center & Research Institute, Tampa, FL 33612
10/06-12/09	Full Member, Sylvester Comprehensive Cancer Center, University of Miami Miller School of Medicine, Miami, FL 33136
1/08-12/12	Full Member, Cancer Therapy & Research Center, University of Texas Health Science Center at San Antonio (UTHSCSA), San Antonio, TX 78229-3900
8/08-12/10	Professor, Department of Biochemistry, UTHSCSA
6/09-12/10	Adjunct Professor, Department of Chemistry, The University of Texas at San Antonio, San Antonio, TX 78249

12/10-2/16	Full Member, Torrey Pines Institute for Molecular Studies (TPIMS), Port St. Lucie, FL 34987
12/10-5/12	Director of Research, TPIMS
9/11-12/14	Affiliate Professor, Departments of Biomedical Science and Chemistry, FAU
5/12-12/14	Vice President of Scientific Affairs, TPIMS
9/13-12/14	President, TPIMS (appointed, but declined)
12/14-present	Professor, Department of Chemistry and Biochemistry, FAU, Jupiter, FL 33458
12/14-6/19	Chair, Department of Chemistry and Biochemistry, FAU, Jupiter, FL
12/14-present	Director, Center for Molecular Biology & Biotechnology, FAU, Jupiter, FL
12/14-present	Adjunct Professor, Department of Chemistry, TSRI/Scripps Florida
9/16-present	Member, FAU Brain Institute
2/17-present	Member, FAU Research Core Facility Oversight Committee
3/17-present	Member, FAU 2015-2025 Strategic Planning Committee
9/17-present	Member, FAU Harbor Branch Pillar
10/17-present	Member, FAU Research Advisory Committee
11/17-present	FAU Jupiter Coordination Council
2/18-6/18	Member, Provost Search Committee, FAU
3/19-present	Jupiter Life Science Initiative (JLSI)/Legislative Budget Request (LBR) Strategy and Budget Committee, FAU
7/19-present	Executive Director, Institute for Human Health and Disease Intervention (I-HEALTH), FAU, Jupiter, FL
7/20-present	Co-Chair, Institutional Liaison Committee (ILC), FAU

HONORS

Young Investigator Award, Matrix Metalloproteinase Conference, 1989.
Young Investigator Award, 12th American Peptide Symposium, 1991.
McKnight-Land Grant Professorship, University of Minnesota, 1993-1995.
National Institutes of Health Research Career Development Award, 1994-1999.
Invited Lecturer, Carlsberg Laboratory, Valby, Denmark, 1994.
Invited Guest Editor, *Peptide Science: Comprehensive Reports & Reviews*, 1994-1996.
Invited Editor, *Methods In Enzymology*, 1995-1998.
Profiled in *Today's Life Sciences* **9**(1), January 1997, "Tumours and techniques," p. 36.
Association of Biomolecular Resource Facilities Excellence Award in Peptide Synthesis Research, 1997.
Selected as one of "2000 Outstanding Scientists of the 21st Century," 2000.
Researcher of the Year Award (Full Professor), FAU, 2000-2001.
Profiled in *Boca Raton Magazine* **23**(3), May/June 2003, "8 Florida Scientists Who Are Saving Your Life: Breakthrough Medicine - Stopping The Spread Of Cancer," pg. 98-100.
Invited Editor, *Methods In Molecular Biology*, 2003-2007.
Profiled in *Time Magazine* **163**(23), June 7, 2004, "The Secrets Of Their Success," pg. 107-110.
Distinguished Visiting Professor, Imperial College London, 2004.
Faculty of 1000 Biology, Chemical Biology Faculty, Protein Chemistry & Proteomics section, 2004-present.
Profiled in *NanoBiotech News* **3**(36), September 21, 2005, "Florida Atlantic University, Moffitt get $1M to develop liposome-based drugs," p. 7.
Researcher of the Year Award (Full Professor), FAU, 2005-2006.
Profiled in *Chemical Biology & Drug Design* **67**(2), February 2006, "Who's Who In Chemical Biology & Drug Design," p. 187.
Keynote Speaker, PepCon-2008, Shenzhen, China, 2008.
Roche U.S.-Sponsored Keynote Speaker, Chemistry & Biology of Peptides 2008, University of Nottingham, England.
BIT Life Sciences Lifetime Membership Award, 2008.
Robert A. Welch Foundation Distinguished University Chair in Chemistry, UTHSCSA, 2008-2010.
Texas Higher Education Science and Technology Acquisition and Retention (STAR) Award, 2008.
Texas Higher Education Science and Technology Acquisition and Retention (STAR) Plus Award, 2008.
Keynote Speaker, PepCon-2009, Seoul, South Korea, 2009.
Commencement Speaker, UTHSCSA, School of Graduate Sciences, 2009.
Keynote Speaker, 2nd World Cancer Congress, Beijing, China, 2009.
Plenary Lecturer, 2nd Modern Solid Phase Synthesis & Its Applications Symposium, Brisbane, Australia, 2009.
Distinguished Chair of Metalloproteinase and Multiple Sclerosis Research, TPIMS, 2010-2014.
Arthritis & Chronic Pain Research Institute Lecturer, University of Florence, Italy, 2011.

Profiled by *Journal of Biological Chemistry*, http://www.jbc.org/content/288/13/8785/suppl/DCAuthor_profile, 2013.
Profiled in *ASBMB today* **12**(5), May 2013, "Deconstructing Collagen: Insights into collagen mechanisms," p. 23.
Plenary Lecturer, 2nd Proteomics & Peptide Synthesis Core Workshop, University of Michigan, 2013.
Elected Fellow, National Academy of Inventors, 2014 [*Technology and Innovation* **17**, 75-84 (2015)].
Profiled in *International Innovation* **190**, 2015, "Constraining cancer," pp. 92-95.
Elected Fellow, American Association for the Advancement of Science (AAAS), 2015 [*Science* **350**, 1047-1049 (2015)].
Profiled in *Current Protein & Peptide Science* **17**(1), 2016, "Meet Our Editorial Board Member: Gregg B. Fields," p. 1.
President's Leadership Award, FAU, 2017-2018.
Research Park at FAU Distinguished Researcher Award, 2018.
Inducted Member, FAU Chapter of the National Academy of Inventors, 2018.

RESEARCH INTERESTS

Extracellular matrix biochemistry; synthetic protein design and construction; proteases of the extracellular matrix; cancer chemical biology; biomimetic biomaterials for drug delivery; tumor cell biology/signal transduction; solid-phase peptide synthesis methodology.

SELECTED PROFESSIONAL ACTIVITIES

Editorial Boards

Editor-In-Chief, *Journal of Biomolecular Techniques*, 2001-2011; *International Journal of Peptide Research and Therapeutics*, 2004-2019; *Journal of Cellular Physiology*, 2020-present.
Editor, *Letters in Peptide Science*, 1993-2004.
Editorial Board, *Biopolymers*, 2002-2006; *Biopolymers (Peptide Science)*, 2004-present; *Current Protein and Peptide Science*, 2000-present; *The Journal of Biological Chemistry*, 2001-2006, 2008-2013; *The Journal of Peptide Research*, 1997-2004.
Editorial Advisory Board, *Chemical Biology & Drug Design*, 2006-present; *Protein and Peptide Letters*, 1994-2004.
Section Editorial Board, *Expert Opinion on Therapeutic Patents*, 1998-2004.

Grant Reviews

Grant Proposal Reviewer: International Science Foundation, 1993; National Science Foundation, 1994, 1998-1999, 2004-2005, 2008; North Carolina Biotechnology Center, 1994; Medical Research Council of Canada, 1996; American Chemical Society Petroleum Research Fund, 1997; Research Corporation Cottrell College Science Awards, 1998, 2005-2007; Center of Biomedical Research Excellence (CoBRE), University of Kansas, 2001-2002, 2005; The Wellcome Trust, 2000, 2002, 2004, 2016; Professional Staff Congress-City University of New York (PSC-CUNY) Research Award Program, 2007; Cancer Research UK, 2007; Center of Biomedical Research Excellence (CoBRE) Center for Protease Research, North Dakota State University, 2007; Austrian Science Fund, 2007-2008, 2019; Council for Chemical Sciences (CW) of the Netherlands Organisation for Scientific Research (NWO), 2007-2008, 2015; Israel Science Foundation, 2009, 2014; Swiss National Science Foundation, 2010; Australia National Health & Medical Research Council, 2013; Center of Biomedical Research Excellence (CoBRE), University of Montana, 2014; Biotechnology and Biological Sciences Research Council (BBSRC) of the United Kingdom, 2014; Medical Research Council (MRC) of the United Kingdom, 2014; Arthritis Research UK, 2015; Deutsche Forschungsgemeinschaft (German Research Foundation), 2016; Yorkshire Cancer Research, 2017; United States - Israel Binational Science Foundation (BSF), 2018; Fonds zur Förderung der wissenschaftlichen Forschung (FWF) Austrian Science Fund, Hertha Firnberg-Programme, 2018; Research Foundation - Flanders (Fonds Wetenschappelijk Onderzoek - Vlaanderen, FWO), 2018.
Panel Member, Department of Defense CET-4 Breast Cancer Research Program, 1996.
Member, National Institutes of Health (NIH) Study Sections: Hematology-1 ZRG4-HEM-01 Small Business Innovation Research (SBIR) and Technology Transfer (STTR) Grants, 1998; Special Emphasis Panel ZRG1-CVB-02 SBIR and STTR Grants, 1999; Special Emphasis Panel ZRG1-MCHA-1, 1999; Special Emphasis Panel ZRG1-MEDB-1, 2000; Bioengineering Research Partnership Special Emphasis, 2000-2001; Tissue Engineering Special Emphasis, 2000-2002; Biochemistry, 2002; Bioorganic and Natural Products, 2002; Bioengineering Research Partnership, 2004; Neurotechnology/Engineering Special Emphasis, 2007; National Cancer Institute Discovery and Development Special Emphasis, 2007; Musculoskeletal, Oral & Skin Sciences (MOSS), 2008; Drug Discovery & Molecular Pharmacology (DMP), 2009; ARRA/Challenge Grant Program ZRG1 BST-M (58), 2009; Special Emphasis Panel ZRG1 F14-C Biotechnology Fellowships, 2009; Special Emphasis Panel ZRG1 OTC-F (55) R, 2010; National Institute on Drug Abuse (NIDA) Synthetic Peptides and Other Drugs of Abuse – Purity Determination, Stability Testing & Quantitative Analysis Panel ZDA1 JXR-D(44), 2013; National Institute of Child Health and Human Development Special Emphasis Panel ZHD1 DSR-Y (50) 1, 2016; National Institute of Child

Health and Human Development Special Emphasis Panel on Structural Birth Defects ZHD1 DRG-D (50), 2017; Oncological Sciences Fellowship Special Emphasis Panel 10 ZRG1 F09B-M (20) L, 2017; National Institute of General Medical Sciences (NIGMS) K99/R00 Pathway to Independence Panel ZGM1 TWD-8 (KR), 2018; National Institute of Neurological Disorders and Stroke (NINDS) Special Emphasis Panel ZNS1 SRB-H (05), 2019.

Member, National Center for Research Resources, Research Centers in Minority Institutions, NIH, Clark Atlanta University Site Visit, 1999.

Chair, Center for Scientific Review Special Emphasis Panel ZRG1-SSSM-2, NIH, 2001.

Chair, Reparative Medicine Study Section SSSM-1, NIH, 2003-2004.

Member, Subcommittee D: Clinical Studies, National Cancer Institute, 2004.

Invited Member, Biomaterials and Biointerfaces Study Section, NIH, 2005-2009 (invitation declined).

Site Visit Committee, Research Council of Canada, Natural Sciences and Engineering, Strategic Network Grant Program (NETGP), 2007.

Member, American Cancer Society Peer Review Committee on Institutional Research Grants, 2012-2017.

Member, Register of Expert Peer Reviewers for Italian Scientific Evaluation (REPRISE), The National Committee of Research Guarantors (CNGR) of the Italian Ministry of Education, Universities and Research (MIUR), 2018-present.

Symposia Organization and Related

Peptide Synthesis Workshop Leader, Eighth Symposium of the Protein Society, 1994.

Peptide Synthesis Workshop Leader, Ninth Symposium of the Protein Society, 1995.

Session Chair, "Peptide Structure And Design," Division of Medicinal Chemistry, 31st Annual American Chemical Society Western Regional Meeting & 4th Annual San Diego Biotech Exposition, 1995.

Session Chair, 24th Symposium of the European Peptide Society, 1996.

Member, Program Committee, 15th American Peptide Symposium, 1997.

Session Chairman, 15th American Peptide Symposium, 1997.

Co-Chair, Molecular Biophysics Symposium on Biomolecular Design, 1997.

Session Chair, Gordon Research Conference on Chemistry and Biology of Peptides, 1998.

Session Chair, Woessnerite Symposium on Proteases and Extracellular Matrix, 1998.

Session Chair, "Recent Advances in Synthetic Protein Construction and Utility," ABRF '99: Bioinformatics and Biomolecular Technologies - Linking Genomes, Proteomes and Biochemistry, 1999.

Co-Chair, 16th American Peptide Symposium: Peptides for the New Millennium, 1999.

Session Chair, "Non-Globular Proteins: Folding and Function," 16th American Peptide Symposium, 1999.

Session Co-Chair, Symposium on Synthetic Macromolecules with Higher Structural Order, 219th American Chemical Society National Meeting, 2000.

Session Chair, "Collagenase Molecular Tectonics," 2003 Matrix Metalloproteinase Gordon Research Conference.

Session Chair, "New Technologies for Proteomic Profiling of Proteases," ABRF 2006.

Member, Program Committee, Modern Solid Phase Peptide Synthesis & Its Applications: An Official Satellite Symposium of the 7th International Australian Peptide Symposium, 2007.

Member, Scientific Advisory Committee, PepCon-2008.

Member, Program Committee, Modern Solid Phase Peptide Synthesis & Its Applications 2009: An Official Satellite Symposium of the 8th International Australian Peptide Symposium, 2009.

Member, Organizing Committee, 5th International Peptide Symposium/47th Japanese Peptide Symposium, 2010.

Member, 2010 Akabori Memorial Award Committee.

Session Co-Chair and Panelist, "Platform Technologies and Novel Therapeutics," Science, Partnering and Investment Forum 2012.

Session Chair, "Visualization and Control of Metalloproteases," 2015 Matrix Metalloproteinase Gordon Research Conference.

Member, 2019 Makineni Lectureship Selection Committee.

Discussion Leader, "Late-Breaking Topics," 2019 Metalloproteases Gordon Research Conference.

Member, 2021 Vincent du Vigneaud Award Selection Committee.

Member, Organizing Committee, XVth Association for Ocular Pharmacology and Therapeutics (AOPT) Meeting, 2021.

Consulting and Related

Consultant, Peptide Synthesis Research and Development, Applied Biosystems, Inc., 1991.

Consultant on applications of synthetic peptides, Bio-Metric Systems, Inc., 1991-1996.

Consultant on development of peptide synthesis reagents, Millipore Corporation, 1992-1994.

Member, Scientific Advisory Board, BioStratum, Inc., 1994-1997.

Consultant on applications of synthetic peptides for type IV collagen related disease states, BioStratum, Inc., 1994-1997.
Consultant on peptide chemistry, Mallinckrodt Chemical, Inc., 1994-2004.
Member, Scientific and Business Advisory Board, Xenna Corporation, 1998-2012.
Consultant on conopeptide chemistry, Cognetix, Inc., 2000-2001.
Consultant on peptide chemistry, Peptisyntha/Solvay, 2002-2010.
External Reviewer, Department of Chemistry and Biochemistry, The University of North Carolina - Greensboro, 2007-2008.
Co-Founder, Nano Wound Devices, Inc., 2011-2015.
Member, Executive Steering Committee and Industry Advisory Council, Banner Center for Life Sciences, 2012.
Member, Advisory Board, Ali's Alliance: The Alison Arnesen Cowan Cancer Resource & Support List, 2012-2016.
Member, Palm Beach State College Biotechnology Business Partnership Council, 2013-2014.
Member, Scientific Advisory Board, Akron Biotech, 2012-present.
Consultant, Plastic Surgery Innovations, 2013-present.
Trustee, Alzheimer's and Aging Research Center, 2013-2016.
Trustee, Diabetes National Research Group, 2013-2016.
Trustee, Osteoporosis and Breast Cancer Research Group, 2013-2016.
Co-Founder and Vice President, MMP Biopharma, Inc., 2017-present.
External Evaluator, Foundation for Polish Science (FNP) Prize, 2019.

MEMBERSHIPS AND OFFICES IN PROFESSIONAL SOCIETIES

Member, American Chemical Society, 1986-present; European Peptide Society, 1996-2001; American Society for Cell Biology, 1998-2005; Protein Society, 2001-2005; American Society for Biochemistry and Molecular Biology, 2001-2013; Society for Melanoma Research, 2004-2008; American Association for the Advancement of Science, 2011-present.
American Peptide Society Charter Member, 1990-2015.
Association of Biomolecular Resource Facilities (ABRF) Research Committee on Peptide Synthesis and Mass Spectrometry Member, 1991-1996.
Facility Director, ABRF, 1992-2010.
Co-Chair, ABRF Research Committee on Peptide Synthesis and Mass Spectrometry, 1992.
Chair, ABRF Research Committee on Peptide Synthesis and Mass Spectrometry, 1992-1994.
Chairman, American Peptide Society Publications Committee, 1993-1995.
Member, American Peptide Society Publications Committee, 1995-1997.
New York Academy of Sciences Active Member, 1994-1997.
American Peptide Society Council, 1997-2003.
President-Elect, American Peptide Society, 2007-2009.
President, American Peptide Society, 2009-2011.
Past President, American Peptide Society, 2011-2013.
Member, Federation of American Societies for Experimental Biology (FASEB) Board of Directors (American Peptide Society Representative), 2012-2013.
Member, American Chemical Society Insight Lab, 2015-present.

EXTERNALLY FUNDED RESEARCH SUPPORT (CURRENT)

1. Inhibition of Tumor Cell Surface Proteolysis, James and Esther King Biomedical Research Program 8JK01 (Gregg B. Fields, P.I.), 4/1/18-3/31/21, $708,046 total costs.
2. Local and Systemic Control of Multiple Myeloma Skeletal Colonization by MMP-13, NIH R01-CA239214 (Conor Lynch, P.I.; Gregg B. Fields, Co-P.I.), 4/1/19-3/31/24, $2,917,995 total costs ($749,995 Fields laboratory).
3. STEM Articulation and Transfer Collaborative Project, National Science Foundation (NSF) [Improving Undergraduate STEM Education (IUSE): Hispanic-Serving Institutions (HIS) program 19-540] (Becky A. Mercer, P.I.; Gregg B. Fields, Co-P.I.; Cynthia Judd, Co-P.I.; Evonne Rezler, Co-P.I.; Marina Rines, Co-P.I.), 10/1/19-9/30/24, $1,553,556 total costs.
4. Insights Into Structure-Function Relationships of Matrix Metalloproteinase 1 from Computational and Experimental Studies, NIH R15-GM132873 (Tatyana Karabencheva-Christova, P.I.; Gregg B. Fields, Collaborator), 4/1/20-3/31/23, $439,609 total costs ($112,125 Fields laboratory).

EXTERNALLY FUNDED RESEARCH SUPPORT (PENDING)

1. Memorial Cancer Institute Florida Atlantic University Cancer Center of Excellence, Florida Department of Health (Gregg B. Fields, P.I.), 1/1/21-12/31/23.
2. Autoantibody Modulation of Cartilage Turnover in Rheumatoid Arthritis, NIH R15-AI154248-01A (Gregg B. Fields, P.I.), 4/1/21-3/31/24, $426,225 total costs. Impact score 20.
3. Mechanism and Inhibition of Breast Cancer Metastasis to Bone, Bankhead-Coley Cancer Research Program (Gregg B. Fields, P.I.), 5/3/21-5/2/24, $600,000 total costs.
4. Neuroscience Research Instrumentation at FAU, Department of Defense Research and Education Program for Historically Black Colleges and Universities and Minority-Serving Institutions Equipment/Instrumentation (Gregg B. Fields, P.I.), 7/20/21-7/19/22, $547,857 total costs.
5. Pathways to Biomedical Science Careers, NIH R25 [Innovative Programs to Enhance Research Training (IPERT), PAR-19-383] (Karin D. Scarpinato, P.I.; Gregg B. Fields, Co-P.I.; Randy Blakely, Co-P.I.), 7/1/21-6/30/26, $1,815,852 total costs.

EXTERNALLY FUNDED RESEARCH SUPPORT (PRIOR)

1. Collagen Model Peptides for Study of Cancer Cell Adhesion and Spreading, American Cancer Society Institutional Research Grant 13-32-6 (Gregg B. Fields, P.I.), 1/1/92-12/31/92, $10,000 total costs.
2 The Development of Conformationally Constrained Peptides As Drugs and Therapeutic Agents (Gregg B. Fields, P.I.), Millipore Corporation, 1/1/92-12/31/94, $30,000 total costs.
3. A Study of the Osteoconductive/Osteoinductive Properties of Synthetic Peptides Derived from Extracellular Matrix Proteins, SenMed Medical Ventures (Dr. Daniel L. Mooradian, P.I.), 4/1/92-3/31/94, $400,340 total costs.
4. Collagen Models for Study of Diabetes Mellitus, NIH First Independent Research Support and Transition (FIRST) Award R29-KD44494 (Gregg B. Fields, P.I.), 9/30/92-9/29/97, $490,000 total costs.
5. Type IV Collagen Peptides: Receptors in Corneal Function, NIH R01-EY09065 (Dr. Leo T. Furcht, P.I.), 5/1/93-4/30/94, $182,865 costs (Fields' laboratory).
6. Tubulointerstitial Nephritis/Basement Membrane Antigens, NIH R01-DK36007 (Dr. Aristidis S. Charonis, P.I.), 7/1/93-6/30/95, $278,620 costs (Fields' laboratory).
7. Helical Collagen Peptides, Cell Surface Proteoglycans and Tumor Metastasis, American Cancer Society CB-101 (Drs. James B. McCarthy and Gregg B. Fields, Co-P.I.), 1/1/94-12/31/96, $318,634 total costs.
8. Molecular Mechanisms of Cell Interactions With Collagens, NIH Research Career Development Award K04-AR01929 (Gregg B. Fields, P.I.), 3/1/94-2/28/99, $297,153 total costs.
9. Peptide Inhibition of Leukocyte Responsiveness, Senmed Medical Ventures (Dr. James B. McCarthy, P.I.), 4/1/95-3/31/97, $391,254 total costs.
10. Synthetic Peptide Approaches For the Design of Substrates/Inhibitors of Matrix Metalloproteinases, Pfizer Central Research (Gregg B. Fields, P.I.), 8/1/95-6/30/99, $85,162 total costs.
11. Type IV Collagen in Melanoma Cell Invasion & Metastasis, NIH R01-CA63671 (Dr. James B. McCarthy, P.I.; Dr. Gregg B. Fields, Co-P.I.), 8/1/95-7/31/98, $564,982 total costs.
12. The Development of Type IV Collagen-Derived Sequences As Therapeutic Agents, BioStratum Incorporated (Gregg B. Fields, P.I.), 10/1/95-3/31/98, $310,000 total costs.
13. Establishment of a High Field Nuclear Magnetic Resonance Facility, National Science Foundation ARI Instrumentation Program/OSTI (Dr. Ian M. Armitage, P.I.; Dr. Kevin H. Mayo, Co-P.I.), 9/1/96-8/31/99, $860,073 total costs.
14. Interactive Materials and Devices for Medical and Biological Engineering, The Whitaker Foundation Biomedical Engineering Special Opportunity Award (Dr. Matthew Tirrell, Program Director), 10/1/96-9/30/98, $1,000,000 total costs.
15. Biomedical Engineering Center and Microtechnology Laboratory Biomedical Engineering Initiative, State of Minnesota 1998-1999 Legislative Request (Drs. Gregg B. Fields, James B. McCarthy, Ronald C. McGlennen, Daniel L. Mooradian, and Dennis Polla, Co-P.I.), 1/1/98-12/31/98, $300,000 total costs.
16. National Cancer Institute Comprehensive Cancer Center Peptide Synthesis & Design Core Facility, NIH P30-CA077598 (Dr. Gregg B. Fields, P.I.), 6/1/98-5/31/03, $294,000 total costs.
17. Collagen Structural Modulation of Tumor Behaviors, NIH R01-CA77402 (Gregg B. Fields, P.I.), 8/14/98-4/30/04, $1,029,103 total costs.
18. Tissue Engineering Using Peptide-Amphiphile Biomimetics, NIH R01-HL62427/EB000289 (Gregg B. Fields, P.I.), 7/15/98-6/30/04, $1,203,320 total costs.
19. Purchase of a 500 MHz Nuclear Magnetic Resonance Spectrometer, Kresge Foundation Science Initiative (Drs. Hank Steele, John Wiesenfeld, Gregg B. Fields, and Frank Marí, Co-P.I.), 9/17/98-9/16/00, $333,333 total costs.

20. Identification of AcrySof™ Binding Domains Within Lens Capsule Components, Alcon Laboratories (Gregg B. Fields, P.I.), 7/1/99-9/30/00, $24,168 total costs.
21. Identification of Novel Conopeptides, Cognetix Incorporated (Frank Marí, P.I.), 1/1/00-12/31/00, $35,000 total costs.
22. Isolation and Characterization of Novel Pharmacological Agents from Atlantic and Panamic Cone Snails Species, Florida Sea Grant College Program (Frank Marí, P.I.; Gregg B. Fields, Co-P.I.), 2/1/02-1/31/04, $226,000 total costs.
23. Mechanism & Inhibition of Collagenolytic Activity, NIH R01-CA98799 (Gregg B. Fields, P.I.), 3/5/03-2/29/08, $1,746,579 total costs.
24. Identification of Novel Compounds and New Targets for Cancer Therapy, FAU Center of Excellence for Biomedical and Marine Biotechnology (Gregg B. Fields, P.I.), 9/1/03-8/31/05, $95,238 total costs.
25. Characterization and Synthesis of Hydroxyconophans: A New Class of Neuropharmacological Agents from Cone Snails, Florida Sea Grant College Program (Frank Marí, P.I.; Gregg B. Fields, Co-P.I.), 2/1/04-1/31/06, $226,000 total costs.
26. Novel Pharmacological Agents from Conus regius, NIH R15-GM066004 (Frank Marí, P.I.; Gregg B. Fields, Co-P.I.), 7/1/03-6/30/06, $138,654 total costs.
27. State of Florida Center of Excellence in Biomedical and Marine Biotechnology (Larry F. Lemanski, P.I.; Russell G. Kerr, Project Director; Gregg B. Fields and 17 others, Co-P.I.), 9/1/03-8/31/07, $10,000,000 total costs.
28. Peptide-Amphiphile Biomimetics for Targeted Therapies, NIH R01-EB000289-07S1 (Gregg B. Fields, P.I.), 7/1/06-6/30/09, $219,242 total costs. Terminated after one year due to departure of postdoctoral fellow.
29. ADAMTS/MMP Drug Development, NIH X01-MH078948 (Gregg B. Fields, P.I.), 8/1/06-7/31/07, $0 total costs [PAR-05-147: Solicitation of Assays for High Throughput Screening in the Molecular Libraries Screening Centers Network].
30. MBRS Support of Continuous Research Excellence (SCORE) at Florida Atlantic University, National Institutes of Health 1S06GM073621 (Gregg B. Fields, Program Director), 6/1/05-5/31/09, $3,689,612 total costs [resigned as Program Director upon move to UTHSCSA].
31. Florida Atlantic University Institutional Research Grant, American Cancer Society IRG-08-063-01 (Gregg B. Fields, Program Director), 1/1/08-12/31/10, $270,000 total costs [resigned as Program Director upon move to UTHSCSA].
32. Neuropharmacology of Conophans and Hydroxyconophans, NIH R15-GM080737 (Frank Marí, P.I.; Gregg B. Fields, Co-P.I.), 4/12/07-3/31/10, $196,750 total costs.
33. Peptide-Amphiphile Biomimetics for Targeted Therapies, NIH R01-EB000289 (Gregg B. Fields, P.I.), 8/25/05-6/30/10, $1,013,958 total costs.
34. Nanomedicine for Inhibition of Proteolysis and Targeted Drug Delivery, Texas Higher Education STAR Award Program (Gregg B. Fields, P.I.), 8/1/08-7/31/11, $1,440,000 total costs.
35. Nanomedicine for Inhibition of Proteolysis and Targeted Drug Delivery, Texas Higher Education STAR Plus Award Program (Gregg B. Fields, P.I.), 8/1/08-7/31/11, $200,000 total costs.
36. Near Infra-Red Imaging of MMP-2/MMP-9 With a Highly Specific Optical Probe, NIH R21-CA131660 (W. Barry Edwards, P.I.; Gregg B. Fields, Collaborator), 7/1/08-4/30/11, $418,000 total costs.
37. Development of Matrix Metalloproteinase Inhibitors for Treatment of Osteoarthritis, Arthritis & Chronic Pain Research Institute International Travel Grant (Gregg B. Fields, P.I.), 11/28/11-12/2/11, $2,250 total costs.
38. Mechanism & Inhibition of Collagenolytic Activity, NIH R01-CA098799 (Gregg B. Fields, P.I.), 4/1/08-3/31/13, $1,395,029 total costs.
39. Selective Matrix Metalloproteinase Inhibition for Treatment of Multiple Sclerosis, Multiple Sclerosis National Research Institute (Gregg B. Fields, P.I.), 7/1/11-6/30/13, $120,000 total costs.
40. Towards Immune Specific Diagnosis and Prevention of Rheumatoid Arthritis, Karolinska Institutet K2009-75SX-21029-01-3 (Rikard Holmdahl, P.I.; Gregg B. Fields, Collaborator), 12/1/12-11/30/13, $60,000 total costs (Fields laboratory).
41. Molecular Target for Neuroblastoma Therapy, Department of Defense (DOD) Congressionally Directed Medical Research Programs (CDMRP) Peer Reviewed Cancer Research Program (PRCRP) Idea Award PR100563 (Linda H. Malkas, P.I.; Gregg B. Fields, Co-P.I.), 11/15/11-10/14/14, $750,000 total costs ($225,000 Fields laboratory).
42. Mechanism & Inhibition of Collagenolytic Activity Administrative Supplement, NIH R01-CA098799 (Gregg B. Fields, P.I.), 4/1/14-3/31/15, $29,000 total costs.
43. ADSC Isolation by MMPs, NIH R43-GM106469 (Claudia Zylberberg, P.I.; Gregg B. Fields, Co-P.I.), 9/15/14-3/14/15, $140,446 total costs ($49,475 Fields laboratory).

44. UTHSCSA Cardiovascular Proteomics Center, NIH/NHLBI Contract 268201000036C-0-0-1 (Merry L. Lindsey, P.I.; Gregg B. Fields, Susan T. Weintraub, Seema Ahuja, Richard A. Lange, Robert J. Chilton, John M. Erikson, Co-P.I.), 8/1/10-7/31/15, $11,854,012 total costs ($1,033,688 Fields laboratory).
45. The Role of Macrophage-Derived MMP-9 in LV Remodeling, NIH R01-HL075360 (Merry L. Lindsey, P.I.; Gregg B. Fields, Co-P.I.), 8/1/10-7/31/15, $1,863,375 total costs ($104,006 Fields laboratory).
46. The role of galectin-3 processing by MMPs in fibrosis and cardiac remodeling, FAU Mentee-Mentor Award (Mare Cudic, Mentee; Gregg B. Fields, Mentor), 4/13/15-4/12/16, $6,000 total costs ($2,000 Fields laboratory).
47. Development of Pancreatic Cancer Therapeutic Agents, Lustgarten Foundation FAU Pancreatic Cancer Program (Gregg B. Fields, P.I.), 1/1/16-12/31/16, $58,000 total costs.
48. New Probes for Matrix Metalloproteinase 13, NIH R01-AR063795 (Gregg B. Fields, P.I.), 9/17/13-7/31/17, $1,539,810 total costs.
49. Novel synthetic tools for mucin glycobiology, NIH R21-CA178754 (Mare Cudic, P.I.; Gregg B. Fields, collaborator), 9/15/14-8/31/17, $391,318 total costs ($23,555 Fields laboratory).
50. HTS for selective inhibitors of meprin alpha and beta, NIH R01-AR066676 (Dmitriy Minond, P.I.; Gregg B. Fields, collaborator), 4/24/15-3/31/18, $1,144,936 total costs ($31,914 Fields laboratory).
51. CC*DNI Networking Infrastructure: Enabling Multi-Campus, Data-Driven Science and Engineering through a 10Gb FAU DMZ, NSF (Jason O. Hallstrom, P.I.; Fraser Dalgleish, Gregg B. Fields, Borko Furht, and Michele Pergadia, Co-P.I.), 3/1/16-2/28/18, $498,006 total costs.
52. Mechanism & Inhibition of Collagenolytic Activity, NIH R01-CA098799 (Gregg B. Fields, P.I.), 4/1/13-3/31/19, $1,751,527 total costs.
53. ECM Remodeling Mechanisms in Infectious Diseases, US-Israel Binational Science Foundation (BSF) 2015180 (Irit Sagi, P.I.; Gregg B. Fields, co-P.I.), 9/16-9/20, $230,000 total costs ($92,000 Fields laboratory).

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10. Conor Lynch and Gregg B. Fields. Compounds and Methods for Inhibition of Multiple Myeloma. Patent application filed June 28, 2019. Licensed for application as an anti-cancer therapeutic by MMP Biopharma, Inc., April 11, 2019.

INVITED SEMINARS AND LECTURES

Research Conferences and International Symposia:

1. “Theory for Protein Aggregation,” Twelfth American Peptide Symposium, Massachusetts Institute of Technology, Cambridge, MA, June 18, 1991.
2. “Optimization Strategies for Fmoc Solid-Phase Peptide Synthesis: Synthesis of Triple-Helical Collagen-Model Peptides,” Second International Symposium on Innovation and Perspectives in Solid Phase Synthesis and Related Technologies, University of Kent, Canterbury, U.K., August 29, 1991.
3. “Results of the 1992 Peptide Synthesis Study,” Seventh Annual Meeting of the Association of Biomolecular Resource Facilities/Satellite Meeting of the Sixth Symposium of the Protein Society, Sheraton Harbor Island Hotel, San Diego, CA, July 25, 1992.
4. “The Use of Collagen Model Peptides to Correlate Collagen Primary and Secondary Structural Effects With the Mechanisms of Tumor Cell Adhesion, Motility, and Invasion,” Twenty-Second European Peptide Symposium, Casino Kursaal Congress Center, Interlaken, Switzerland, September 13-19, 1992.
5. “Characterization of Synthetic Peptides by a Variety of Methods Including Mass Spectrometry and Capillary Electrophoresis,” Association of Biomolecular Resource Facilities Symposium “Protein Characterization and Synthesis: Results From Analysis of Unknown ABRF Test Peptides,” 9th International Conference on Methods in Protein Sequence Analysis, Otsu, Japan, September 20, 1992.
6. “Three-Dimensional Orthogonal Solid-Phase Synthesis of Aligned Triple-Helical Collagen Model Peptides for Study of Cell Adhesion and Motility,” Midwestern Connective Tissue Workshop, Rush-Presbyterian-St. Luke's Medical Center, Chicago, IL, October 23, 1992.
7. “The Identification of Essential Amino Acid Residues for Melanoma Cell Adhesion and Spreading on Basement Membrane Collagen,” Thirteenth American Peptide Symposium, Edmonton Convention Centre, Edmonton, Alberta, Canada, June 22, 1993.
8. “Multi-Year Evaluation of Automated Solid-Phase Peptide Synthesis,” Workshop I: Approaches and Advances in Peptide Synthesis, Purification, and Analysis, Thirteenth American Peptide Symposium, Edmonton Convention Centre, Edmonton, Alberta, Canada, June 25, 1993.
9. “Combining Boc and Fmoc Chemistries for Solid-Phase Protein Synthesis,” Peptide Synthesis Workshop, Eighth Annual Meeting of the Association of Biomolecular Resource Facilities/Satellite Meeting of the Seventh Symposium of the Protein Society, Town & Country Convention Center, San Diego, CA, July 24, 1993.
10. “Results of the 1993 Peptide Synthesis Study,” Eighth Annual Meeting of the Association of Biomolecular Resource Facilities/Satellite Meeting of the Seventh Symposium of the Protein Society, Town & Country Convention Center, San Diego, CA, July 24, 1993.
11. “The Use of Non-Native and Modified Amino Acids For Defining Collagen-Mediated Biological Activities,” Third International Congress on Amino Acids, Peptides and Analogues, University of Vienna, Vienna, Austria, August 26, 1993.
12. “The Use of Synthetic Peptides for Defining Pathological and Normal Cell Interactions with the Extracellular Matrix,” Third International Symposium on Innovation and Perspectives in Solid Phase Synthesis & Complementary Technologies: Biological & Biomedical Applications, University of Oxford, Oxford, U.K., September 3, 1993.

13. “Synthesis, Characterization, and Tumor Cell Activities of Triple-Helical 'Mini-Collagens' Incorporating Native Type IV Collagen Sequences,” European Molecular Biology Organization (EMBO) Workshop 1993: Coiled-Coils, Collagen & Co-Proteins, Romantikhotel Böglerhof, Alpbach, Austria, September 5-11, 1993.
14. “Purification and Analysis of Synthetic, Triple-Helical 'Mini-Collagens' by Reversed-Phase, Size-Exclusion, and Hydrophobic Interaction HPLC,” Thirteenth International Symposium on HPLC of Proteins, Peptides and Polynucleotides, Embarcadero Center Hyatt Regency, San Francisco, CA, December 2, 1993.
15. “Cellular Recognition Processes and Collagen Triple-Helical Conformation,” Round Table II: The Search of a Bioactive Conformation, Fourth Naples Workshop On Bioactive Peptides, La Residenza Hotel, Capri, Italy, May 25, 1994.
16. “Incorporation of Posttranslational Modifications Into Synthetic Peptides: Potential Pitfalls and Solutions,” Peptide Synthesis Workshop, Ninth Annual Meeting of the Association of Biomolecular Resource Facilities/Satellite Meeting of the Eighth Symposium of the Protein Society, Town & Country Convention Center, San Diego, CA, July 9, 1994.
17. “Results of the 1994 Peptide Synthesis Study,” Ninth Annual Meeting of the Association of Biomolecular Resource Facilities/Satellite Meeting of the Eighth Symposium of the Protein Society, Town & Country Convention Center, San Diego, CA, July 9, 1994.
18. “Solvation and Aggregation Effects During Fmoc Solid-Phase Synthesis,” Symposium Honoring the Contributions of Dr. R.C. Sheppard to Peptide Science, University of Minho, Braga, Portugal, September 3, 1994.
19. “Synthetic Peptide Analysis of Conformationally Dependent and Independent Tumor Cell Adhesion Sites in Collagen,” Twenty Third European Peptide Symposium, Exhibition and Conference Centre, Braga, Portugal, September 4-10, 1994.
20. “Dissecting the Mechanisms of Tumor Cell Motility and Invasion,” Sydney Peptide Group Peptech Symposium, Prince Of Wales Medical Research Institute, Sydney, Australia, October 14, 1994.
21. “Synthetic Peptide Approaches for Dissecting Collagen-Mediated Biological Activities,” First Australian Peptide Conference: From Discovery to Therapeutics, Daydream Island Resort, Daydream Island, Queensland, Australia, October 18, 1994.
22. “Synthetic Peptides for Biological Studies: Minimizing Peptide Degradation,” Peptide Synthesis Workshop, Tenth Annual Meeting of the Association of Biomolecular Resource Facilities/Satellite Meeting of the Ninth Symposium of the Protein Society, John B. Hynes Veterans Memorial Convention Center, Boston, MA, July 8, 1995.
23. “Design Of Selective, Fluorogenic Substrates For Members Of The Matrix Metalloproteinase Family,” Fourth International Symposium on Innovation and Perspectives in Solid Phase Synthesis and Complementary Technologies, University of Edinburgh, Edinburgh, Scotland, September 15, 1995.
24. “Peptide Structure And Design,” 31st Annual American Chemical Society Western Regional Meeting & 4th Annual San Diego Biotech Exposition, Town & Country Convention Center, San Diego, CA, October 18, 1995.
25. “Cellular Activities of Branched, Triple-Helical Collagen-Model Peptides,” 31st Annual American Chemical Society Western Regional Meeting & 4th Annual San Diego Biotech Exposition, Town & Country Convention Center, San Diego, CA, October 18, 1995.
26. “Designing Protein Modules for Cellular Interactions: The Collagen Triple-Helix,” Molecular Biophysics Symposium on Protein Folding & Design, University of Minnesota, Earle Brown Center, St. Paul, MN, October 20, 1995.
27. “Promotion of Fibroblast Adhesion by Triple-Helical Peptide Models of Type I Collagen-Derived Sequences,” Sixth International Conference on the Molecular Biology and Pathology of Matrix, Thomas Jefferson University, Philadelphia, PA, June 17, 1996.
28. “Tumor Cell Interactions With Type IV Collagen: Synthetic Peptide Dissection of Post-Adhesion Signal Transduction Mechanisms,” Twenty Second Annual Lorne Conference On Protein Structure And Function, Lorne, Australia, February 13, 1997.
29. “Tumor Cell Interactions With Type IV Collagen: Synthetic Peptide Dissection of Post-Adhesion Signal Transduction Mechanisms,” Fifteenth American Peptide Symposium, Nashville Convention Center, Nashville, TN, June 16, 1997.
30. “Protein-Like Molecular Architecture: Synthesis and Application for Inducing Cellular Receptor Binding and Signal Transduction,” Fifth International Symposium on Solid Phase Synthesis & Combinatorial Chemical Libraries, Imperial College of Science, Technology and Medicine, University of London, London, England, September 5, 1997.
31. “Protein-Like Molecular Architecture: Applications for Inducing Cellular Receptor Binding and Signal Transduction,” Molecular Biophysics Symposium on Biomolecular Design, University of Minnesota, Basic Science and Biomedical Engineering Building, Minneapolis, MN, October 31, 1997.

32. “Protein-Like Molecular Architecture: Biomaterial Applications for Inducing Cellular Receptor Binding and Signal Transduction,” 1st Peptide Engineering Meeting, Osaka National Research Institute, Osaka, Japan, December 9, 1997.
33. “Protein-Like Molecular Architecture: Biomaterial Applications for Inducing Cell Binding and Spreading,” Gordon Research Conference on Chemistry and Biology of Peptides, Doubletree Hotel, Ventura, CA, February 17, 1998.
34. “Synthetic Peptide Dissection of Tumor Cell Invasion Mechanisms,” Association of Biomolecular Resource Facilities (ABRF) '98: From Genomes to Function - Technical Challenges of the Post-Genome Era, Town & Country Convention Center, San Diego, CA, March 24, 1998.
35. “Protein-Like Molecular Architecture: Synthesis, Characterization, and Potential Biomaterial Application for Inducing Cellular Activities,” Florida Annual Meeting and Exposition (FAME) ‘98, The Harley Hotel, Orlando, FL, May 8, 1998.
36. “Synthetic Triple-Helical Mini-Collagens,” Woessnerite Symposium on Proteases and Extracellular Matrix, The Lakeside Inn, Mount Dora, FL, May 23, 1998.
37. “Stabilized Collagen-Model Peptides: Potential Biomaterials, Therapeutics, and Diagnostic Agents,” Round Table II: The Search for a Bioactive Conformation, Sixth Naples Workshop on Bioactive Peptides, La Palma Hotel, Capri, Italy, July 15, 1998.
38. “Are There Simple Methods for Creating Protein-Like Architectures?,” Association of Biomolecular Resource Facilities (ABRF) '99: Bioinformatics and Biomolecular Technologies - Linking Genomes, Proteomes and Biochemistry, Durham Marriott at the Civic Center, Durham, NC, March 22, 1999.
39. “Induction of α-Helical Protein-Like Molecular Architecture by Mono- and Dialkyl Hydrocarbon Chains,” Florida Annual Meeting and Exposition (FAME) ‘99, The Harley Hotel, Orlando, FL, May 7, 1999.
40. “Simple Methods for Creating Protein-Like Architectures for Use As Targeted Therapeutic Agents,” Sixth International Symposium on Solid Phase Synthesis & Combinatorial Chemical Libraries, University of York, York, England, September 3, 1999.
41. “Kinetic Analysis of MMPs Using Fluorogenic and Non-Fluorogenic Triple-Helical Peptides,” The First General Meeting of the International Proteolysis Society, Mission Point Resort, Mackinac Island, MI, September 26, 1999.
42. “Tissue Engineering Using Peptide-Amphiphile Biomimetics,” Second Annual Tissue Engineering, Biomimetics, and Medical Implant Science (TEBMIS) Grantees Meeting, Lister Hill Auditorium, National Institutes of Health, Bethesda, MD, March 1, 2000.
43. “Peptide-Amphiphile Induction of α-Helical and Triple-Helical Structures,” Symposium on Synthetic Macromolecules with Higher Structural Order, Division of Polymer Chemistry, 219th American Chemical Society National Meeting, San Francisco, CA, March 30, 2000.
44. “Convenient Synthesis of Glycosylated Hydroxylysine Derivatives for Use in Solid-Phase Peptide Synthesis,” Florida Annual Meeting and Exposition (FAME) 2000, The Four Points Hotel, Orlando, FL, May 12, 2000.
45. “Analysis of Triple-Helical Peptidase Activity Using Fluorogenic Collagen-Model Substrates,” Cold Spring Harbor Laboratory 2001 Proteolysis & Biological Control Conference, Cold Spring Harbor Laboratories, Cold Spring Harbor, NY, May 5, 2001.
46. “Triple-Helical Peptide Analysis of Collagenolytic Protease Activity,” Seventeenth American Peptide Symposium, Town & Country Convention Center, San Diego, CA, June 10, 2001.
47. “Solid-Phase Incorporation of Unusual Amino Acids for Analysis of Tumor Cell Invasion Mechanisms,” Association of Biomolecular Resource Facilities (ABRF) 2002: Biomolecular Technologies – Tools for Discovery in Proteomics and Genomics, Renaissance Austin Hotel, Austin, TX, March 10, 2002.
48. “The Use of Triple-Helical Peptide Ligands to Dissect Unique Matrix Metalloproteinase Signaling Pathways for Melanoma Cell Receptors During Invasion of the Basement Membrane,” Proteases, Extracellular Matrix and Cancer: American Association for Cancer Research Special Conference in Cancer Research, Hilton Head Island, SC, October 10, 2002.
49. “Solid-Phase Incorporation of Unusual Amino Acids for Analysis of Tumor Cell Invasion Mechanisms,” 2003 Organic Faculty of Florida (OFF) Conference, University of Central Florida, Orlando, FL, March 1, 2003.
50. “Biochemical Approaches for Analyzing Triple-Helical Peptidase Activity and its Role in Tumor Cell Invasion,” Fargo Conference on Metalloproteinases, Holiday Inn Convention Center, Fargo, ND, May 31, 2003.
51. “Triple-Helical Peptide Ligand Dissection of Unique Melanoma Cell Signaling Pathways,” Eighteenth American Peptide Symposium, Boston Marriott Copley Place, Boston, MA, July 20, 2003.
52. “Collagenolytic Versus Triple-Helical Peptidic Activity: Implications for Understanding Collagen Catabolism,” 2003 Matrix Metalloproteinase Gordon Research Conference, Big Sky Resort, Big Sky, MT, August 19, 2003.
53. “Topological Templates for Dissecting Collagenolytic Activity and Designing Matrix Metalloproteinase and Aggrecanase Substrates,” Third General Meeting of the International Proteolysis Society, ANA Hotel Grand Court Nagoya, Nagoya, Japan, November 13, 2003.

54. "Differential Modulation of Melanoma Metalloproteinase Expression by $\alpha 2\beta 1$ Integrin and CD44 Ligands," Molecular Targets For Cancer Therapy: Third Biennial Meeting, The Don CeSar Beach Resort & Spa, St. Petersburg, FL, October 3, 2004.
55. "Therapeutic agents containing gamma-hydroxylated amino acids," Southeast Technology Expo, New Frontiers in Therapeutics: Emerging Technologies in Infectious Disease and Oncology, Research Triangle Park, NC, October 5-7, 2004.
56. "Peptide-Amphiphile Biomimetics for Targeted Therapies," Florida Annual Meeting and Exposition (FAME) 2005, Clarion Hotel and Conference Center, Orlando, FL, May 6, 2005.
57. "Target-Based Proteolytic Profiling for Characterizing Cancer Progression," Nineteenth American Peptide Symposium, Understanding Biology Using Peptides, Town & Country Convention Center, San Diego, CA, June 21, 2005.
58. "Target-Based Proteolytic Profiling for Characterizing Cancer Progression," 4th General Meeting of the International Proteolysis Society, Hotel Loews Le Concorde, Quebec City, Canada, October 17, 2005.
59. "Target-Based Proteolytic Profiling for Characterizing Cancer Progression," ABRF 2006, Long Beach Convention Center, Long Beach, CA, February 12, 2006.
60. "Targeted Drug Delivery Systems for Metastatic Melanoma," BioFlorida 8th Annual Conference, Delray Beach Marriott, Delray Beach, FL, February 26, 2006.
61. "Advances in Peptide Technologies for Protease Characterization," First Annual Degradomics Workshop/6th Canadian Proteomics Initiative Annual Conference, University of Alberta, Edmonton, Alberta, Canada, May 9, 2006.
62. "Development of "Mini-Proteins" as Novel Matrix Metalloproteinase Inhibitors and Imaging Agents," 2008 Global Cancer Congress, Safety Harbor Spa & Resort, Tampa, FL, January 28, 2008. Meeting canceled.
63. "Mechanism and Inhibition of Collagenolytic Matrix Metalloproteinases," First International Conference on Drug Design & Discovery, Dubai World Trade Centre, Dubai, United Arab Emirates, February 4, 2008.
64. "Exosite Probes and Inhibitors of Matrix Metalloproteinases," Gordon Research Conference on Chemistry and Biology of Peptides, Ventura Beach Marriott, Ventura, CA, February 21, 2008.
65. "Mechanism and Inhibition of Collagenolytic Matrix Metalloproteinases," 1st Annual Peptide & Protein Conference (PepCon-2008; Peptide & Protein Technology: From Concept to Market), Grand View Hotel, Shenzhen, China, April 19, 2008.
66. "Mechanism and Inhibition of Collagenolytic Matrix Metalloproteinases," Florida Annual Meeting and Exposition (FAME) 2008, Clarion Hotel and Conference Center, Orlando, FL, May 9, 2008.
67. "Synthesis and Application of Collagen-Model Triple-Helical Peptides," Chemistry & Biology of Peptides 2008, University of Nottingham, Nottingham, England, July 10, 2008.
68. "Mechanism and Inhibition of Collagenolytic Matrix Metalloproteinases," 2nd Annual Protein & Peptide Conference (PepCon-2009; Life, Knowledge & Bio-Economy) Keynote Forum, COEX Conference Center, Seoul, South Korea, April 2, 2009.
69. "Development of Selective, Exosite Binding Matrix Metalloproteinase Inhibitors," 21st American Peptide Symposium, Indiana University Auditorium, Bloomington, IN, June 11, 2009.
70. "New Challenges for Targeted Nanoparticles: From Cancer Stem Cells to "Theranostics"," 2nd Annual World Cancer Congress Keynote Forum, Beijing International Convention Center, Beijing, China, June 22, 2009.
71. "Development of Selective, Exosite Binding Matrix Metalloproteinase (MMP) Inhibitors," 2nd Annual World Cancer Congress, Beijing International Convention Center, Beijing, China, June 24, 2009.
72. "Development of Selective MMP-2/MMP-9 Substrates and Inhibitors," Second Lovelace CounterACT-CRCE Research Symposium, Hotel Albuquerque at Old Town, Albuquerque, NM, September 17, 2009.
73. "Synthesis of Collagen-Model Triple-Helical Peptides and Peptidomimetics," 2nd Modern Solid Phase Synthesis & Its Applications Symposium, Sea World Nara Resort, Gold Coast (Brisbane), Australia, October 8, 2009.
74. "Exploring Secondary Binding Sites (Exosites) for the Development of Selective Protease Inhibitors," 8th Australian Peptide Conference, Couran Cove, Stradbroke Island, Gold Coast (Brisbane), Australia, October 14, 2009.
75. "Triple-Helical Peptide Models for Dissecting Collagenolysis," Polymeric Materials based on Polypeptides and their Mimics: Synthesis, Characterization, and Applications Symposium, 2010 Joint Southwest/Southeast Regional American Chemical Society Meeting, New Orleans, LA, December 3, 2010.
76. "Synthesis and Application of Collagen-Model Triple-Helical Peptides," 4th Annual Protein & Peptide Conference (PepCon-2011; New Leaders in Peptide and Protein Science), Beijing International Convention Center, Beijing, China, March 24, 2011.
77. "Dissecting Collagenolysis Utilizing Triple-Helical Peptide Models," Gordon Research Conference on Matrix Metalloproteinases, Bryant University, Smithfield, RI, August 8, 2011.

78. "How Do Enzymes Catalyze Collagen Hydrolysis?," Seventh General Meeting of the International Proteolysis Society, Hilton San Diego Resort and Spa, San Diego, CA, October 18, 2011.
79. "Platform Technologies and Novel Therapeutics," Science, Partnering and Investment (SPI) Forum 2012: Gateway for the Global Life Sciences, Palm Beach County Convention Center, West Palm Beach, FL, May 21, 2012.
80. "Production and Characterization of Matrix Metalloproteinases (MMPs) Implicated in Multiple Sclerosis (MS)," 32nd European Peptide Symposium, Megaron, Athens, Greece, September 5, 2012.
81. "Nanodiamonds for Improved Cellular Responses," 1st International Symposium on Nanoparticles-Nanomaterials and Applications: ISN2A 2014, Lisbon, Portugal, January 20, 2014.
82. "Matrix Metalloproteinase•Type II Collagen Triple-Helix Complexes," COLL Network Seminar: New Approaches For Targeting Arthritis, Karolinska Institutet, Stockholm, Sweden, March 13, 2015.
83. "*In Vivo* Inhibition of MMP Activity Using Collagen-Model, Triple-Helical Peptides," Gordon Research Conference on Collagen, Colby-Sawyer College, New London, NH, July 16, 2015.
84. "New Approaches for Obtaining Selective MMP Probes," Gordon Research Conference on Matrix Metalloproteinases, Sunday River Resort, Newry, ME, August 5, 2015.
85. "Targeting Matrix Metalloproteinases," 2015 Discovery Summit, Red Rock Resort and Spa, Las Vegas, NV, September 22, 2015. Canceled due to travel problems.
86. "Structure-guided Design and Synthesis of Highly Selective Matrix Metalloproteinase 13 Inhibitors for the Treatment of Osteoarthritis," Gordon Research Conference on Proteolytic Enzymes and Their Inhibitors, Renaissance Tuscany Il Ciocco, Lucca (Barga), Italy, June 29, 2016.
87. "Structure-guided design of selective matrix metalloproteinase (MMP) inhibitors and their application in animal models of multiple sclerosis, sepsis, and osteoarthritis," Enzymology 2017: 2nd International Conference on Enzymology and Molecular Biology, Holiday Inn Aurelia, Rome, Italy, March 20, 2017.
88. "MMP Structural Biology for Guiding Selective Inhibitor Design," Gordon Research Conference on Matrix Metalloproteinases, University of New England, Biddeford, ME, July 12, 2017.
89. "Structure-guided design of selective matrix metalloproteinase (MMP) inhibitors," Rumbaugh Goodwin Institute for Cancer Research (RGICR) Symposium, Nova Southeastern University, Fort Lauderdale, FL, March 15, 2018. Symposium postponed.
90. "Biologicals As Matrix Metalloproteinase Inhibitors," 11th Annual Protein & Peptide Conference (PepCon-2018; Revealing the Secrets of Life) Keynote Forum, Miami Marriott Dadeland, Miami, FL, March 26, 2018.
91. "Triple-Helical Peptide Models For Studying Protein-Protein Interactions Modulated by Collagen Post-translational Modifications," 11th Annual Protein & Peptide Conference (PepCon-2018; Revealing the Secrets of Life), Miami Marriott Dadeland, Miami, FL, March 26, 2018.
92. "Designing Novel Biologicals Based On Proteolytic Mechanisms," Statistical Physics in Biology: A Workshop in Honor of Ken Dill, Arizona State University, Tempe, AZ, October 8, 2018.
93. Discussion Leader, "Keynote Session," Gordon Research Conference on Metalloproteases, Renaissance Tuscany Il Ciocco, Lucca (Barga), Italy, May 12, 2019.
94. "Further Consideration of the Role of Matrix Metalloproteinase 13 in Matrix Diseases," Gordon Research Conference on Collagen, Colby-Sawyer College, New London, NH, July 16, 2019.
95. "Inhibition of Tumor Cell Surface Proteolysis," James and Esther King Biomedical Research Grant Symposium, H. Lee Moffitt Cancer Center, Tampa, FL, September 19, 2019.
96. "The Institute for Human Health & Disease Intervention (I-HEALTH)," FAU Research Showcase, Boca Raton, FL, September 27, 2019.

Academia:

1. "Solvation Effects in Solid-Phase Peptide Synthesis," Bay Area Peptide Group, University of California at San Francisco, San Francisco, CA, January 18, 1991.
2. "Optimization Strategies for Fmoc Solid-Phase Peptide Synthesis and Application for the Study of Collagen-Mediated Cellular and Enzymatic Activities," Division of Radiation Sciences, Mallinckrodt Institute of Radiology, Washington University School of Medicine, St. Louis, MO, August 13, 1992.
3. "Synthesis, Characterization, and Tumor Cell Activities of Triple-Helical Collagen-Model Polypeptides," Joint Waksman Institute and Molecular Biophysics Seminar Series, Rutgers University and Robert Wood Johnson Medical School, Piscataway, NJ, March 23, 1993.
4. "*De Novo* Design and Biological Activity of Synthetic Proteins: Triple-Helical Collagen Model Polypeptides," Department of Chemistry Seminar Series, Louisiana State University, Baton Rouge, LA, October 22, 1993.

5. “Three-Dimensional Orthogonal Solid-Phase Synthesis of Triple-Helical Collagen Model Peptides and Biological Activity,” Department of Biochemistry and Molecular Biology, University of Kansas Medical Center, Kansas City, KS, April 15, 1994.
6. “Synthetic Peptide Approaches For Dissecting the Mechanisms of Tumor Cell Adhesion and Invasion,” Howard Florey Institute of Experimental Physiology and Medicine, Melbourne, Australia, October 28, 1994.
7. “Dissecting the Mechanisms of Collagen-Mediated Tumor Cell Adhesion and Motility,” Department of Chemistry, Carlsberg Laboratory, Valby, Denmark, November 11, 1994.
8. “Utilizing Synthetic Peptides to Dissect the Mechanisms of Tumor Cell Progression,” Department of Chemistry Seminar Series, Gustavus Adolphus College, Saint Peter, MN, November 6, 1995.
9. “Cellular Interactions With Collagen: Dissecting Adhesion and Signal Transduction Mechanisms,” Department of Biochemistry, UMDNJ - Robert Wood Johnson Medical School, Piscataway, NJ, June 20, 1996.
10. “Protein-Like Molecular Architecture: Synthesis and Application for Inducing Cellular Receptor Binding and Signal Transduction,” Department of Chemistry and Biochemistry, University of California at San Diego, La Jolla, CA, December 2, 1996.
11. “Self-Assembling Systems for Construction of Protein Molecular Architecture,” Centre for Drug Design and Development, University of Queensland, Brisbane, Australia, February 18, 1997.
12. “Protein-Like Molecular Architecture: Synthesis and Application for Inducing Cellular Receptor Binding and Signal Transduction,” Department of Chemistry and Biochemistry, Florida Atlantic University, Boca Raton, FL, March 28, 1997.
13. “Protein-Like Molecular Architecture: Synthesis and Application for Inducing Cellular Receptor Binding and Signal Transduction,” Department of Developmental and Molecular Biology, Albert Einstein College of Medicine, Bronx, NY, April 15, 1997.
14. “Tumor Cell Interactions With Type IV Collagen: Synthetic Peptide Dissection of Pre- and Post-Adhesion Signal Transduction Mechanisms,” Bioorganic Chemistry Seminar Series, Washington University School of Medicine, St. Louis, MO, May 16, 1997.
15. “Collagen Structural Modulation of Tumor Cell Invasion Processes,” Department of Biochemistry and Molecular Biology, University of Miami School of Medicine, Miami, FL, April 15, 1998.
16. “Engineering Synthetic Proteins to Probe Tumor Cell Invasion Mechanisms,” Department of Chemistry, University of Central Florida, Orlando, FL, September 14, 1998.
17. “Tissue Engineering Using Peptide-Amphiphile Biomimetics,” Tulane University Medical School, New Orleans, LA, February 19, 1999.
18. “Engineering Synthetic Proteins to Probe Tumor Cell Invasion Mechanisms,” Department of Chemistry, Florida International University, Miami, FL, March 5, 1999.
19. “Engineering Synthetic Proteins to Probe Tumor Cell Invasion Mechanisms,” Department of Chemistry, University of South Florida, Tampa, FL, October 7, 1999.
20. “Engineering Synthetic Proteins to Probe Tumor Cell Invasion Mechanisms,” Biochemistry/Structural Biology Seminar Series, Florida State University, Tallahassee, FL, January 18, 2000.
21. “Peptide-Amphiphile Biomimetics for Surface Modification,” Department of Chemistry, University of Miami, Miami, FL, January 28, 2000.
22. “Engineering Synthetic Proteins to Probe Tumor Cell Signaling and Invasion Mechanisms,” The Kennedy Institute of Rheumatology, Imperial College School of Medicine, London, February 11, 2000.
23. “A Chemical Approach to Probing Tumor Cell Invasion Mechanisms,” Florida Institute of Technology, Melbourne, FL, March 1, 2001.
24. “Development of Peptide-Amphiphiles for Enhancing Endothelialization at Biomaterial Surfaces,” The Kennedy Institute of Rheumatology, Imperial College School of Medicine, London, April 20, 2001.
25. “Chemical Approaches for Analysis of Tumor Cell Collagenolytic Protease Activity,” Scripps Research Institute, La Jolla, CA, June 22, 2001.
26. “Correlating the Role of Collagen and Collagenolytic Protease Activity to Tumor Cell Invasion,” College of Medicine Seminar Series, University of Florida, Gainesville, FL, September 13, 2001.
27. “Correlating the Role of Collagen and Collagenolytic Protease Activity to Tumor Cell Invasion,” Cell and Molecular Biology Department Seminar Series, Northwestern University Medical School, Chicago, IL, September 25, 2001.
28. “Development of Peptide-Amphiphiles for Enhancing Endothelialization at Biomaterial Surfaces,” Biomolecular Engineering Seminar Series, University of California at Santa Barbara, Santa Barbara, CA, October 19, 2001.
29. “Biochemical Approaches for Analyzing Triple-Helical Peptidase Activity and its Role in Tumor Cell Invasion,” University of British Columbia, Vancouver, British Columbia, Canada, September 23, 2002.
30. “Collagenolytic Versus Triple-Helical Peptidic Activity: Implications for Understanding Collagen Catabolism,” The Kennedy Institute of Rheumatology, Imperial College School of Medicine, London, November 8, 2002.

31. “Development of Peptide-Amphiphiles for Enhancing Endothelialization at Biomaterial Surfaces,” Institute for Biomedical Engineering and Department of Materials, Swiss Federal Institute of Technology (ETH)/University of Zürich, Zürich, Switzerland, December 6, 2002.
32. “Correlating the Role of Collagen and Collagenolytic Protease Activity to Tumor Cell Invasion,” University of California at San Francisco, San Francisco, CA, December 19, 2002.
33. “Correlating the Role of Collagen and Collagenolytic Protease Activity to Tumor Cell Invasion,” Washington University School of Medicine, St. Louis, MO, September 4, 2003.
34. “Development of Peptide-Amphiphiles for Enhancing Desired Endothelial Cell Behaviors at Biomaterial Surfaces,” Department of Materials Science and Engineering, University of Florida, Gainesville, FL, January 6, 2004.
35. “Defining the Roles of Collagen-Binding Receptors in Endothelial Cell Activation and Melanoma Cell Invasion,” Jefferson Institute of Molecular Medicine Science Lecture Series, Thomas Jefferson University, Philadelphia, PA, February 2, 2004.
36. “Correlating the Role of Collagen and Collagenolytic Protease Activity to Melanoma Cell Invasion,” Department of Biochemistry & Biophysics, University of Pennsylvania School of Medicine, Philadelphia, PA, February 4, 2004.
37. “Biochemical Approaches for Analyzing Triple-Helical Peptidase Activity and its Role in Tumor Cell Invasion,” CIHR Group in Matrix Dynamics, University of Toronto, Faculty of Dentistry, Toronto, Ontario, Canada, April 19, 2004.
38. “Protein Topology As An Enzyme Specificity Determinant,” Department of Chemistry Seminar Series, Louisiana State University, Baton Rouge, LA, May 4, 2004.
39. “Correlating the Role of Collagen and Collagenolytic Protease Activity to Tumor Cell Invasion,” The Kennedy Institute of Rheumatology Division, Imperial College London, London, England, May 27, 2004.
40. “Correlating the Role of Collagen and Collagenolytic Protease Activity to Tumor Cell Invasion,” Cambridge Institute for Medical Research, University of Cambridge, Cambridge, England, June 30, 2004.
41. “Biochemical Approaches for Analyzing Melanoma Metastasis,” Parc Cientific de Barcelona, University of Barcelona, Barcelona, Spain, July 22, 2004.
42. “Correlating the Role of Collagen and Collagenolytic Protease Activity to Tumor Cell Invasion,” H. Lee Moffitt Cancer Center and Research Institute, Tampa, FL, September 1, 2004.
43. “Protein Topology As A Protease Specificity Determinant,” Department of Biochemistry, University of Alberta, Edmonton, Alberta, Canada, March 2, 2005. Canceled due to travel problems.
44. “Proteolytic Profiling of the Melanoma Microenvironment: Implications for Therapeutic Intervention,” Scripps Florida, Jupiter, FL, April 21, 2005.
45. “Biochemical Approaches for Profiling the Melanoma Microenvironment, and Implications for Therapeutic Intervention,” College of Pharmacy, University of Florida, Gainesville, FL, November 9, 2005.
46. “Triple-Helical Model Systems for Dissecting the Mechanisms of Collagenolysis,” Department of Chemistry and Chemical Biology, Rutgers University, Piscataway, NJ, January 31, 2006.
47. “Biochemical Approaches for Profiling the Melanoma Microenvironment, and Implications for Therapeutic Intervention,” Basic Pharmaceutical Sciences Seminar Series, Florida A&M University, Tallahasee, FL, March 23, 2006.
48. “Biochemical Approaches for Profiling the Melanoma Microenvironment, and Implications for Therapeutic Intervention,” Department of Chemistry, University of Missouri, Rolla, MO, May 2, 2006.
49. “Target-Based Proteolytic Profiling for Characterizing Cancer Progression,” Department of Biochemistry, University of California, Riverside, CA, June 6, 2006.
50. “Biochemical Approaches for Profiling the Melanoma Microenvironment, and Implications for Therapeutic Intervention,” Molecular Analysis and Experimental Therapeutics Program, University of Miami Sylvester Cancer Center, Miami, FL, June 14, 2006.
51. “Biochemical Approaches for Profiling the Melanoma Microenvironment, and Implications for Therapeutic Intervention,” Department of Biochemistry, University of Texas Health Sciences Center, San Antonio, TX, July 5, 2006.
52. “Biochemical Approaches for Profiling the Melanoma Microenvironment, and Implications for Therapeutic Intervention,” Department of Chemistry, Barry University, Miami, FL, October 6, 2006.
53. “Proteomics Approaches for Analyzing Cancer Progression and Identifying Novel Therapeutic Agents,” Sylvester Comprehensive Cancer Center, University of Miami Miller School of Medicine, Miami, FL, February 2, 2007.
54. “The Progression of Cancer and Arthritis: Can Similar Treatments Help for Both Diseases?,” Charles E. Schmidt College of Science Frontiers in Science Seminar Series, Florida Atlantic University, Boca Raton, FL, March 22, 2007.
55. “Clues From the Extracellular Matrix for Developing Novel Therapeutic Agents,” Department of Biochemistry, University of Texas Health Sciences Center, San Antonio, TX, May 3, 2007.

56. “Clues From the Extracellular Matrix for Understanding Disease Progression and Designing Novel Therapeutic Agents,” South Carolina School of Pharmacy, University of South Carolina, Columbia, SC, May 16, 2007.
57. “Mechanism and Inhibition of Collagenolytic Matrix Metalloproteinases,” Diabetes Research Institute, University of Miami Miller School of Medicine, Miami, FL, November 26, 2007.
58. “The Bioinformatics Consortium at Florida Atlantic University,” Palm Beach Community College, Palm Beach Gardens, FL, March 26, 2008.
59. “Mechanism and Inhibition of Collagenolytic Matrix Metalloproteinases,” Greehey Children’s Cancer Research Institute, University of Texas Health Sciences Center, San Antonio, TX, October 6, 2008.
60. “Clues From the Extracellular Matrix for Developing Novel Therapeutic Agents,” Department of Molecular Medicine, University of Texas Health Sciences Center/Institute of Biotechnology, Texas Research Park Campus, San Antonio, TX, October 14, 2008.
61. “Clues From the Extracellular Matrix for Developing Novel Therapeutic Agents,” Experimental & Developmental Therapeutics Program, Cancer Therapy & Research Center, University of Texas Health Sciences Center, San Antonio, TX, November 20, 2008.
62. “*In vitro* and *in vivo* CD44/CSPG Targeting of NanoDDSs,” Southwest Research Institute, San Antonio, TX, January 22, 2009.
63. “Design of Novel, Selective Inhibitors for Collagenolytic Proteases,” Torrey Pines Institute for Molecular Studies, Port St. Lucie, FL, August 14, 2009.
64. “Design of Novel, Selective Inhibitors for Collagenolytic Proteases,” Southwest Research Institute, San Antonio, TX, January 21, 2010.
65. “Design of Novel, Selective Inhibitors for Collagenolytic Proteases,” University of Florence, Florence, Italy, February 2, 2010.
66. “Design of Novel, Selective Inhibitors of Collagenolytic Proteases,” Experimental and Developmental Therapeutics (EDT) Program Annual Retreat, Cancer Therapy & Research Center (CTRC), San Antonio, TX, July 30, 2010.
67. “Matrix Metalloproteinases in Chronic Wound Healing,” San Antonio Wound Healing Group, Southwest Research Institute, San Antonio, TX, September 16, 2010.
68. “How Do Enzymes Catalyze Collagen Hydrolysis?,” Biomedical Engineering Department, Texas A&M University, College Station, TX, January 24, 2011.
69. “How Do Enzymes Catalyze Collagen Hydrolysis?,” Department of Biochemistry, University of Missouri, Columbia, MO, February 18, 2011.
70. “How Do Enzymes Catalyze Collagen Hydrolysis?,” Department of Chemistry, Rice University, Houston, TX, March 30, 2011.
71. “Using the Mechanism of Collagenolysis to Develop Novel Matrix Metalloproteinase Inhibitors,” Torrey Pines Institute for Molecular Studies Seminar Series, Port St. Lucie, FL, September 13, 2011.
72. “Using the Mechanism of Collagenolysis to Develop Novel Matrix Metalloproteinase Inhibitors,” Beckman Research Institute, City of Hope, Duarte, CA, September 19, 2011.
73. “Design of Novel, Selective Inhibitors of Collagenolytic Proteases,” Department of Pathology, Keck School of Medicine, University of Southern California, Los Angeles, CA, September 21, 2011.
74. “Exosite Inhibitors of Metalloproteinases,” Torrey Pines Institute for Molecular Studies, La Jolla, CA, October 17, 2011.
75. “Using the Mechanism of Collagenolysis to Develop Novel Matrix Metalloproteinase Inhibitors,” Center for Molecular Biology & Biotechnology Seminar Series, Florida Atlantic University, Boca Raton FL, October 26, 2011.
76. “Exosite Inhibitors of Metalloproteinases,” University of Florence, Florence, Italy, November 30, 2011.
77. “Selective Inhibition of Membrane-Type I Matrix Metalloproteinase,” Torrey Pines Institute for Molecular Studies Faculty Discussion Group, Port St. Lucie, FL, December 14, 2011.
78. “Unraveling the Mechanism of Collagenolysis,” Department of Medical Biochemistry and Biophysics, Karolinska Institutet, Stockholm, Sweden, September 28, 2012.
79. “Unraveling the Mechanism of Collagenolysis,” National Heart, Lung, and Blood Institute (NHLBI) Tenure Track Seminar Series, National Institutes of Health, Bethesda, MD, November 13, 2012.
80. “Using the Mechanism of Collagenolysis to Develop Novel Matrix Metalloproteinase Inhibitors,” Cancer Center, Mayo Clinic Jacksonville, Jacksonville, FL, January 18, 2013.
81. “Enzyme Inhibition Based on Secondary Binding Sites,” Department of Chemistry & Biochemistry, Florida Atlantic University, Boca Raton, FL, March 1, 2013.
82. “Progress in Selective Matrix Metalloproteinase Inhibition,” Centro di Ricerca di Risonanze Magnetiche (CERM), Florence, Italy, July 4, 2013.

83. “Glycosylation of Collagen Modulates its Cellular Activities,” Toscana Life Sciences Foundation, Siena, Italy, July 5, 2013.
84. “Modulation of Cell Surface Proteolytic Activity,” Department of Biomedical Science, Charles E. Schmidt College of Medicine, Florida Atlantic University, Boca Raton, FL, September 9, 2013.
85. “Triple-Helical Peptide Models for Studying Collagen-Based Diseases,” University of Michigan Medical School, Ann Arbor, MI, October 9, 2013.
86. “What Can You Do With Chemistry?,” FAU Chemistry Club Research Symposium and Banquet, Lakeside Terrace, Boca Raton, FL, November 16, 2013.
87. “Modulation of Cell Surface Proteolytic Activity,” National Cancer Institute (NCI) Molecular Discovery Program Seminar Series, Chemical Biology Laboratory, Frederick, MD, April 24, 2014.
88. “Inhibition and Imaging of Extracellular Matrix Degradation *In Vivo*,” Max Planck Institute for Molecular Cell Biology and Genetics, Dresden, Germany, June 18, 2014.
89. “Analysis of Membrane Type 1 Matrix Metalloproteinase (MT1-MMP) Behavior at the Cell Surface,” Centro di Ricerca di Risonanze Magnetiche (CERM), Florence, Italy, June 20, 2014.
90. “Modifications to Potentially Improve PCNA-Derived Peptides As Anti-Cancer Therapeutic Agents,” Beckman Research Institute, City of Hope, Duarte, CA, July 10, 2014.
91. “Using the Mechanism of Collagenolysis to Develop Novel Matrix Metalloproteinase Probes,” The Scripps Research Institute/Scripps Florida, Jupiter, FL, January 22, 2015.
92. “Different Mechanisms of Collagenolytic Metalloproteinases,” Centro di Ricerca di Risonanze Magnetiche (CERM), Florence, Italy, June 26, 2015.
93. “Different Mechanisms of Collagenolytic Metalloproteinases,” Department of Applied Sciences, Northumbria University, Newcastle-upon-Tyne, United Kingdom, June 29, 2015.
94. “Probe Development for Analysis of Matrix Metalloproteinase Function *In Vivo*,” KU Leuven and Rega Institute for Medical Research, Leuven, Belgium, July 1, 2015.
95. “Cancer, Arthritis, and Neurodegenerative Diseases: What Do They Have in Common?,” Department of Physical Sciences, Barry University, Miami, FL, October 2, 2015.
96. “(Maybe Not So) New Approaches for Obtaining Selective MMP Probes,” Charles E. Schmidt College of Medicine Seminar Series, Florida Atlantic University, Boca Raton, FL, October 9, 2015.
97. “Probe Development for Analysis of Matrix Metalloproteinase Function *In Vivo*,” Department of Drug Discovery, Harrison School of Pharmacy, Auburn University, Auburn, AL, March 22, 2016.
98. “Structure-guided Design and Synthesis of Highly Selective Matrix Metalloproteinase 13 Inhibitors for the Treatment of Osteoarthritis,” Centro di Ricerca di Risonanze Magnetiche (CERM), Florence, Italy, March 24, 2017.
99. “Structure-guided Design of Selective Matrix Metalloproteinase (MMP) Inhibitors and Their Application in Animal Models of Disease,” Florida Atlantic University Harbor Branch, Ft. Pierce, FL, May 22, 2017.
100. “New Adventures in Matrix Metalloproteinase 13 Inhibitors,” Department of Chemistry, The Scripps Research Institute/Scripps Florida, Jupiter, FL, January 9, 2018.
101. “Modulation of Protein-Protein Interactions by Collagen Post-translational Modifications,” Center for Matrix Biology, Vanderbilt University, Nashville, TN, January 16, 2018.
102. “Structure-guided Design of Selective Matrix Metalloproteinase (MMP) Inhibitors and Their Application in Animal Models of Disease,” Department of Chemistry, Michigan Technological University, Houghton, MI, March 23, 2018.
103. “Structure-guided Design of Selective Matrix Metalloproteinase (MMP) Inhibitors and Their Application in Animal Models of Disease,” Department of Biological Regulation, Weizmann Institute of Science, Rehovot, Israel, March 29, 2018.
104. “Inhibition of Proteases Implicated in Melanoma Progression,” Dermatology Grand Rounds, University of Miami Medical School, Miami, FL, October 9, 2019.
105. Translational Research Roundtable Discussion, Miami Integrative Metabolomics Research Center, University of Miami Medical School, Miami, FL, January 29, 2020.
106. “Perspectives on New Cancer Treatments,” Virtual Research In Action Seminar Series, Florida Atlantic University, Boca Raton, FL, August 27, 2020.

Industrial/Other:

1. “Theory for Solid-Phase Peptide Synthesis,” Applied Biosystems, Incorporated, Foster City, CA, February 22, 1990.
2. “Fmoc Solid-Phase Peptide Synthesis,” Gilson Medical Electronics, Incorporated, Middleton, WI, September 13, 1991.

3. “Correlation of Solvent Effects With Solid-Phase Reactivity,” Bio-Metric Systems, Incorporated, Eden Prairie, MN, September 26, 1991.
4. “University of Minnesota Biomedical Engineering Center,” Minnesota Mining and Manufacturing (3M), St. Paul, MN, February 20, 1992.
5. “University of Minnesota Biomedical Engineering Center,” Hoechst Celanese, University of Minnesota, Minneapolis, MN, April 10, 1992.
6. “University of Minnesota Biomedical Engineering Center,” BioGen, University of Minnesota, Minneapolis, MN, May 12, 1992.
7. “University of Minnesota Biomedical Engineering Center,” Perstorp Pharma, University of Minnesota, Minneapolis, MN, November 24, 1992.
8. “University of Minnesota Biomedical Engineering Center,” ZymoGenetics, University of Minnesota, Minneapolis, MN, July 22, 1993.
9. “The Effect of Collagen Conformation on Biological Recognition Processes,” Pfizer Central Research, Pfizer Incorporated, Groton, CT, February 11, 1994.
10. “Cell Recognition and Collagen Conformation,” Tanabe Research Laboratories U.S.A., San Diego, CA, February 25, 1994.
11. “Synthetic Peptide Dissection of Extracellular Matrix Proteins and Receptors/Adhesion Molecules,” Tanabe Research Laboratories U.S.A., San Diego, CA, July 8, 1994.
12. “Synthetic Peptide Approaches For Understanding Tumor Cell Behavior,” Star Biochemicals, Torrance, CA, September 28, 1994.
13. “Synthetic Peptide Approaches For Understanding and Modulating Tumor Cell Behavior,” Mallinckrodt Chemical, Incorporated, St. Louis, MO, March 3, 1995.
14. “Potential Therapeutic Applications Of Tumor Cell Receptor Ligands,” Coulter Pharmaceutical, Palo Alto, CA, April 20, 1998.
15. “Synthetic Peptide Approaches for Dissecting Extracellular Matrix Protein-Mediated Cellular Activities,” Alcon Laboratories, Fort Worth, TX, January 28, 1999.
16. “Synthesis of Glycosylated Hydroxylysine Derivatives, and Their Use For Studying Tumor Cell Interactions With Collagen,” Degussa AG, Hanau-Wolfgang, Germany, November 5, 2001.
17. “New Approaches For Melanoma Diagnosis and Treatment,” Wachovia Wealth Management Biomedical Lunch/Lecture Series, Boca Raton, FL, March 24, 2005.
18. “New Approaches For Delivering Drugs To Cancer Cells,” Leavitt Capital Management, Boca Raton, FL, November 15, 2005.
19. “Collagen Model Systems for Evaluating Metalloproteinase Mechanisms and Identifying Novel Inhibitors,” Department of Enzymology and Mechanistic Pharmacology, GlaxoSmithKline Pharmaceuticals, Collegeville, PA, April 19, 2006.
20. “Mechanism and Inhibition of Collagenolytic Matrix Metalloproteinases,” Kinetic Concepts, Inc., San Antonio, TX, September 18, 2008.
21. “Design of Novel, Selective Inhibitors for Collagenolytic Proteases,” Chemizon, Inc., Beijing, China, June 24, 2009.
22. “Design of Novel, Selective Inhibitors of Collagenolytic Proteases,” DPT Laboratories, San Antonio, TX, March 30, 2010.
23. “Modulating Disease Progression and Minimizing Side-Effects With New Anti-Protease Therapeutics,” St. Lucie County Economic Development Council Member Luncheon, Treasure Coast Campus, Florida Atlantic University, Port St. Lucie, FL, February 7, 2012.
24. “Glycoproteolysis and Cancer Biomarkers,” Fourth Annual Retreat and Medical Symposium, Martin Medical Center, Stuart, FL, March 25, 2012.
25. “Inhibition of Metalloproteinases via Exploitation of Secondary Binding Sites,” Cytonics Corporation, Jupiter, FL, February 13, 2013.
26. “Torrey Pines Institute for Molecular Studies: Protease Therapeutics and Therapeutic Proteases,” Third Annual Palm Beach Business Group “Biotech Breakfast at the Breakers,” The Breakers Hotel, Palm Beach, FL, November 8, 2013.
27. “Methodological aspects of triple-helical peptide synthesis and functional studies of MMP interactions,” JointID Workshop: Biomarker Identification of Inflammation in Joints, Hotel Norrtull, Stockholm, Sweden, March 14, 2015.
28. “FAU STEM/Health Sciences Initiative,” Business Development Board of Palm Beach County 2015 Life Sciences FAM Tour, The Jupiter Beach Resort, Jupiter, FL, March 26, 2015.
29. “Why Can’t I Eat Sugar All Of The Time?,” The Weiss School, Palm Beach Gardens, FL, April 1, 2015.

30. “Cancer, Arthritis, and Neurodegenerative Diseases: What Do They Have in Common?,” Coffee with the Professor, FAU, Jupiter, FL, January 15, 2016.
31. “The Polymerase Chain Reaction (PCR),” The Weiss School, Palm Beach Gardens, FL, March 8, 2017.
32. “Structure-guided design of selective matrix metalloproteinase (MMP) inhibitors and their application in animal models of disease,” Bio-Science and Analytics of South Florida, FAU, Jupiter, FL, December 4, 2017.
33. “The Center for Molecular Biology & Biotechnology,” Palm Beach North Chamber of Commerce Prosperity Leadership Tour, Florida Atlantic University, Jupiter, FL, April 3, 2018.
34. “The Center for Molecular Biology & Biotechnology,” BioFlorida Palm Beach/Treasure Coast Chapter Event, Florida Atlantic University, Jupiter, FL, April 26, 2018.
35. “FAU/Deluge Biotechnologies Collaboration,” Discovery at FAU: Your Partner in Innovation, Florida Atlantic University, Boca Raton, FL, May 7, 2018.
36. “College of Science Research on the Jupiter Campus,” FAU Research Leadership Retreat, Spanish River Library, Boca Raton, FL, May 22, 2018.
37. “Cancer-related Research at FAU,” Lynn Cancer Institute, Boca Raton, FL, November 15, 2018.
38. “Perspectives on New Cancer Treatments,” Academy of Continuing Education (ACE) Lifelong Learning Center, Mandel JCC, Boynton Beach, FL, January 21, 2019.
39. “Perspectives on New Cancer Treatments,” Institute For Learning In Retirement, Boca Raton, FL, January 28, 2019.
40. “Improvement of Human Health: From Chemical Biology to Coordination of Research and Clinical Communities,” Florida Atlantic University, Boca Raton, FL, April 3, 2019.
41. “Cancer-related Research at FAU,” FAU/South Florida Proton Therapy Institute Meeting, FAU, Boca Raton, FL, April 9, 2019.
42. “So What’s the Problem with Sugar?,” Institute For Learning In Retirement, Boca Raton, FL, April 15, 2019.
43. “The Center for Molecular Biology & Biotechnology,” Tech Runway Advisory Board Meeting, Florida Atlantic University, Boca Raton, FL, July 16, 2019.
44. “Scientific Research and Societal Impact,” Future Doctor’s Reception, Florida Atlantic University, Boca Raton, FL, May 11, 2020. Canceled due to SARS-CoV-2/COVID-19.

MENTORING, THE UNIVERSITY OF MINNESOTA

Fellows:

Cynthia G. Fields, Research Fellow, 3/91-1/97; Beate Grab, Postdoctoral Associate, 4/94-10/95; Janelle L. Lauer, Research Associate, 7/94-12/97; Jennifer R. Knutson, Postdoctoral Associate, 12/95-3/96; Henriette A. Remmer, Postdoctoral Associate, 6/96-12/97; Pilar Forns, Postdoctoral Associate, 1/97-12/97.

Graduate Students:

Ying-Ching (Eric) Yu, 12/93-11/97. Ph.D. in Biomedical Engineering; Matthew V. Tirrell, co-advisor. Dissertation title: “Synthesis and Characterization of Collagenous Peptide-Amphiphiles.”

Undergraduates:

Andrew J. Miles, 10/91-6/93; Celeste Hymel, 6/92-8/92; Kristopher Josephson, 6/94-9/94; Christi M. Gendron, 9/96-6/97.

MENTORING, FLORIDA ATLANTIC UNIVERSITY

Fellows:

Pilar Forns, Postdoctoral Associate, 1/98-12/98; Janelle L. (Lauer) Lauer-Fields, Research Associate, 1/98-7/08; Stephen J. Freedman, Postdoctoral Associate, 11/98-4/99; Navdeep B. Malkar, Postdoctoral Associate, 3/99-2/02; Jeffrey A. Borgia, Postdoctoral Associate, 8/99-8/02; Thilaka Sritharan, Research Associate, 6/00-12/01; Diane Baronas-Lowell, Postdoctoral Associate, 8/01-5/06; Mare Cudic, Postdoctoral Associate, 9/03-6/08; Evonne Rezler, Postdoctoral Associate, 1/04-6/06; Carolina Moller, Postdoctoral Associate, 6/06-11/06; Sabrina Amar, Postdoctoral Associate/Assistant Research Professor, 1/15-2/17; Ania Knapinska, Postdoctoral Associate/Assistant Research Professor, 1/15-present; Maciej Stawikowski, Postdoctoral Associate/Associate Research Professor, 1/15-1/16; Hongjie Wang, Postdoctoral Associate/Assistant Research Professor, 10/18-present.

Graduate Students:

Ayala Fishel, 2/98-4/00. M.S. in Chemistry & Biochemistry. Thesis title: “Biophysical Characterization of Bioactive Peptide Amphiphiles.”

Mohammad A. Al-Ghoul, 8/00-9/03. M.S. in Chemistry & Biochemistry. Thesis title: “Construction of Mini Collagen Ligands Recognized by $\alpha 2\beta 1$ Integrin and CD44/CSPG Melanoma Receptors: New Method for the Study of Signaling Pathways.”

Dmitriy Minond, 8/02-5/06. Ph.D. in Chemistry & Biochemistry. Dissertation title: “The Roles of Substrate Sequence and Thermal Stability in the Collagenolytic Action of Matrix Metalloproteinases.”

David Khan, 12/02-10/07. Ph.D. in Chemistry & Biochemistry. Dissertation title: “Targeted Drug Delivery Utilizing a Mini-Collagen Ligand Recognized by CD44/CSPG Melanoma Receptors.”

Deepak Patel, 5/03-7/06. M.S. in Chemistry & Biochemistry. Thesis title: “Assay Development for Lysyl Hydroxylase.”

Mohammad A. Al-Ghoul, 1/04-10/07. Ph.D. in Chemistry & Biochemistry. Dissertation title: “Proteome Analysis of Melanoma Progression.”

Orsi Giricz, 9/04-6/08. Ph.D. in Chemistry & Biochemistry. Dissertation title: “Metalloprotease Profiling in Melanoma.”

Beatrix Aukszi, 9/04-9/08. Ph.D. in Chemistry & Biochemistry. Dissertation title: “Effects of Glycosylation on Melanoma Interactions with Type IV Collagen Models.”

Michal Tokmina-Roszyk, 8/13-12/19. Ph.D. in Chemistry & Biochemistry. Dissertation title: “Monitoring Collagenolysis Utilizing Triple Helical Peptide Probes.”

Mariam Ibrahim, 1/19-6/20. P.S.M. in Medical Physics. Thesis title: “Synthesis of Fluorogenic Probes Specific for Matrix Metalloproteinase 13.”

Dorota Tokmina-Roszyk, 8/13-11/20. Ph.D. in Integrative Biology. Dissertation title: “The Role of Matrix Metalloproteinase-28 in Health and Disease.”

Lillian Onwuha-Ekpete, 8/12-11/20. Ph.D. in Integrative Biology. Dissertation title: “A Study on the Clinical Relevance of Metalloproteinase Inhibition.”

Aaron McFarlane, 8/19-present.

Undergraduates:

Mark Heckathorne, 1/99-4/00; Jermaine Bowan, 1/99-4/99, 8/99-12/99; Kartik Viswanathan, 1/99-4/99; Katarzyna Pisarewicz, 5/99-12/99; James Alouidor, 8/99-12/99; Todd Broder, 8/99-8/00; Mohammed A. Al-Ghoul, 9/99-4/00; Christopher Allen, 1/00-4/01; Anjum Sayad 1/00-8/01; Shannon McDonough, 5/00-4/01; Rick Wagner, 5/00-4/01; Claudia Perez, 5/00-4/01; Neal Niemczyk, 5/00-8/01; Olivia Dalla Costa, 1/01-12/01; Guerda Etienne, 1/02-5/02; Sonya Reid, 5/03-8/03; Gian Franco Sferrazza, 5/03-12/03; Reynold Johnson, 1/04-8/04; Nandini Rambahal, 8/05-12/05; Antoinette Foster, 8/05-5/06; Eric Hilgenfeldt, 5/06-8/06; Gayle Burstein, 8/06-8/07; Claudia Zapata, 8/06-8/07; Allison Price, 8/07-12/07; Marcelo Vilarindo, 1/08-5/08; Melissa Stone, 5/08-7/08 (Summer Undergraduate Research Fellow, Yale University); Karla-Anne Knapp, 3/15-8/15; Whitney Oliveira, 3/15-12/15; Jocelyn Mark, 3/15-12/15; Christie-Anne Estrada, 3/16-5/17; Dominique Davis, 8/16-5/17; Melissa Hart, 7/17-5/18; James Mamola, 8/17-4/18; Danielle Salick, 3/18-6/18; Stephen Dietz, 6/18-7/18 (summer researcher, Arizona State University); Aaron McFarlane, 8/18-8/19; Darien Bellido de Luna, 8/18-12/19; Daniela Blanco, 11/18-3/20; Jessica Samuel, 12/18-8/19; Gary Drotleff, 2/19-8/20; Jason Schwab, 1/20-3/20; Cedric Chai, 1/20-present; Destiny Twohill, 4/20-present; Michelle Rodriguez Suarez, 4/20-8/20.

FAU High School Students:

Devin Willis, 8/19-6/20; Alexa Ernce, 4/20-present; Isabella Grande, 4/20-present.

MENTORING, UNIVERSITY OF TEXAS HEALTH SCIENCE CENTER

Fellows:

Janelle L. Lauer-Fields, Postdoctoral Associate/Fellow, 8/08-3/10; Trista Robichaud, Postdoctoral Fellow, 6/09-1/11; Margaret Ndinguri, Postdoctoral Associate, 6/09-12/10; Manishabrata Bhowmick, Postdoctoral Associate, 1/10-12/10.

MENTORING, TORREY PINES INSTITUTE FOR MOLECULAR STUDIES

Fellows:

Margaret Ndinguri, Postdoctoral Associate, 1/11-8/12; Manishabrata Bhowmick, Postdoctoral Associate, 1/11-6/14; Sabrina Amar, Postdoctoral Associate, 5/11-12/14; Ania Knapinska, Postdoctoral Associate, 8/11-12/14; Maciej Stawikowski, Postdoctoral Associate, 8/11-12/14; Sonia Pahwa, Postdoctoral Associate, 10/11-8/13.

Undergraduates:

Nicholas Jones, 5/12-8/12; Lisa Tack, 5/12-8/12; Jennifer Davis, 4/13-12/13; Sacha Chevolleau, 4/13-12/13; Lyndsay Smith, 6/14-6/17.

EXTERNAL DOCTORAL DISSERTATION COMMITTEES

Qi Meng, 1998. University of Miami, Biochemistry and Molecular Biology; Keith Brew, advisor. Dissertation title: “Structure-Function Relationships in Human Tissue Inhibitor of Metalloproteinase (TIMP).”

Matthias Lütolf, 2002. Swiss Federal Institute of Technology (ETH), Biomedical Engineering and Materials; Jeffrey A. Hubbell, advisor. Dissertation title: “Cell-Responsive Synthetic Hydrogels.”

Peter Kele, 2002. University of Miami, Chemistry; Roger M. Leblanc, advisor. Dissertation title: “Synthesis and Application of Novel Coumarin Derivatives.”

Antonia Alexandra Georgina Cecilia Claasz, 2003. Howard Florey Institute & University of Melbourne, Biochemistry and Molecular Biology; Geoffrey Tregear, John Wade, and Ross Bathgate, advisors. Dissertation title: "Properties of the Human Relaxin Receptor."

Yuxin (Jason) Chen, 2005. University of Alberta, Biochemistry; Robert S. Hodges, advisor. Dissertation title: "HPLC Methodology Development and De Novo Design of Antimicrobial Peptides."

Mark Pasqualino Del Borgo, 2005. Howard Florey Institute & University of Melbourne, Pharmacology; John Wade and Tony Hughes, advisors. Dissertation title: "Design, Synthesis and Analysis of Mimetics of Relaxin and Insulin-like Peptide 3."

Xin Du, 2013. University of British Columbia, Biochemistry & Molecular Biology; Dieter Brömme, advisor. Dissertation title: "Structural Requirements for the Respective Elastolytic and Collagenolytic Activities of Cathepsins V and K."

Yu Gao, 2014. The Scripps Research Institute/Scripps Florida; Thomas Kodadek, advisor. Dissertation title: "Conformationally Restricted Peptidomimetic Libraries for High-Throughput Screening."

Alexandra Louka, 2016. University of Florence/Centro di Ricerca di Risonanze Magnetiche (CERM); Claudio Luchinat and Marco Fragai, advisors. Dissertation title: "Design of Chimeric Proteins and Metalloproteins for the Creation of Innovative Bio-Inspired Material."

Spencer D. Wood, 2017. The Scripps Research Institute/Scripps Florida; William Roush, advisor. Dissertation title: "Chemical Synthesis and Use of *in silico* Methods for the Rational Design of Small Molecule anti-Cancer Therapeutic Candidates."

Jeremy W. Mason, 2017. The Scripps Research Institute/Scripps Florida; William Roush, advisor. Dissertation title: "Correcting Metabolic Disturbances in Disease: Part 1 – Enhancing Acetylcholine Synthesis in Alzheimer's Disease; Part 2 – Approach Towards Depleting Lipid Building-Blocks in Cardiovascular Disease."

Kevin Pels, 2017. The Scripps Research Institute/Scripps Florida; Thomas Kodadek, advisor. Dissertation title: "Synthesis of Diverse Combinatorial Libraries For Covalent & Noncovalent Engagement Of Biological Targets."

James M. Alburger, 2018. The Scripps Research Institute/Scripps Florida; William Roush, advisor. Dissertation title: "Rationally and Computationally Guided Synthesis Targeting the Inhibition of Cancer."

HONORS & AWARDS FOR MEMBERS OF THE FIELDS' LABORATORY

Beate Grab, American Peptide Society Travel Grant, 14th American Peptide Symposium, Columbus, OH, June 18-23, 1995.

Pilar Forns, American Peptide Society Travel Grant, 16th American Peptide Symposium, Minneapolis, MN, June 26 - July 1, 1999.

Diane Baronas-Lowell, Keystone Symposia Scholarship, Keystone Symposium on Signaling via Cell-Cell Interactions, Keystone, CO, March 18-23, 2003.

Janelle L. Lauer-Fields, Novartis Award, Gordon Research Conference on Matrix Metalloproteinases, Big Sky, MT, August 17-22, 2003.

Janelle L. Lauer-Fields, Glenn/American Federation for Aging Research (AFAR) Scholarship, 2004.

Evonne Rezler, BioFlorida "Legacy in Life Science" Scholarship, 2005.

Janelle L. Lauer-Fields, Scholar-In-Training Award, Cancer, Proteases, and the Tumor Microenvironment: An American Association for Cancer Research (AACR) Special Conference in Cancer Research, Bonita Springs, FL, November 30 - December 4, 2005.

Janelle L. Lauer-Fields, ASBMB Award, Experimental Biology 2006 Meeting, San Francisco, CA, April 1-5, 2006.

Janelle L. Lauer-Fields, NIH Craniofacial Oral-Biology Student Training in Academic Research (COSTAR) Postdoctoral Fellowship, 2009-2010.

Trista K. Robichaud, NIH Pathobiology of Occlusive Vascular Disease Postdoctoral Fellowship, 2009-2012.

Margaret Ndinguri, AACR Minority Scholar in Cancer Research Award, AACR 102nd Annual Meeting, Orlando, FL, April 2-6, 2011.

Margaret Ndinguri, National Organization for the Professional Advancement of Black Chemists and Chemical Engineers (NOBCChE) Advancing Science Award, NOBCChE 38th Annual Meeting, Houston, TX, April 19-22, 2011.

Margaret Ndinguri, American Peptide Society Travel Grant, 22nd American Peptide Symposium, San Diego, CA, June 25-30, 2011.

Dorota Tokmina-Roszyk, Cold Spring Harbor Scholarship, Cold Spring Harbor Laboratory Course: Proteomics, Cold Spring Harbor, NY, June 15-28, 2016.

Christie-Anne Estrada, FAU Research Summer Scholarship, 2016.

Lillian Onwuha-Ekpete, Cold Spring Harbor Scholarship, Cold Spring Harbor Laboratory Course: Metabolomics, Cold Spring Harbor, NY, June 10-26, 2017.

Michal Tokmina-Roszyk, 2017 Parkanyi Research Award, Department of Chemistry & Biochemistry, FAU.

Melissa Hart, FAU Undergraduate Research Grant, 2017.

Dorota Tokmina-Roszyk, 2018 Dissertation Year Support Award, Division of Research, FAU.
Lillian Onwuha-Ekpete, 2018 Dissertation Year Support Award, Division of Research, FAU.
Lillian Onwuha-Ekpete, 2018 American Association of Immunologists Trainee Abstract Award, Immunology 2018, Austin, TX, May 4-8, 2018.
Lillian Onwuha-Ekpete, American Association of Immunologists Travel Grant, 5th European Congress of Immunology, Amsterdam, The Netherlands, September 2-5, 2018.
Aaron McFarlane, FAU Undergraduate Research Grant, 2018.
Darien Bellido de Luna, FAU Undergraduate Research Grant, 2018.
Lillian Onwuha-Ekpete, FAU College of Medicine Graduate Student Research Day 1st Place Poster Award, April 5, 2019.
Dorota Tokmina-Roszyk, 10th Annual FAU Graduate & Professional Student Association Research Day, Poster Award, Health Category, April 5, 2019.
Dorota Tokmina-Roszyk, 10th Annual FAU Graduate & Professional Student Association Research Day, 2nd Place Poster Award, Chemistry Category, April 5, 2019.
Michal Tokmina-Roszyk, 10th Annual FAU Graduate & Professional Student Association Research Day, 3rd Place Poster Award, Chemistry Category, April 5, 2019.
Aaron McFarlane, 9th Annual FAU Undergraduate Research Symposium 1st Place Poster Award, April 8, 2019.
Gary Drotleff, 2019 John Nambu Memorial Summer Research Experience for Undergraduates Program, FAU.
Aaron McFarlane, The Honor Society of Phi Kappa Phi Love of Learning Award, 2019.
Gary Drotleff, FAU Undergraduate Research Grant, 2019.
Gary Drotleff, 2019 Undergraduate Researcher of the Year, College of Science, FAU.
Aaron McFarlane, 2020 Osher Lifelong Learning Institute Scholarship.
Lillian Onwuha-Ekpete, American Association of Immunologists Minority Scientist Travel Award, Immunology 2020, Honolulu, HI, May 8-12, 2020.

TEACHING ASSIGNMENTS, THE UNIVERSITY OF MINNESOTA

Quarter	Course Number	Course Title	Students (#)
Spring 1992	Path 8130	Cell Biology of the Extracellular Matrix	8
Fall 1993	BioC/MdBc 8001	Adv. Biochem. 1: Protein Structure & Function	25
Fall 1993	BioC 8094	Research and Literature Reports	17
Winter 1994	BioC 8094	Research and Literature Reports	15
Spring 1994	BioC 8094	Research and Literature Reports	9
Spring 1994	Path 8130	Cell Biology of the Extracellular Matrix	15
Fall 1994	Path 8140	Application of Methods for Pathobiology	5
Fall 1994	BioC/MdBc 8001	Adv. Biochem. 1: Protein Structure & Function	25
Spring 1996	Path 8130	Cell Biology of the Extracellular Matrix	15

TEACHING ASSIGNMENTS, FLORIDA ATLANTIC UNIVERSITY

Semester	Course Number	Course Title	Students (#)
Spring 1998	BCH 5505	Proteins & Enzymes	13
Fall 1998	BCH 3033	Biochemistry I	56
Spring 1999	BCH 3034	Biochemistry II	61
Fall 1999	BCH 5505	Proteins & Enzymes	14
Fall 2000	BCH 3034	Biochemistry II	45
Fall 2000	CHM 6830	Instrumentation	15
Fall 2001	CHM 6830	Instrumentation	25
Fall 2001	BCH 4035/CHM 6830	Advanced Biochemistry/Proteins & Enzymes	30
Fall 2002	CHM 6830	Instrumentation	20
Fall 2002	BCH 4035/CHM 6740	Advanced Biochemistry	22
Fall 2003	CHM 6830	Instrumentation	25
Fall 2003	BCH 4035/CHM 6740	Advanced Biochemistry	19
Spring 2004	BSC 6936	Integrative Biology II	16
Fall 2004	BCH 4035/CHM 6830	Advanced Biochemistry	22
Spring 2005	BSC 6936	Integrative Biology II	15
Fall 2005	BCH 4035/CHM 6830	Advanced Biochemistry	35
Fall 2006	BCH 4035/CHM 6830	Advanced Biochemistry	24
Spring 2007	CHM 6830	Medicinal Chemistry	18
Fall 2007	BCH 4035/CHM 6830	Advanced Biochemistry	19
Spring 2008	CHM 6830	Medicinal Chemistry	15
Fall 2015	CHM 6157	Instrumentation (two lectures)	15
Fall 2015	BSC 6390	Integrative Biology I (one lecture)	15
Fall 2015	BCH 6930	Chemical Biology	3
Spring 2017	BCH 6930/CHM 4933	Chemical Biology	11
Fall 2017	CHM 6157	Instrumentation (two lectures)	15
Fall 2018	BCH 6930/CHM 4933	Chemical Biology	7
Fall 2019	CHM 6157	Instrumentation (two lectures)	10

TEACHING ASSIGNMENTS, UNIVERSITY OF TEXAS HEALTH SCIENCE CENTER

Semester	Course Number	Course Title	Students (#)
Fall 2009	None	Medical Biochemistry	120
Fall 2009	BIOC 6035	Biomolecular Interactions	2
Spring 2010	None	Medical Biochemistry	120
Fall 2010	None	Medical Biochemistry	120

Curriculum Vitae

Address: 777 Glades Rd
Boca Raton, FL 33431
Phone: 561-297-4031
E-mail: bghoraani@fau.edu
Home page: http://biomedsignal.com

Behnaz Ghoraani, B.Sc., M.Sc., Ph.D.

EDUCATION

Postdoctoral Fellow 2010-2012
Faculty of Medicine, University of Toronto, Toronto, Canada
Doctor of Philosophy 2006–2010
Department of Electrical and Computer Engineering, Ryerson University, Toronto, Canada
Master of Applied Science 1998–2000
Department of Electronics and Electrical Engineering, Amir Kabir University of Technology, Tehran, Iran
Bachelor of Applied Science 1994–1998
Department of Electronics and Electrical Engineering, Sharif University of Technology, Tehran, Iran

RESEARCH INTERESTS

Biosensor and Biomedical signal analysis, Non-stationary Data Analytics, Machine Learning, Feature extraction and classification, Deep Learning, Time-frequency signal analysis, Pattern classification and recognition, Dictionary learning, Computer-aided clinical decision making

PROFESSIONAL AND ACADEMIC EXPERIENCE

Computer and Electrical Engineering at Florida Atlantic University, Boca Raton, FL — July 2020– present
Associate Professor – Tenured

Computer and Electrical Engineering at Florida Atlantic University, Boca Raton, FL — August 2016– June 2020
Assistant Professor – Tenure track

Institute for Sensing and Embedded Network Systems Engineering, Boca Raton, FL — August 2016– present
Faculty Fellow

Biomedical Engineering at Rochester Institute of Technology (RIT), Rochester, NY — August 2012–August 2016
Assistant Professor – Tenure track

COURSES DEVELOPED

Intro to Deep Learning - Undergraduate, Florida Atlantic University — Spring 2020

Biosignal Analysis – Graduate level, Florida Atlantic University — 2017-2018

Numerical and Statistical Analysis of Complex Biomedical System – 4th year students, RIT — 2013-2014

Biomedical Signals and Systems Analysis – 3rd year students, RIT — 2013-2014

Introduction to Biomedical Engineering I – 1st year students, RIT — 2013-2014

Engineering Analysis II– 3rd year students, RIT — 2012-2013

Computations in Genetic Engineering – Graduate level, Ryerson University — 2010-2011

Electronics and Biomedical Sensors – 4th year students, Ryerson University 2009-2010

COURSES TAUGHT

Intro to Deep Learning	Spring 2020
Biosignal Analysis	Fall 2017, 2019, 2020
Introduction to Digital Signal Processing	Spring 2017, 2019
Numerical and Statistical Analysis of Complex Biomedical System	Fall 2014, 2015
Biomedical Signals and Systems Analysis	Fall 2012 & Spring 2014, 2015, 2016
Introduction to Biomedical Engineering I	Fall 2013, 2014, 2015
Engineering Analysis II	Spring 2012
Computations in Genetic Engineering	Spring 2011
Electronics and Biomedical Sensors	Spring 2010

INTELLECTUAL PROPERTY

Systems and Methods for Localizing Signal Sources using Multi-Pole Sensors
U.S. Patent No. 10398346
Publication Date: September 3, 2019

Systems and Methods for Guiding a Multi-Pole Sensor Catheter to Locate Cardiac Arrhythmia Sources
U.S. Patent No. 10398338
Publication Date: September 3, 2019

FUNDED RESEARCH PROPOSALS

National Science Foundation (NSF) 2020-2025
CAREER: Advanced data analytics for early detection of Alzheimer's disease using wearables and smartphone $524K
Role: PI

National Science Foundation (NSF) 2019-2022
CCSS: Discovery of Individualized Disease Features for Personalized Health Monitoring $322K
Role: PI

Florida Department of Health 2019-2021
Technology-based Systems to Measure Dual-task (Motor-cognitive) Performance as a Biomarker for Early Detection of Alzheimer's Disease $94K
Role: PI

National Institute of Health (NIH) Heart, Lung, and Blood Institute 2015-2019
Catheter Guidance Algorithm for Identification of Atrial Fibrillation Ablation Targets $456K
Role: PI

National Science Foundation CNS 2017-2019
REU Site: Sensing and Smart Systems $340K
Role: Principal Personnel

ISENSE Seed Funding
Development of Preliminary Results for a Competitive External Proposal on Therapeutic Management of Patients with Parkinson's Disease — 2019-2020 — $15K
Role: PI

ISENSE Seed Funding — 2016-2017
Wearable sensor devices to measure dual-task (motor-cognitive) performance as a biomarker for neurocognitive disorders — $28K
Role: PI

Faculty Education and Development (FEAD) Grants in College of Engineering — 2015-2016
Dictionary Learning for Event Localization during Health Monitoring — $21K
Role: PI

NSF Advance Internal Grant — 2015-2016
Developing Software For High-Resolution Data Acquisition From Multiple Cameras Sustaining Sites — $8K
Role: PI

NSF Advance Internal Grant — 2014
Characterization of the Electrograms From Diagnostic Catheters to Locate Atrial Fibrillation Sustaining Sites — $10K
Role: PI

Effective Access Technology Grant at RIT — 2012-2013
Patient Awareness Instrument for Aging Populations with Atrial Fibrillation Risk — $10K

RIT Seeds Funding — 2012-2013
Detection of Electrophysiological Perturbations in the Human Heart to Improve the Treatment of Atrial Fibrillation — $5K

SELECTED HONOURS, AWARDS, AND RECOGNITIONS

Scholar of the Year Award at Florida Atlantic University, — March 2020

National Academy of Innovators award at Florida Atlantic University, — September 2019

Graduate Student received NSF travel award — May 2019
Awarded for the development of a novel algorithm for automatic assessment of disease severity in patients with Parkinson's disease using wearable sensors

Graduate Student received NSF young professional award — August 2016
Awarded for the development of a novel algorithm for automatic detection of medication states of patients with Parkinson's disease using wearable sensors

Graduate Student Selected as an IEEE EMBS Student Paper Competition Finalist — July 2016
Awarded for the development of a novel probabilistic algorithm for localization of rotors during atrial fibrillation
15 students were selected as finalists out of 258 nominations and will compete at the IEEE EMBC conference

Kate Gleason College of Engineering 2015 Award Certificate — 2015
Awarded by the KGCOE at RIT for Exemplary Performance in Engaging Students in Dissemination.

Kate Gleason College of Engineering 2015 Award Certificate 2015
Awarded by the KGCOE at RIT for Exemplary Performance in Peer-Reviewed Journals.

Graduate Student Received the Gordon K. Moe Young Investigator Award November 2015
Awarded by the Upstate New York Cardiac Electrophysiology Society for the research toward improving atrial fibrillation therapy.

Kate Gleason College of Engineering 2013 Award Certificate 2013
Awarded by the KGCOE at RIT for Exemplary Performance in Externally Disseminated Works.

Senior Member of the Institute of Electrical and Electronics (IEEE) 2012
Elevated by the IEEE for the extensive experience, which reflects professional maturity and documented achievements of significance.

Mitacs Elevate Industrial Fellowship ($65,000 for one year) 2012
Awarded by the Mitacs Inc., Canada.

The G. Gordon M. Sterling Engineering Intern Award 2011
Awarded by the Professional Engineers Ontario, Canada.

Appreciation of the extraordinary service to the IEEE Women in Engineering Society 2011
Awarded by the IEEE Toronto Section.

Ontario Graduate Scholarship in Science and Technology 2007-2010
Awarded by the Natural Sciences and Engineering Research Council of Canada.

Best Teaching Assistant Award 2008-2009
Awarded by the department of Electrical and Computer Engineering, Ryerson University.

Best Teaching Assistant Award 2008-2009
Awarded by the Faculty of Engineering, Architecture and Science, Ryerson University.

Outstanding New Leader Award In appreciation to excellent service 2008-2009
Awarded by the IEEE Toronto Section.

REVIEW DUTIES FOR GOVERNMENT PROPOSALS AND AWARDS

External Grant Reviewer - Medical Research Council of UK	2019
External Grant Reviewer – Swiss NSF	2019
External Grant Reviewer - French Fourth University Hospital Research Evaluation Committee	2019
NSF Review Panel	2014–present
National Institute of Health (NIH) Review Panel	2015–present
Committee of the Sheehan's Scholarship for Exceptional Women @ FAU	February 2017, 2019
Austrian Science Funding Reviewer	2016
AdvanceRIT Faculty Connect Grants Steering and Review Committee	2015–2016
Review Committee, ASEE WIED Mara H. Wasburn Early Engineering Educator Award	2013
TELUS Innovation Award Competition IEEE Canada	2008 and 2009

TECHNICAL PROGRAM COMMITTEE (TPC) MEMBER

IEEE Engineering in Medicine and Biology Society Conference	2020
IEEE SMC BMI Workshop and Brain Hackathon	2020
IEEE Life Sciences Conference, Sydney, Australia (’17) Montreal, Canada (’18)	2017, 2018
IEEE International Symposium on Computer-based Medical Systems (CBMS) Thessaloniki, Greece (’17) Sweden (’18)	2017, 2018
Western New York Image and Signal Processing Workshop	2013–2016
The Healthcare Innovations and Point-of-care Technologies Conference of the IEEE Engineering in Medicine and Biology Society	2014
IEEE Canada International Humanitarian Technology Conference	2014
The 27th Queen's Biennial Symposium on Communications	2014
The International Conference on Information Sciences, Signal Processing and their Application	ISSPA2012
International Conference on Digital Signal Processing	2009 and 2013
IEEE Canadian Conference on Electrical and Computer Engineering	2008 and 2011
The IEEE Toronto Inter Conference Science and Technology for Humanity	2009

REVIEW DUTIES FOR JOURNALS

IEEE Transactions on Signal Processing, IEEE Transactions on Biomedical Engineering, IEEE Biomedical Health and Informatics, Digital Signal Processing, Medical Engineering & Physics, Biomedical Signal Processing and Control, Transactions on Neural Systems & Rehabilitation Engineering, International Journal of Entropy, Cardiovascular Engineering and Technology, Neural Computing and Applications, International Journal of Advancements in Computing Technology, International Journal of PLOS ONE, Journal of Healthcare Engineering, Computers in Biology and Medicine, Numerical Methods in Biomedical Engineering, Journal of Signal, Image and Video Processing, International Journal of Computer Science and System Biology, International Journal of Molecular Sciences, British Journal of Applied Sciences and Technology, EP EuroPace, Computer Methods and Programs in Biomedicine, Computers in Biology and Medicine, Journal of Entropy, The IEEE Transactions on Audio, Speech and Language Processing, The Journal of European Association for Signal Processing (EURASIP), The Elsevier journal on Biomedical Signal Processing and Control, Metabolites (ISSN 2218-1989; CODEN: METALU), The Canadian Journal of Electrical and Computer Engineering (CJECE), MPDI Entropy, MPDI Sensors, MPDI Energies, Knowledge-based Systems, Annals of Biomedical Engineering

PROFESSIONAL AFFILIATION

Heart Rhythm Society	2015–present
Senior Member of IEEE Signal Processing Society (SPS)	2006–present
Member of IEEE Women in Engineering	2007–present
Member of IEEE Engineering in Medicine and Biology Society (EMBS)	2008–present

OTHER ACTIVITIES

Associate Editor of Associate Editor of BioMedical Engineering OnLine (BMEO) Journal	2019-present
Associate Editor of the IEEE Signal Processing Magazine eNewsletter	2019-present

Chair of the IEEE Signal Processing Society Young Professional Committee	2018-2020
Treasurer – IEEE Rochester Signal Processing Chapter	2013–2016
Section Secretary - IEEE Toronto Section	2011-2012
BMES Student Chapter Faculty Advisor	2012–2016
Chair – IEEE Canada Women in Engineering	2010–2012
Chair - IEEE Toronto Women in Engineering	2008–2011
Vice Chair - IEEE Toronto Signal Processing Chapter	2009–2012

STUDENT ADVISING

Postdoctoral

Advisor, Dr. Mark sterling – Biomedical Engineering, R.I.T 2013–2014
Now: Assistant Professor, Nazarbayev University

Current Graduate Students

Murtadha Hssayeni – Ph.D Computer Engineering, FAU	2018–present
Syed Qasim Gilani – Ph.D Electrical Engineering, FAU	2020–present

Graduated PhD/Masters Students

Prasanth Ganesan – Ph.D., FAU	2015–2019
Murtadha Hssayeni – M.S. Computer Engineering, RIT	2016
Anthony Salmin – M.S. Electrical Engineering, RIT	2016
Sathyashree Basavaraju – M.S. Electrical Engineering, RIT	2018
Vignesh Ramji – M.S. Electrical Engineering, RIT	2016
Miguel Dominguez – M.S. Electrical Engineering, RIT	2016
Prasanth Ganesan – M.S. Electrical Engineering, RIT	2015
Supachan Traitruengsakul – M.S. Electrical Engineering, RIT	2015
Daniel Sinkiewicz – BS./M.S. in Electrical Engineering, RIT	2014
Baabak Mamaghani – BS./M.S. in Electrical Engineering, RIT	2014
Steven Ladavich – B.S./M.S. in Electrical Engineering, RIT	2014

Graduate Research Assistants

Subhosit Ray – Ph.D. Electrical Engineering, FAU	2018
Ronak Patel – M.S. Electrical Engineering, RIT	2015
Jefferson Medel – B.S./M.S. Electrical Engineering, RIT	2015
Sriram Kumar – B.S./M.S. Electrical Engineering, RIT	2015

Graduate Committees

Mohammed Alharbi – [Committee Member] Ph.D. in Computer Science at FAU	2019–present

Imran Mohammed – [Committee Member] Ph.D. in Computer Science at FAU	2019–present
Zhabiz Gharibshah– [Committee Member] Ph.D. in Computer Science at FAU	2019–present
Ali Muhamed Ali – [Committee Member] Ph.D. in Electrical Engineering at FAU	2017–present
External PhD dissertation reviewer - Megha Gupta meghag@iiitd.ac.in, IIIT-Delhi, India	2019
Mohammed Alharbi – [Thesis Committee] M.S. in Computing Science at FAU	2018
Jingjia Xu– [Committee Member] Ph.D. in Computing and Information Sciences at RIT	2013–2016
Wangshi Zhao– [Committee Member] Ph.D. in Computing and Information Sciences at RIT	2013–2016
Sitong Zhou [Qualifying Exam Committee] Ph.D. in Microsystems at RIT	January 2016
Fatemeh Shahmohamad [Qualifying Exam Committee] Ph.D. in Engineering at RIT	June 2015
Behzad Bahrami [Qualifying Exam Committee] Ph.D. in Engineering at RIT	June 2015
Masoud Golshadi [Qualifying Exam Committee] Ph.D. in Microsystems at RIT	June 2013

Undergraduate Research Assistants

Lillian Boettcher – B.S. Computer Science, FAU	Spring 2019–present
Nick Hirad – B.S. Biology, FAU	Spring 2019–present
Emily Hamlin – B.S. Computer Science, Oberlin College	Spring 2019
Marquita Scott – B.S. Electrical Engineering, FAU	Spring 2018
Ali Zilouchian – B.S. Biology, UF	Summer 2018
Ashley Smith – B.S. Computer Science, UCF	Summer 2017
Luiz Alves – B.S. Electrical Engineering, UCF	Summer 2017
Kelly Nguyen – B.S. Electrical Engineering, University of Redlans	Summer 2017
Kristina Shillieto – B.S. Electrical Engineering, RIT	2015–2016
Nicholas Dacosta – B.S. Biomedical Engineering, RIT	2016–2016
Isaac Arabadjis – B.S. Biomedical Engineering, RIT	2016–2016
Alison Kahn – B.S. Biomedical Engineering, RIT	2015–2016
Erik Messier – B.S. Biomedical Engineering, RIT	2014–2015
Ryan Selby – B.S. Electrical Engineering, RIT	2015
Anup Jonchhe – B.S. Biomedical Engineering, RIT	2015
Matthew Haywood – B.S. Electrical Engineering, RIT	2014
Rachel Baumgarten – B.S. Biomedical Engineering, RIT	2014
Amy Zeller – B.S. Biomedical Engineering, RIT	2013
Andrew Tock – B.S. Biomedical Engineering, RIT	2013

INVITED TALKS

IEEE EMBS chapter of Buenaventura and Alberta section	November 2020
University of Toronto	January 2020
Speaker at Research in Action, Boca Raton Public Library	October 2019
University of Pittsburgh	September 2019
FAU Research Showcase	September 2019
BioFlorida Conference, HealthIT Advancements: Going Digital to Improve Healthcare & Treatment	October 2018
Women in Data Science Conference, Biomedical Signal Feature Extraction for Computer-assisted Clinical Decision Making	March 2018
Massachusetts General Hospital, Developing Algorithms to Localize AF ablation Targets	November 2017
FAU College of Nursing, Applying Technology to Research Proposals	November 2017
Florida Atlantic University, Women in Engineering/Computer Science Panel Discussion	November 2017
Life Sciences Career Event, BioFlorida	October 2016
University of Buffalo, Mechanical and Aerospace Seminar	November 2015
University of Rochester, Department of Biomedical Engineering, Rochester, NY	December 2014
Guest Lecture - Computer Audition, University of Rochester, Rochester, NY. November 2014	
University of Wisconsin-Milwaukee, Milwaukee, Wisconsin	September 2014
Xerox, Rochester, NY	May 2013
Rochester IEEE Section Signal Processing Society, Rochester, NY	April 2013
University of Rochester Medical Center, Rochester, NY	January 2013
The American Statistical Association of Rochester Chapter, Rochester, NY	November 2012
The IEEE Canadian Women in Engineering National Conference, Mississauga, Canada	April 2011
The IEEE EMBS Society, University of Ontario Institute of Technology, Oshawa, Canada	February 2010
National Conference on Women in Engineering, Toronto, Canada	November 2009
The IEEE Signal Processing Society, Youngstown, Ohio	November 2009

REFEREED PUBLICATIONS

Journals (underline represents students)

J1) **B. Ghoraani,** L.N. Boettcher, M. Hssayeni, A. Rosenfeld, M.I. Tolea, and J.E. Galvin, " Detection of Mild Cognitive Impairment and Alzheimer's Disease using Dual-task Gait Assessments and Machine Learning," in press, *Journal of Biomedical Signal Processing and Control,* October 2020

J2) P. Ganesan, E.M. Cherry, D.T. Huang, A. Pertsov, and **B. Ghoraani**, "Atrial fibrillation source area probability mapping using electrogram patterns of multipole catheters", *BioMedical Engineering OnLine by Springer Nature,* No. 19, Issue: 1, Pages: 1-23, May 2020.

J3) M.D. Hssayeni, M. S. Croock, A. Al-Ani, H. F. Al-khafaji, Z. A. Yahya, and B. Ghoraani, "Intracranial Hemorrhage Segmentation Using Deep Convolutional Model", Data MDPI Journals, February 2020

J4) **B. Ghoraani**, M.D. Hssayeni, M.A. Burack, J. Jimenez-Shahed, "Multilevel Features for Sensor-based Assessment of Motor Fluctuation in Parkinson's Disease Subjects", *IEEE Journal of Biomedical and Health Informatics*, Sept. 2019. 10.1109/JBHI.2019.2943866

J5) M.D. Hssayeni, M.A. Burack, J. Jimenez-Shahed, and **B. Ghoraani,** "Wearable Sensors for Estimation of Parkinsonian Tremor Severity During Free Body Movements", *Sensors MPDI Journal*, No. 19, Sept. 2019. **https://doi.org/10.3390/s19194215**

J6) **B. Ghoraani**, A.M. Suszko, R.J. Selvaraj, A. Subramanian, S. Krishnan, V.S. Chauhan, "Body Surface Distribution of T wave alternans is Modulated by Heart Rate and Ventricular Activation Sequence in Patients with Cardiomyopathy", *PLOS ONE*, 14 (4), e0214729 April 2019.

J7) P. Ganesan, E.M. Cherry, D.T. Huang, A. Pertsov, and **B. Ghoraani**, "Locating Atrial Fibrillation Rotor and Focal Sources Using Iterative Navigation of Multipole Diagnostic Catheters", *Cardiovascular engineering and technology,* Pages: 1-13, May 2019.

J8) P. Ganesan, A. Salmin, E.M. Cherry, D.T. Huang, A. Pertsov, and **B. Ghoraani**, "Iterative Navigation of Multipole Diagnostic Catheters to Locate Repeating-pattern Atrial Fibrillation Drivers", *Journal of Cardiovascular Electrophysiology*, **https://doi.org/10.1111/jce.13872**, February 2019.

J9) M.D. Hssayeni, M.A. Burack, J. Jimenez-Shahed, and **B. Ghoraani**, "Assessment of Response to Medication in Individuals with Parkinson's Disease", *Medical Engineering & Physics*, https://doi.org/10.1016/j.medengphy.2019.03.002 March 2019.

J10) M.D. Hssayeni, J. Jimenez-Shahed, and **B. Ghoraani**, "Hybrid Feature Extraction for Detection of Degree of Motor Fluctuation Severity in Parkinson's Disease Patients. *Entropy*, 21(2), p.137, January 2019.

J11) M.D. Hssayeni, M.A. Burack, J. Jimenez-Shahed and **B. Ghoraani**, "Wearable-based Mediation State Detection in Individuals with Parkinson's Disease, " *arXiv preprint arXiv:1809.06973*, 2018.

J12) S. Traitruengsakul, L. E. Seltzer, A. R. Paciorkowski, and **B. Ghoraani**, "Developing A Novel Epileptic Discharge Localization Algorithm for Electroencephalogram Infantile Spasms During Hypsarrhythmia", *Medical & Biology Engineering and Computing Journal*, Pages: 1-10, February 2017.

J13) D. Sinkiewicz, L. Friesen, **B. Ghoraani**, "A novel method for extraction of neural response from single channel cochlear implant auditory evoked potentials". Medical Engineering & Physics. 40 (2017) Pages: 47–55.

J14) **B. Ghoraani**, "Class-specific Discriminant Time-frequency Analysis Using Novel Jointly-learnt Non-negative Matrix Factorization", *EURASIP Journal on Advances in Signal Processing*, DOI: 10.1186/s13634-016-0393-4. Sept 2016.

J15) S. Ladavich and **B. Ghoraani**, "Rate-Independent Detection of Atrial Fibrillation by Statistical Modeling of Atrial Activity", *Biomedical Signal Processing and Control Journal*, Pages: 274–281, 2015.

J16) P. Ganesan, E. Cherry, A. Pertsov, and **B. Ghoraani**, "Characterization of Electrograms From Multi-polar Diagnostic Catheters During Atrial Fibrillation", *the Simulations of Heart Function Journal - BioMed Research International*, 2015.

J17) M. Sterling, D. Huang, and **B. Ghoraani**, "Developing a New Computer-aided Clinical Decision Support System For Prediction of Successful Post-cardioversion Patients With Persistent Atrial Fibrillation", *Computational and Mathematical Methods in Medicine Journal - Congestive Heart Failure*, 1(6), 2015.

J18) A. Zeller and **B. Ghoraani**, "Body Surface Mapping of T-wave Alternans Depends on the Distribution of Myocardial Scarring", *The Open Cardiovascular Medicine Journal,* 26, 2015.

J19) **B. Ghoraani**, R. Dalvi, S. Gizurarson, M. Das, A. Ha, A. Suszko, S. Krishnan, and V. Chauhan, "Localized Rotational Activation in the Left Atrium during Human Atrial Fibrillation: Relationship to Complex Fractionated Atrial Electrograms and Low Voltage Zones", *Heart Rhythm*, 10(12), Pages: 1830–1838, 2013.

J20) **B. Ghoraani**, "Selected Topics on Time-Frequency Matrix Decomposition Analysis", *Journal of Pattern Recognition and Intelligent Systems*, 1(3), Pages: 64-78, 2013.

J21) M.F. Kaleem, **B. Ghoraani,** A. Guergachi, and S. Krishnan, "Pathological Speech Signal Analysis and Classification using Empirical Mode Decomposition", Springer, *Medical & Biological Engineering & Computing (MBEC) journa*l, 10.1007/s11517-013-1051-8, 51(7), Pages: 811-821, 2013.

J22) **B. Ghoraani**, and S. Krishnan, "Discriminant Non-stationary Signal Features' Clustering Using Hard and Fuzzy Cluster Labeling" *EURASIP Journal on Advances in Signal Processing Editorial*, Pages: 2012-250, 2012

J23) **B. Ghoraani**, K. Umapathy, L. Sugavaneswaran, and S. Krishnan, "Pathological Speech Signal Analysis using Time-frequency Approaches" *Critical Reviews in Biomedical Engineering*, 40(1), Pages: 63-95, 2012.

J24) **B. Ghoraani**, S. Krishnan, R. J. Selvaraj and V. S. Chauhan, "T Wave Alternans Evaluation Using Adaptive Time-Frequency Signal Analysis and Non-negative Matrix Factorization", *Medical Engineering and Physics*, 33(6), Pages:700-711, 2011.

J25) **B. Ghoraani**, and S. Krishnan, "Time-Frequency Matrix Feature Extraction and Classification of Environmental Audio Signals", *the IEEE Transactions on Audio, Speech and Language Processing*, 19 (7), Pages: 2197 – 2209, 2011.

J26) K. Umapathy, **B. Ghoraani,** and S. Krishnan, Audio Signal Processing using Time- frequency Approaches: Coding, Classification, Fingerprinting, and Watermarking, *EURASIP Journal on Advances in Signal Processing*, Volume 2010 (2010), Article ID 451695, 28 pages.

J27) **B. Ghoraani** and S. Krishnan, "A Joint Time-Frequency and Matrix Decomposition Feature Extraction Methodology for Pathological Voice Classification", *the EURASIP Journal on Advances in Signal Processing*, vol. 2009, Article ID 928974, 11 pages, 2009, doi:10.1155/2009/928974.

Conference Proceedings and Abstracts (underline represents students)

C1) M.D. Hssayeni, J. Jimenez-Shahed, M.A. Burack, and B. Ghoraani, "Dyskinesia Severity Estimation in Patients with Parkinson's Disease Using Wearable Sensors and a Deep LSTM Network", accepted in *International Conference of the IEEE Engineering in Medicine and Biology Society (EMBC)*, Montreal, Canada, Pages: 6001-6004,July 2020.

C2) L. N. Boettcher, M.D. Hssayeni, A. Rosenfeld, M. I. Tolea, J. E. Galvin, and B. Ghoraani, "Dual-Task Gait Assessment and Machine Learning for Early-Detection of Cognitive Decline", accepted in *International Conference of the IEEE EMBC*, Montreal, Canada, Pages: 3204-3207, July 2020.

C3) M.D. Hssayeni, T. Wilcox, and B. Ghoraani, "Tensor Decomposition of Functional near-infrared spectroscopy (fNIRS) Signals for Pattern Discovery of Cognitive Response in Infants", accepted in *International Conference of the IEEE EMBC*, Montreal, Canada, Pages: 394-397,July 2020.

C4) M.D. Hssayeni, J. Jimenez-Shahed, M.A. Burack, and B. Ghoraani, "Continuous Parkinsonian Tremor Estimation Using Motion Data", *IEEE GlobalSIP*, Ottawa, Canada, November 2019.

C5) P. Ganesan, S. Rajaraman, R.L. Long, **B. Ghoraani**, and S. Antani, "Assessment of Data Augmentation Strategies Toward Performance Improvement of Abnormality Classification in Chest Radiographs," *International Conference of the IEEE Engineering in Medicine and Biology Society (EMBC)*, Berlin, Germany, July 2019.

C6) P. Ganesan, Z. Xue, S. Singh, R.L. Long, **B. Ghoraani**, and S. Antani, "Performance Evaluation of a Generative Adversarial Network for Deblurring Mobile-Phone Cervical Images," *International Conference of the IEEE Engineering in Medicine and Biology Society (EMBC)*, Berlin, Germany, July 2019.

C7) **B. Ghoraani**, "A Novel Resource-Aware Tensor Decomposition Design Based on Reinforcement Learning", *IEEE International Conference on Acoustics, Speech, and Signal Processing*, Pages: 3447-3451, May 2019.

C8) M.D. Hssayeni, M.A. Burack, J. Jimenez-Shahed, and **B. Ghoraani**, "Symptom-based, Dual-channel LSTM Network for The Estimation of Unified Parkinson's Disease Rating Scale III", *IEEE International Conference on Biomedical and Health Informatics*, May 2019.

C9) M.D. Hssayeni, M.A. Burack, J. Jimenez-Shahed, and **B. Ghoraani,** "Activity-independent detection of mediation states in individuals with Parkinson's disease using wearable sensors", *Annual meeting of the American Academy of Neurology*, Neurology 92 (15 Supplement), P2. 8-004, May 2019.

C10) **B. Ghoraani**, A.M. Suszko, R.J. Selvaraj, A. Subramanian, S. Krishnan, V.S. Chauhan, "Effectiveness of T wave Alternans Testing for Risk Stratification of Ventricular Tachyarrhythmias and Sudden Death in Patients with Cardiomyopathy", International Society for Computerized Electrocardiology Annual Conference, April 2019.

C11) P. Ganesan, E. Cherry, A. Pertsov, and **B. Ghoraani**, "Development of a Rotor-Mapping Algorithm to Locate Ablation Targets During Atrial Fibrillation", *The IEEE Life Sciences Conference*, Pages: 41-44, Montreal, Canada, October 2018,

C12) P. Ganesan, H. Zilouchian, E. Cherry, A. Pertsov, and **B. Ghoraani**, "Developing an Iterative Tracking Algorithm to Guide a Catheter Towards Atrial Fibrillation Rotor Sources in Simulated Fibrotic Tissue", *International Conference of the Computing in Cardiology*, Masstricht, Netherlands, September 2018.

C13) M. Hssayeni, J. Adams and **B. Ghoraani**, "Deep Learning for Medication Assessment of Individuals with Parkinson's Disease Using Wearable Sensors," *International Conference of the IEEE Engineering in Medicine and Biology Society (EMBC), 10.1109/EMBC.2018.8513344*, Pages: 1-4, Honolulu, Hawaii, July 2018.

C14) P. Ganesan, K. Shillieto, **B. Ghoraani**, "Simulation of Spiral Waves and Point Sources in Atrial Fibrillation with Application to Rotor Localization", *30th IEEE International Symposium on Computer-Based Medical Systems, IEEE CBMS 2017*, Pages: 379- 384Thessaloniki, Greece, June 2017.

C15) V. Ramji, M. Hssayeni, M. Burack, **B. Ghoraani**, "Parkinson's Disease Medication State Management Using Data Fusion of Wearable Sensors", *in the proceedings of the International Conference of the IEEE Biomedical and Health Informatics*, Pages: 193 - 196, Orlando, February 2017.

C16) P. Ganesan, A. Salmin, E. Cherry, A. Pertsov, D. Huang, and **B. Ghoraani**, "A Tracking Algorithm to Guide Multi-pole Diagnostic Catheters Towards Atrial Fibrillation Sustaining Sources in Simulated Fibrotic Tissue", Abstract *at Proceedings of the 38th Heart Rhythm Scientific Sessions*, Chicago, May 2017.

C17) M. Burack, M. Hssayeni, **B. Ghoraani**, "Individualized classification algorithms for OFF and ON levodopa motor states from continuous wearable motion sensor data in Parkinson disease with motor fluctuations",

at the 30th Annual Symposium on the Etiology, Pathogenesis, and Treatment of Parkinson Disease and Other Movement Disorders, September 2016, Portland, OR

C18) P. Ganesan*, A. Salmin, E. Cherry, **B. Ghoraani**, "Development of a Novel Probabilistic Algorithm for Localization of Rotors During Atrial Fibrillation", *in the proceedings of the 38th Annual International Conference of the IEEE Engineering in Medicine and Biology Society*, Pages: 493-496, Orlando, August 2016.

* The IEEE EMBC Best Student Paper Finalist

C19) K. Shillieto, P. Ganesan, A. Salmin, E. Cherry, A. Pertsov, **B. Ghoraani**, "Catheter Simulator Software Tool to Generate Electrograms of Any Multi-Polar Diagnostic Catheter from 3D Atrial Tissue", *in the proceedings of the 38th Annual International Conference of the IEEE Engineering in Medicine and Biology Society*, Pages: 2741-2744, Orlando, August 2016.

C20) M. Hssayeni, M. Burack, **B. Ghoraani**, "Automatic Assessment of Medication States of Patients with Parkinson's Disease Using Wearable Sensors", *in the proceedings of the 38th Annual International Conference of the IEEE Engineering in Medicine and Biology Society*, Pages: 6082-6085, Orlando, August 2016.

C21) A. Salmin, P. Ganesan, K. Shillieto, E. Cherry, D. Huang, A. Pertsov, **B. Ghoraani**, "A Novel Catheter-Guidance Algorithm for Localization of Atrial Fibrillation Rotor and Focal Sources", *in the proceedings of the 38th Annual International Conference of the IEEE Engineering in Medicine and Biology Society*, Pages: 501-504, Orlando, August 2016.

C22) R. Selby, A. Jonchhe, and **B. Ghoraani**, "Development of Data Acquisition Components for Simultaneous Recording of 3D Epicardial and Surface ECG Signals in the Langendorff Perfusion Apparatus", *in the proceedings of the 38th Annual International Conference of the IEEE Engineering in Medicine and Biology Society*, Pages: 2733 - 2736, Orlando, August 2016.

C23) E. Messier, **B. Ghoraani**, "Development of MATLAB Software to Control Data Acquisition from a Multichannel Systems Multi-Electrode Array", *in the proceedings of the 38th Annual International Conference of the IEEE Engineering in Medicine and Biology Society*, Pages: 3551 - 3554, Orlando, August 2016.

C24) A. Salmin, P. Ganesan, K.E. Shilieto, E. Cherry, A. Pertsov, D. Huang, and **B. Ghoraani**, "Developing and Evaluating a Novel Tracking Algorithm to Guide Multi-pole Diagnostic Catheters Towards Atrial Fibrillation Sources", Abstract *at Proceedings of the 37th Heart Rhythm Scientific Sessions*, San Francisco, CA, May 2016.

C25) A. Salmin, P. Ganesan, K.E. Shilieto, E. Cherry, A. Pertsov, D. Huang, and **B. Ghoraani**, "An Algorithm to Guide Multi-pole Diagnostic Catheters towards Atrial Fibrillation Sustaining Sites", Abstract *at Proceedings of the 21st Atrial Fibrillation Symposium*, Orlando, FL, January 2016.

C26) A. Salmin**, P. Ganesan, K.E. Shilieto, E. Cherry, A. Pertsov, and **B. Ghoraani**, "An Algorithm to Guide Multi-pole Diagnostic Catheters towards an Atrial Fibrillation Sustaining Site", Abstract *at Proceedings of the Upstate NY Cardiac Electrophysiology Society annual meeting, Rochester, NY, November, 2015, Rochester.*

** *A. Salmin received the Gordon K. Moe Young Investigator Award*

C27) S. Traitruengsakul, L. E. Seltzer, A. R. Paciorkowski, and **B. Ghoraani**, "Automatic Localization of Epileptic Spikes in EEGs of Children with Infantile Spasms", *the Proceedings of 37th Annual International IEEE EMBS*, Pages: 6194-6197, 2015.

C28) J. Medel, A. Savakis, and **B. Ghoraani**, "A Novel Time-Frequency Feature Extraction Algorithm Based on dictionary Learning", *the Proceedings of the 41st IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP)*, Pages: 4895-4899, Shanghai, China, March 2016.

C29) S. Kumar, **B. Ghoraani**, A. Savakis, "Joint and Discriminative Dictionary Learning for Facial Expression Recognition," Electronic Imaging, No. 11, Pages: 1-6, February 14-18, San Francisco, 2016.

C30) A. Salmin, P. Ganesan, K.E. Shilieto, E. Cherry, A. Pertsov, D.T. Huang, and **B. Ghoraani**, "An Algorithm to Guide Multi-pole Diagnostic Catheters Towards Atrial Fibrillation sustaining Sites", *at the 21st Atrial Fibrillation Symposium*, Orlando, Florida, Journal of Cardiovascular Electrophysiology, Vol. 27, No. 5, Page 632, May 2016.

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C56) **B. Ghoraani**, and S. Krishnan, "Chirp-based image watermarking as error-control coding", in the proceedings of *the IEEE International Conference on Intelligent Information Hiding and Multimedia Signal Processing* (IIH-MSP 2006), Dec. 2006, Pages: 647– 650.

C57) L. Le, S. Krishnan, and **B. Ghoraani**, "Discrete Polynomial Transform for Digital Image Watermarking Application", in the proceedings of *the IEEE International Conference on Multimedia & Expo* (ICME 2006), July 2006, Toronto, CA, Pages: 1569 – 1572.

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B1) P. Ganesan, M. Sterling, S. Ladavich and **B. Ghoraani**, "Computer-Aided Clinical Decision Support Systems for Atrial Fibrillation", Computer-aided Technologies - Applications in Engineering and Medicine, ISBN 978-953-51-2788-8, Book edited by Razvan Udroiu, December 2016.

B2) **B. Ghoraani**, and S. Krishnan, „Time-frequency Feature Analysis" (ISBN 978-3-8454-3582-4), *LAP LAMBERT Academic Publishing GmbH & Co. KG*, 2011.

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P2) L. N. Boettcher, M.D. Hssayeni, A. Rosenfeld, M. I. Tolea, J. E. Galvin, and B. Ghoraani, "Dual-Task Gait Assessment and Machine Learning for Early-Detection of Cognitive Decline", accepted in *International Conference of the IEEE EMBC*, Montreal, Canada, Pages: 3204-3207, July 2020.

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P4) M.D. Hssayeni, J. Jimenez-Shahed, M.A. Burack, and **B. Ghoraani**, "Continuous Parkinsonian Tremor Estimation Using Motion Data", *IEEE GlobalSIP*, Ottawa, Canada, November 2019.

P5) M.D. Hssayeni, M.A. Burack, J. Jimenez-Shahed, and **B. Ghoraani**, "Estimation of Unified Parkinson's Disease Rating Scale III: A Sensor-Type Selection Study," *International Conference of the IEEE Engineering in Medicine and Biology Society (EMBC)*, Berlin, Germany, July 2019.

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P7) M.D. Hssayeni, M.A. Burack, J. Jimenez-Shahed, and **B. Ghoraani,** "Activity-independent detection of mediation states in individuals with Parkinson's disease using wearable sensors", *Annual meeting of the American Academy of Neurology*, Neurology 92 (15 Supplement), P2. 8-004, May 2019.

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P31) M. Haywood and **B. Ghoraani**, "Cochlear Implant Artifact Reduction Methods", *Undergraduate Research Symposium*, RIT, August, 2014.

P32) S. Ladavich and **B. Ghoraani**, "Developing An Atrial Activity-Based Algorithm For Detection Of Atrial Fibrillation", *in the proceedings of the 2nd Annual Effective Access Technology Conference*, Rochester, NY June, 2014.

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P37) **B. Ghoraani**, "Detection of Electrophysiological Perturbations in the Human Heart to Improve the Treatment of Atrial Fibrillation", *Seed's funding poster,* RIT., November, 2013.

P38) A. Zeller and **B. Ghoraani**, "Sudden Cardiac Death Risk Detection", *Undergraduate Research Symposium*, RIT, August, 2013.

P39) A. Tock and **B. Ghoraani**, "Reduction of Cochlear Implant Artifacts", *Undergraduate Research Symposium*, RIT, August, 2013.

P40) **B. Ghoraani**, "Patient awareness device for aging populations with atrial fibrillation risk", *Effective Access technology conference*, RIT Inn and conference center, June 2013.

P41) S. Gizurarson, R. Dalvi, M. Das, **B. Ghoraani**, A. Ha, A. Suszko, S. Krishnan, V. Chauhan, "Identifying areas of rapid focal activity in AF by periodic component analysis. A novel target in AF ablation?", Abstract in *Heart Rhythm Society Meeting,* Denver, May, 2013.

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Professional Overview and Research Interests

The goal of my research is to investigate the function of histone modifications in health and disease, particularly in the processes of gene transcription, DNA replication, and genome integrity in response to exposure to genotoxic agents. I have a broad background in molecular biology and neuroscience, with specific training in immunology, biochemistry, and epigenetics. As a postdoctoral fellow I was the first to isolate the SAGA histone acetyltransferase complex, and identified numerous other native complexes and characterized their function in transcription. As a faculty member my research has included studies that addressed the mechanism of action and biological function of SAGA-related complexes and SAGA dysfunction in the neurodegenerative disease SCA7. My research expanded into the characterization of histone methylation, ubiquitination and phosphorylation, and the identification of “readers” of histone marks. My current interests involve the epigenomics of cellular proliferation, histone modifications that mediate resistance to genotoxic cancer chemotherapeutics, the epigenetic basis and therapeutic interventions for disease in SCA7, and in collaboration with Dr. Wendy Lynch (UVA, Dept. of Psychiatry) the molecular mechanisms underlying the efficacy of exercise as an intervention for cocaine relapse and opioid addiction. I have received funding for my research from the National Institutes of Health’s NIDDK, NIGMS, NINDS and Burroughs Wellcome and additionally as a collaborator from NIDA and NCI. I have taught, trained and mentored medical, graduate and undergraduate students and have received teaching awards that include the 2019 Jefferson Scholars Foundation Award and the medical student-nominated Mullholland Award three times. Prior to joining FAU I also served as the Associate Dean of Graduate & Medical Scientist Programs at the University of Virginia School of Medicine. I have extensive experience with multiple graduate/medical programs and training grant membership, national and international scientific review panels, journal editorial boards, and a standing membership on the American Society for Biochemistry and Molecular Biology’s meeting committee.

Education and Employment

1986-89	B.Sc. Biology and Parasitology (honors), University of Portsmouth, United Kingdom.
1989-95	Ph.D. Medicine, Karolinska Institute, Stockholm, Sweden. Advisor: Sven Pettersson. Research Area: Regulation of Immunoglobulin gene expression.
1991	Ph.D. training, Brandeis University, MA, USA. Advisor: Ranjan Sen. Research Area: Molecular Immunology.
1995-1999	Postdoctoral, Howard Hughes Medical Inst., Penn State University, USA. Advisor: Jerry Workman. Research Area: Isolation and characterization of native histone modifying complexes; Role of histone acetylation in transcription.
2000-2005	Assistant Professor, University of Virginia, School of Medicine
2005-2007	Associate Professor, University of Virginia, School of Medicine
2007-2020	Associate Professor with tenure University of Virginia, School of Medicine
2013	Visiting Scientist, GlaxoSmithKline, Stevenage, UK Research Area: Assay development and drug screening.

2019-present	Faculty Fellow of The Jefferson Scholars Foundation
2019-2020	Associate Dean for Graduate and Medical Scientist Programs University of Virginia, School of Medicine
2020-present	Visiting Associate Professor, University of Virginia, School of Medicine
2020-present	Associate Professor with tenure Florida Atlantic University, Chair E. Schmidt College of Medicine
2020-present	Affiliate Associate Professor of Biological Sciences, Florida Atlantic University, Chair E. Schmidt College of Science

Research and Teaching Honors and Awards

1990	Boehringer Ingelheim Fonds fellowship.
1991	Swedish Cancerfonden fellowship.
1992	Karolinska research fellowship.
1998	NIH postdoctoral fellowship (declined).
1998-1999	American Cancer Society postdoctoral fellowship.
1999-2004	Burroughs Wellcome Career Development Award.
2007	University of Virginia School of Medicine Award for Excellence in Teaching.
2007	Elected to the Academy of Distinguished Educators, University of Virginia.
2008-10	Class of 2011, 2012, 2013 Mulholland Award for Teaching Excellence in Foundations of Medicine.
2017 & 2018	Sloane Society Lecture.
2019	Jefferson Scholars Foundation Award for Excellence in Teaching.
2019	Faculty Fellow of The Jefferson Scholars Foundation.
2020	Elected to the Academy for Excellence in Education, University of Virginia.

Professional Experience, Memberships and Committees

University of Virginia (UVA) Affiliations: Biochemistry and Molecular Genetics Graduate Program; Neuroscience Graduate Program; Microbiology, Immunology and Cancer Graduate Program; Cell and Molecular Biology Training Program; Cancer Training Program; Neurodevelopment and Behavior Training Program; Summer Medical Scientist Training Program (MSTP); Research Internship Program (SRIP); UVA Cancer Center and Cancer Center Genetics Program.

Journal Editorial Positions:
Editorial Board, Molecular and Cellular Biology.
Editorial Board, Journal of Biological Chemistry.

Professional Membership and Committees:
Genetics Society of America Member.
American Society for Biochemistry and Molecular Biology Member.
American Society for Microbiology Member.
American Society for Biochemistry and Molecular Biology Meetings Committee Member.

National Scientific Review Panels:

Nov 2003	**NSF** (National Science Foundation) Merit Review, Biochemistry of Gene Expression Program.
Mar 2004	**NIH** (National Institutes of Health) Cell Development and Function (CDF).
Mar 2004	**NSF** Merit Review, Biochemistry of Gene Expression Program.
Apr 2004	**NSF** Merit Review, Biochemistry of Gene Expression Program.
Jun 2004	**NIH** Genome Institute (NHGRI) special emphasis panel ZHG1 HGR-P, Encyclopedia of DNA Elements (ENCODE).
Oct 2004	**NIH** Molecular Genetics A study section.
Jun 2005	**NIH** Molecular Genetics A study section.
Oct 2006	**AHA** (American Heart Association) Basic Science & Molecular Biology 1 Study Group.

Apr 2007 **AHA** (American Heart Association) Basic Science & Molecular Biology 1 Study Group.
Jan 2008 **NIH** NIDA special emphasis panel ZDA1 GXM-A, Genes Environment And Health Initiative.
Aug 2008 **NIH** Molecular, Cellular, and Developmental Neuroscience special emphasis panel ZRG1 MDCN-F02, Transcriptional Repressors.
Feb 2009 **NIH** NIDA special emphasis panel ZDA1 GXM-A. Functional Characterization of Genetic Variants and Interactions: The Genes, Environment and Health Initiative.
Apr 2009 **NIH** special emphasis panel ZRG1 GGG-M, Epigenomics of Human Health and Disease.
Oct 2009 **NIH** P01 review panel, CBQ40.
Jun 2011 **NIH** Molecular Genetics B study section.
Jun 2012 **NIH** Neural Basis of Psychopathology, Addictions and Sleep Disorders Study Section.
May 2014 MD Anderson Center for Cancer Epigenetics.
May 2015 **NIH** Molecular Genetics A study section.
Mar 2016 **NIH** Molecular Genetics A study section.
Oct 2016 **NIH** Molecular Genetics A study section.
Mar 2017 **NIH** NIGMS Maximizing Investigators' Research Award (MIRA) for Early Stage Investigators (R35) ZRG1 CB E50.
Jun 2017 **NIH** Molecular Genetics A study section.
Dec 2017 **NIH** Director's New Innovator Award study section.
Jan 2019 **NIH** CSR/Social Solutions Anonymization Study
Mar 2020 **NIH** PAR Panel: Novel Genomic Technology Development

International Scientific Review Panels:
Sep 2010 Wellcome Trust, UK.
Jan 2012 Netherlands Organisation for Scientific Research.
Mar 2013 French National Research Agency (ANR).
Jun 2014 French National Research Agency (ANR).

National/International Symposia Organization:
ASBMB and Experimental Biology Annual Meeting Co-organizer, Chicago 2017.
ASBMB and Experimental Biology Annual Meeting Co-organizer, San Diego 2018.
ASBMB and Experimental Biology Annual Meeting Co-organizer, Orlando 2019.
ASBMB and Experimental Biology Annual Meeting Co-organizer, San Diego 2030 *cancelled due to pandemic.

Manuscript/Book reviews: Nature, Science, Cell, Molecular Cell, Molecular and Cellular Biology, Nature Cell Biology, Nature Structural & Molecular Biology, Nature Reviews Genetics, PNAS, EMBO Journal, EMBO Reports, Genes and Development, Molecular Biology of the Cell, Nucleic Acids Research, Journal of Biological Chemistry, Journal of Biochemistry, Gene, Genome Biology, Nutrition and Cancer, Biochemistry, PLOS One, Frontiers in Genetics, Chromatin Structure: State-of-the-art.

UVA Symposia Organization: Chromatin and Chromosomes: Old Words, New Insights. May 17-18, 2001.
Comparative Genomics. May 23-24, 2002.
Nuclear Receptors, Transcription and Cancer. May 10-11, 2004.
Chromatin and Transcription: Gene Expression, Development and Cancer. May 9-10, 2005.
Replication, Repair, Recombination and Cancer. June 14-15, 2006.
Cell cycling: braking and entering. May 16-17, 2011.
Epigenetics and Disease. May 7-8, 2013.
Cancer Genomics and Epigenomics. May 7-8, 2018.
BIMS/Basic Science Department reunion planning committee.
Department of Biochemistry & Molecular Genetics Annual Retreat & Poster Session, 2015-2017.

Internal Review Committee member (2006-2012): Committee evaluates limited submission research proposals, both internal and external, for the University, Hartwell Foundation, Pew Charitable Trust, Beckman etc.

Undergraduate Medical Education Curriculum Committee (2013-2015): Committee assigned to develop new undergraduate courses and curriculum in science and medicine.

Faculty Recruitment Committee (2016-2017): Department of Biochemistry & Molecular Genetics, UVA.
Faculty Search Interview Workshop (2018, 2020): Stowers Institute for Medical Research, Kansas City, MO.

Teaching and Mentoring Activities

Undergraduate: BIOL/PSYC 3559 Introduction to Epigenetics.

Graduate (2001-2020): BIMS 824 Chromatin Structure and Function, BIOC 815 Current literature, BIMS 815 Cell & Molecular Biology: Current literature, BIMS 808 General and Molecular Genetics, BIMS 8041 Advanced Topics in Cancer, BIMS 7100 Research Ethics, NESC 7200 Behavior, Cognition, and Epigenetics, BIMS 6000 Core Course in Integrative Biosciences, BIOC 8012 Chromatin I, BIOC 8014 Chromatin II.

Medical (2002-2020): Medical Biochemistry, Cells to Society, Integrated Clinical Sciences- Molecular and Cellular Medicine.

Undergraduate and Graduate Research: BIOC 921/922 Chromatin Modifying Complexes, BIOC 9995 Topical Research: Biochemistry & Molecular Genetics, BIOC 9998/9 Non-Topical Research, Doctoral Prep (Independent Study), NESC 8150-9999 Introduction to Research, Current Topics in Neuroscience, Directed Readings Neuroscience, Non-Topical Research, NESC 8250 Molecular Basis of Neurological, ENGR 4595 Special Topics in Engineering

Graduate student trainees and current position:

Michael Torok, Ph.D.	2001-2005	Senior Director, Global Clinical Pharmacology and Exploratory Development Operations at Astellas
Stacey McMahon, Ph.D.	2001-2005	Associate Professor, University of Virginia
Jennifer Phillips, M.S.	2001-2005	Lab Specialist, University of Virginia
Jeremy Daniel, Ph.D.*	2002-2006	Associate Professor, University of Copenhagen
Yoonah Shin, M.S.	2006-2007	Researcher, National Institutes of Health
Stephen Baker, Ph.D.*#	2005-2010	Research Scientist, Defense Intelligence Agency, US DOD
Stacy Crum, M.S.	2009-2010	Scientist, Sigma-Aldrich
Shaun McCullough, Ph.D.	2006-2011	Principal Investigator, U.S. Environmental Protection Agency
Paul Bonthius, Ph.D.$	2007-2012	Postdoctoral Fellow, University of Utah School of Medicine
Tara Burke, Ph.D.	2006-2012	Director, Public Policy and Advocacy, Assoc. for Mol. Pathology
Erdem Sendinc, Ph.D.	2008-2013	Postdoctoral Fellow, Harvard Medical School
Jaime Miller, M.D., Ph.D.	2008-2013	Resident Physician, University of Pittsburgh
Joshua Danof @	2019-present	

* Outstanding Graduate Student in Biochemistry, Molecular Biology and Genetics
\# Michael J. Peach Outstanding Graduate Student Award
$ Co-mentored with Dr Emilie Rissman
@ Co-mentored with Dr Jessica Connelly

Additional Thesis Committees (year of graduation): Serving member on 76 thesis committees

LeeAnn Swanegan, Ph.D.	2001	Advisor Dr Joel Hockensmith
Wang Cheung, MD, Ph.D.	2003	MSTP, Advisor Dr C. David Allis
Cynthia Barber, Ph.D.	2004	Advisor Dr C. David Allis
Michael Kagey, Ph.D.	2005	Advisor Dr David Wotton
Anne Allison, Ph.D.	2006	Advisor Dr Mitch Smith
Ashley Blair, Ph.D.	2007	Advisor Dr Rong Li
Rebekka Sprouse, Ph.D.	2008	Advisor Dr David Auble
Ashley Snyder, Ph.D.	2008	Advisor Dr Kevin Lynch
Robert Hontz, Ph.D.	2008	Advisor Dr Jeff Smith
Brice Keyes, Ph.D.	2009	Advisor Dr Dan Burke

Anne Knowlton, Ph.D.	2009	Advisor Dr Todd Stukenberg
Jacqueline Merrill, Ph.D.	2009	Advisor Dr David Wotton
Anthony Trace, Ph.D.	2009	Advisor Dr Raghu Mirmira
Staton Wade, Ph.D.	2009	Advisor Dr David Auble
Greg DiMicco, M.S.	2010	Advisor Dr Jeff Smith.
Emily Glidden, Ph.D.	2011	Advisor Dr Marty Mayo
David Allison, Ph.D.	2011	Advisor Dr Marty Mayo
Andrea De-Santis, Ph.D.	2011	Advisors Dr Patrick Concannon and Donald Hunt.
Woo-Sin Park, M.S.	2011	Advisor Dr David Auble.
Joseph Johnson, Ph.D.	2012	Advisor Dr Jeff Smith.
Kimberly Cox, Ph.D.	2012	Advisor Dr Emily Rissman.
Stephen Hoang, Ph.D.	2013	Advisor Dr Stefan Bekiranov.
Jake Wamsley, Ph.D.	2013	Advisor Dr Marty Mayo.
Kunal Poorey, Ph.D.	2013	Advisors Dr David Auble and Dr Stefan Bekiranov.
Dan Harmon, Ph.D.	2014	Advisor Dr Coleen McNamara.
Mondovi Chatterjee, Ph.D.	2014	Advisor Dr Bryce Paschal.
Kayla Quarterman, Ph.D.	2015	Advisor Dr Emily Rissman.
Maggie Wierman, Ph.D.	2015	Advisor Dr Jeff Smith.
Szymon Szymura, Ph.D.	2016	Advisor Dr Marty Mayo.
Jason True, Ph.D.	2016	Advisor Dr David Auble.
Jaclyn M. D'Innocenzi, Ph.D.	2017	Advisor Dr Marty Mayo.
Magda Wegrzynska, Ph.D.	2017	Advisor Dr Anindya Dutta.
Anne Carlton, Ph.D.	2018	MSTP, Advisors Dr David Wotton and Dr John Bushweller
Mouadh Benamar	2020	Advisor Dr Tarek Abbas.
Heather Raimer		Advisor Dr Yuh-Hwa Wang.
Bri Wilson		Advisor Dr Anindya Dutta.

Additional Thesis Committees within School of Medicine (year of graduation)

Caroline Kulesza, Ph.D.	2001	Dept of Microbiology. Advisor Dr Dan Engel
David Yu, Ph.D.	2004	Dept of Microbiology, Advisors Drs M. Smith & Mike Christman
Olga F. Sarmento, Ph.D.	2007	Dept of Microbiology, Advisor Dr Mitch Smith
Peter V. Decker, Ph.D.	2007	Dept of Microbiology, Advisor Dr Mitch Smith
Brian Del Rosario, Ph.D.	2007	Dept of Microbiology, Advisor Dr Lucy Pemberton
Kurt Jensen, Ph.D.	2008	Dept of Microbiology, Advisor Dr Mitch Smith
Jeffrey S. Blackwell, Ph.D.	2008	Dept of Microbiology, Advisor Dr Lucy Pemberton
Tye Deering, Ph.D.	2008	Dept of Pharmacology, Advisor Dr Raghu Mirmira
Amanda Duley, Ph.D.	2009	Dept of Microbiology, Advisor Dr Tim Bender
Gang Zhi, Ph.D.	2009	Dept of Microbiology, Advisor Dr Gary Kupfer
Marcin Walkiewicz, Ph.D.	2010	Dept of Microbiology. Advisor Dr Dan Engel
Mingda Hang, Ph.D.	2010	Dept of Microbiology, Advisor Dr Mitch Smith
Kristin Keck, Ph.D.	2011	Dept of Microbiology, Advisor Dr Lucy Pemberton
Benjamin Leach, Ph.D.	2011	Mol. Physiology & Biol. Physics, Advisor Dr John Bushweller
Michelle Neveklovska, Ph.D.	2012	Dept of Neuroscience, Advisor Dr Scott Zeitlin
Aravinda Kuntimaddi, Ph.D.	2015	Mol. Physiology & Biol. Physics, Advisor Dr John Bushweller
Steven Griffith, Ph.D.	2016	Mol. Physiology & Biol. Physics Advisor, Dr Gary Owens
Gabriel Falcao Alencar, Ph.D	2018	Mol. Physiology & Biol. Physics Advisor, Dr Gary Owens
Daniel Hess, Ph.D.	2018	MSTP, Mol. Physiology & Biol. Physics Advisor, Dr Gary Owens
Alison Francois		Dept of Microbiology, Advisor Dr Anna Cliffe

Additional Thesis Committees University wide (year of graduation)

Beatrix Ueberheide, Ph.D.	2005	Dept of Chemistry, Advisor Dr Donald Hunt
Hillary Montgomery, Ph.D.	2009	Dept of Chemistry, Advisor Dr Donald Hunt
Joshua Nicklay, Ph.D.	2010	Dept of Chemistry, Advisor Dr Donald Hunt
Lauren Buro, Ph.D.	2011	Dept of Biology. Advisor Dr Melissa Henriksen

Ann English, Ph.D.	2011	Dept of Chemistry, Advisor Dr Donald Hunt
Edmond Chipumuro, Ph.D.	2011	Dept of Biology. Advisor Dr Melissa Henriksen
Shaili Shah, Ph.D.	2012	Dept of Biology. Advisor Dr Melissa Henriksen
Joseph Strukl, Ph.D.	2012	Dept of Chemistry, Advisor Dr Donald Hunt

Undergraduate student trainees:

Mohammadali Mojarrad	2005-2008	Alexandra Indeglia	2016-2018
Raquel Martin	2010	John Hensien	2016-2019
Joseph Gonnella	2015-2016	Peter King	2018
Alex Grant	2015-2017	Marianne Trimble	2016-2020
Christina Lee	2015-2018	Tashani Patel	2017-2020
Kathryn Goodrich	2015-2017	Burke Lawlor	2018-2020
Nima Said	2016	Ben Grant	2018-2020
Lillian Tan	2016	Natalia Vega Perez	2019
John Hardy	2016-2017	Siri Fredericksen	2019-2020
Meagan Josephs	2016-2017		

Financial Resources (Grants and Contracts)

Title: — Period:

Funded

NIH P30 CA044579-27 NCI Cancer Center Support Grant subaward Grant (PI) — 12/5/19-10/31/20
A Novel Epigenetic Mechanism Conferring Platinum Resistance in Lung Cancer
Role: co-I

US DOD LCRP LC190551 Concept Award Grant (PI) — 8/1/20-7/31/21
A novel epigenetic mechanism conferring resistance to treatment in lung cancer
Role: PI

NIH R01 DA035202 Lynch (PI) — 4/1/15-3/31/21
Exercise as an Intervention Strategy for Cocaine Addiction in Males and Females
Role: co-I

Pending

NIH R01 DA050604 Grant, Lynch and Ratan (MPIs)
Sex Differences in An Animal Model of Opioid Use Disorder
Role: MPI

Completed

NIH R01 GM111911 Grant (PI) — 6/1/15-12/31/20
Regulation of a novel epigenome of protein biosynthesis genes
Role: PI

RCN NSF 1049849 Rissman (PI) — 4/1/11-3/30/15
Research Coordination Network for Epigenetics, Behavior and Reproduction
Role: co-I

NIH R01 GM026108 Hamlin (PI) — 7/1/08-6/30/12
Replication of Mammalian Chromosomes
Role: co-I

NIH R01 GM055763 Auble (PI) — 3/1/07-2/28/12
Molecular Analysis of a Yeast Transcriptional Regulator
Role: co-I

NIH R01 NS049065 Grant (PI) 5/1/06-4/30/12
Spinocerebellar ataxia 7 protein function
Role: PI

NIH R56 DK082673-01 Grant (PI) 09/30/08 – 08/31/10
Characterization of a novel histone H3 phosphorylation mark in DNA replication
Role: PI

NIH R01 DK58646 Grant (PI) 2/1/01-1/31/07
Identification and Analysis of HAT/Coactivator Complexes
Role: PI

NIH R41 CA105604 Engel (PI) 8/1/04-7/31/07
NIH/NCI Structural Biology/Molecular Application Novel Tool Compounds for Chromatin Research
Role: co-I

Other:
Completed
UVA Brain Institute Lynch and Grant (PIs) 7/1/19-6/30/2020
Identifying Novel Targets for the Treatment of Opioid Use Disorders
Role: PI

UVA Brain Institute Connelly and Grant (PIs) 7/1/19-6/30/2020
Epigenetic Consequences of Maternal Oxytocin Treatment in Offspring
Role: PI

Travel Award to John Hensien 06/1/18
Medical Mycological Society of the Americas
Role: Mentor

Undergraduate Research Fellowship to John Hensien 06/1/17-05/30/18
American Society for Microbiology
Role: Mentor

Harrison Award to Christina Lee 06/1/17-12/31/17
University of Virginia
Role: Mentor

University of Virginia R&D Grant (PI) 7/10/14-7/9/15
The role of the conserved SAGA and SLIK complexes in aging
Role: PI

University of Virginia R&D Grant (PI) 1/15/14-1/14/15
Epigenomic regulation of proliferation in cancer cells
Role: PI

P30 CA44579 UVA Cancer Center 5/1/11- 12/31/12
Patients and Friends Fund Grant (PI)
The role of H3-T45 phosphorylation in cellular proliferation and as a novel marker for cancer
Role: PI

Goodwin clinical trial/UVA cancer center 2/1/04-1/31/05
Grant (PI)
Role of Histone Acetylation in NER and Identification of HDAC Inhibitors as Therapeutic Agents of Xeroderma Pigmentosum and Skin Cancer
Role: PI

992837 Grant (PI) 2/1/00-1/31/04
Burroughs Wellcome Foundation
Role: PI

Virginia Kincaid Charitable Trust/ 1/25/02-1/24/03
UVA cancer center Auble (PI)
Post-translational Modification of Chromatin during Nucleotide Excision Repair
Role: co-I

Publications and Patents

1 **Grant, P.A.**, Arulampalam, V., Ährlund-Richter, L. and Pettersson, S.* (1992) Identification of Ets-like lymphoid specific elements within the immunoglobulin heavy chain 3' enhancer. Nucl. Acids Res. *20*,4401-4408.

2 Arulampalam, V., **Grant, P.A.**, Samuelsson, A., Lendahl, U. and Pettersson, S.* (1994) Lipopolysaccharide-dependent transactivation of the temporally regulated immunoglobulin heavy chain 3' enhancer. Eur. J. Immunol. *24*, 1671-1677.

3 Nilsson, L., **Grant, P.A.**, Pettersson, S. and Sideras, P.* (1995) The human I 1 region contains a TGF- 1 responsive enhancer and a putative recombination hotspot. Int. Immunol. *7*, 1191-1204.

4 Arulampalam, V., **Grant, P.A.**, Anderson, T., Faxén, M., Samuelsson, A., Skogberg, M. and Pettersson, S.* (1995) The 3' end of the IgH locus: an important regulator of B-lymphoid development. The Immunologist *3*, 26-31.

5 Arulampalam, V., **Grant, P.A.**, Poellinger, L. and Pettersson, S.* (1995) Aberrant Regulation of the Immunoglobulin 3´ Enhancer by c-Myc in Plasmacytoma Cells. Mol. Immunol. *32*, 1369-1375.

6 **Grant, P.A.**, Thompson, C.B. and Pettersson, S.* (1995) IgM receptor mediated transactivation of the IgH 3´ enhancer couples a novel Elf-1-AP-1 protein complex to the developmental control of enhancer function. EMBO J. *14*, 4501-4513.

7 Andersson, T., Neurath, M.F., **Grant, P.A.** and Pettersson, S.* (1996) Physiological activation of the IgH 3' enhancer in B lineage cells is not blocked by Pax-5. Eur. J. Immunol. *26*, 2499-2507.

8 **Grant, P.A.**, Andersson, T., Neurath, M.F., Arulampalam, V., Bauch, A., Müller, R., Reth, M. and Pettersson, S.* (1996) A T-cell controlled molecular pathway regulating the IgH locus: CD40 mediated activation of the IgH 3' enhancer. EMBO J. *15*, 6691-6700.

9 Thøger Andersen, A.S., Jensen, A.W., **Grant, P.A.**, Arulampalam, V., Pettersson, S. and Junker, S.* (1997) Concomitant downregulation of IgH 3' enhancer activity and c-myc expression in a plasmacytoma x fibroblast environment: implications for dysregulation of translocated c-myc. Mol. Immunol. *34*, 97-107.

10 Vettese-Dadey, M., **Grant, P.A.**, Hebbes, T.R., Crane-Robinson, C., Allis, C.D. and Workman, J.L.* (1996) Acetylation of histone H4 plays a primary role in enhancing transcription factor binding to nucleosomal DNA in vitro. EMBO J. *15*, 2508-2518.

11 **Grant, P.A.**, Duggan, L., Côté, J., Roberts, S.M., Brownwell, J., Candau, R., Ohba, R., Owen-Hughes, T., Allis, C.D., Winston, F., Berger, S.L. and Workman, J.L.* (1997) Yeast Gcn5 functions in two multisubunit complexes to acetylate nucleosomal histones: characterization of an Ada complex and the SAGA (Spt/Ada) complex. Genes Dev. *11*, 1640-1650.

12 **Grant, P.A.**, Sterner, D.E., Duggan, L.J., Workman J.L., and Berger, S.L.* (1998) The SAGA unfolds: convergence of transcription regulators in chromatin-modifying complexes. Trends Cell Biol. *8*, 193-197.

13 **Grant, P.A.**, Schieltz, D., Pray-Grant, M.G., Steger, D.J., Reese, J.C., Yates III, J.R., and Workman, J.L.* (1998) A subset of TAF_{II}s are integral components of the SAGA complex required for nucleosome acetylation and transcriptional stimulation. Cell *94*, 45-53.

14 Utley, R.T., Ikeda, K., **Grant, P.A.**, Côté, J., Steger, D.J., Eberharter, A., John, S. and Workman, J.L.* (1998) Transcriptional activators target histone acetyltransferase complexes to nucleosomes. Nature *394*, 498-502.

15 Steger, D.J., Eberharter, A., John, S., **Grant, P.A.** and Workman J.L.* (1998) Purified histone acetyltransferase complexes stimulate HIV-1 transcription from preassembled nucleosomal arrays. Proc. Natl. Acad. Sci. USA *95*, 12924-12929.

16 **Grant, P.A.** and Workman, J.L.* (1998) Transcription: A lesson in sharing ? Nature, *396*, 410-411.
17 **Grant, P.A.**, Schieltz, D., Pray-Grant, M.G., Yates III, J.R., and Workman, J.L.* (1998) The ATM-related Cofactor Tra1 is a Component of the Purified SAGA Complex. Mol. Cell *2*, 863-867.
18 Eberharter, A., John, S., **Grant, P.A.**, Utley, R.T. and Workman, J.L.* (1998) Identification and analysis of yeast nucleosomal histone acetyltransferase complexes. Methods *15*, 315-321.
19 Allard, S., Utley, R.T., Savard, S., Clarke, A., **Grant, P.A.**, Brandl, C.J., Pillus, L., Workman, J.L. and Côté, J.* (1999) The NuA4 transcription activation/histone H4 acetyltransferase complex contains the essential Esa1 protein as the catalytic subunit and the essential ATM-related cofactor Tra1p. Biochem Cell Biol. 77, 383.
20 Sterner, D, **Grant, P.A.**, Roberts, S.M., Duggan, L.J., Belotserkovskaya, R., Pacella, L.A., Winston, F., Workman, J.L., and Berger, S.L.* (1999) Functional organization of the yeast SAGA complex: Distinct components involved in structural integrity, nucleosome acetylation and TBP binding. Mol. Cell. Biol. *19*, 86-98.
21 **Grant, P.A.**, Eberharter, A., John, S., Cook, R.G., Turner, B.M. and Workman, J.L.* (1999) Expanded lysine acetylation specificity of Gcn5 in native complexes. J. Biol. Chem. *274*, 5895-900.
22 Grant P.A. and Berger, S.L.* (1999) Histone acetyltransferase complexes. Semin Cell Dev Biol *10*, 169-177.
23 Steger, D.J., Utley, R.T., **Grant, P.A.**, John, S., Eberharter, A., Côté, J., Owen-Hughes, T., Ikeda, K. and Workman, J.L.* (1999) Regulation of transcription by multisubunit complexes that alter nucleosome structure. Cold Spring Harb Sym *63*, 483-491.
24 Massari, M.E., **Grant, P.A.**, Pray-Grant, M.G., Berger, S.L., Workman, J.L. and Murre, C.* (1999) A conserved motif present in a class of helix-loop-helix-proteins activates transcription by direct recruitment of the SAGA complex. Mol. Cell *4*, 63-73.
25 Wallberg, A.E., Neely, K.E., Gustafsson, J.-Å., Workman, J.L., Wright, A.P.H. and **Grant, P.A.*** (1999) Histone aceyltransferases complexes can mediate trasncriptional activation by the major glucocorticoid receptor activation. Mol. Cell. Biol. *19*, 5952-5959.
26 Allard, S., Utley, R.T., Savard, J., Clarke. A., **Grant, P.A.**, Brandl, C.J., Pillus, L., Workman, J.L. and Côté, J.* (1999) NuA4, an essential transcription adaptor/histone H4 acetyltransferase complex containing Esa1p and the ATM-related cofactor Tra1p. EMBO J. *18*, 5108-5119.
27 John, S., Howe, L., Tafrov, S.T., **Grant, P.A.**, Sternglanz, R., Workman, J.L.* (2000) The something about silencing protein, SAS3, is the catalytic subunit of NuA3, a yTAF(II)30-containing HAT complex that interacts with the Spt16 subunit of the yeast CP (Cdc68/Pob3)-FACT complex. Genes Dev 14, 1196-208.
28 Lechner T, Carrozza M.J., Yu Y., **Grant P.A**., Eberharter A., Vannier D., Brosch G., Stillman D.J., Shore D, Workman J.L.* (2000) Sds3 (Suppressor of Defective Silencing 3) is an integral component of the yeast Sin3/Rpd3 HDAC complex required for histone deacetylase activity. J. Biol. Chem. 275, 40961-6.
29 **Grant, P.A.*** A tale of histone modifications (2001) Genome Biol 2, 0003.1-0003.6.
30 Howe, L. Auston, D., **Grant, P.A.**, John, S., Cook, R.G., Workman, J.L. and Pillus, L.* (2001) Histone H3 specific acetyltransferases are essential for cell cycle progression. Genes Dev. *15*, 3144-3154.
31 Strahl, B.D., **Grant, P.A.**, Briggs, S.D., Sun, Z.-W. Bone, J.R., Caldwell, J.A., Mollah, S., Cook, R.G., Shabanowitz, J., Hunt, D.F., and Allis, C.D.* (2002) Set2 is a nucleosomal histone H3-selective methyltransferase that mediates transcriptional repression. Mol. Cell. Biol. 22, 1298–1306.
32 Pray-Grant, M.G., Balasubramanian, R., Selleck, W., **Grant, P.A.**, Tan, S.* (2002) Role of the Ada2 and Ada3 transcriptional coactivators in histone acetylation. J. Biol. Chem. 277, 7989–7995.
33 Flinn, E.M., Wallberg, A.E., Hermann, S., **Grant, P.A.**, Workman, J.L. and Wright, A.P.* (2002) Recruitment of Gcn5-containing complexes during cMyc-dependent gene activation: Structure and function aspects. J. Biol. Chem. 277, 23399-23406.
34 Bird, A.W., Yu, D.Y., Pray-Grant, M.G., Qiu, Q., Harmon, K.E., Megee , P.C., **Grant, P.A.**, Smith, M.M. and Christman, M.F.* (2002) Acetylation of histone H4 by Esa1 is required for DNA double strand break repair. Nature 419, 411-415.
35 Pray-Grant, M.G., Schieltz, D., McMahon, S.J., Wood, J.M., Kennedy, E.L., Cook, R., Workman, J.L., Yates, J.R. and **Grant, P.A.*** (2002) The novel SLIK histone acetyltransferase complex functions in the yeast retrograde response pathway. Mol. Cell. Biol. 22, 8774-8786.
36 Nourani, A., Howe, L., Pray-Grant, M.G., Workman, J.L., **Grant P.A.** and Cote, J.* (2003) Opposite role of yeast ING family members in p53-dependent transcriptional activation. J. Biol. Chem. 278, 19171-19175.

37 Daniel, J.A., Torok, M.S., Sun, Z.-W., Schieltz, D., Allis, C.D., Yates, J.R. and **Grant, P.A.*** (2004) Deubiquitination of histone H2B by a yeast acetyltransferase complex regulates transcription. J. Biol. Chem. 279, 1867-1871.
38 McMahon, S.J., Doyon, Y., Côté J. and **Grant, P.A.*** (2004) Identification and analysis of native HAT complexes. In Chromatin and Chromatin remodeling enzymes. Methods in Enzymology 377, 154-167.
39 Torok, M.S. and **Grant, P.A.*** (2004) Histone acetyltransferase (HAT) proteins contribute to transcriptional processes at multiple levels. Adv. Protein. Chem. 67, 181-199.
40 Thomashevski, A., High, A.A., Drozd, M., Shabinowitz, J., Hunt, D.F., **Grant, P.A.** and Kupfer, G.M.* (2004) The Fanconi anemia core complex forms 4 different sized complexes in different subcellular compartments. J Biol Chem. 279, 26201-26209.
41 Ramsey, K., Smith, J.J., Dasgupta, A., Maqani, N., **Grant, P.A.** and Auble, D.T.* (2004). The NEF4 complex regulates Rad4 levels and utilizes Snf2/Swi2-related ATPase activity for nucleotide excision repair. Mol. Cell. Biol. 24, 6362-6378.
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70 Cloud, V., Thapa, A., Momtahan, E., Jack, J., Leiva, E., Wu, Y., Rapp, S., Miller, S., Shelton, L., Pierce, R., McCullough, M., **Grant, P.A**., Zhang, Y., Florens, L., Washburn, M. and Mohan, R. SAGA subunits Ataxin-7 and non-stop regulate WRC stability and actin cytoskeletal organization. *Submitted.*

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71 **Grant, P.A.**, Berger, S.L. and Workman, J.L.* (1999) Identification and analysis of native nucleosomal histone acetyltransferase complexes. In Chromatin Protocols, Methods in Molecular Biology, Vol 119, 311-317, P. B. Becker, ed. (Totowa, NJ: Humana Press Inc.).
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Patents

Grant, P.A. and McCullough, S.D. "Compositions and Methods for Treating Spinocerebellar Ataxia Type 7". U.S. Provisional Patent Application Serial No. 61/475,033.

Grant, P.A. "Apparatus and method for UV-C sanitization of contaminated masks in a household or workplace environment. Provisional Patent Application Serial No. 63/087,488.

Invited Lectures and Symposiums

Jul 1998	Gordon Research Conference "Chromatin Structure and Function", Tilton NH.
Dec 1998	Laboratory of Molecular Biology, Medical Research Council, Cambridge, England.
Dec 1998	Department of Biochemistry and Molecular Genetics, University of Virginia.
May 2000	National Cancer Institute "Histone Deacetylase Chromatin Remodeling Workshop", Washington DC
Apr 2002	Dept of Biochemistry and Molecular Biology, Pennsylvania State University.
Mar 2003	Plenary speaker at the Keystone Symposium "The Enzymology of Chromatin and Transcription", Sante Fe, NM.
May 2003	Laval University Cancer Research Center, Quebec, Canada.
Apr 2004	Department of Biochemistry and Molecular Biology, University of Southern California.
Apr 2004	Department of Biochemistry and Molecular Biology, Michigan State University.
Jul 2004	Gordon Research Conference "Chromatin Structure and Function", Tilton NH.
Nov 2004	Stowers Institute for Medical Research, Kansas City, MO.
Nov 2004	Abcam "Chromatin Structure and Function", Cancun, Mexico.
Apr 2005	Second East Coast Chromatin Meeting at NIH.
Jun 2005	IRIS symposium "Molecular host response mechanisms", Stockholm, Sweden.
Nov 2005	National Cancer Institute, NIH, Bethesda.
Nov 2005	Abcam "Chromatin Structure and Function", Nassau, Bahamas.
Feb 2006	Department of Biochemistry and Biophysics, Texas A&M University.
Mar 2006	Department of Pathology, University of Virginia.
Mar 2006	National Institute of Aging, NIH, Baltimore.
Apr 2006	Department of Neuroscience, University of Virginia.
Apr 2006	Department of Biochemistry & Mol. Biology, Southern Illinois University School of Medicine.
May 2006	Gordon Research Conference "Chromatin Structure and Function", Italy.
Aug 2006	FASEB Conference "Transcription in Cell Growth, Differentiation, and Disease", Saxtons River, Vermont.
Mar 2007	Neuroscience Graduate Program, University of Virginia.
Aug 2007	Scripps Institute, Florida.
Nov 2007	Molecular Physiology & Biological Physics, University of Virginia.
Jun 2008	BioMaPS Summer School "Chromatin Structure and Gene Regulation", Rutgers University
Oct 2008	Atlantic Coast Chromatin Conference, University of North Carolina.
Apr 2010	London Research Institute, England.
Apr 2011	NSF symposium "Epigenetics and Behavior", University of Virginia.
Jun 2011	FASEB Conference "Histone Deacetylases and Reversible Acetylation Signaling and Disease", Steamboat Springs, Colorado.
Dec 2012	Department of Human and Molecular Genetics, Virginia Commonwealth University.
Jun 2013	Glaxo Smith Kline, UK.
May 2014	Department of Pathology, University of Virginia.
Sep 2014	University of Oxford, UK.
July 2015	Penn State University.
July 2016	Plenary Lecture, The Allied Genetics Conference, Orlando, Florida.
Apr 2017	Invited Speaker, ASBMB Annual Meeting, Chicago, IL.
Apr 2017	Chair Chromatin and Gene Expression, ASBMB Annual Meeting, Chicago, IL.
Apr 2017	Chair Chromatin Structure and Epigenetic Regulation, ASBMB Annual Meeting, Chicago, IL.
Apr 2017	Co-Chair Chromatin Modification, Gene Expression & Epigenetic Mutations, ASBMB Annual Meeting, Chicago, IL.
Sep 2017	Speaker, "The Nucleosome: from factor binding and remodeling to cell signaling and disease". Kansas City, MO.

Jan 2018 Sloane Society, University of Virginia.
Apr 2018 Speaker, Session on Chromatin Regulation of Gene Expression, ASBMB Annual Meeting, San Diego, CA.
Aug 2018 Stowers Institute for Medical Research, Kansas City, MO.
Sep 2018 Sloane Society, University of Virginia.
Apr 2019 Chair RNA Regulatory Mechanisms and Disease, ASBMB Annual Meeting, Orlando, FL.
Sep 2019 Department of Biomedical Science, Florida Atlantic University.
Sep 2019 Cancer Epigenetics Program, University of Miami.

CURRICULUM VITAE

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EDUCATION

3/1995-5/1999	**PhD** (**Doktor der Naturwissenschaften)**, Lehrstuhl für Genetik, Bayerische Julius-Maximilians-Universität Würzburg.
9/1989-2/1995	**Masters** (**Biologie Diplom)**, Lehrstuhl für Genetik (umbenannt in Genetik und Neurobiologie), Bayerische Julius-Maximilians-Universität Würzburg.

EMPLOYMENT HISTORY

8/2018- present	**Professor**, Florida Atlantic University, Department of Biological Sciences, Boca Raton, Florida, **Affiliate Faculty Harriet L. Wilkes Honors College, Faculty of International Max Planck Research School (IMPRS) Brain and Behavior**
08/2011-082017	**Associate Professor (tenured)**, Florida Atlantic University, Department of Biological Sciences, Boca Raton, Florida, Faculty of International Max Planck Research School (IMPRS) Brain and Behavior
08/2006-07/2011	**Assistant Professor (tenure-track)**, Florida Atlantic University, Department of Biological Sciences, Boca Raton, Florida, **Associate Director of Integrative Biology PhD Program, Faculty of the Center of Molecular Biology and Biotechnology, Affiliate Faculty, Charles E Schmidt College of Biomedical Sciences, Member of the Florida Bioinformatics Research Consortium**
09/2004-08/2006	**Research Assistant Professor**, Pioneer Valley Life Sciences Institute, Massachusetts
10/1999-08/2006	**National Science Foundation & Nation Institute of Health Post-doctoral research fellow** at the University of Massachusetts Amherst. Adviser: Rodney K Murphey.
5/1999-9/1999	**Post-doctoral research fellow & group leader** of the "Graduiertenkollegium Arthropodenverhalten" at the Bayerische Julius-Maximilians Universität Würzburg.

PUBLICATIONS AND RESEARCH ACTIVITY

Publications in Print

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Research articles

Wayne Robinson and Tanja Godenschwege, Live imaging of axonal transport in the adult drosophila central nervous system, Methods in Molecular Biology, 2021, Springer Nature, in press

Sven Bervoets , Na Wei , Maria-Luise Erfurth , Shazie Yusein-Myashkova , Biljana Ermanoska , Ligia Mateiu , Bob Asselbergh , David Blocquel , *Priyanka Kakad , Tyrone Penserga* , Florian Thomas , Velina Guergueltcheva , Ivailo Tournev , Tanja Godenschwege , Albena Jordanova. Transcriptional dysregulation by a nucleus-localized aminoacyl-tRNA synthetase associated with Charcot-Marie-Tooth neuropathy (2019), Nature Communications, Nov 6;10(1):5045. doi: 10.1038/s41467-019-12909-9.

Penserga, T, Kudumala, SR, Poulos, R and Godenschwege, TA. A role for *Drosophila* amyloid precursor protein in retrograde trafficking of L1-type cell adhesion molecule neuroglian (2019), Front Cell Neurosci. 2019 Jul 12;13:322. doi: 10.3389/fncel.2019.00322. eCollection 2019. PMCID:PMC6640005

Maria E. Yurgel, Priyanka Kakad, Meet Zandawala , and Dick Nassel, Tanja A.Godenschwege, and Alex C. Keene: A single pair of leucokinin neurons are modulated by feeding state and regulate sleep-metabolism interactions (2019), Plos Biology, Feb 13;17(2):e2006409. doi: 10.1371/journal.pbio.2006409.

Priyanka P. Kakad, Tyrone Penserga, Blake P. Davis, Brittany Henry, Jana Boerner, Anna Riso, Jan Pielage, and Tanja A. Godenschwege. An ankyrin-binding motif regulates nuclear levels of L1-type neuroglian and expression of the oncogene *Myc* in Drosophila neurons. J Biol Chem. 2018 Nov 9;293(45):17442-17453

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Hrvoje Augustin, Kieran McGourty, Marcus J. Allen, Sirisha Kudumala Madem, Jennifer Adcott, Fiona Kerr, Chi Tung Wong, Alec Vincent, Tanja Godenschwege, Emmanuel Boucrot, Linda Partridge. Reduced insulin signaling maintains electrical transmission in a neural circuit in aging flies. Plos Biology 2017, Sep 13;15(9):e2001655. doi: 10.1371/journal.pbio.2001655. , PMC5597081

Sirisha R. Kudumala*, Tyrone Penserga*, Jana Boerner, Olesya Slipchuk, Priyanka Kakad, LaTasha H. Lee, Aater Qureshi, Jan Pielage and Tanja A. Godenschwege. Lissencephaly-1 dependent axonal retrograde transport of L1-type CAM Neuroglian in the adult drosophila central nervous system. PlosOne 2017. *equal contribution. PLoS ONE 12(8): e0183605. https://doi.org/10.1371/journal.pone.0183605, PMC5570280.

Heghinian MD, Mejia M, Adams DJ, Godenschwege TA, Mari F (2015): Inhibition of cholinergic pathways in *Drosophila melanogaster* by alpha-conotoxins. FASEB Journal 29(3):1011-8. Epub 2014/12/04. Impact factor 5.043.

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Mejia, M.; Heghinian, M. D*.,* Busch, A.; Mari, F., Godenschwege, T. A. (2012): Paired nanoinjection and electrophysiology assay to screen for neuromodulatory compounds using the *Drosophila melanogaster* Giant Fiber System Jove-Journal of Visualized Experiments. 2012 Apr 15;(62). pii: 3597. doi: 10.3791/3597. PMID: 22525737*.* Impact Factor 1.19.

Boerner, J. and Godenschwege, T.A. (2011): Whole Mount Preparation of the Adult *Drosophila* Ventral Nerve Cord for Giant Fiber Dye Injection*.* Jove-Journal of Visualized Experiments. 52. Impact Factor 1.19.

Chul Kim, Sapeckshita Srivastava, Marian Rice, Tanja A Godenschwege, Brooke Bentley, Saranya Ravi, Shuang Shao, Craig Woodard and Lawrence M Schwartz (2011): "Expression of human amyloid precursor protein in the skeletal muscles of Drosophila results in age- and activity-dependent muscle weakness", BMC Physiology, 11:7doi:10.1186/1472-6793-11-7. Impact Factor 0.9.

Mejia, M.; Heghinian, M. D., Busch, A.; Armishaw, C.; Mari, F., Godenschwege, T. A. (2010): A novel approach for *in vivo* screening for toxins the *Drosophila* Giant Fiber Circuit, Toxicon, 56(8):1398-407. Impact factor: 2.437*.*

Allen, M. J., & Godenschwege, T. A. (2010). Electrophysiological recordings from the Drosophila giant fiber system (GFS). Cold Spring Harbor Protocols*, 2010*(7), pdb prot5453. doi: 10.1101/pdb.prot5453. Impact factor: 4.63*.*

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Godenschwege T, Forde R, Davis C, Paul A, Beckwith K, Duttaroy A (2009): Mitochondrial Superoxide Radicals Differentially Impacts Muscle Activity and Neural Functions in Drosophila. Genetics 183(1): 175–184. Impact factor: 4.002. **Selected by Genetics Editors for Press Release.**

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Uthaman, S. B.; Godenschwege, T. A.; Murphey, R. K (2008): A mechanism distinct from Highwire for the Drosophila ubiquitin conjugase Bendless in synaptic growth and maturation. Journal of Neuroscience. 28(34): 8615-8623. Impact factor: 7.490

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Löhr, R.; Godenschwege, T. A.; Buchner, E.; Technau, G.; Prokop, A. (2002): Compartmentalisation of central neurons in *Drosophila*: a new strategy of mosaic analysis reveals localisation of pre-synaptic sites to specific segments of neurites. Journal of Neuroscience 22(23):10357-67. Impact factor: 7.490

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Godenschwege, T. A.; Buchner, S.; Pohar, N.; Buchner, E. (2000): Insect tissue inhibitor of metalloproteinases: Inflated wings, tissue autolysis, and early death in TIMP mutants of *Drosophila*. European Journal of Cell Biology 79(7): 495-501. Impact factor: 3.955, **Cover art**

Pohar, N.; Godenschwege, T. A.; Buchner, E. (1999): Invertebrate Tissue Inhibitor of Metalloproteinase: Structure and Nested Gene Organization within Synapsin Locus is Conserved from *Drosophila* to Man, Genomics 57(2), 293-296. Impact factor: 3.613

Klagges, B. R. E.; Heimbeck, G.; Godenschwege, T. A.; Hofbauer A.; Pflugfelder, G. O.; Reifegerste, R.; Reisch, D.; Schaupp, M.; Buchner S.; Buchner, E. (1996): Invertebrate Synapsins: A Single Gene Codes for Several Isoforms in *Drosophila*, Journal of Neuroscience 16(10), 3154-3165. Impact factor: 7.490

Journal reviews

Hortsch, M.; Nagaraj, K.; Godenschwege, T. A. (2009)**:** The interaction between L1-type proteins and Ankyrins - A master switch for L1-type CAM function**.** Cellular & Molecular Biology Letters, 14(1):57-69. **Blind Peer-reviewed**. Impact factor: 1.676

Allen, M. J.; Godenschwege, T. A; Mark A. Tanouye, Pauline Phelan (2006): Making an escape: Development and function of the *Drosophila* Giant Fibre System. Seminar in Cell & Developmental Biology. 17(1):31-41. **Solicited by editor and reviewed by editorial board.** Impact factor: 6.482

Murphey, R. K. and Godenschwege, T.A. (2002): New Roles for Ubiquitin in the Assembly and Function of Neuronal Circuits. Neuron 36 (1): 5-8. **Peer-reviewed**, Impact factor: 13.41

Book and book chapters

Allen, M. J.; Godenschwege, T. A. (2010): Electrophysiological Recordings from the Giant Fiber System in *Drosophila* Neurobiology: A Laboratory Manual (Zhang B, Freeman MR, Waddell S eds), Cold Spring Harbor, ISBN 978-087969905-5/ISBN 978-087969904-8. Cold Spring Harbor Protocols; 2010; **Solicited by editor and reviewed by editorial board. Book Cover Art.**

Uthaman SB, Godenschwege T. A. (2009): L1-Type Cell Adhesion Molecules: Distinct Roles in Synaptic Targeting, Organization, and Function in The Sticky Synapse: Cell Adhesion Molecules and Their Role in Synapse Formation and Maintenance (Umemori H, Hortsch M, eds), pp 247-263. New York, NY: Springer-Verlag New York, ISBN: 978-0-387-92707-7. **Solicited by editor and reviewed by editorial board.**

Symposium and meeting talks by students

International

Mari D. Heghinian, Monica Mejia, Tanja A. Godenschwege, and Frank Marí: "Investigating the Neuromodulatory Effects of Cone Snail Venom in *Drosophila Melanogaster*", 2011 Venoms to Drugs Conference, Heron Island, Australia 05/2011

Mari D. Heghinian, Monica Mejia, Tanja A. Godenschwege, and Frank Marí: "Exploring the Neuromodulatory Effects of Cone Snail Venom in *Drosophila Melanogaster*", 2010 International Society on Toxicology Conference, San Jose, Costa Rica 4/10

National

Tyrone Penserga, Sirisha Kudumala, Priyanka Kakad, Tanja A. Godenschwege (2017): A novel role for Drosophila amyloid precursor protein in regulating axonal retrograde trafficking of selective cargoes. Neurobiology of Drosophila, Cold Spring Harbor, October 307, 2017.

Monica Mejia, Mari D. Heghinian, Frank Mari, Chris Armishaw, and Tanja A. Godenschwege (2010): Screening for marine neuromodulatory drugs using *Drosophila melanogaster.* Society for Neuroscience's 40th Annual Meeting.

Regional/Local

Tyrone Penserga, Sirisha Kudumala, *Richelle Poulus*, Tanja A. Godenschwege: A novel role for Drosophila Amyloid Precursor Protein in regulating axonal retrograde trafficking of selective cargoes. Flies on the Beach Symposium May 12-13, 2017.

Priyanka Kakad and Tanja A. Godenschwege, A role for Lis1 in retrograde transport of L1-type CAMS, 7th Annual South Florida Research Consortium Meeting, Florida, 2015

Jana Boerner and Tanja Godenschwege. Novel Role for Lissencephaly-1 in Synapse Formation, 5th Annual South Florida Research Consortium Meeting- Flies on the Beach Meeting, April 21th, 2013

Sirisha Kudumala and Tanja A. Godenschwege CAMs at work: Role of Neuroglian in Synapse formation. 4th Annual South Florida Research Consortium Meeting, Boca Raton April 21th, 2012

Monica Mejia, Mari D. Heghinian, Frank Mari, and Tanja A. Godenschwege. Hunting from the sea: Screening for marine neuromodulatory drugs using Drosophila melanogaster. Astronaut Trail Shell Club Show Annual Banquet. Patrick Air Force Base NCO, Florida. January 14th 2011.

LaTasha Lee, Sirisha Kudumala and Tanja A Godenschwege. Circuit Du Soleil Juggling genes and neurons: Neuroglian/L1-CAM and PTP69D in giant fiber circuit assembly (2011), 3th Annual South Florida Research Consortium Meeting, Jupiter-Scripps Florida, April, 2011

Monica Mejia, Mari D. Heghinian, *Alexandra Busch,* Frank Mari, Chris Armishaw, and Tanja A. Godenschwege (2010): Marine pharmacy: Hunting for Novel Neuromodulatory Drugs from the Sea. Florida Atlantic University- Max-Planck Florida Institute Neuroscience Symposium.

Monica Mejia, Mari D Heghinian, *Alexandra Busch,* Chris Armishaw, Frank Marí and Tanja A Godenschwege (2010)**:** Screening for marine neuromodulatory drugs in Drosophila melanogaster. 2nd South Florida Drosophila Research Consortium Meeting, University of Miami, Florida.

Jana Boerner and Tanja A. Godenschwege (2010): Analysis of mutant neuron morphology in a standard reference space. 2nd South Florida Drosophila Research Consortium Meeting, University of Miami, Florida.

Monica Mejia, Mari D Heghinian, Frank Marí and Tanja A Godenschwege (2009)**:** Bio-Chemical Alliance **-** A novel approach for in vivo screening of conotoxins. 1st South Florida Drosophila Research Consortium Meeting, Senate Chamber at Florida Atlantic University.

CONFERENCE ABSTRACTS-POSTERS (undergraduate underlines and italics)

International

Bervoets, S., Wei, N., Ermanoska, B., Yusein-Myashkova, S., Blocquel, D., Ooms, T., Guergueltcheva, V., Tournev, I., Thomas, F., Godenschwege, T., Yang, X. L., and Jordanova, A. (2016) THE NUCLEAR CONNECTION OF TYROSYL-TRNA SYNTHETASE TO NEURODEGENERATION, 6th International Charcot-Maroe-Tooth and related neuropathy Consortium meetin, Venis-Metsre, Italy. **J. Peripher. Nerv. Syst. 21, 240-240.**

Ermanoska, B.; Asselbergh, B.; Bervoets, S., I; Leitao-Goncalves, R. ; Ooms, T. ; Atkinson, D.; Ydens, E. ; Verstreken, P.; Timmerman, V; Godenschwege, T.; Jordanova, A. Novel genetic modifier of YARS and GARS in Drosohila improves the understanding of DI-CMTC and CMT2D Neuropathies. Biennial Meeting of the Peripheral-Nerve-Society, May 2015. **Journal of the Peripheral Nervous System 2015 Volume: 20 Issue: 2 Pages: 137-138**.

Jana Boerner, Julie Freund, Sirisha Kudumala, Tanja Godenschwege**.** Lis in retrograde transport of L1-type CAMs, 2014 European Fly Neurobiology Meeting, Hersonissos, Crete, Greece 5-9 October, 2014

Ermanoska, B., Goncalves, R., Boerner, J., Sleegers, K., Ooms, T., Godenschwege, T., Timmerman, V, Callaerts, P., Jordanova, A. The role of the apoptosome complex in olfactory axon pathfinding and targeting. Neurofly meeting. Padua Italy, September 2012. 17th World Congress of the International **Journal of Neurogenetics, Volume: 26 Pages: 69-69.**

Jana Boerner and Tanja A Godenschwege (2010): In-depth characterization of synaptic defects of *Drosophila neuroglian* mutant alleles in the Giant Fiber System. 12th European Drosophila Neurobiology Conference, Manchester, U.K.

Mari D Heghinian, Monica Mejia, Tanja A Godenschwege, Gerhard Dahl, and Frank Marí (2009): Novel Efficacious Bioassay-guided Fractionation of Cone Snail Venom. XVI World Congress of the international Society of Toxinology and X Congresso da Sociedada Brasileira de Toxinologia, *Brazil*

Shirisha Kudumala, Monica Mejia, Rodney Murphey, Tanja Godenschwege (2008): Functional requirements of L1-type cell adhesion molecule Neuroglian and its interaction with Semaphorin 1a in circuitry formation. 12th European Drosophila Neurobiology Conference, Wuerzburg, Germany. Journal of Neurogenetics (2009) 23:S41-S41.

Godenschwege, T. A.; Hu, H.; Shan, X.; Goodman, C. S.; Murphey, R.K. (2002): Semaphorin1a as a Receptor in Guiding the Giant Fiber of *Drosophila,* 9th European Symposium on Drosophila Neurobiology, Dijon, France*.* Talk

Klagges, B.R.E., Pohar, N., Godenschwege, T. A., Schaupp, M., Sass, H., and Buchner, E. (1999): Synapsin and Timp are overlapping genes in *Drosophila*. EDRC 99 16th European Drosophila Research Conference

Godenschwege, T.; Pohar, N.; Buchner, E. (1998): Analysis of the *Drosophila Synapsin* locus and characterization of mutants. *7th European Symposium on Drosophila Neurobiology, Warwick, UK.*

Godenschwege, T.; Pohar, N.; Klagges, B.; Wustmann, G.; Buchner, E. (1998): Analysis of the *Drosophila Synapsin* Locus by Targeted Mutagenesis. Göttingen Neurobiology Report 1998. Proceedings of the 26th Göttingen Neurobiology Conference 1998; Volume II; Edited by N. Elner and R. Wehner, S. 587.

Reisch, D.; Godenschwege, T.; Klagges, B.; Buchner, E. (1998): Electrophysiological, Immunohistochemical, and Ultrastructural Analysis of the Larval Neuro-Muscular Junction in *Synapsin* Knock-Outs of *Drosophila*. Göttingen Neurobiology Report 1998. Proceedings of the 26th Göttingen Neurobiology Conference 1998; Volume II; Edited by N. Elner and R. Wehner, page 588.

Buchner, E.; Eberle, K. K.; Klagges, B.; Becker, S.; Reisch, D.; Schaupp, M.; Körner, Ch.; Godenschwege, T.; Buchner , S. (1997): Synapsin, SAP47, CSP: Molecular Characterization, Mutagenesis and Functional Analysis of Three Conserved Synapse-Associated Proteins of *Drosophila*. From Membrane to Mind. Proceedings of the 25th Göttingen Neurobiology Conference 1997; Volume I; Edited by N. Elner and H. Wässle, page 63.

Klagges, B. R. E.; Heimbeck, G.; Hofbauer, A.; Pflugfelder, G.; Godenschwege, T.; Reifegerste, R., Schaupp, M.; Buchner, S.; Buchner, E. (1994): The Drosophila synapsin homolog gene, Meeting Abstract: Vth European Symposium on Drosophila Neurobiology, La Grande Motte, France.

National

Priyanka Kakad, Brittany Henry, *Aater Qureshi*, *Anna Riso* and Tanja Godenschwege. In vivo characterization of the nuclear role of L1-type CAM Neuroglian. Drosophila Neurobiology meeting, Cold Spring Harbor, Oct 3-7, 2017

Tyrone Penserga, Sirisha Kudumala, Priyanka Kakad, Tanja Godenschwege. A novel function for the Go-protein binding domain of *Drosophila* amyloid precursor protein in regulating axonal retrograde transport. Axon guidance, synapse formation & regeneration meeting, Cold Spring Harbor, NY, Sept. 2016. Page 142

Sirisha Kudumala, *Aater Qureshi,* Priyanka Kakad, Smitha Uthaman, Tanja A. Godenschwege. Distracted—An attractin model for spongiform neurodegeneration. Axon guidance, synapse formation & regeneration meeting, Cold Spring Harbor, NY, Sept. 2016. Page 92

M. H. Hackman, M. F. Hoggard, T. A. Godenschwege, F. Mari. Utilizing the *Drosophila* melanogaster giant fiber system for the functional characterization of peptidic natural products, Society for Neuroscience meeting, Washington DC, 2014

A. M. Rodriguez, M. Heghinian, T. A. Godenschwege, F. Mari; Effects of α-conotoxins from the venom of Conus purpurascens on the *Drosophila* α7 nicotinic acetylcholine receptor, Society for Neuroscience meeting, Washington DC, 2014

Monica Mejia, Mari D. Heghinian, Frank Mari, and Tanja A. Godenschwege. *Drosophila melanogaster* Giant Fiber System as a model for the characterization of α7 nAChRs modulators**.** Society for Neuroscience meeting. New Orleans, Louisiana, October 13th-17th 2012

Heghinian MD, Mejia M, Godenschwege TA, Mari F (2012) The Atypical Activity Profile of bru1b, an alpha-Conotoxin from the Venom of Conus brunneus. Society on Toxinology & Venom Week 2012, Honolulu, Hawaii. **Toxicon 60:156-156.**

Franco A, Heighinian M, Mejia M, McCall J, Nag S, Akondi K, Melaun C, Daly N, Luetje CW, Alewood PF, Craik DJ, Godenschwege T, Adams DJ, Mari F (2012) Discovery, Characterization, and Functional Implications of Conotoxins from Cone Snails Species of the Americas. 17th World Congress of the International Society on Toxinology & Venom Week 2012, Honolulu, Hawaii. **Toxicon 60:148-148.**

Jana Boerner, Sirisha Kudumala and Tanja A. Godenschwege. Interaction of Lissencephaly-1 and Neuroglian in the giant fiber system. MPFI/IBRO SYMPOSIUM on Neural Circuits, From Molecules to Behavior, March 6-7 2012, Jupiter

Sirisha Kudumala, Julie Freund and Tanja A. Godenschwege. Characterization of FIGQY Motif of Neuroglian/L1CAM in synapse formation. MPFI/IBRO SYMPOSIUM on Neural Circuits, From Molecules to Behavior, March 6-7 2012, Jupiter

Jana Boerner and Tanja Godenschwege, Doublecortin, Lissenchephaly-1, and Neuroglian at the giant fiber synapse. Neurobiology of Drosophila, Cold Spring Harbor, New York, USA, page 35

Sirisha Kudumala, Jana Boerner, Julie Freund and Tanja Godenschwege (2011): Characterization of the FIGQY motif of Neuroglian/L1-CAM in synapse formation. *Drosophila*. Neurobiology of Drosophila, Cold Spring Harbor, New York, USA, page 161

LaTasha H Lee and Tanja A. Godenschwege (2011): A novel role of receptor protein tyrosine phosphatase PTP69D in synapse formation. Neurobiology of Drosophila, Cold Spring Harbor, New York, USA, page 175

Sirisha Kudumala, Julie Freund and Tanja A Godenschwege (2010): Characterization of the ankyrin binding motif of Neuroglian in synapse formation. Axon Guidance, Synaptic Plasticity & Regeneration, Cold Spring Harbor, New York, USA

LaTasha H Lee and Tanja A. Godenschwege (2010): A novel role for protein tyrosine phosphatase 69D in *Drosophila* central synapse formation. Axon Guidance, Synaptic Plasticity & Regeneration, Cold Spring Harbor, New York, USA

Mari D Heghinian, Monica Mejia, Tanja A Godenschwege and Frank Marí (2009): Search for the Neuromodulatory Effects of Cone Snail Venom in *Drosophila melanogaster*. Society for Neuroscience's 39th Annual Meeting.

Monica Mejia, Mari D Heghinian, Frank Marí and Tanja A Godenschwege (2009)**:** A novel approach for *in vivo* screening of drugs for biological activity. Society for Neuroscience's 39th Annual Meeting.

Caludette Davis, Rennee Forde, Tanja Godenschwege, Atanu Duttaroy (2008): Heightened oxidative stress in mitochondria endure myopathy, yet synaptic transmission and motor neuron outputs are affected rather slowly. 49th Annual Drosophila Research Conference

Tanja A Godenschwege (2007): Neuroglian/L1-CAM function in central synapse formation. *Neurobiology of Drosophila,* Cold Spring Harbor, New York*,* USA

Tanja A Godenschwege (2007): Signals and Mechanisms in Making a Giant Central Synapse. Janelia Farm Conference, Insect Behavior: Small Brains, Big Functions, HHMI Janelia Farm Research Campus, Ashburn, Virgina

Tanja A Godenschwege (2006): Semaphorin1a and Neuroglian in the assembly of the giant fiber circuit of *Drosophila.* Society for Neuroscience's 36th Annual Meeting, 227.4.

Tanja A Godenschwege (2006): "Interaction of Semaphorin1a and Neuroglian signaling in *Drosophila* giant fiber circuitry formation", Axon Guidance, Synaptogenesis & Neural Plasticity, Cold Spring Harbor, New York, USA, page 65

Smitha Uthaman; Tanja Godenschwege; Rod Murphey (2005): Critical period for the ubiquitin conjugase Bendless in assembly of the giant synapse in *Drosophila*. Neurobiology of Drosophila, Cold Spring Harbor, New York, USA, page 232

Tanja A Godenschwege, Lars V Kristiansen, Xiaoliang Shan-Crofts, Michael Hortsch, Rodney K Murphey (2004): A conserved function for Neuroglian/L1in central synapse formation in Drosophila. Axon Guidance & Neural Plasticity, Cold Spring Harbor, New York, USA, page 75

Smitha Uthaman; Tanja Godenschwege; Rod Murphey (2004): Spatial and temporal role of ubiquitin conjugase Bendless in Drosophila giant synapse formation. Axon Guidance & Neural Plasticity, Cold Spring Harbor, New York, USA, page 132

Godenschwege, T. A.; Froggett, S.J., Caruccio, P.; Shan-Crofts, X.; Kitamoto, T. and Murphey, R. K. (2003): Semaphorin 1a, endocytosis, vesicular traffic jams, and the assembly of the giant fiber system of *Drosophila*. Society for Neuroscience's 33th Annual Meeting, 783.20

Uthaman, S.B.; Godenschwege, T.A.; Murphey R.K. (2003): Ubiquitin and giant synapse formation in *Drosophila*. Society for Neuroscience's 33th Annual Meeting, 783.21

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Godenschwege, T. A.; Shan, X.; Caruccio, P.; Simpson, J.; Goodman, C. S.; Murphey, R.K (2000): Over-expression of Robo and Robo2 in the *Drosophila* giant fiber system alters axon trajectory and synaptic connectivity**.** Axon Guidance & Neural Plasticity, Cold Spring Harbor, New York, USA, page 69.

Godenschwege, T.; Schaupp, M., Reisch, D.; Klagges, B.; Hoppe, V.; Hoppe, J.; Buchner, S.; Buchner, E. (1997): The *Drosophila Synapsin* Gene Is Not Required For Basic Synaptic Function. Meeting on Neurobiology of Drosophila, Cold Spring Harbor, New York, USA, page 56.

<u>Regional/Local</u>

Vindhya Nawaratne, Maria Yurgel, Tyrone Penserga, Ryan Sobel, Brandon Lajeunesse, Sirisha Kudumala, Tanja Godenschwege. Characterization of the role of the Drosophila Attractin homolog in the nervous system. Flies on the Beach Neuroscience Symposium, April 6th 2019.

Vindhya Nawaratne, Maria Yurgel, Tyrone Penserga, Ryan Sobel, Brandon Lajeunesse, Sirisha Kudumala, Tanja Godenschwege. Characterization of the role of the Drosophila Attractin homolog in the nervous system**.** Max Planck Sunposium, March 4-6, 2019.

Tyrone Penserga, Sirisha Kudumala, Richelle Poulos, Rameen Walters and Tanja A Godenschwege**A** role for the Drosophila amyloid precursor protein in retrograde trafficking**.** March 4-6, 2019.

Brandon Lajeunesse and Tanja Godenschwege. Characterization of the neuroprotective role of Mahogunin Ring Finger1, Wilkes Honors College Scholarly and Creative Symposium, April 5th, 2019

Sophia Khan, Brandon Lajeunesse, Supriya Gudi, Tyrone Penserga, Oshadhi Vindhya Nawaratne, Tanja Godenschwege. The characterization of the neuroprotective role of Attractin and Mahogunin Ring Finger1 in Drosophila, Wilkes Honors College Scholarly and Creative Symposium, April 5th, 2019

Brandon Lajeunesse and Tanja Godenschwege. The neuroprotective role of Drosophila Mahogunin Ring Finger in spongiform neurodegeneration. Distinction through Discovery Summer Retreat of the Office of Undergraduate Research and Inquiry, Distinction through Discovery Summer Retreat, August 14. 2018

Brittany Henry, Priyanka Kakad, Tanja Godenschwege, Determining potential enzymes involved in cleavage of L1-type CAM in vivo, Flies on the Beach Neuroscience Symposium, May 12-13, 2017.

Richelle Poulos, Tyrone Penserga, Tanja Godenschwege, To cleave or not to cleave- Defining the functional role of Amyloid precursor Protein in the development of the Drosophila Giant Fiber Circuit, Flies on the Beach Neuroscience Symposium, May 12-13, 2017.

Sirisha Kudumala, *Idani* M., Qureshi A., Kakad P., Uthaman S., Godenschwege T. Distracted: an attractin model for spongiform neurodegeneration. Flies on the Beach Neuroscience Symposium, May 12-13, 2017.

Priyanka Kakad, Qureshi A., Henry B., Godenschwege T. Characterization of the nuclear role of L1-type CAMs in vivo. Flies on the Beach Neuroscience Symposium, May 12-13, 2017.

Brittany Henry, Priyanka Kakad, Tanja Godenschwege, Determining potential enzymes involved in cleavage of L1-type CAM in vivo, 7th Annual Undergraduate Research Symposium 2017, 31 March

Richelle Poulos, Tyrone Penserga, Tanja Godenschwege, To cleave or not to cleave- Defining the functional role of Amyloid precursor Protein in the development of the Drosophila Giant Fiber Circuit, 7th Annual Undergraduate Research Symposium 2017, 30 March

Tyrone Penserga, Kudumala S., Kakad P., Godenschwege T. A novel role for Drosophila Amyloid Precursor Protein in regulating axonal retrograde trafficking of selective cargoes. Max Planck Sunposium, Feb 12-13, 2017.

Priyanka Kakad, Qureshi A., Henry B., Godenschwege T. Characterization of the nuclear role of L1-type CAMs in vivo. Max Planck Sunposium, Feb 12-13, 2017.

Sirisha Kudumala, Idani M., Qureshi A., Kakad P., Uthaman S., Godenschwege T. Distracted: an attractin model for spongiform neurodegeneration. Max Planck Sunposium, Feb 12-13, 2017.

Tyrone Penserga, Sirisha Kudumala, Priyanka Kakad Tanja Godenschwege. Amyloid Precursor Protein-Like and its interaction with L1-type Cell Adhesion Molecule in the CNS of *Drosophila melanogaster,* GPSA Graduate student research day, FAU, 2016

Anthony Singer, Tanja Godenschwege, Frank Mari: Characterization of Peptides from the Venom of Conus Purpurascens, an Eastern Pacific Fish-Hunting Cone Snail Species. Sixth Annual Undergraduate Research Symposium, 2016, Florida Atlantic University

Eber Vazquez, Tanja Godenschwege, Frank Mari: Characterization of Unknown Peptides from the Venom of the Conus Purpurascens. Sixth Annual Undergraduate Research Symposium, 2016, Florida Atlantic University

Stacy Cabral, Sirisha Kudumala, Jana Boerner and Tanja A Godenschwege. Disrupting retrograde axonal transport in Drosophila. Annual Undergraduate Summer Internship Research Poster Presentation 2015, Scripps Florida. Best poster award, 2nd place.

Priyanka Kakad, Jana Boerner, Julie Freund, Sirisha Kudumala, Tanja Godenschwege, In vivo Characterization of L1-type CAM Neuroglian of retrograde signaling in the nervous system of Drosophila melanogaster, College of Science Research Day,2014

Sirisha Kudumala,Julie Freund, Jana Boerner and Tanja Godenschwege. Distinct roles of Neuroglian/L1CAM in guidance and synapse formation. Max Planck Sunposium, Feb 18-19, 2013.

Monica Mejia, Mari Heghinian, Frank Mari, Tanja Godenschwege. New tools for targeted disruption of cholinergic synaptic transmission in Drosophila melanogaster. Max Planck Sunposium, Feb 18-19, 2013.

LaTasha H Lee and Tanja A. Godenschwege Building a Functional Synapse: Receptor Tyrosine Phosphatase 69D involved Pre- and Post-Synaptically in Synapse formation. Max Planck Sunposium, Feb 18-19, 2013.

Olesya Slipchuck and Tanja A Godenschwege. Synaptic and guidance role for EphR and Ephrin in the Giant Fiber circuit. College of Science Research Day, FAU 2013.

Jana Boerner, Sirisha Kudumala and Tanja A. Godenschwege. Interaction of Lissencephaly-1 and Neuroglian in the giant fiber system. MPFI/IBRO SYMPOSIUM on Neural Circuits, From Molecules to Behavior, March 6-7 2012, Jupiter

Sirisha Kudumala, Julie Freund and Tanja A. Godenschwege. Characterization of FIGQY Motif of Neuroglian/L1CAM in synapse formation. MPFI/IBRO SYMPOSIUM on Neural Circuits, From Molecules to Behavior, March 6-7 2012, Jupiter

Monica Mejia, Mari D. Heghinian, Frank Mari, and Tanja A. Godenschwege. Giant Fiber System as a model for the characterization of α7 nAChRs modulators. Max Planck Florida Institute/International Brain Research Organization Neural Circuits Symposium. Jupiter, Florida, March 6th-7th 2012

LaTasha H Lee and Tanja A. Godenschwege (2012): A novel role of receptor protein tyrosine phosphatase PTP69D in synapse formation. Max Planck Florida Institute/International Brain Research Organization Neural Circuits Symposium. Jupiter, Florida, March 6th-7th 2012

Sirisha Kudumala, Jana Boerner, Julie Freund and Tanja Godenschwege (2011): Characterization of the ankyrin binding motif of Neuroglian/L1-CAM in synapse formation. *Drosophila*. 3th Annual South Florida Research Consortium Meeting, Jupiter April 21th, 2011, Scripps Florida.

Monica Mejia, Alexandra Busch, Tanja A Godenschwege, Giant Fiber System as a model for the characterization of α7 nAChRs modulators, 3th Annual South Florida Research Consortium Meeting, Jupiter April 21th, 2011, Scripps Florida.

LaTasha H Lee and Tanja A. Godenschwege (2010)**:** Wiring the brain: A Novel Role for Receptor Tyrosine Phosphatase PTP69D in Synapse Formation. Research Day of the College of Science, Florida Atlantic University.

Monica Mejia, Mari D Heghinian, *Alexandra Busch*, Chris Armishaw, Frank Marí and Tanja A Godenschwege (2010)**:** A novel approach for *in vivo* screening of drugs for biological activity. Research Day of the College of Science, Florida Atlantic University.

Shirisha Kudumala and Tanja A Godenschwege (2009): Structural and Functional Analysis of the cytoplasmic domain of L1-type molecules. Research Day of the College of Science, Florida Atlantic University.

SYMPOSIUMS, INVITED SEMINARS & LECTURES

2020 University of Buffalo, Biology Department, May- postponed due to corona pandemic

2019 Würzburg Insect Research Colloquium, University of Würzburg. Dec

2017 Krasnow Institute for Advanced Study, George Mason University, USA

2016 FAU Neuroscience Student Organization Kick-Off Event, Lake Pavilion, West Palm Beach
Association of Biological and Biomedical Students. "Making Choices: Career and Family", Florida Atlantic University

2015 Florida Atlantic High School, Boca Raton, FL

2014 University of York, U.K.
Max Planck Institute and University of Muenster, Germany
Friedrich Mieschner Institute, Basel, Switzerland
Jupiter Neuroscience Faculty Forum, USA

2013 University of Antwerp-Belgium, VIB institute- Department of Molecular Genetics.
5th Annual South Florida Research Consortium Meeting, University of Miami, FL

2012 Guest speaker of the Academic Careers Roundtable at Scripps Florida

2011 Neuroscience Seminar Series, Florida Atlantic University
Physics Colloquium, Florida Atlantic University

2009 University of York, Department of Biology, U.K. (cancelled due to defective airplane)
Neurogenetics of the Synapse in Drosophila Symposium, University of Würzburg, Germany
1st South Florida Drosophila Research Consortium Meeting, Boca Raton, Florida

2008 Florida Atlantic University, Neuroscience Seminar Series, Florida
University of University of Missouri-Columbia, Biological Sciences
Howard University, Biology Department
Theodor-Boveri-Institut für Biowissenschaften, University of Würzburg, Germany
Neurobiology of Drosophila Summer Course, Cold Spring Harbor Laboratories
"My Fly Project" Workshop of the Biology Department-Florida University of Miami at the Kampong National Tropical Botanical Garden

2007 FAU-Max Planck Symposium at Florida Atlantic University
FAU-Tyratech Symposium at Florida Atlantic University

2006 Florida Atlantic University, Neuroscience Seminar Series, Florida
Neurobiology of Drosophila Summer Course, Cold Spring Harbor Laboratories, NY
University of West Virginia, Biological Sciences, Morgantown, West Virginia
Pioneer Valley Life Sciences Institute, Baystate, Springfield, Massachusetts
University of Maryland Baltimore County, Biology Department, Baltimore, Maryland
University of Houston, Department of Biology and Biochemistry, Houston, Texas
University of Miami, Biology Department, Miami, Florida
Florida Atlantic University, Department of Biological Sciences, Boca Raton, Florida

2005 Neurobiology of Drosophila Summer Course, Cold Spring Harbor Laboratories, NY
Kent State University, Department of Biological Sciences, Kent, Ohio
Medical College of Georgia, Institute of Molecular Medicine and Genetics, Augusta, GA
Drexel University, Department of Neurobiology and Anatomy, Philadelphia, PA
SIU School of Medicine, Department of Physiology, Carbondale, Illinois
University at Albany, Department of Biological Sciences, Albany, NY
University of Toronto at Mississauga, Department of Biology, Toronto, Canada

Children's Hospital Medical Center, Department of Anesthesia, Cincinnati, Ohio
Neurobiology of Drosophila Conference, Cold Spring Harbor, New York

2004 Vanderbilt University, Department of Biological Sciences, Tennessee
Neurobiology of Drosophila Summer Course, Cold Spring Harbor Laboratories, NY
University of Würzburg, Department of Genetics & Neurobiology, Germany
Medical School-University of Massachusetts, Institute of Neurobiology, Worcester, MA

2003 Neurobiology of Drosophila Summer Course, Cold Spring Harbor Laboratories, NY

2002 University of Puerto Rico, Institute of Neurobiology, San Juan, Puerto Rico
Neurobiology of Drosophila Summer Course, Cold Spring Harbor Laboratories, NY
Axon Guidance & Neural Plasticity Conference, Cold Spring Harbor
East Coast Nervenet meeting, Woods Hole, MA.
9th European Symposium on Drosophila Neurobiology, Dijon, France

2001 University of Würzburg, Department of Genetics & Neurobiology, Germany
Neurobiology of Drosophila Summer Course, Cold Spring Harbor Laboratories, NY

CONTRACTS AND GRANTS

External

09/15/2015 – 09/14/2019 National Institute of Health/National Institute for Neurological Disease and Stroke (R15NS090043), Nuclear function of L1-type CAMs in the drosophila nervous system, PI: Godenschwege, $447,587.00 (re-submitted 2/2015, first submission 2/2014)

01/11/2015-18/12/2014 HHMI Janelia Farm Visitor program. Whole cell patch clamp recordings from the tergotrochanteral motoneuron in the giant fiber circuit of *Drosophila,* PI: Tanja, Co-PI: Gwyneth Card, $2,816.00

01/03/2008-30/11/2014 National Institute of Health/National Institute of Child Health and Human Development (R01HD050725), Functional analyses of Neuroglian/L1 in synaptogenesis, PI: Godenschwege, $1,369,459.00

07/01/2009 – 02/28/2014 National Institute of Health/National Institute of Child Health and Human Development (R01HD050725-S1), Research Supplements to Promote Diversity in Health-Related Research, PI: Godenschwege, $95,308.00

01/07/2009-06/30/2011 National Institute of Health/ National Institute for Neurological Disease and Stroke (1R21NS066371), Efficacious Screening of Peptidic Natural Products Using Drosophila, PI: Frank Mari, Co-PI: Godenschwege, $391,875.00

External-Pending

Submitted 06/2020 National Institute of Health/ National Institute for Neurological Disease and Stroke (R15NS122022), The Role of Drosophila Attractin homolog in regulation of E3-

ligase Mgrn1 and stress signaling, 04/01/2021 - 03/31/2024, PI Godenschwege, $448,500.00, **Impact Score:** 42, **Percentile:** 33.0

Internal

2/15/2021-6/30/2021	Undergraduate Research Grant of Office of Undergraduate Research and Inquiry 2020. “The effects of DSD on E3-ligase Mahogunin Ring Finger 1 (Mgrn1) in the nervous system and insulin producing cells”, Undergraduate: Wayne Robinson, PI: Godenschwege, $600
1/15/2021-6/30/2021	Undergraduate Research Grant of Office of Undergraduate Research and Inquiry 2020. “Determining oxygen consumption if in wildtype and mutant Drosophila”, Undergraduate: Satviki Singh, PI: Godenschwege, $600
07/2018- 06-2019	Neuroscience Pilot Award, FAU Brain Institute. Determine interaction of Attractin homolog Dsd with the ubiquitin system. PI: Godenschwege, $15,000.00
07/2018- 06-2019	Undergraduate Research Team Grant of Office of Undergraduate Research and Inquiry 2018. “Characterization of Dsd, Ben and Mgrn1 in the GF of Drosophila”, Undergraduates: Brandon Lajeunesse, Sophia Khan, Supriya Gudi, PI: Godenschwege, $1,200
04/13-08/02/2018	2018 Summer Undergraduate Research Fellowship (SURF) from Undergraduate Research Grant of Office of Undergraduate Research and Inquiry, Undergraduate: Brandon Lajeunesse, PI: Godenschwege, $4000
05/08-07/02/2017	2017 Summer Undergraduate Research Fellowship (SURF) from Undergraduate Research Grant of Office of Undergraduate Research and Inquiry, Undergraduate: Richelle Poulos, PI: Godenschwege, $4000
05/08-07/02/2017	2017 Summer Undergraduate Research Fellowship (SURF) from Undergraduate Research Grant of Office of Undergraduate Research and Inquiry, Undergraduate: Brittany Henry, PI: Godenschwege, $4000
1/10/2017-1/8/2018	Undergraduate Research Grant of Office of Undergraduate Research and Inquiry 2016. “Detect and characterize different fragments of L1-type-CAM, Neuroglian in Drosophila nervous system”, Undergraduate: Brittany Henry, PI: Godenschwege, $600
12/22/2016- 12/21/2017	Undergraduate Research Grant of Office of Undergraduate Research and Inquiry 2016. “The role of Amyloid Precursor Protein in the

	development of the Drosophila Giant Fiber Circuit", Undergraduate: Richelle Poulos, PI: Godenschwege, $600
05/2015-03/2016	Graduate Research and Inquiry Grant (Grip) 2015, Graduate College, "Illuminating Neuroglian", Graduate Student: Tyrone Penserga, PI: Godenschwege, $1500.00
05/2014-06/2015	Seed Grant 2014, College of Science, Analyses of the role of full-length L1-type CAM neuroglian in the nucleus. PI: Godenschwege, $5000.00
01/2013-06/2015	Seed Grant 2013, FAU Division of Research. "Investigation of common mechanisms of L1-type CAMs and Semaphorins interactions in cancer and neurological disorders", PI's: Vijaya Iragavarapu (Biomedical Sciences), Tanja A Godenschwege (Biological Sciences), $20,000.00
01/2012-12/2012	Seed Grant Program 2012, FAU Division of Research, A Genetic Study of Natural Hybridization in African Monkeys. PI: Kate Detwiler, Co-PI: Godenschwege, $5000.00

INSTRUCTION

TEACHING

Undergraduate Courses at Florida Atlantic University

PCB 4842 Cellular Neuroscience & Disease, Fall 2007- 2010, Summer 2015, Fall 2016-2019

PCB 4023 Molecular and Cellular Biology, Fall 2012, 2013, Summer 2014, Fall 2015

PCB 3023 Cell Biology, Fall 2020-present

Graduate Courses at Florida Atlantic University

BSC 6846/ENC6258 Scientific Communication, Spring 2008-present

PCB 6840 Cellular Neuroscience & Disease, Fall 2007-2010, Summer 2015

BSC 6936 Advanced Biotechnology lab II, Spring 2007

BSC 6905 Neuroscience Colloquium and Seminar, 2007-2010

BSC 6905 Neuroscience Journal Club, 2010-2011

BSC 6905 Research Seminar in Neuroscience & Development, 2007-2011

Guest Lectures at Florida Atlantic University

Course	**Level**	**Semester**
Integrative Biology	Graduate	Fall 2006-7, 2009-13
SLS 1503	Undergraduate	Fall 2008, Fall2009-11
Biology Honors program	Undergraduate	Fall 2009, 2016, 2020
NSF URM Program	Undergraduate	Summer 2010-11

Practical Cell Neuroscience	Graduate	Spring 2010
Neuroscience 2	Graduate	Spring 2011-12

STUDENTS AND POSTDOCS

PhD students:

Completed

Amanda Rainey, GNTP, rotating student (Spring 2020)

Priyanka Kakad, IBN-PhD (Summer 2013-Summer 2018), Thesis project: Characterization of the nuclear role of L1-type CAMs.

- *2017 John Nambu Scholarship*
- *2015 Life Long Learning Fellowship*
- *2014 Dr. Vincent R. Saurino Graduate Fellowship in Biological Sciences.*

Monica Mejia, IB-PhD student (Fall 2009- Summer 2013), Thesis title: Development of a novel assay for in vivo screening of neuromodulatory drugs and targeted disruption of cholinergic synaptic transmission in Drosophila melanogaster.

- 2013 *FAU Alumni Association Scholarship*
- *2012-2013 Delores A. Auzenne Fellowship for Graduate Students. FAU, FL*
- *2009-2013 Latin American and Caribbean Consortium of Engineering Institutions Scholarship. FAU, FL*
- *2011-2013 Student Government Scholarship. FAU, FL*
- *2011-2013 Julian Weiss Scholarship. FAU, FL*
- *2011 Andrew Todd Auster Scholarship. FAU, FL*
- *2011 Astronaut Trail Shell Club Scholarship, FL*
- *2010, 2011 Dr. Daniel and Aurel B. Newell Fellowship for Graduate Students. FAU, FL*
- *2010 Zeiss Graduate Student award at the FAU-Max Planck Florida Institute Neuroscience Symposium*
- *2010 Graduate Research Excellence award at FAU, FL (2nd place)*
- *2009 Dr. Vincent R. Saurino Graduate Fellowship in Biological Sciences. FAU, FL*

LaTasha Lee, IB-PhD student (Fall 2008-Summer 2014), Thesis title: Characterization of receptor protein tyrosine phosphatase PTP69D in the giant fiber circuit.

- *IB PhD Alumni award 2015*
- *FAU Graduate Diversity Fellowship* 2009
- *Certificate of Appreciation from Student Government for Service* 2008, 2009, 2010
- *Certificate of Appreciation from Graduate Student Advisory Board* 2008, 2009, 2010
- *Delores A. Auzenne Fellowship* 2009-2011
- *Inaugural Recipient of the Darwin Award* 2010
- *Cold Spring Harbor Laboratory Fellowship* to attend **"**Neurobiology of Drosophila Summer Course, 2010
- *National Institute for Child Health and Human Development Fellowship***.**
- *Federation of American Societies for Experimental Biology (FASEB) Minority Access to Research Careers (MARC) Program Fellowship (2010)*

Sirisha Kudumala, IB PhD student (Fall 2008-Spring 2014), Thesis title: Functional roles of LI-CAM/Neuroglian in the nervous system of Drosophila melanogaster.

Mari Heghinian, Chemistry PhD student (Fall 2008-Spring 2014), Thesis title: Discovery and biological characterization of conotoxins from the venom of Conus brunneus in Drosophila melanogaster, Co-adviser with Frank Mari, Chemistry und Biochemical Department

Masters students

Completed

Tyrone Penserga (2014-Spring 2019), Lab project: Characterization of retrograde signals in the adult central nervous system.

- *2018 Osher Lifelong Learning Institute Scholarship*
- *2017 Dr. Vincent R. Saurino Graduate Fellowship in Biological Sciences. FAU, FL*
- *2017 Outstanding Student Award, Northern Campus Achievement Awards*
- *2016 Diversity Fellowship*
- *2015 Life Long Learning Fellowship*
- *2015 GRIP grant recipient*

Priyanka Kakad, (2013-2015), Master's En Passant in Biological Sciences
Monica Mejia, Masters student (2007-2008), Lab project: Characterization of tyrosyl-TRNA synthase mutants in the giant fiber circuit
Olesya Slipchuk, Masters of Science (Spring 2012-Fall 2014), Lab project: Characterization of Ephrin and Ephrin receptors in the giant fiber circuit.
Michael Lucchese, Masters of Science (Fall 2008-Spring 2009). Lab project: Cloning of Human-L1CAM constructs. Co-advisor with David Binninger, Biological Science Department

Undergraduates (Honors thesis students highlighted in bold):

Roberto Estevez, Biology BS, DIR, Spring 2021-present
Brianne Jacquet-Cribe, Harriet L. Wilkes Honors College/NSF Lear Scholar, intern, Spring 2021- present
Satviki Singh, dual enrolled Harriet L. Wilkes Honors College/Max Planck Academy, DIR, Fall 2020-present, Ouri Grant 2020
Wayne Robinson, Biology BS, DIR and Work-study, Summer 2020-present, Ouri Grant 2020
Andrew Wu, Harriet L. Wilkes Honors College, Spring 2020-present
Cypress Potter, Harriet L. Wilkes Honors College, intern Summer 2020 -present
Roberto Martin, Biology BS, DIR, Fall 2020
Matthew Eximond, Harriet L. Wilkes Honors College, Summer, 2019-Fall 2020
Rachel Kamel, Biology BS, DIR, Spring 2020
Laura Paez**,** Harriet L. Wilkes Honors College, intern, Spring 2019-Summer 2019
Ryan Sobel, Biology BS, FAU-MPFI Honors program, Summer 2018-present, John Nambu Research Scholarship Summer 2019
Brandon Lajeunesse, Harriet L. Wilkes Honors College, Fall 2017- present Ouri Grant 2018, SURF Fellowship 2018
Sophia Khan, Harriet L. Wilkes Honors College, Spring 2018-Summer 2019, Ouri Grant 2018

Micael Idani, Harriet L. Wilkes Honors College, Fall 2016-Fall2018, John Nambu Summer research scholarship 2017
Supriya Gudi, Harriet L. Wilkes Honors College, Fall 2017- Summer 2018,Ouri Grant 2018
Rameen K Walters**,** Biology BS, Spring 2017- Summer2018, John Nambu Research Scholarship Summer 2018
Kenzie Waldkoetter, Harriet L. Wilkes Honors College, Spring 2018.
Brittany Henry, Biology Honors Program, **Summer 2016-Summer 2017,** Ouri Grant 2016, SURF Fellowship 2017, *Andrew R. and Marjorie C. Buglione Endowed Scholarship 2017* **(MPH at UF)**
Richelle Poulos, Biology Honors Program, **Summer 2016-Summer 2017,** Ouri Grant 2016, SURF Fellowship 2017
Anna Riso, Harriet L. Wilkes Honors College, Spring 2017-Summer 2017, Harriet L. Wilkes Honors College Summer Research Scholarship 2017
Aater Qureshi, Harriet L. Wilkes Honors College, Spring 2014-Spring 2016 (MPH at UF)
Veronica Nunez, Biology BS, DIS Fall 2015-Summer 2016, John Nambu Research Scholarship Summer 2016
Stacy Cabral, Harriet L. Wilkes Honors College, John Nambu Research Scholarship Summer 2015, 2nd place poster presentation at **Scripps Research Institute's Undergraduate Summer Internship Research Poster Presentation**
Srigita Madiraju, Harriet L. Wilkes Honors College, JLSI Research Scholarship Summer 2014, Spring 2013-Summer 2014**, Biology BS**, **Biology Honor program students, Fall 2011-Summer 2013**
Andrew J. Seaboyer, Biology BS, DIS, Spring 2013 (FIU in Environmental Policy and Management)
Stanley Andieu, Biology BS, DIS, Spring 2013
Eva M. Gallo, Biology BS, DIS, Fall 2012-Spring 2013
Asha Patel, Biology BS, Summer & Fall 2012
Stephen Rohrnough, Biology BS, Spring 2011-Summer 2011
Oleysa Slipchuk, Biology BS, Spring 2011-Fall 2011
Aline Yonezawa, Biology BS, Spring 2011
Alexandra N. Busch, Biology BS, **NSF-URM student, Summer 2009-Summer 2011**
Christina Marie Gambino, Biology BS, **DIS & Honors Program, Fall 2009-Spring 2011**
Danielle Howard, Biology BS, DIS, Fall 2010
Ryan W. Treu, Biology BS, DIS, Summer 2009
Duniel Viera, Biology BS, DIS, Fall 2008
Carlos Gonzales, Biology BS, DIS, Spring 2008, Summer 2008
Alexandra Reid, Biology BS, DIS, Spring 2007, Summer 2007
Ben Warner, Biology BS, DIS, Summer 2007
Clarissa Alexandra, Biology BS, DIS, Summer 2007

Postdoctoral Research Fellow:
Oshadhi Vindhya Nawaratne, June 2018- March 2020
Sirisha Kudumala, Sept 2015-Summer 2017
Jana Boerner, Summer 2009-Summer 2013

Other trainees:
Biljana Ermanoska, PhD student in Albena Jordonova lab, VIB Department of Molecular Genetics, University of Antwerp, June-December, 2011, Boehringer Ingelheim Fonds Travel Grant
Samantha Stilley, Benjamin High School, Jupiter, Summer 2013

Julie Freund, Technician, 2009-2015
Meghana Pandit, Suncoast High School in Riviera Beach, Summer 2016
Blake Davis, BS Biology at USF, Postbac Volunteer, Fall 2017- Summer 2018
Rachel Kamel, Postbac Volunteer, Summer 2020-present

THESIS COMMITTEE MEMBER

Aaron McFarlane, IBN-PhD (Fall 2019-present)
Cecila Nicholas, IB-PhD (Spring 2019-present)
Kazuma Murakami, IBN-PhD (Summer 2016-present)
Lillian Onwuha-Ekpete, IB-PhD, (Spring 2014-Fall 2020)
Ke Zhang, IBN-PhD (Fall 2016-Spring 2020)
James Jaggard, IB-PhD (Summer 2016-Spring 2020)
Maria Eduarda Yurgel, IBN-PhD (Spring 2016-Fall 2018)
Mickelene Hackman, PhD student, Chemistry department (Spring 2014-Spring 2018)
Jennifer Krill, Biological Sciences, IB-PhD student (Fall 2008- Fall 2018)
Melissa Slocumb, IBN-PhD (Summer 2016-Summer 2017)
Raphael Itzkowitz, Masters (Fall 2015-Fall 2016)
Ramon Antonio Garcia Areas, Biological Sciences, IB-PhD student (Spring 2011-Summer 2016)
Haiyin Zou, Biomedical Sciences, IB-PhD student (Fall 2009- Spring 2016)
Mari Heghinian, Chemistry PhD student (Fall 2008-Spring 2014)
Melissa Borgen, Biological Sciences, IB-PhD student (Spring 2009-Fall 2014)
Brian Orr Biological Sciences, IB-PhD student (Fall 2009- Fall 2013)
Rebecca Leon, Biomedical Sciences, IB-PhD student (Fall 2008-Summer 2012)
Kimberly Diane Rowland, Biological Sciences, IB-PhD student (Fall 2008-Spring 2012)
Joe Krystal, Biological Sciences, IB-PhD student (Fall 2009-Spring 2012)
Huan Liu, Biomedical Sciences, IB-PhD student (Fall 2009-Fall 2012)
Lauren Purpura, Biological Sciences, IB-PhD student (Fall 2008- 2011)
Traci Pantuso, Biological Sciences, Masters student (Spring 2011)
Jennifer Verriotto, Biological Sciences, Masters student (Spring 2009-Fall 2010)
Michael Lucchese, Masters Student (Fall 2008-Summer 2009)
Julie Freund, Biological Sciences, BS/Masters student (Spring-Fall 2008)

SERVICE AND PROFESSIONAL DEVELOPMENT

Department

Advisory committee of Neuroscience and Behavior undergraduate program (Spring 2020-present)
Personnel Committee (Fall 2019-present)
Space Committee (Spring 2020-present)
Biology Chair recruitment committee (Fall 2019-Spring 2020)
Integrative Biology PhD Admissions Committee (Spring 2009-present)
Integrative Biology and Neuroscience PhD Admissions Committee (Spring 2011-present)
Integrative Biology PhD Program Committee (Spring 2009-present)
Teaching evaluation for promotion of Dr. Rindy Anderson (Fall 2019)
Teaching evaluation for promotion of Dr. Alex Keene (Fall 2019)
Promotion evaluation Evelyn Frazier, Summer 2018

Faculty recruiting committee, Biological Sciences (Spring 2007, Spring 2009, Spring 2013)
Associate Director, Integrative Biology PhD Program (2008-2011)
Biology Bylaws committee, Biological Sciences Department (Spring 2010)

College

Master researcher of the Master research program of College of Science, Florida Atlantic University (2011- 2012)
Seed proposal reviewer for the College of Sciences (Spring 2012).
Neuroscience Steering committee (Spring 2009-2011)
Graduate Marshal of College of Science, Commencement (Fall 2011)
Neuroscience Webpage committee (Summer 2007- 2009)
Neuroscience curriculum committee for PhD program (Summer 2007- 2009)
Faculty recruiting committee, Physics Department (Spring 2007)
Neuroscience Seminar Committee representative for Biological Sciences and CMBB (Fall 2006-Spring 2009)

University

Reviewer for the Office of Undergraduate Research and Inquiry of Undergraduate Research Grants (2018, 2019, 2020)
Mentor for Network of Women in Science (NWIS) at FAU, MPFI and Scripps (Spring 2020-present)
Diving and Boating Safety Board Member (Spring 2018-present)
Graduate Training Program in Neuroscience (GNTP) Steering Committee (Fall 2017- present)
Panel member, Women's Networking Event hosted by FAU ADVANCE Institutional Transformation-Catalyst (IT-Catalyst) program. (March 25th, 2019)
Integrating FAU neuroscience graduate education committee (Spring-Summer 2017)
Poster judge at Undergraduate Research Symposium (Spring 2015, 2016, 2017)
Undergraduate research grant reviewer for the Undergraduate Research & Inquiry at FAU (Fall 2015)
Poster judge at the Graduate and Professional Student Association Research Day Spring (Spring 2010-2015)
Incentive Committee, Division of Research (Fall 2015)
Faculty Advisor to the Graduate and Professional Student Association (Spring 2012-2014)
Faculty recruiting committee, Biological Sciences & Honors College (Spring 2013)
Owl Awards Selection Committee for the Graduate Student Association (Fall 2011)
NSF MRI proposal reviewer for the Division of Research at FAU (Fall 2011)
Poster judge at the College of Science Research day (Spring 2007-2008)

International

International Max Planck Research School (IMPRS) Brain and Behavior admissions committee, Spring 2019-present

Community Public service

Guest speaker at Association of Biological and Biomedical Students "Making Choices: Career and Family" event, Florida Atlantic University, Spring 2016
Guest lecture at FAU High School, Boca Raton, Spring 2015
Guest speaker of the Academic Careers Roundtable at Scripps Florida, Fall 2012

Professional development and qualifications

Writing Across Curriculum (WAC) course certification, Spring 2015
Florida Atlantic University Scientific Diver/Member of AAUS, since June 2011

Exhibitions

Spring 2011	Provided art work for exhibition at the Florida Atlantic University multimedia event to celebrate the 16th annual Brain Awareness Week, March 14-20, 2011, as well as the 25th Anniversary of the Center for Complex Systems and Brain Sciences and the 50th Anniversary of FAU.

PROFESSIONAL SERVICE & MEMBERSHIPS

Grant reviewer

2017	National Institute of Health, Synapses, Cytoskeleton and Trafficking Study Section [SYN]
2017	National Institute of Health, Special Emphasis panel, AREA: Applications in Cell and Developmental Biology, ZRG1 CB-T(81) study section
2016	National Institute of Health, Special Emphasis panel, AREA: Applications in Cell and Developmental Biology, ZRG1 CB-T(81) study section
2015	National Institute of Health, Synapses, Cytoskeleton and Trafficking Study Section [SYN]
2014	National Science Foundation, IOS – Modulation, request received but declined due to conflict of interest
2013	Parkinson's U.K.
2012	National Institute of Health, Synapses, Cytoskeleton and Trafficking Study Section [SYN] The Wellcome Trust-Career Re-Entry Fellowship, U.K.
2011	National Institute of Health, Synapses, Cytoskeleton and Trafficking Study Section [SYN]
<2011	National Science Foundation, IOS – Modulation, IOS - Animal Developmental Mechanisms, MCB – Cellular Systems and IOB – Developmental Systems cluster

Journal/textbook reviewer

2020	JOVE (Sept), Journal of Neurochemistry (January), Molecular Biology of the Cell (Text book of W. W. Norton & Company)-video animation library for chapters 13,14 &17 (Feb), BMC Biology (Feb and May), Guest editor-Plos Genetics (Nov-Dec)
2019	Micropublications, Molecular and Cellular Neuroscience, Nature-Scientific Reports
2018	Journal of Visual Experiments (March), ACS Chemical Neuroscience (May),
2016	Nature, Plos One
2015	Nature, Plos One
2014	Plos One (Spring and summer), Journal of Visual Experiments

2013	Nature
2012	Journal of Comparative Neurology, Journal of Neurogenetics, Journal of Visual Experiments
2011	Current Biology, Journal of Comparative Neurology, Journal of Neurogenetics
<2011	FLY, Journal of Neurobiology, Biochimica Et Biophysica Acta (BBA), PLos Genetics, Developmental Neurobiology, Oxford University Press, Current Biology
PNT reviewer	Western Kentucky University (2015)
Course Instructor	for the Neurobiology of Drosophila summer course at the Cold Spring Harbor Laboratories, NY, (2001-2006, 2008).
Organizer	of the Florida Atlantic University-Max-Planck Florida Institute Neuroscience Symposium, Grand Palm, Florida Atlantic University (2010), 1st South Florida Drosophila Research Consortium Meeting, Senate Chamber at Florida Atlantic University (2009).
Session chair	of the 2nd South Florida Drosophila Research Consortium Meeting, University of Miami, Florida (2010).
Member	of the Society for Neuroscience (since 2002), American Association for the Advancement of Science (since 2006) and American Academy of Underwater Sciences (since 2013).

HONORS, AWARDS & FELLOWSHIPS

Exceptional Faculty Award nominee, Northern Campus Achievement Awards (2017)
HHMI Janelia Farm Visitor Program Fellowship (2014)

Division of Research Faculty Mentor-Mentee Award (2011). Mentee: Kate Detwiler, Arts & Letters.

Researcher of the Year Award 2010-2011, Florida Atlantic University

Research Assistant Professor of the Year 2011, Warren Lloyd Holtzman Seed grant, Charles E Schmidt College of Science

Graduate Student Mentor Award of the Graduate Student Association, FAU Owl Awards (2009)

Postdoctoral fellowship of the "Graduiertenkollegium Arthropodenverhalten" in Würzburg (1999)

Graduate fellowship of the "Graduiertenkollegium Arthropodenverhalten" in Würzburg (1995-1998)

Neurofly Meeting Award, 7th European Symposium on Drosophila Neurobiology, Warwick, UK (1998)

CSHL Meeting Award, Neurobiology of Drosophila meeting, Cold Spring Harbor, NY (1997)

Journal/Book cover illustrations Drosophila Neurobiology: A laboratory manual, Cold Spring Harbor Press (2010), Journal Neurogenetics, volume 24 (3), (2010) and European Journal of Cell Biology, volume 79 (7), (2000)

Institutional Affiliation

Kathleen M. Guthrie, Ph.D.
Associate Professor of Biomedical Science
College of Medicine
Florida Atlantic University

Contact Information

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EDUCATION

1983-1989	**Ph.D., Dept. of Psychobiology** University of California, Irvine.
1982	**B.S. Chemistry, cum laude** Fort Lewis College, Durango, Colorado
1980	**B.S. Biological Science, magna cum laude** Fort Lewis College, Durango, Colorado.

EMPLOYMENT/PROFESSIONAL APPOINTMENTS

2018-present	**Assistant Director of Education** Graduate Neuroscience Training Program Florida Atlantic University Brain Institute
2017-present	**Affiliate Faculty, Associate Professor**, Division of Neurology Dept. of Integrated Medicine, College of Medicine Florida Atlantic University
2007-present	**Associate Professor** Dept. of Biomedical Science (dept moved to College of Biomedical Science, which became the College of of Medicine in 2010) Florida Atlantic University
2004-2010	**Affiliate faculty, Assistant Professor** Dept of Neuroscience, College of Medicine University of Miami
2003-present	**Affiliate faculty, Assistant Professor**

	Dept of Biological Sciences, College of Science Florida Atlantic University
2001-present	**Affiliate faculty, Assistant Professor** Dept of Psychology, College of Science Florida Atlantic University
2001-2007	**Assistant Professor** Dept. of Basic Biomedical Sciences, College of Science Florida Atlantic University
1994-2001	**Assistant Research Professor (I and II)** Dept. of Anatomy and Neurobiology, College of Medicine University of California, Irvine
1989-1994	**Postdoctoral Research Fellow** Dept. of Anatomy and Neurobiology, College of Medicine University of California, Irvine
1987-1989	**NIMH Predoctoral Fellow** Dept. of Psychobiology, School of Biological Sciences University of California, Irvine
1984-1987	**NIMH Predoctoral Trainee** Dept. of Psychobiology, School of Biological Sciences University of California, Irvine

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AWARDS AND HONORS

2014	FAU Division of Research, University Seed Grant Award
2010	FAU College of Biomedical Science, Excellence in Teaching Award
2001	FAU Division of Sponsored Research Initiation Award
1998	European Chemosensory Research Organization Travel Fellowship Award
1998	Career Development Award, University of California, Irvine
1996	Career Development Award, University of California, Irvine
1992	Career Development Award, University of California, Irvine
1991-1992	Winter Conference on Brain Research Travel Fellowship Award
1990	Career Development Award, University of California, Irvine
1980	La Plata County Humane Society Scholarship, Fort Lewis College
1979	John Reed Biology Scholarship, Fort Lewis College

PROFESSIONAL MEMBERSHIPS/SOCIETIES

Society for Neuroscience (1987-present)

Association for Chemoreception Sciences (1986-present)

RESEARCH GRANT SUPPORT

External:

2018-2020, “Role of Ube3a in neuronal maturation and synaptogenesis in adult-born neurons”. NIH/NIDCD Grant R21DC16467, ***Principal Investigator,*** 25-28% effort annually, Total award: $395,295 (direct: $275,000, indirect: $120,295) Florida Atlantic University.

2012-2015 "BDNF overexpression and olfactory neurogenesis”. NIH/NIDCD grant R15DC012425 "BDNF overexpression and olfactory neurogenesis. ***Principal Investigator,*** 13-15% effort annually, Total award: $429,050, (direct: $300,000, indirect: $129,050) Florida Atlantic University.

2009-2011 “Trafficking of trophic factors in forebrain.” NIH/NIDCD grant R15DC010485. ***Principal Investigator*****,** 20% effort annually, Total award: $214,970 (direct: $150,000, indirect $64,970). Florida Atlantic University.

2005-2009 “Neuronal survival in the olfactory system”. NIH/NIGMS SCORE Grant, S06GM073621, ***Principal Investigator***, 25-30% effort annually. Total award: $624,955 (direct: $371,849, indirect: $253,106). Florida Atlantic University.

2004-2006 Research Grant Contract, Matrixx Initiatives Inc. “Effects of zinconium gluconate on the olfactory epithelium”. ***Co-Principal Investigator***, No salary support, no indirect costs. Total award: $79,382. Florida Atlantic University.

1998-2002 "Neurotrophins in Olfactory Development". NIH/NIDCD grant award R29DC03547. ***Principal Investigator***. Total award: $526,325.(direct: $305,269, indirect: $221,056). University of California, Irvine and Florida Atlantic University.

1997-1998 “Trophic factor expression by ensheathing glia". NIDCD Grant Award RO3DC03501, ***Principal Investigator***, 100% effort. Total award $52,000 (direct: $30,050, indirect $21,950). University of California, Irvine.

1992-1996 "Odor regulation of neuronal gene expression". NIH/NIDCD grant award RO1D01534, ***Co-Investigator***, 100% effort, University of California, Irvine. Total annual direct: $254,730.

1987-1989 “Neurobiology of Olfactory Development”, NIH/NIDCD fellowship award F31MH009635 award, ***Doctoral Trainee***, 100% effort, tuition and stipend support.

Internal:

2017-2018, “Role of Ube3a in neuronal maturation and synaptogenesis in adult-born neurons”. College of Medicine, Bridge Grant Award, ***Principal Investigator***, No salary support, 25% COM research effort. Total: $10,000.

2014-2015, "Trophic mechanism promoting the emergence of pro-epileptic hippocampal circuitry", FAU Division of Sponsored Research, Seed Grant Award, ***Co-Principal Investigator***, No salary support, 25% COM research effort, Total award: $50,377.

2004-2005 “Genetic approach to functional mapping”. Research Grant Award, Florida Atlantic University Division of Research, ***Principal Investigator***, Total award: $15,000. No salary support.

2001-2002 “Trophic factor expression and apoptosis in cortical neurons”. Research Grant Award, Florida Atlantic University Division of Research, ***Principal Investigator***, Total award: $3,250.

1996-1997 "Axon guidance mechanisms", University of California Irvine, College of Medicine, Committee on Research Grant Award, ***Principal Investigator***, Total direct: $3,500.

TEACHING

2002-2020	DEVELOPMENTAL NEUROBIOLOGY (PSB 6515) *Received the College of Biomedical Science Graduate Teaching award in spring 2010*. Dates: Fall, 2002, 2003, 2005, 2007, 2009, 2011, 2013. Spring, 2016, 2017, 2018, 2019, 2020.
2005-2020	NEUROSCIENCE AND BEHAVIOR, Faculty lecturer, Year 1 medical class, lecture course taught by multiple faculty (spring). FAU College of Medicine 2010-2020 (Miami-FAU medical school prior to this).
2019, April	Lecturer, Department of Neurology, Boca Raton Regional Hospital, "*Neurodevelopment*" lecture given to Neurology Residents.
2019	PATHOPHYSIOLOGY AND THERAPEUTICS 1, Faculty Instructor-Facilitator, Year 1 Medical class (spring) Problem-Based learning course, College of Medicine
2017, 2019	FOUNDATIONS OF BIOMEDICAL SCIENCE 1, Faculty Instructor/Facilitator, Year 1 Medical class (fall), Problem-Based learning course, College of Medicine
2018	Six-month sabbatical. No teaching in medical curriculum in Fall 2018.
2017	FUNDAMENTAL TOPICS IN HUMAN HEALTH, (PCB 6933) Graduate course, Dept. of Biomedical Science, taught by multiple faculty, guest lecturer (fall).
2016	PATHOPHYSIOLOGY AND THERAPEUTICS 3, Faculty Instructor-Facilitator, Problem-Based learning course, Year 2 Medical class (fall) College of Medicine
2005-2015 (except 2010 and 2012)	NEUROSCIENCE AND BEHAVIOR, Faculty Instructor/Facilitator, Problem-based learning course, Year 1 medical students (spring) College of Medicine
2015	FOUNDATIONS OF BIOMEDICAL SCIENCE 2, Faculty Instructor/Facilitator, Problem-based learning course, Year 1 medical students (fall), College of Medicine
2015-2018	ICA 1, Year 1 medical student Core Competency Exams, Faculty Competency Evaluator, College of Medicine (spring).
2011-2020	NEUROSCIENCE I and NEUROSCIENCE 2 (PSB 6345, PSB 6346) Required graduate lecture course for neuroscience majors in Psychology, Complex Systems and Brain Science, and Integrative Biology-Neuroscience. Voluntary Lecturer, 6-9 lectures annually, College of Science

2010-2011	No medical teaching during transition year from Miami Medical School to FAU Medical School. Teaching effort devoted revamping the curriculum and writing/editing new PBL Neuroscience cases.
2005-2006	NEUROSCIENCE AND BEHAVIOR ANATOMY LABORATORY, Laboratory Instruction Year 1 Miami-FAU medical students.
2004-2005	TOPICS IN BIOMEDICAL SCIENCE*,* Co-organizer and Lecturer, Dept. of Biomedical Science, Graduate course.
1996 (fall)	Lecturer, MEDICAL HISTOLOGY, Dept. of Anatomy and Neurobiology, College of Medicine, University of California Irvine.
1983-1987	Graduate Teaching Asisistant, University of California, Irvine *Psychobiology*, 1983-1987 *Brain and Behavior*, 1984 *Neuroendocrinology,* 1986 *Animal Behavior*, 1986

SUPERVISION OF GRADUATE STUDENTS

Ph.D. Students

2013-2018	Ph.D. Dissertation Advisor and Committee **Chair**, Brittnee McDole, Integrative Biology, FAU, August 2013 – August 2018. "*The role of BDNF in the survival and morphological development of adult-born CNS olfactory neurons".*
2009-2012	Ph.D. Dissertation Advisor and Committee **Chair**, Huan Liu, Integrative Biology, FAU, January 2009-December 2012. "*Anterograde trophic signaling in the olfactory system: Neurotrophin-3 expressed by olfactory sensory neurons is transported to target bulb neurons in adult mice."*
2002-2006	Ph.D. Dissertation Co-Advisor and Committee **Co-Chair**, Dept. of Psychology, FAU, Kimberlee Bachand, 2002-2006. *"Neural activity associated with tolerance to amphetamine hypophagia".*

M.S. Students

2020-present	M.S. Thesis Advisor for Tyler Batlle, Department of Biomedical Science.
2017-2019	M.S. Thesis Advisor and Committee **Chair,** Julieta DiMase, Dept. of Biology, 2017-Summer 2019. "*Hippocampal neurogenesis in the SERT Ala56 mouse model of autism".*
2014-2016	M.S. Thesis Advisor and Committee **Chair,** Rachel Berger, Department of Biomedical Science, Fall 2014- August 2016. "*Effects of BDNF over-expression on sensory-deprivation-induced death of adult-born olfactory granule cells.".*
2006-2008	M.S. Thesis Advisor and Committee **Chair**, Huan Liu, Department of Basic Science, 2006-Fall 2008. "*Analyses of neuronal replacement in the neuron-depleted central olfactory system in mice".*

2005-2007 M.S. Thesis Advisor and Committee **Chair**, Krista Sultan, Dept. of Psychology, *"Effects of target neuron loss on olfactory receptor neurons in the adult rat*."

2002-2004 M.S. Thesis Advisor and Committee **Chair**, Yona Ardiles, Depts. of Biology and Biomedical Science, 2002-2004. "*Changes in mouse olfactory sensory neurons after target neuron loss."*

Member of Graduate Student Dissertation/Thesis Committees for the following students*:*

2019-present	PhD student, Thomas Kent, Dept, of Chemistry and Biochemistry
2019-present	MS Thesis Student Aubrey Clark, Integrative Biology
2018-present	Ph.D. Student David Cinalli, Dept. of Psychology
2014-2019	Ph.D. Student, Boris Tezak, Integrative Biology
2009-2014	Ph.D. Student, Ozge Oztan, Integrative Biology
2008-2013	Ph.D. Student Trisha Meredith, Integrative Biology
2007-2010.	Ph.D. Student, George Tyler Smith, Integrative Biology
2008-2013	Ph.D. Student, Cigdem Aydin, Integrative Biology
2012-2016	Ph.D. student, Sarah Cohen, Center Complex Systems and Brain Sciences
2007	Ph.D. student Sarah Repicky, Dept. of Pharmacology, Neuroscience Program, University of Miami.
2008-2009	MS Thesis Student Ozge Oztan, Dept. of Biomedical Science
2005-2007	Ph.D. student Walter Hoover, Center for Complex Systems and Brain Sciences
2003-2005	Ph.D. student Di Sha, Center for Complex Systems and Brain Sciences
2003-2005	Ph.D. student Heng Wu, Dept. of Biomedical Science

Research Supervisor for rotation/summer students*:*

Medical Students:

2013, summer	Abigail Davenport ,Year 1 Medical Student
2009, summer	Jason Margolesky, Year 1 Medical Student

Doctoral students:

2019, Fall	Ph.D. rotation student Amanda Rainey, Graduate Neuroscience Training Program
2018, Fall	Ph.D. rotation student, Gabriel Pena, Integrative Biology
2006, Fall	Ph.D. rotation student, Integrative Biology, Gongliang Zhang

Supervision of directed independent research MS students (non-thesis)

2017-2018	Julian Johnson "*Ube3a expression in mouse olfactory bulb".*
2017-2018	Katrina Seenah, "*Neuron development with Ube mutation*"
2017	Crystal Gilkes "*BDNF in olfactory neurogenesis*"
2014 spring	Fredrika Dias "*Adult olfactory neurogenesis*".
2010	Christopher Pare "*BDNF mRNA levels in TgBDNF mouse brain*".

Qualifying Exit Examinations administered for the MS degree (non-thesis) in Biomedical Science for the following MS students:

2014	Heather Behr Jahangan,
2014	Amanda Hanvivatpong
2013	O'Shaine Brown
2011	Noelle Lazan
2011	Jackie Wilneff
2010	Christopher Pare
2010	Eric Nichols
2006	Jill Cuadra
2003	Anita Singh
2003	Ephrain Arias
2003	Tori-Lynn Sargeant

Qualifying Examination Committee Member for PhD students:

2019	Thomas Kent, Dept. of Chemistry and Biochemistry.

SUPERVISION OF UNDERGRADUATE HONORS STUDENTS

2019-2020	Mariam Amir, FAU High School-FAU Undergraduate Honors Research, *"Time course of paternal Ube3a gene silencing in adult-born neurons"*. Received an Undergraduate Research Grant award from OURI (was unable to present her poster live at symposium due to covid virus).
2012-2013	Rebecca Mello, Introduction to Honors in Biology, "*Fractalkine and microglia: Association with apoptotic olfactory neurons*".
2011-2012	Student Dalbir Bahga, Honors in Psychology, *"Adult neural stem cell proliferation is not altered in transgenic mice over-expressing BDNF or mutant Huntingtin in brain".* Awarded an Undergraduate Research grant, and the **FAU Undergraduate Researcher of the Year Award recipient**, for the College of Medicine. Published in the first issue of the FAU Undergraduate Research Journal (**2012**), and co-author on a publication in *Chemical Senses*.
2001-2004	Student Anna Kallkopf, Honors in Psychology "*Effects of bulb lesions on target neuron survival in piriform cortex". Co-author on publication.* (Also participated in a non-honors project on olfactory bulb lesion effects on peripheral sensory neurons). Co-author on publications.

SUPERVISION OF UNDERGRADUATE RESEARCH STUDENTS AND HIGH SCHOOL STUDENTS

2020	Zulema Toledo, "*Neuron development in autism*".
2016-2017	Colton Biehl, *"Dendritic spine development in vivo"*
2015-2016	Crystal Gilkes, "*BDNF and olfactory neurogenesis*".
2014 spring	Lenhardt Vo, "*Adult forebrain neurogenesis*"
2009 fall	Rochelle Freire, "*Experimental neurobiology*".
2008-2009	Paul Adedoyin, "*Experimental neurobiology*"

2007-2008	Aurora Rodriguez, "*NT3 expression in olfactory development".*
2006-2007	Pamela La Force, "*Olfactory neurobiology*".
2006 spring, summer	Tyrone Robinson, "*Mouse olfactory system histology*".
2005-2006	Rafael de la Puente, "*OMP expression after Zicam treatment".*
2005, spring	Masha Signaevsky, "*Assessing Zicam damage to OSNs*."
2005 fall	Mazi Edut, Undergraduate DIS, no title.
2004 spring	Anna Berkefeld, Undergraduate DIS, no title
2003-2004	Jacquelyn Gold,Spanish River High School Student Volunteer (no title).

SERVICE AND PROFESSIONAL DEVELOPMENT

Department Service

2002-2003:
Faculty Search Committee, Interviewed 22 candidates, hired 7 faculty
2004-2005
Biomedical Science Research Committee
2005-2006:
Biomedical Science Annual Review Committee
2005-2006
Biomedical Science Animal Use Committee
2005-2006
Biomedical Science Curriculum Planning Committee
2006-2007:
Biomedical Science Bylaws Committee
2006-2007
Biomedical Science Chair Search Committee
2006-2009:
Biomedical Science Research Committee
2012-2014
Ad hoc Committee for Revision of Dept. Promotion and Tenure Criteria
2016-2017
Chair, Biomedical Science Promotion and Tenure Committee
2016-2017
Biomedical Science Sustained Performance Evaluations Criteria Committee
2016-2017
Chair, Biomedical Science, Promotion and Tenure Committee
2018-2019
Biomedical Science Promotion and Tenure Committee
2018-2019
Biomedical Science Sustained Performance Committee
2019-2020
Biomedical Science RCR Training Workshop, speaker

College Service

2001-2002
Faculty Search Committee, Department of Psychology (College of Science)
2002-2003

Commencement Marshall (College of Science)
2004-2005
Faculty Representative, McNair's Scholars (College of Science)
2005-2006:
Interdepartmental Neuroscience Curriculum Committee (College of Science)
2005-2006
Judge, College of Science Graduate Research Symposium
2006-2007
College of Medicine Research Committee
2007-2009
Chair, College of Medicine Research Committee
2007-2009
College of Medicine Promotion and Tenure Committee
2007-2009
College of Medicine Bridge Funds Committee
2007-2008
FAU Commencement Marshall for College of Medicine
2009-2010
LCME Committee, Medical Students Subcommittee
2009-2010
College of Medicine Research Committee
2010-2011
Neuroscience Course Planning Committee, Year 1 Medical Curriculum
2010-2011
College of Medicine, Peer Review Development Committee
2012-2013
COM Search Committee, Clinical/Integrative Medicine Professor
2012-2015
College of Medicine Research Committee
2012-present
College of Medicine Faculty Assembly Executive Committee
2013
FAU Commencement Marshall for College of Medicine
2012-2013
COM Faculty Search Committee, Chair of Biomedical Science
2013-2014
COM Faculty Search Committee, Chair of Biomedical Science
2015-2016
COM Diversity Engagement Survey, Biomedical Science Representative
2016
Reader for COM, FAU Commencement
2016-2017
COM Sustained Performance Evaluations Guidelines Committee
2017-2018
Faculty Contributions Task Force (aka Faculty Performance Development)
2017-2018
COM Strategic Planning Steering Committee
2018-2019
COM Sustained Performance Evaluation Committee
2019-2020
COM Promotion and Tenure Committee
Research Climate Survey Committee
Medical Year 1, Neuroscience and Behavior Grading Committee

FAU Commencement Marshall for COM

University Service

2001-2004
FAU Institutional Animal Care and Use Committee

2002-2003
University Veterinarian Search Committee 1
University Veterinarian Search Committee 2
2004-2005
Speaker at FAU Brain Awareness Week
2006-2007
Neuroscience Certificate Curriculum Committee (multiple departments)
2007-2009
FAU University Research Committee
2008- 2009
FAU Research Committee, Chair, Assistant Professor Researcher of the Year Award Subcommittee
2012-present
Florida Atlantic University Faculty Senate, College of Medicine Senator
2013
FAU Graduate Research Day Symposium, Poster Judge
2014
FAU Undergraduate Research Symposium, Oral Presentations Judge
2014-16
Reviewer, Undergraduate Research Grant proposals, for the Office of Undergraduate Research and Inquiry (OURI)
2016-17
FAU Brain Institute Faculty Search Committee
2017-18
Reviewer, Undergraduate Research Journal manuscripts for FAU OURI

Administrative Service

2018-present
FAU Brain Institute, Assistant Director of Education, Graduate Neuroscience Training Program. Currently developing an application for a new Ph.D. program in Neuroscience with Dr. Randy Blakely.

Service to Discipline/Profession

National:

Editorial Board Member
Journal *"Scientific Reports*" (Nature Publishing Group, open access publication), Neuroscience/Neurology Division. 2014-present.

National Institutes of Health Study Section Grant Review

CSR Special Emphasis Panel, ZRG1-F03A-N(20), *Neurodevelopment, Synaptic Plasticity, and Neurodegeneration Fellowships.* ***Panel reviewer.*** Locations: Washington DC, Bethesda MD, Los Angeles CA.

Dates: June 2016
October 2016
February 2017
July 2017
October 2017

National Institute on Deafness and Other Communication Disorders Study Section Review

CSR Special Emphasis Panel, ZDC1 SRB-LK (18), *Chemical Senses Fellowships.* ***Panel Reviewer****,* February 6, 2017.

Communication Disorders *Special Emphasis Panel-Fellowships*, ***Panel reviewer,*** February 2005.

Ad hoc reviewer, King's Health Partners Research and Development Grants, Health Science Center, London

Career Development Award application, March 2009

Ad hoc reviewer, National Science Foundation

Directorate of Biological Sciences, Integrative and Organismal Biology Grants, *2004, 2007*

Scientific Advisory Board Member

Matrixx Initiatives Inc., 2004-2006.

Ad hoc reviewer for journals

Behavioral Brain Research
Brain Research
Chemical Senses
Experimental Neurology
Journal of Comparative Neurology
Journal of Neuroscience
Journal of Neurobiology
Neuroscience
PlosOne
Scientific Reports

Symposium Co-Organizer and Speaker

Association for Chemoreception Sciences, Sarasota, FL, "*Gene expression in neuronal activity*", 1994, Co-organizer with Dr. Judith Van Houten.

PUBLICATIONS

Peer-Reviewed, Refereed Journal Articles in print *(Hirsch index 20)*

Bold type indicates K. Guthrie is the corresponding author

Underlining indicates graduate student authors
* Indicates undergraduate authors

David A Cinalli Jr., Sarah J Cohen, Kathleen Guthrie, and Robert W. Stackman Jr. Object Recognition Memory: Distinct Yet Complementary Roles of the Mouse CA1 and Perirhinal Cortex. *Frontiers in Molecular Neuroscience.*13:527543. doi:10:3381/fnmol.2020.527543.

McDole B, Berger R, and **Guthrie K**. (2020) Genetic increases in olfactory bulb BDNF do not enhance survival of adult-born granule cells. *Chemical Senses,* Jan 1;45(1):3-13. doi: 10.1093/chemse/bjz058. PMID: 31562506. (epublished September 2019).

Tezak BM, Guthrie K and Wyneken J. (2017) An immunohistochemical approach to identify the sex of young marine turtles. *Anatomical Record*, 300(8):1512-1518.

Smail S, Bahga D*, McDole B**,** and **Guthrie, K**. (2016) Increased olfactory bulb BDNF expression does not rescue deficits in olfactory neurogenesis in the Huntington's disease R6/2 mouse. *Chemical Senses*, 41:221-232.PMID:26783111.

McDole B, Isgor C, Pare C and **Guthrie K**. (2015) BDNF over-expression increases olfactory bulb granule cell dendritic spine density in vivo. *Neuroscience,* 304: 146-160. doi: 10.1016/j.neuroscience.2015.07.056. PMID: 26211445. PMC4547863. NIHMS710570.

Isgor C, Pare C**,** McDole B, Coombs P* and **Guthrie K**. (2015) Expansion of the dentate mossy fiber-CA3 projection in the brain-derived neurotrophic factor enriched hippocampus. *Neuroscience*, 288:10-23. PMC:4324623. NIHMS652724.

Liu H*,* Lu M and **Guthrie K**. (2013) Anterograde trafficking of neurotrophin-3 in the adult olfactory system *in vivo*. *Experimental Neurology,* 241:125-137. PMC:3570701.

McCollum MH, Leon RT, Rush DB, Guthrie KM and Wei J. (2013) Striatal oligodendro-gliogenesis and neuroblast recruitment are increased in the R6/2 mouse model of Huntington's disease. *Brain Research*, 1518:91-103. PMC3684253.

Owen JL, Criscitiello MF, Libreros S**,** Garcia-Areas R, Guthrie K, Torroella-Kouri M, Iragavarpu-Charyulu V. (2011) Expression of the inflammatory chemokines, CCL2, CCL5 and CXCL2 and the receptors CCR-1-3 and CXCR2 in T lymphocytes from mammary tumor-bearing mice. *Cellular Immunology,* 270:172-82. PMCID: PMC3156845.

Liu H and **Guthrie K**. (2011) Neuronal replacement in the injured olfactory bulb. *Experimental Neurology,* 228:270-282. PMCID: PMC3063445. (*Made the journal cover)*.

Sultan-Styne K, Toledo R, Walker C, Kallkopf A*, Ribak C, and **Guthrie K**. (2009) Long-term survival of olfactory sensory neurons after target depletion. *Journal of Comparative Neurology,* 515:696-710. PMCID: PMC2728470.

Bachand K, Guthrie K, and Wolgin D. (2008) Expression of *c-fos* in the basal ganglia associated with contingent tolerance to amphetamine-induced hypophagia. *Behavioral Brain Research*, 198:388-396. PMCID: PMC2751577.

Ardiles, Y, de la Puente R*, Toledo R, Isgor C and **Guthrie K**. (2007) Response of olfactory axons to loss of synaptic targets in the adult mouse. *Experimental Neurology,* 207:275-288. PMCID: PMC2101767.

Robertson R, Baratta J, Wu J and Guthrie KM. (2006) A role for neurotrophin-3 in targeting developing cholinergic axon projections to cerebral cortex. *Neuroscience*, 143(2):523-39.

Owen J, Lopez D, Grosso J, Guthrie K, Herbert L, Torroella-Kouri M andIragavarapu-Charyulu VJ. (2005) The expression of CCL2 by T lymphocytes of mammary tumor bearers: role of tumor-derived factors. *Cellular Immunology,* 235(2):122-135. PMCID: PMC3156845.

Guthrie KM, Tran A, Barrata J, and Robertson R. (2005) Patterns of afferent projections to the dentate gyrus studied in organotypic co-cultures. *Developmental Brain Research,* 157: 162-171.

Guthrie KM and Gall CM. (2003) Anatomical mapping of neuronal odor responses in the developing rat olfactory bulb. *Journal of Comparative Neurology,* 455: 56-71.

Guthrie KM, Rayhanabad J*, and Gall CM. (2000) Odor regulation of Arc expression in neuronal ensembles engaged in odor coding. *NeuroReport*, 11: 1809-1813.

Woods AG**,** Guthrie KM, Kurwala M* and Gall C. (1998) Neurotrophic responses during sprouting are attenuated in the aged rat hippocampus. *Neuroscience* 83: 663-668.

Guthrie KM, Woods AG, Nguyen T*, and Gall C. (1997) Astroglial CNTF expression is increased in fields of axonal sprouting in deafferented hippocampus. *Journal of Comparative Neurology*, 386: 137-148.

Wilson DA, Sullivan R, Gall CM, and **Guthrie KM**. (1996) NMDA receptor modulation of lateral inhibition and *c-fos* expression in olfactory bulb. *Brain Research* 719: 62-71.

Guthrie KM and Gall CM. (1995) Odor increases Fos in olfactory bulb neurons including dopaminergic cells. *NeuroReport.* 6:2145-2149.

Guthrie KM, Holmes JM* and Leon M. (1995) Focal 2-DG uptake persists following olfactory bulb lesions. *Brain Research Bulletin.* 38: 129-134.

Guthrie KM, Nguyen T* and Gall CM. (1995) Insulin-like growth factor-1 mRNA is increased in deafferented hippocampus: Spatiotemporal correspondence of a trophic event with axon sprouting. *Journal of Comparative Neurology,* 352:147-160.

Guthrie KM and Gall CM. (1995) Functional mapping of odor-activated neurons in the olfactory bulb. *Chemical Senses*, 20:271-282. *Solicited by the editors.*

Van Houten, J. and K.M. Guthrie. (1995) Gene expression in neuronal activity. *Chemical Senses*, 20: 249-250. *Review solicited by the editor.* Co-wrote the manuscript with J Van Houten.

Seroogy KB, Lundgren KH, Guthrie KM and Gall CM. (1994) Dopaminergic neurons in rat ventral midbrain express brain-derived neurotrophic factor and neurotrophin-3 mRNAs. *Journal of Comparative Neurology*, 340:1-14.

Seroogy KB, Lundgren KH, Lee DC, Guthrie KM and Gall C. (1993) Cellular localization of transforming growth factor-a mRNA in rat forebrain. *Journal of Neurochemistry,* 60: 1777-1782.

Guthrie KM, Anderson AJ, Leon M, and Gall C. (1993) Odor-induced increases in *c-fos* mRNA expression reveal an anatomical unit for odor processing in olfactory bulb. *Proceedings of the National Academy of Sciences,* USA 90: 3329-3333. PMCID: PMC46293.

Guthrie KM and Gall CM. (1991) Differential expression of mRNAs for the NGF-family of neurotrophic factors in the adult rat central olfactory system. *Journal of Comparative Neurology,* 313: 95-102.

Guthrie KM, Pullara JM, Marshall JF and Leon M. (1991) Olfactory deprivation increases D2 receptor density in the rat olfactory bulb. *Synapse* 8: 61-70.

Guthrie KM, Wilson DA and Leon M. (1990) Early unilateral deprivation modifies olfactory bulb function. *Journal of Neuroscience,* 10: 3402-3412.

Wilson DA, Guthrie KM, and Leon M. (1990) Modification of olfactory bulb synaptic inhibition by early unilateral olfactory deprivation. *Neuroscience Letters,* 116: 250-256.
Guthrie KM and Leon M. (1989) Induction of tyrosine hydroxylase expression in rat forebrain neurons. *Brain Research,* 497: 117-131.

Gomez-Pinilla F, Guthrie KM, Leon M and Nieto-Sampedro M. (1989) NGF receptor increase in the olfactory bulb of the rat after early odor deprivation. *Developmental Brain Research* 48: 161-165.

O'Connor CM, Germaine BJ, Guthrie KM, Aswad DW, and Millette CF. (1989) Protein carboxyl methyltransferase activity specific for age-modified aspartyl residues in mouse testes and ovaries: Evidence for translation during spermiogenesis. *Gamete Research,* 22: 307-319.

Book Chapters

Gall CM, JC Lauterborn, KM Guthrie and CT Stinis. (1997) Seizures and the regulation of neurotrophic factor expression: Associations with structural plasticity in epilepsy. In: *Neuronal Regeneration, Reorganization, and Repair*, Advances in Neurology, vol. 59, F.J. Seil, Ed., Raven Press, N.Y., pp. 9-24. *Solicited by the editor.*

Gall CM., KM Guthrie and JC Lauterborn. (1995) Stimulation of neurotrophic factor expression: Links to different forms of brain plasticity. In: *Life and Death in the Nervous System*, C.F. Ibanez, K. Fuxe, T. Hokfelt, H. Jornvall, L. Olson and D. Ottodon, Eds., Pergamon Press, NY, pp. 275-296. *Solicited by the editors.*

Gall C, J Lauterborn and K Guthrie. (1995) In situ hybridization: A sensitive measure of activity dependent changes in neuronal gene expression. In: *Autoradiography and Correlative Imaging,* W.E. Stumpf and H.F. Solomon, eds., Academic Press, N.Y., pp. 379-399. *Solicited by the editors.*

Gall CM and KM Guthrie. (1993) Odor-induced *c-fos* mRNA expression reveals a functional unit in main olfactory bulb. In: *Development, Growth, and Senescence in the Chemical Systems,* J. Pearl and T. Getchell, Eds., NIH Research Monograph, volume 3, pp. 119-128. *Solicited by the editors.*

Leon, M., D.A. Wilson and K.M. Guthrie. (1991) Plasticity in the developing olfactory system. In: *Olfaction as a Model System for Computational Neuroscience,* J. Davis and H. Eichenbaum, eds., MIT Press, Cambridge, MA, pp. 121-140. *Solicited by the editors.*

REFEREED PRESENTATIONS AT CONFERENCES

Guthrie KM, Berger R, McDole B. (2016) Increased olfactory bulb BDNF does not enhance the normal survival of new granule cells and does not prevent deprivation-induced cell death. *Annual Society for Neuroscience meeting*, *San Diego, CA*. Abstract 430.06.

McDole B, Isgor C, Guthrie K. (2016) BDNF augmentation *In vivo* increases spine density in adult-born olfactory granule cells. *Annual Society for Neuroscience meeting*, *San Diego, CA*, Abstract 430.19.

Yepes C, Laquerre M, Zhou W, Guthrie K, C. Isgor C. (2016) Emergence of epilepsy in a transgenic mouse strain that overexpresses brain-derived neurotrophic factor in the forebrain. *Annual Society for Neuroscience meeting*, *San Diego, CA*, Abstract 406.14.

McDole B, C Gilkes, Guthrie K. (2016) Over-expression of BDNF in the mouse olfactory bulb does not increase adult-born granule cell survival. *Annual meeting of the Association for Chemoreception Sciences*, *Bonita Springs, FL*, Abstract 113.

Guthrie K, Smails S, Bahga D, McDole B. (2016) Increased endogenous brain-derived neurotrophic factor does not rescue impaired olfactory neurogenesis in a Huntington's disease mouse model. *Annual meeting of the Association for Chemoreception Sciences*, *Bonita Springs, FL*, Abstract 321.

Isgor C, Coombs P, Guthrie K. (2014) Progressive remodeling of hippocampal mossy fibres and dentate gyrus granule neuron dendritic arbors in the brain-derived neurotrophic factor overexpressing mice. *Annual Society for Neuroscience meeting*, *Washington DC*, Abstract 20.18.

McDole B, Isgor C, Guthrie K. (2014) BDNF increases apical spine density of olfactory bulb granule cells in vivo. *Annual Society for Neuroscience meeting*, *Washington DC*, Abstract 58.08.

McDole B, Isgor C, Guthrie K. (2014) Dendritic analysis of granule cells in the BDNF-enriched olfactory bulb. *Annual meeting of the Association for Chemoreception Sciences*, *Bonita Springs*, Astract 38:67.

Isgor C, Hossain F, Aydin C, Oztan O, Guthrie, K. (2013) Dendritic analyses of hippocampal dentate gyrus granule and CA3 pyramidal neurons in brain-derived neurotrophic factor over-expressing mice. *Annual Society for Neuroscience meeting*, *San Diego CA*, Abstract 536.13.

Guthrie K, Aydin C, Pare C, Isgor C. (2013) Mossy fiber sprouting in the BDNF-enriched hippocampus. *Annual Society for Neuroscience meeting*, *San Diego CA*, Abstract 536.06.

Liu H and Guthrie K. (2011) Neurotrophin-3 synthesized by olfactory sensory neurons is anterogradely transported to axon terminals in olfactory bulb. *Annual Society for Neuroscience meeting*, *Washington DC,* Abstract 573.0.

Guthrie K and H. Liu (2011) Expression and anterograde transport of neurotrophin-3 in the olfactory nerve. *International Brain Research Organization meeting. Florence, Italy, Abstract C223.*

Liu H and Guthrie K. (2009) Analysis of neuronal replacement in the neuron depleted olfactory system. *Annual meeting of the Association for Chemoreception Sciences*, *Sarasota, FL*, Abstract 31:220.

Guthrie K, K Sultan, R Toledo and C Ribak. (2008) Degenerative changes in olfactory sensory neurons deprived of neuronal targets. *International Society for Olfaction and Taste triannual meeting, San Diego, CA*, Abstract 15:208.

Guthrie K, K. Sultan, C. Walker and C. Ribak. (2008) Target deprivation leads to degenerative changes in olfactory sensory neurons. *Annual Society for Neuroscience meeting, Washington DC*, Abstract 65.3.

Guthrie K, R. de la Puente, and C. Isgor. (2007). Ki-67 expression in the intact and target-deprived olfactory epithelium. *Annual Society for Neuroscience meeting*, *San Diego CA*, Abstract 276.14.

Bachand K, Guthrie K, and Wolgin D. (2006) A distributed network for the learned suppression of amphetamine stereotypy. *Annual Society for Neuroscience meeting, Atlanta GA*, Abstract 741.4.

Bachand K, K Guthrie, and D Wolgin. (2005) Neural activity associated with contingent tolerance to amphetamine hypophagia. *Annual Society for Neuroscience meeting, Washington DC*, Abstract. 1031.8.

Ardiles Y and KM Guthrie (2005) Bulbar synaptic targets maintain olfactory sensory neurons in adult mice. *Annual meeting of the Association for Chemoreception Sciences*, *Sarasota, FL*, Abstract 27:35.

Ardiles Y and KM Guthrie (2004) Effects of target neuron loss on intact olfactory sensory neurons in adult mice. *Annual Society for Neuroscience meeting*, *San Diego CA*. Abstract 834.11

Robertson R, J Barratta, KM Guthrie, J Yu. (2004) Basal forebrain cholinergic axons target NT-3 expressing cortical neurons in vitro. *Annual Society for Neuroscience meeting, San Diego CA*, Abstract 941.15.

Baratta J, KM Guthrie, J Yu and RT Robertson. (2002) Basal forebrain cholinergic axons appear attracted to Neurotrophin-3 expressing regions in organotypic slice cultures. *Annual Society for Neuroscience meeting, Orlando FL*, Abstract. 28: 129.8 .

Guthrie KM and CM Gall. (2002) Ablation of bulb neurons kills piriform neurons but not sensory neurons. *Annual meeting of the Association for Chemoreception Sciences*, *Sarasota, FL*, Abstract. **24**;184.

Robertson RT, J Baratta J, CM Gall, K Guthrie, JC Lauterborn and J Yu. (2001) Does neurotrophin-3 induce septal cholinergic axons to target dentate gyrus granule cells? *Annual Society for Neuroscience meeting*, *San Diego CA*, Abstract 27: 797.7.

Guthrie KM and CM Gall. (2001) Olfactory sensory neurons survive ablation of target neurons by NMDA. *Annual Society for Neuroscience meeting, San Diego CA*, Abstract 27: 62.3.

Guthrie KM and CM Gall. (1999) Functional mapping of the developing olfactory bulb. *Annual meeting of the Association for Chemoreception Sciences*, *Sarasota, FL*, Abstract **21**; 17.

Guthrie KM and C. Gall. (1998) Neurotrophin expression in the developing olfactory system: Potential for anterograde effects. *Annual Society for Neuroscience meeting, Los Angeles, CA,* Abstract **24**: 799.

Guthrie KM, J Rayhanbad* and C Gall (1998) Odor stimulated expression of the activity-regulated cytoskeletal protein (Arc) in olfactory bulb. *European Chemosensory Research Organization, Florence, Italy*, ECRO XIII Abstract **13.**

Woods AG, KM Guthrie, M Kurwala and CM Gall. (1997) Neurotrophic factor expression is attenuated in deafferented hippocampus of aged rats. *Annual Society for Neuroscience meeting*, *New Orleans, LA,* Abstract **23**: 326.

Bahr BA, KB Hoffman, PW Van Derklish, BT Kawasaki, AJ Yang, K Guthrie, C Gall, C Glabe and G Lynch. (1996) The Alzheimer's Abeta 1-42 peptide induces CA1-specific Abeta immunostaining and synaptic decay in hippocampal slice cultures. *Annual Society for Neuroscience meeting*, *Washington, DC*, Abstract.**22**: 1209.

Woods AG, KM Guthrie and CM Gall. (1995) Increased expression of CNTF mRNA in rat hippocampus following entorhinal cortex ablation. *Annual Society for Neuroscience meeting*, *San Diego, CA* . Abstract **21**: 1533.

Guthrie KM and CM Gall. (1995) Localization of neurotrophic factor mRNAs in rat olfactory bulb. *Annual meeting of the Association for Chemoreception Sciences*, *Sarasota, FL*, Abstract **17**: 77. \.

Guthrie KM and CM Gall. (1994) Functional mapping of odor-activated neurons in the olfactory bulb. *Annual meeting of the Association for Chemoreception Sciences*, *Sarasota, FL*, Abstract. **16**:15.

Hess US, KM Guthrie and CM Gall. (1993) Effect of stimulus duration and intensity on odor induced c-fos expression in rat olfactory bulb. *Annual Society for Neuroscience meeting*, *Washington, DC*, Abstract **19**;122.

Guthrie KM and CM Gall. (1993) Increased expression of IGF-1 mRNA in rat hippocampus following entorhinal lesion. *Annual Society for Neuroscience meeting*, *Washington, DC*, Abstract **19**; 254.

Wilson DA, KM Guthrie, R Smart, CM Gall and RM Sullivan. (1993) NMDA receptor modulation of olfactory bulb inhibitory circuits. *Annual meeting of the Association for Chemoreception Sciences*, *Sarasota, FL*. Abstract **15**; 299.

Seroogy KB, KH Lundgren, KM Guthrie, T.D. Tran, P.J. Isackson, and C.M. Gall. (1992) Dopaminergic neurons express NT-3 and BDNF mRNAs in rat mesencephalon. *Annual Society for Neuroscience meeting*, *Anaheim, CA,* Abstract. **18**; 224.

Hennegriff M, BA Bahr, RA Hall, KM Guthrie, R.S. Yamamoto, M. Kessler, C.M. Gall and G. Lynch.(1992) Antibodies to the GluR-A, GluR-B/C, GluR-D, and NMDA glutamate receptor subunits: Western blot studies. *Annual Society for Neuroscience meeting*, *Anaheim, CA,* Abstract **18**; 88.

Guthrie KM and CM Gall. (1992) Odor stimulation of *c-fos* mRNA expression in rat olfactory bulb during postnatal development. *Annual Society for Neuroscience meeting Anaheim, CA,* Abstract **18**:56.

Orona E, KM Guthrie, CM Gall, J.M. Fadool, R.M. Greenberg and B.W. Ache. (1992) Functional activity maps in the olfactory CNS of the lobster. *Annual meeting of Association for Chemoreception Sciences*, *Sarasota, FL*. Abstract **14**:80.

Guthrie KM and CM Gall. (1992) Changes in growth factor mRNA expression in rat olfactory bulb with unilateral naris occlusion. *Annual meeting of Association for Chemoreception Sciences*, *Sarasota, FL*. Abstract **14**: 91.

Guthrie KM and CM Gall. (1992) Developmental changes in c-*fos* mRNA expression in the rat olfactory bulb. *Annual meeting of the Association for Chemoreception Sciences*, *Sarasota, FL*, Abstract **14**; 92.

Anderson AJ, KM Guthrie, M Leon and C Gall. (1991) Odor-stimulated increases in c-*jun* mRNA in the rat main olfactory bulb. *Annual Society for Neuroscience meeting, New Orleans, LA*, Abstract. **21**: 142.

Guthrie KM, AJ Anderson, M Leon and C Gall. (1991) Spatially distributed increases in c-*fos* mRNA in odor-activated regions of the main olfactory bulb. *Annual Society for Neuroscience meeting*, *New Orleans, LA*, Abstract **21**: 141.

Guthrie KM and CM Gall. (1991) Localization of growth factor mRNA expression in the rat olfactory system. *Annual meeting of the Association for Chemoreception Sciences*, *Sarasota, FL*, Abstract **13**; 254.

Guthrie KM, AJ Anderson, M Leon and CM Gall. (1991) Odor induction of *c-fos* expression reveals functional topography in the rat main olfactory bulb. *Annual meeting of the Association for Chemoreception Sciences*, *Sarasota, FL*, Abstract **13**; 266.

Guthrie KM, JM Holmes and M Leon. (1990) Evidence for functional topography following complete and partial bulbectomy. *Annual meeting of the Association for Chemoreception Sciences*, *Sarasota, FL*, Abstract **12**; 134.

Holmes J, K Guthrie and M Leon. (1989) Evidence of functional topography following partial bulbectomy. *International Society for Developmental Psychobiology, San Diego, CA,* Abstract 22: 34.

Guthrie KM and M Leon. (1989) Olfactory nerve ingrowth induces tyrosine hydroxylase-immunoreactivity in rat forebrain neurons. *Annual meeting of Association for Chemoreception Sciences*, *Sarasota, FL*. Abstract **11**; 22.

Guthrie KM, DA Wilson and M Leon. (1988) Modification of olfactory bulb physiology following early olfactory deprivation. *Annual Society for Neuroscience meeting*, *Toronto, Canada*, Abstract. **14**: 1188.

Gomez-Pinilla F, KM Guthrie, M Leon and M Nieto-Sampedro. (1988) NGF receptor increase in the olfactory bulb after early olfactory deprivation in rats. *Annual Society for Neuroscience meeting, Toronto, Canada*. Abstract. **14**: 685.

Guthrie KM, J.M. Pullara, J.F. Marshall and M. Leon. (1987) Olfactory deprivation increased ^{3}[H] spiroperidol binding in the rat olfactory bulb. *Annual Society for Neuroscience meeting, New Orleans, LA*, Abstract. **13**: 1403. \

Guthrie KM and M Leon. (1986) Ornithine decarboxylase activity in the developing rat olfactory bulb. *Annual Society for Neuroscience meeting*, *Washington DC*, Abstract. **12**: 123.

Guthrie KM and M Leon. (1986) Developmental pattern of ornithine decarboxylase activity in the rat olfactory bulb. *Annual meeting of the Association for Chemoreception Sciences*, *Sarasota, FL*. Abstract **8**: 116.

Non-refereed and Invited Presentations/Seminars:

2016, FAU Henderson School, Boca Raton, FL
2011, Neuroscience Seminar Series, FAU, Boca Raton, FL
2008, TyraTech Research Symposium at FAU, Boca Raton FL.
2006, Dept. of Zoology, University Oklahoma, Norman, OK.
2006, Neuroscience Program, University of South Florida, Tampa, FL.
2004, The Brain Bee, Brain Awareness Week, Florida Atlantic University, Boca Raton, FL
2000, Dept. of Psychology, Univ. of California, Santa Barbara, CA.
1999, Dept. of Neuroscience, Univ. of New Mexico, Albuquerque, NM
1999, Dept. of Anatomy and Neurobiology, SUNY Syracuse, NY.
1999, Dept. of Cellular and Molecular Biology, Tulane University, New Orleans, LA.
1999, Dept. of Biology, Louisiana State University, Baton Rouge, LA.
1998, Dept. of Anatomy and Cell Biology, Louisiana State University, Shreveport, LA
1998, Department of Psychology, Florida State University, Tallahassee, FL.
1998, Dept. of Anatomy and Neurobiology, Texas A&M Univ., College Station, Texas
1995, Department of Biology, University of Kentucky, Lexington, KY.
1994, Association for Chemoreception Sciences, Sarasota, FL, Speaker and Co-organizer of symposium with Dr. Judith Van Houten.
1993, Dept. of Neuroscience, Univ. of California, Riverside, CA
1993, Dept. of Psychology, Univ. of Washington, Seattle, WA.
1992, Winter Conference on Brain Research, Steamboat Springs, CO.

William Edward Hahn

101 SE 10th Court – Deerfield Beach, FL 33441

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561-479-8123

I. EDUCATION

Florida Atlantic University Ph.D. Complex Systems and Brain Sciences	777 Glades Road Boca Raton, Florida 33431	2011-2016
University of North Carolina at Greensboro Mathematics / Computer Science	1400 Spring Garden Street Greensboro, North Carolina 27412	2009-2011
Guilford College B.S. in Mathematics / Physics	5800 West Friendly Avenue Greensboro, North Carolina 27410	2003-2008

II. RESEARCH

Morris, P., St. Clair, R., Hahn, W.H. and Barenholtz, E. (2020)
Predicting Binding from Screening Assays with Transformer Network Embeddings.
Journal of Chemical Information and Modeling.

Barenholtz, E., Fitzgerald, N. D., Hahn, W. E. (2020).
Machine-learning approaches to substance-abuse research:
emerging trends and their implications.
Current Opinion in Psychiatry, 33(4), 334-342.

Sarangi, V., Pelah, A., Hahn, W. E., Barenholtz, E. (2020).
Gender Perception From Gait:
A Comparison Between Biological, Biomimetic and Non-biomimetic Learning Paradigms.
Frontiers in human neuroscience, 14.

N Sachdeva, M Klopukh, RS Clair, WE Hahn
Using conditional generative adversarial networks to reduce the effects of latency in robotic telesurgery
Journal of Robotic Surgery

Sarangi, V., Pelah, A., Hahn, W. E., Barenholtz, E.
(2020). Neural and Neuromimetic Perception:
A Comparative Study of Gender Classification from Human Gait.
Electronic Imaging, 2020(11), 10402-1.

Morris, P., St Clair, R., Barenholtz, E. and Hahn, W.E.
Predicting Binding from Screening Assays with Transformer Network Embeddings.
(Submitted, Journal of Chemical Information and Modeling 2019)

Michael Teti, Shawn Martin, Christopher Teti, Elan Barenholtz and William Hahn.

A Controlled Investigation of Behaviorally-Cloned Deep Neural Network Behaviors
in an Autonomous Steering Task.
(Submitted, Robotics and Autonomous Systems 2019)

Michael Teti, Elan Barenholtz and William Hahn.
Half the Measurements, Twice the Speed:
Accelerating Deep Reinforcement Learning Using Compressed Sensing.
NICE 2019. Accepted With Talk.

Evan Clark, Rachael St Clair, Mike Teti, Elan Barenholtz and William Hahn.
Advances in deep learning and their applied utility toward chemical informatics and Drug Discovery.
ACS Conference 2019 Accepted with Talk.

Paul Morris, Rachael St Clair, Mike Teti, Elan Barenholtz and William Hahn.
Virtual High-throughput screening; A combined deep-learning approach.
ACS Conference 2019 Accepted with Talk.

Sarangi, Pelah, Hahn, Barenholtz, Stone, Kazakov
Clinical evaluation of machine learning approaches for the classification of 3D gait
using static and dynamic models in comparison to human perception.
British Machine Vision Conference (BMVC) 2019

Michael Teti, Elan Barenholtz and William Hahn.
Half the Measurements, Twice the Speed:
Accelerating Deep Reinforcement Learning Using Compressed Sensing.
NICE 2019 (Submitted)

Michael Teti, William Edward Hahn, Shawn Martin, Christopher Teti, Elan Barenholtz
A Systematic Comparison of Deep Learning Architectures in an Autonomous Vehicle. (Submitted)

Rachael St Clair, Mike Teti, Elan Barenholtz and William Hahn.
Target Binding and Sequence Prediction With LSTMs. RECOMB 2019

Hahn, William Edward, Mike Teti, and Elan Barenholtz.
Double-Blind Inpainting with Conditional Generative Adversarial Networks.(CVPR In-prep)

Kleiman, Michael, William Hahn, and Elan Barenholtz.
"Saliency Map Classification Using Capsule-based CNNs."
Journal of Vision 18.10 (2018): 1209-1209.

Morris, Paul, DaSilva, Yahchayil, Clark, Evan, Hahn, William, Barenholtz, Elan.
Convolutional Neural Networks for Predicting Molecular Binding Affinity to HIV-1 Proteins.
2018 ACM International Conference.

Kelsey Wilson, Evan Clark, Regy Augustin, Paul Morris, Elan Barenholtz and William Edward Hahn.
Deep Learning Guided Transcriptome: Sequence Analysis of Primary Tumors
for Differentiation and Diagnosis of Multiple Cancers
GTC 2018 Accepted with Talk

Hahn, William Edward, Mark Lenson, and Elan Barenholtz.
Human Saliency Prediction using Conditional Generative Adversarial Neural Networks
VSS 2018

Hahn, William Edward, Teti, Michael and Elan Barenholtz
X^3: A biologically inspired, high-speed algorithm for feature learning.
NICE 2018 Accepted with Talk

Teti, Michael, Elan Barenholtz and William Hahn.

A Systematic Comparison of Deep Learning Architectures in an Autonomous Vehicle
GTC 2018 Accepted with Talk

Teti, Michael, William Edward Hahn, and Elan Barenholtz
Compressed Sensing Using Locally-Competitive Algorithms
EUSIPCO 2017 In Review

William Hahn, Mike Teti, Stephanie I. Lewkowitz, Bing Ouyang and Elan Barenholtz
Sparse Dictionaries for RGB Image Classificationusing Locally Competitive Neural Networks
IJCNN Submitted 2017

Teti, Michael, Rachel St Clair, Abrian Miller and William Edward Hahn.
Deep Learning Sequence Prediction for Synthetic Biology and Genetic Energineering
iGem 2017 Accepted with Talk

Howard Hock, Elan Barenholtz, William Hahn and Adar Pella.
Human and machine perception of gender from gait
IEEE FG 2017 In Review

Martin, Shawn, William Hahn, and Elan Barenholtz
An Open-Source Research Platform for Autonomous Vehicle Research and Development
NCUR 2017

Augustin, Regynald, William Hahn, and Elan Barenholtz
DeepFeature: A Recurrent Memory Network for Autonomous Vehicle Control
NCUR 2017

Teti, Michael, William Hahn, and Elan Barenholtz
Detecting Wading Bird Presence in Time-Lapse Images with a Convolutional Neural Network
NCUR 2017

Hahn, William Edward, Stephanie Lewkowitz, and Elan Barenholtz
Deep Learning Human Actions from Video via Sparse Filtering and Locally Competitive Algorithms.
Multimedia Tools and Applications (2015): 1-14.

Hahn, William, and Elan Barenholtz.
Alpha-Stable Distributions and Saccadic Foraging.
Journal of Vision 14.10 (2014): 752-752.

Hahn, William Edward and Shapiro, Steven
Swarm Driven Neural Networks Identification of El Nino Southern Oscillations
NCUR 2008

III. PRESENTATIONS AND TALKS

X^3: A Biologically Inspired, High-Speed Algorithm for Feature Learning - Intel Corp, NICE - 2018

Self-Driving Cars and the Future of Medicine - FAU Frontiers - 2018

Neurocomputing - Guilford College - 2018

Intermediate Machine Learning - Itplaooza - 2016

Big Data, IoT, and Machine Learning - - Itplaooza - 2016

Locally Competitive Algorithms and Random Projections - Florida Atlantic University - 2016

Information Processing Models of the Visual Cortex - Florida Atlantic University - 2015
Machine Cognition - Florida Atlantic University - 2015
Summer Programming Workshop: Reservoir Computing - Florida Atlantic University - 2015
Sparse Coding and Compressed Sensing - Florida Atlantic University - 2013
Computer Vision and Structure from Motion - Ft. Lauderdale Rotary Club - 2014
Sparse Modeling for Saliency Prediction - Florida Atlantic University - 2014
Intro to Computational Complexity - Guilford College - 2014
Differential Equations in Neuroscience - Guilford College - 2014
Intro to Computational Geometry - Guilford College - 2014
Computer Vision and Medical Imaging - Guilford College - 2014
Deep Machine Learning - Florida Atlantic University - 2013
State of the Art: Brain Mapping - Ft. Lauderdale Rotary Club - 2013
Saccadic Foraging and Alpha Stable Distributions - Florida Atlantic University - 2013
Traumatic Brain Injury and Diffusion Tensor Imaging - Florida Atlantic University - 2012
Alzheimer's Disease Bio-markers Using Diffusion Tensor Imaging - Florida Atlantic University - 2011
Brain Mapping: Diffusion Tensor Tractography Whole Brain Connectome - Guilford College - 2011
Bio-Inspired Algorithms - University of North Carolina Greensboro - 2010
Crayon Spectroscopy - Greensboro, NC Elementary School - 2009
Antibiotic Resistance Agent Based Simulation - University of North Carolina Greensboro - 2009
Quorum Sensing and Artificial Immune Systems - Guilford College - 2009
Human-Computer Interaction Virtual Worlds: Second Life - University of North Carolina Greensboro - 2009
Fibonacci, the Golden Ratio, and Netlogo - Winterville, NC Middle School - 2008
Swarm Driven Neural Networks for El Niño - National Conference for Undergraduate Research - 2008
Thermohaline Circulation - Guilford College - 2007
Genetic Algorithms and Experimental Paper Aircraft - Guilford College - 2007
Measuring the Wavelength of a Helium-Neon Laser - Guilford College - 2005
Wasting Nuclear Power - Guilford College - 2005
Populations Dynamics and Differential Equations - Guilford College - 2004
Parametric Equations in Maple - Guilford College - 2004
Ant Simulations and Genetic Algorithms - Guilford College - 2003

IV. EDUCATIONAL ACHIEVEMENTS

1^{st} Broward County Regional Science and Engineering Fair Geela Ramos 2019
2^{nd} Florida State County Science Fair Geela Ramos 2019
1^{st} Broward County Regional Science and Engineering Fair Rodrigo Castellon 2018
3^{rd} Florida State Science and Engineering Fair Rodrigo Castellon 2018
NASA Special Recognition Award Rodrigo Castellon 2019
5 MPCR Lab Spin Off Companies in FAU Techrunway Incubator 2018
1^{st} Place FAU Wave Research Award - Mike Kleiman 2018
3^{rd} Place FAU Wave Research Award - Stephen Hoover 2018
1^{st} 3 Minute Thesis Heat - Emily Stark 2017
1^{st} GPSA Graduate Research Day - Michael Teti 2016

1^{st} Undergraduate Research Symposium - Andrew Silverstein 2016
1^{st} Undergraduate Research Poster Day - Marcus McGuire 2016
3^{rd} place FAU business plan competition - Reggie Augustine 2016
PhD Fellowship Everglades Foundation - Michael Teti 2016
Student Wave Undergraduate Summer Research Grant - Shawn Martin 2016
MPCR Lab Summer Programming Workshop 2016
MPCR Lab Article in University Press 2015
MPCR Lab Summer Programming Workshop 2015
Founded Machine Perception and Cognitive Robotics Laboratory (MPCR) 2014
First Florida Statewide Graduate Student Research Symposium: Diffusion MRI Tractography 2013
Honorable Mention Art of Academia - Digital Neuroanatomy 2013
1^{st} Place GPSA Research - White Matter Networks Indicative of Alzheimer's Disease 2013
2^{nd} Place Art of Academia - Diffusion Tractography Visualization 2011
Science Writer - Houghton Mifflin Harcourt 2011
National Science Foundation - Mathematical Biology Fellowship 2009
Davidson College Summer Institute - Calculus Teachers Workshop 2009
National Conference for Undergraduate Research - Swarm Driven Neural Networks ENSO 2008
Guilford College - Physics for Non-Scientists - Lab Instructor - Deutsches Museum - Munich, Germany 2006
E. Garness Purdom Physics Scholarship 2006
AAPT - Outstanding Teaching Award 2006
American Association of Physics Teachers 2006
Physics Teaching Appreciation Award 2005
National Physics Honors Society - Sigma Pi Sigma 2004
Guilford College First-year Student Orientation Leader 2004
Graduation Honors - World Religion - St. Augustine College Preparatory 2003
DigiPen Institute of Technology - Computer Graphics Workshop 2002

V. TEACHING

A. Assistant Professor - Florida Atlantic University

Course	Semester
Methods in Complex Systems	Spring 2020
Time Series Analysis	Spring 2020
Nonlinear Dynamics	Fall 2019
Regression Analysis	Fall 2019
Probability and Statistics	Spring 2019
MPFI Data Science	Spring 2019
MPFI Data Science	Fall 2019
Linear Algebra	Fall 2019
Introduction to Deep Learning	Spring 2018
Machine Perception and Cognitive Robotics	Spring 2018
Machine Perception and Cognitive Robotics HS	Fall 2018
Machine Perception and Cognitive Robotics	Spring 2017
6908 Machine Perception and Cognitive Robotics	Spring 2016

B. Instructor - Florida Atlantic University

Course	Semester
2049 General Physics Laboratory II Electronics	Spring 2015
2049 General Physics Laboratory II Electronics	Fall 2014

C. Teaching Assistant - Florida Atlantic University

Course	Semester
2002 Introduction to Astronomy / Digital Data Laboratory	Summer 2013
2002 Introduction to Astronomy / Digital Data Laboratory	Spring 2013
2002 Introduction to Astronomy / Digital Data Laboratory	Fall 2012
2002 Introduction to Astronomy / Digital Data Laboratory	Summer 2012
2002 Introduction to Astronomy	Spring 2012
2002 Introduction to Astronomy	Fall 2011

D. Teaching Assistant - Guilford College

Course	Semester
122 Classical and Modern Physics II	Spring 2008
101 Science through Science Fiction	Fall 2007
320 Mathematical Methods for the Physical Sciences	Spring 2007
250 Physics for Non-Scientists (Munich, Germany)	Fall 2006
320 Mathematical Methods for the Physical Sciences**	Spring 2006
223 Classical and Modern Physics III	Fall 2005
122 Classical and Modern Physics II*	Spring 2005
101 Systems Thinking and Computer Modeling	Fall 2004

* Guilford College Physics Department – Teaching Assistant Appreciation Award
** American Association of Physics Teachers – Outstanding Teaching Assistant Award

VI. SPECIAL MENTION

Former Student Placements
MIT Media Lab - Oceane Boulais
MIT Media Lab - Danny Marquez
Twitter - Regy Augustine
Mount Sinai - Evan Clask
UF - Washington Garcia
Stanford - Rodrigo Castellon
Georgia Tech - Marcus McGuire
Georgia Tech - Nick Tutaniu
Georgia Tech - Andrew Silverstein
Mike Teti - Summer Researcher Los Alamos National Laboratory 2019
Emily Stark - Japan Conference Deep Learning Talk 2019
Nicole Fitzpatrick - NIDA 2019
Rachael St Clair - Department of Homeland Security 2019
Mike Teti - Summer Researcher Los Alamos National Laboratory 2020
Emily Stark - Summer Researcher Los Alamos National Laboratory 2020

VII. TECHNOLOGIES

Computer Languages: Pytorch, Tensorflow, Python,
Matlab, C++, Java, Netlogo, Maple, Sage, Stella, Breve, Prolog, R, HTML

Operating Systems: Docker, Ubuntu, OS X, Windows

HPC/Cloud: Slurm, Globus, GridNexus, Condor, Dagman, FTP and SSH

Applications: LaTeX, Microsoft Office Suite, Google Documents, Digital Audio/Video/Imaging Editing

Medical Imaging: CMTK, TrackVis, DTK, OsiriX, MRIcroGL, Slicer, FSL, AFNI, Freesurfer

Mixed Reality: Magic Leap, HTC Vive, Oculus Rift, Leap Motion, Kinect v2, Eye-Tracking, Open CV

VIII. WEBSITES

MPCR Homepage: `http://www.mpcrlab.com`

Video History Vlog: `http://www.dividingengine.com/`

Youtube Channel: `http://www.youtube.com/user/williamedwardhahn`

Visualization Portfolio: `https://williamhahn.imgur.com/`

MPCR Slides: `http://www.tinyurl.com/pa9ussn`

MPCR Subreddit: `http://www.reddit.com/r/mpcr/`

MPCR Facebook: `http://www.facebook.com/mpcrlab`

MPCR Github: `http://www.github.com/mpcrlab`

IX. REFERENCES

Dr. Elan Barenholtz	elan.barenholtz@fau.edu	561-297-3433
Dr. Ken Dawson-Scully	ken.dawson-scully@fau.edu	561-297-0337
Dr. Rubin Gruber	rgruber9999@yahoo.com	978-761-3979

Sang Wook (Sammy) Hong: Curriculum Vitae

Department of Psychology, Florida Atlantic University
209 Behavioral Science
777 Glades Road
Boca Raton, FL 33431, U.S.A.
Tel : 1-561-297-2905
E-mail : shong6@fau.edu
Last update: January, 2021

Education

2000 – 2005	Department of Psychology, University of Chicago Ph. D. in Psychology Thesis: Neural representation of color and form during binocular rivalry Advisor: Steven, K. Shevell, Ph. D. Advisory Committee: Joel Pokorny, Ph. D., David Bradley, Ph. D., Naoum Issa, M.D., Ph. D., Stephen Engel, Ph. D.
1997 – 1999	Department of Psychology, Yonsei University M. A. in Psychology Thesis: Effects of facial expression on face recognition Advisor: Chan-Sup Chung
1992 – 1997	Department of Psychology, Yonsei University B. A. in Psychology

Employment

Aug. 2017 – current	Department of Psychology, Florida Atlantic University Associate Professor
Aug. 2011 – Aug. 2017	Department of Psychology, Florida Atlantic University Assistant Professor
Sep. 2009 – Jul. 2011	Department of Psychology, Vanderbilt University Post-doctoral Research Associate Advisor: Frank Tong, Ph. D. & Randolph Blake, Ph. D.
Aug. 2006 – Aug. 2009	Department of Psychology, Vanderbilt University Post-doctoral Research Associate Advisor: Randolph Blake, Ph. D.

Scholarship/Research/Creative Activity: Publications in Print

Peer Reviewed Journal Publications (corresponding author, # students under supervision)*

32. Yoon, K. L., & **Hong, S. W.** (2020). Behavioral inhibition system sensitivity moderates audio-visual neutral information processing. *Journal of Behavior Therapy and Experimental Psychiatry*, *69*, 1-7.

31. Kim, I., **Hong, S. W.**, Shevell, S. K., & Shim, W. M. (2020). Neural representations of perceptual color experience in the human ventral visual pathway. *Proceedings of the National Academy of Sciences*, *117*, 13145-13150.

30. **Hong, S. W.***, & Kang, M. -S. (2019). Slow temporal dynamics of motion-induced brightness shift reveals impact of adaptation. *Perception*, *48*, 402-411.

29. **Hong, S. W.***, & Tong, F. (2017). Neural representation of form-contingent color filling-in in the early visual cortex. *Journal of Vision*, *17(3)*, 1-10, doi:10.1167/17/13/10.

28. **Hong, S. W.***, & Yoon, K. L. (2017). Intensity dependence of facial expression adaptation aftereffect. *Psychonomic Bulletin and Reviews*. *25*, 1035-1042.

27. Park, Y. E., Sy, J. L., **Hong, S. W.**, & Tong, F. (2017). Reprioritization of features of multi-dimensional objects stored in visual working memory. *Psychological Science*, *28*, 1773-1785.

26. **Hong, S. W.***, & Kang, M. -S. (2016). Motion alters color appearance. *Scientific Report*, 6, 1-11. doi: 10.1038/srep36272.

25. Cao, D., Zhuang, X., Kang, P., **Hong, S. W*.**, & King, A. (2016). Acute alcohol drinking promotes piecemeal percepts during binocular rivalry. *Frontiers in Psychology, 7:489*, 1-10. doi: 10.3389/fpsyg.2016.00489.

24. **Hong, S. W.***, & Shim, W. M. (2016). When audiovisual correspondence disturbs visual processing. *Experimental Brain Research*, *234*, 1325-1332. doi: 10.1007/s00221-016-4591-y.

23. Cox, D.[#], & **Hong, S. W.*** (2015). Semantic-based crossmodal processing during visual suppression. *Frontiers in Psychology*, *6:722*, 1-9, doi: 10.3389/fpsyg.2015.00722.

22. **Hong, S. W**.*, Yoon, L., & Peaco, S.[#] (2015). Sex differences in perception of invisible facial expressions. *Frontiers in Psychology*, *6:392*, 1-8, doi: 10.3389/fpsyg.2015.00392.

21. **Hong, S. W.*** (2015). Radial bias for orientation and direction of motion modulates access to visual awareness during continuous flash suppression. *Journal of Vision*, *15(1):3*, 1-11, http://www.journalofvision.org/content/15/1/3, doi:10.1167/15.1.3.

20. Chong, E.[#], **Hong, S. W.**, & Shim, W. M. (2014). Color updating on the apparent motion path. *Journal of Vision*, *14(14):8*, 1–12, http://www.journalofvision.org/content/14/14/8, doi:10.1167/14.14.8.

19. Yang, E., Tadin, D., Glasser, D. M., **Hong, S. W.**, Blake, R., & Park, S. (2013). Visual context processing in bipolar disorder: a comparison with schizophrenia. *Frontiers in Psychology*, *4*, 1-12, doi: 10.3389/fpsyg.2013.00569

18. **Hong, S. W.***, & Kang, M. -S. (2013). Perceptual consequence of normalization revealed by a novel brightness induction. *Vision Research, 91,* 78-83.

17. Williams, M., **Hong, S. W.**, Kang, M. –S., Carlisle, N. B. & Woodman, G. (2013). The benefit of forgetting. *Psychonomic Bulletin and Review*, *20*, 348-355.

16. Yang, E., Tadin, D., Glasser, D. M., **Hong, S. W.**, Blake, R., & Park, S. (2013). Visual context processing in schizophrenia. *Clinical Psychological Science, 1(1)*, 5-15.

15. **Hong, S. W.***, Xu, L.[#], Kang, M. –S. & Tong, F. (2012). The hand-reversal illusion revisited. *Frontiers in Integrative Neuroscience*, *6*, 1-6, doi: 10.3389/fnint.2012.00083

14. **Hong, S. W.**, Tong, F., & Seiffert, A. E. (2012). Direction-selective patterns of activity in human visual cortex suggest common neural substrates for different types of motion. *Neuropsychologia*, *50*, 514-521.

13. Kang, M. -S., **Hong, S. W.**, Blake, R., & Woodman, G. (2011). Visual working memory contaminates perception. *Psychonomic Bulletin and Review, 18,* 860-869.

12. Yang, E., **Hong, S. W.**, & Blake, R. (*2010*). Adaptation aftereffects to facial expressions suppressed from visual awareness. *Journal of Vision*. *10(12):24*, 1-13.

11. **Hong, S. W.***, & Shevell, S. K. (2009). Color-binding errors during rivalrous suppression of form. *Psychological Science*, *20*, 1084-1091.

10. **Hong, S. W.***, & Blake, R. (2009). Interocular suppression differentially affects achromatic and chromatic mechanisms. *Attention, Perception, and Psychophysics, 71,* 403-411.

9. Yoon, L., **Hong, S. W.**, Joormann, J., & Kang, P. (2009). Perception of facial expression of emotion during binocular rivalry. *Emotion*, *9*, 172-182.

8. **Hong, S. W.***, & Blake, R. (2008). Early visual mechanisms do not contribute to synesthetic color experience. *Vision Research*, *48*, 1018-1026.

7. **Hong, S. W.***, & Shevell, S. K. (2008b). Binocular rivalry between identical retinal stimuli with an induced color difference. *Visual Neuroscience*, *25*, 361-364.

6. **Hong, S. W.***, & Shevell, S. K. (2008a) The influence of chromatic context on binocular color rivalry: Perception and neural representation. *Vision Research, 48,* 1074-1083.

5. Shevell, S. K., St. Clair, R., & **Hong, S. W.** (2008). Misbinding of color to form in afterimages. *Visual Neuroscience*, *25*, 355-360.

4. **Hong, S. W.***, & Shevell, S. K. (2006). Resolution of binocular rivalry: Perceptual misbinding of color. *Visual Neuroscience*, *23*, 561-566.

3. **Hong, S. W.**, & Shevell, S. K. (2004b). Brightness induction: unequal spatial integration with increments and decrements. *Visual Neuroscience*, *21*, 353-357.

2. **Hong, S. W.**, & Shevell, S. K. (2004a). Brightness contrast and assimilation from patterned inducing backgrounds. *Vision Research, 44*, 35-43.

1. **Hong, S. W.**, & Chung, C. -S. (1999). Effects of facial expression on face recognition. *Journal of Korean Psychology: Experiment and Cognition*, *11*, 221-247. (In Korean)

Book Chapter

1. **Hong, S. W.** (2015). Large shift in brightness induced by motion in context. *The Oxford Compendium of Visual Illusions*

Manuscripts Under Revision and Submitted

1. Cox, D.[#], & **Hong, S. W.*** (*under revision*). Traveling waves in motion induced blindness. *Journal of Vision*.

3. Lee, J., **Hong, S. W.**, & Chong, S. C. (*submitted*). Multivariate summary of a complex scene. *Scientific Report*.

Manuscripts Under Preparation

Hong, S. W.*, & Tong, F. (Manuscript in preparation). Form-independent direction-selective responses in human visual cortex.

Ha, J., Park, S. Y., **Hong, S. W.***, & Shim, W. M. Asymmetrical effect of spatial attention on color representation between lateral geniculate nucleus and primary visual cortex.

Refereed Presentations and Proceedings (Last 3 years)

Yoon, Y., & **Hong, S. W.** (2020). What determine individual differences in grouping during binocular rivalry. (Annual meeting of the Vision Sciences Society, Online meeting).

Lee, J., **Hong, S. W.**, & Chong, S. C. (2020). Conjunction ensembles are based on conjoint representation of two features. (Annual meeting of the Vision Sciences Society, Online meeting).

Ha, J., Park, S. Y., **Hong, S. W**., & Shim, W. M. (2019) Spatial attention modulates color selectivity in human LGN. (Annual meeting of the Korean Society for Cognitive & Biological Psychology, Pyeongchang, South Korea).

Song, J., **Hong, S. W.**, & Kim, C. -Y. (2019). Chromatic sensitivity affected by depressive symptoms. (Annual meeting of the Society for Neuroscience, Chicago, Illinois).

Cox, D., & **Hong, S. W.** (2019). Using pattern classification and EEG to reveal the temporal characteristics of categorical processing during interocular suppression. (Annual meeting of the Vision Sciences Society, St. Petersburg Beach, Florida).

Romulus, D., **Hong, S. W.**, Hock, H. (2019). Top-down Influence of Global Motion Patterns on Local Motion Patterns. (Annual meeting of the Vision Sciences Society, St. Petersburg Beach, Florida).

Park, S., **Hong, S. W.**, Lee, Y., & Shim, W. M. (2018). Location-specific attentional modulation of neural representation of color in the human LGN. (Annual meeting of the Society for Neuroscience, San Diego, California).

Hong, S. W., & Kang, M. -S. (2018). Contrast dependent brightness shift induced by contextual motion. (Annual meeting of the Vision Sciences Society, St. Petersburg Beach, Florida).

Kim, I., Shim, W. M., **Hong, S. W.**, & Shevell, S. K. (2018). Reconstructing subjective color experiences across the human visual hierarchy. (Annual meeting of the Vision Sciences Society, St. Petersburg Beach, Florida).

Hong, S. W., & Kang, M. -S. (2017). Motion-induced appearance shift depending on orientation. (Annual meeting of the Vision Sciences Society, St. Petersburg Beach, Florida).

Cox, D., & **Hong, S. W.** (2017). The spatiotemporal dynamics of perceptual grouping in motion-induced blindness. (Annual meeting of the Vision Sciences Society, St. Petersburg Beach, Florida).

Courses Taught at FAU

Undergraduate Courses taught:

Cognition (Lecture): Fall 2011, Spring 2012, Fall 2012, Fall 2014, Spring 2016, Spring 2017, Spring 2018, Spring 2019, Spring 2020

Human Perception (Lecture): Spring 2014, Spring 2015, Fall 2015, Summer 2016, Fall 2016, Fall 2017, Fall 2018, Fall 2019, Fall 2020

Graduate Courses developed and taught:

Attention and Consciousness (Lecture and Seminar): Spring 2013, Spring 2015

Seminar in Cognition (Lecture and Seminar): Fall 2013, Fall 2015, Fall 2018, Fall 2020

Seminar in Human Perception (Lecture and Seminar): Fall 2017, Fall 2019

Service and Professional Development

Department Service

FAU Psychology Department Library Representative (2013-present)

FAU Psychology Department Undergraduate Committee (2014-present)

FAU Psychology Department Faculty Search Committee (2013-2018)

FAU Center for Complex Systems and Brain Sciences Faculty Search Committee (2013-2016)

FAU Psychology Honors Seminar, Guest Lecturer (2012, 2013, 2020)

FAU Psychology Department Vision Seminar, Organizing Chair (2012-2019)

FAU Psychology Instructor Search Committee Chair (2018, 2019)

FAU Psychology Strategic Plan Committee (2018-2020)

College Service

FAU Graduate Research Fair, Judge (2012, 2013)

University Service

FAU Neuroscience Seminar Series, Organizer (2016)

FAU Diversity Committee, Member (2015-present)

FAU QEP Topic Selection Committee (2020-present)

Service to Discipline

Ad hoc Reviewer: Journal of Vision

Ad hoc Reviewer: Visual Neuroscience

Ad hoc Reviewer: Vision Research

Ad hoc Reviewer: iPerception

Ad hoc Reviewer: Psychology Research and Behavior Management

Ad hoc Reviewer: Cognitive, Affective, & Behavioral Neuroscience

Ad hoc Reviewer: Neuroscience and Biomedical Engineering

Invited Reviewer: NSF Perception, Action and Cognition

Curriculum Vitae
Ceylan Isgor, PhD
October, 2020

Personal Information

Birth:	October 10, 1970, TURKEY
Address:	Florida Atlantic University Charles E. Schmidt College of Medicine Department of Biomedical Science Building BC-71, Rm 323 777 Glades Road Boca Raton, Florida 33431-0991
E-mail:	cisgor@fau.edu
Phone:	Office: (561) 297-0712 Lab: (561) 297-0714 Home: (561) 322-9354
Fax:	(561) 297-2519
Citizenship:	U.S.A.
Sex:	Female

Professional Background

2010-present	Associate Professor (tenured) Florida Atlantic University Charles E. Schmidt College of Medicine Department of Biomedical Science Boca Raton, FL 33431
2018-present	Undergraduate Research and Inquiry Liaison College of Medicine/ Office of Undergraduate Research & Inquiry / FAU
2004-2010	Assistant Professor (tenure track) Florida Atlantic University Charles E. Schmidt College of Biomedical Science Department of Basic Science Boca Raton, Florida 33431
1999-2004	Postdoctoral Fellow The University of Michigan Mental Health Research Institute Ann Arbor, MI 48109-0720 Research Mentors: Stanley J. Watson, MD, PhD Huda Akil, PhD
1993-1999	Doctor of Philosophy Indiana University

Received: August, 1997
Major: Animal Learning and Behavior (Psychology)
Minor: Behavioral Neuroscience (Program in Neural Science)
Research Mentors: Dale R. Sengelaub, PhD
William Timberlake PhD

1990-1993 Bachelor of Arts
University of Maryland at College Park, College Park MD
Major: Psychology

1988-1990 University Degree
Bogazici University, Istanbul, TURKEY
Major: Business
Major: Psychology

Research Support & Awards

2019-2022 "Temporal ontogeny of epileptogenesis in a model of adult-onset, spontaneous seizures."
Type: 1R15NS115049-01 (NIH/NINDS)
Role: Principal Investigator

2018-2020 "Role of Ube3a in neuronal maturation and synaptogenesis in adult-born neurons"
Type: R21 DC016467 (NIH/NIDCD)
Role: Consultant

2014-2015 "Trophic mechanisms promoting the emergence of pro-epileptic hippocampal circuitry"
Agency: Sponsored programs/FAU
Role: Co-PI

2009-2013 "Individual differences in relapse to nicotine"
Agency: National Institutes of Health/NIDA
Type: R15-AREA
Role: Principal Investigator

2009-2010 Florida Atlantic University
Researcher of the Year
(Assistant Professor)

2008-2011 "A rat model of individual differences in neuro-immune responses to nicotine and stress"
Agency: Florida Department of Health/Biomed. Res. Program
Type: Team Science Project
Role: Co-Principal Investigator (PI: K. Brew)

2007-2008	Florida Atlantic University Charles E. Schmidt College of Biomed Science Dwight W. Warren Excellence in Graduate Teaching Award
2005-2009	"Role of cannabinoid receptor 1 in novelty-seeking phenotype and treatment for nicotine dependence" Agency: Florida Department of Health/Biomed. Res. Program Type: New Investigator Research Role: Principal Investigator
1997	Society for Neuroscience annual meeting travel award
1996-1997	Biomedical Research Grant, NIMH
1996	Indiana Academy of Sciences Grant-in-Aid of Research
1994-1996	Indiana University Center for Integrative Study of Animal Behavior Research Support
1994-1996	Sigma Xi Grant-in-Aid of Research
1993-1997	Indiana University Center for Integrative Study of Animal Behavior Summer Support Fellowship
1993-1996	Indiana University Center for Integrative Study of Animal Behavior Travel Award

Research Experience

2013-present	Florida Atlantic University Charles E. Schmidt Biomedical Science Center *Topic:* Determinants of seizure-prone circuitry in a transgenic mouse model of spontaneous epilepsy
2004-2013	Florida Atlantic University Charles E. Schmidt Biomedical Science Center *Topic:* Individual differences in emotional reactivity in an outbred rat model of the novelty-seeking phenotype as an antecedent to vulnerability to stress and nicotine craving
1999-2004	The University of Michigan Mental Health Research Institute, Ann Arbor MI *Topic 1:* Morphological, behavioral and molecular consequences of chronic, variable stress during the peripubertal-juvenile period in the adult brain *Topic 2:* Individual differences in the novelty-seeking behavior in the female rat: Interactions of the low-responder/high-responder phenotype with the gonadal axis and brain dopaminergic circuitry *Topic 3:* Gonadal and adrenal steroid regulation of the novel estrogen receptor β in stress-relevant brain nuclei: Potential hypothalamic-pituitary-adrenal axis function Supervisors: Stanley J. Watson, MD, PhD Huda Akil, PhD

1994-1999	Indiana University Department of Psychology & Program in Neural Science, Bloomington IN *Topic:* Organization of sexual dimorphism in hippocampal cellular and dendritic morphology and subsequent maze learning in adulthood. Supervisor: Dale R. Sengelaub, PhD
1992-1993	Indiana University Department of Psychology, Bloomington IN *Topic:* Effects of cooperation and competition on social foraging Supervisor: William Timberlake, PhD
1991-1992	University of Maryland at College Park Department of Psychology, College Park MD *Topic:* Priming in racial stereotyping Supervisor: Charles Stangor, PhD
1990-1992	University of Maryland at College Park Program in Behavioral Neuroscience, College Park MD *Topic:* Brightness threshold, visual acuity and concept formation Supervisor: William Hodos, PhD

Technical Skills

Behavior:	Seizure recording and encoding using vertebrate animal models Behavioral models of learning and memory using radial, water and sand mazes Behavioral models of anxiety using light/dark box, elevated plus maze, open field, social interaction test Developmental models of stress/environmental enrichment including unpredictable physical and social stress, rearing condition, social hierarchy, dominance-subordinance and kinship relationships Behavioral models of drug taking, behavioral sensitization to psychostimulants, self-administration of psychostimulants, locomotor reactivity to novelty Behavioral models of foraging for food, approach/avoidance paradigms
Surgery:	Skull EEG electrode implantation and in vivo video/EEG recording; Ovariectomy, orchidectomy, adrenalectomy Intracardial perfusions, decapitation, brain and spinal tissue collection, brain dissection and blocking

Microinjection (iontophoresis) of drugs in the brain nuclei using the stereotaxic apparatus (reversible lesion paradigm)
Collection of plasma from live animals via tail nicking
Cesarean section delivery
Microsurgeries including gonadectomy on embryonic rat pups

Histology: Nissl stains
Immunohistochemistry (DAB and fluorescence-conjugates)
Golgi-Cox impregnation
Timm's Silver Stain
Horseradish peroxidase retrograde labeling
Vaginal cytology
Tissue sectioning using vibratome, cryostat, rotary and freezing microtomes
Tissue collection using Laser Capture Microdissection

Biological Assays: Radioimmunoassay

Molecular Assays: DNA cloning, transformation
Plasmid Preparation
In situ hybridization histochemistry using riboprobes
DNA/RNA isolation/purification
Immunohistochemistry
Double *in situ* and immuno histochemistry using radiolabeled and digoxigenin labeled mRNA probes
Autoradiography
Affymetrix Gene Chip Assay
RNA collection/purification and amplification from picogram quantities using the laser capture microdissection technique
Chromatin Immunoprecipitation Assay & ChIP on chip
Western Blot

Light Microscopy: Unbiased stereological counts of particles using a 3-D computer-interfaced video image analysis system (e.g., neuron, glia, radiolabelled pixels per neuron)
Quantification of gross and cellular morphology using the Cavalieri Estimator for structural volume and Nucleator probe for soma size
Quantification of dendritic morphology in individual neurons stained by the Golgi-Cox method (e.g., dendritic length, number of branches, spine number and density) using a 3-D computer-interfaced video image analysis system

Teaching Experience

Assistant Instructor: Undergraduate level psychology courses, 1993-1996, Indiana University:

(Learning and Motivation, Behavioral Neuroscience, Social Psychology, Statistical Methods, Evolution of Learning, Biopsychology, Developmental Neurobiology)

Assistant Instructor: Graduate level statistics course, 1996, Indiana University

Laboratory Instructor: Methods in Experimental Psychology, 1995, Indiana University

Undergraduate Medical Student Research Advisor, 2000-2002, University of Michigan:
-responsibilities included training students in laboratory techniques and assisting them with their undergraduate research theses

Graduate Student Research Director, 2002, University of Michigan:
-responsibilities included directing graduate level research, helping pose tangible research questions, design experiments and assist in interpreting data

Lecturer in the Medical Neuroscience Module delivered to the *1st year medical students*, 2005-2011, Florida Atlantic University:
-delivered neuropharmacology and neurophysiology lectures pertaining to topics of learning and memory, neurobiology of reward circuitry, drug addiction, hypothalamus and limbic system and the stress axis

Lecturer in a team-taught, *graduate level*, degree requirement class Topics in Biomedical Sciences, 2005-2009; Florida Atlantic University:
-delivered lectures pertaining to neurobiological bases of individual differences in drug addiction and introduced general behavioral paradigms used in animal models of drug addiction

Lecturer Molecular Neuropsychopharmacology, 2008-2013; Florida Atlantic University:
-developed and annually instructed this *graduate level* course which fulfills an elective requirement for the Florida Atlantic University Neuroscience Certificate Program.

Lecturer Neurobiology of Addiction, 2014-onward; Florida Atlantic University
-*graduate level* course designed to provide graduate students with fundamental information on molecular, cellular, and neurocircuitry systems in the brain that are responsible for drug addiction.

Guest Lecturer Neuroscience 2, Spring 2015; Florida Atlantic University
-delivered a lecture on hypothalamus to *graduate students*

Facilitator	Problem Based Learning in Medical Neuroscience delivered to *1st year medical students*, Spring 2009-2015; Florida Atlantic University

Doctoral Thesis

Ceylan Isgor (1997)	Effects of perinatal gonadal steroids on adult spatial navigation and hippocampal morphology
Doctoral Committee:	Dale R. Sengelaub, PhD, Chair Joseph E. Steinmetz, PhD Jeffrey Alberts, PhD Elizabeth Kurz, PhD

Invited Talks and Presentations (2004-present)

"An animal model of individual differences in risk-taking behavior" Neuroscience Brown Bag Series, Florida Atlantic University, Department of Psychology, 11/18/2004

"A rodent model of individual differences in adolescent nicotine addiction: therapeutic perspectives" Neuroscience Colloquium, Florida State University, 11/23/2005

"Individual differences in novelty-seeking and nicotine addiction: therapeutic perspectives." Neuroscience Brown Bag, Florida Atlantic University, 05/11/2006.

"Vulnerability to nicotine craving & modulation with cannabinoid receptor 1 (CB1) antagonist" Biomedical Seminars, Florida Atlantic University, 08/22/2006

"Neurobiological mechanisms in vulnerability to nicotine: HPA axis" Neuroscience Colloquium, University of Michigan, 10/10/2007

"Nicotine vulnerability: "Individual differences in emotional reactivity" Neurobiology Seminar, Emory U., 10/24/2008

"Normal and pathological brain development during adolescence" Neuroscience and Behavioral Biology, Emory U., 12/05/2008

"Vulnerability to stress: neurobiological correlates" University of Louisville, College of Medicine, Department of Psychiatry & Behavioral Sciences, 09/21/2009

"Individual differences in novelty-seeking phenotype and nicotine abstinence-induced anxiety-like behavior" Indiana University, Neuroscience Program, 02/12/2010

"Epigenetic regulation of the brain derived-neurotrophic factor gene in nicotine-induced anxiety" Neuroscience Seminar, University of Florida, 04/30/2010

"Individual differences in relapse to nicotine in an outbred rodent model of nicotine vulnerability" Neuroscience Seminar, University of North Dakota, 07/17/2011

"Stress and drug vulnerability in an outbred rodent model of novelty-seeking" Neuroscience Seminar, University of Wisconsin, 05/14/2013

"Emergence of epileptogenesis and aberrant synaptic circuits in the adult hippocampus of transgenic mice over-expressing the brain-derived neurotrophic factor" Neuroscience Seminar, FAU, 09/22/2015

"Temporal ontogeny of epilepsy: BDNF over expression model" NeuroLectures, University of Nevada, 10/10/2018

International Conferences and Workshops Attended

Isgor, C., Timberlake, W. (1994). Effects of social conflict on foraging efficiency in the Norway rat. Annual Meeting of American Psychological Society, Washington D.C.

Isgor, C., Timberlake, W. (1994). Cooperation and competition in social foraging. Ohio-Kentucky-Purdue-Indiana University Joint Annual Animal Learning Meeting, Purdue University, Purdue IN.

Isgor, C., Waldroup, L.L., Sengelaub, D.R., Timberlake, W., Schroeder, D.M. (1995). Neural and hormonal correlates of spatial memory. Soc. Neurosci. Abstr. (24.19).

Isgor, C., Sengelaub, D.R. (1996). Neonatal androgens affect spatial behavior and CA3 pyramidal cell morphology: A Golgi study. Soc. Neurosci. Abstr. (302.10).

Waldroup, L.L., **Isgor, C.**, Sengelaub, D.R., Frommer, G. (1996). Acute testosterone affects aged male hippocampal morphology. Soc. Neurosci. Abstr. (491.1).

Isgor, C., Sengelaub, D.R. (1997). Prenatal gonadal steroids affect adult spatial behavior, CA1 and CA3 pyramidal cell morphology in rats. Soc. Neurosci. Abstr. (32.13).

Isgor, C., Akil, H., Watson, S.J. (1999). Acute restraint stress interacts with the HPA-axis of the female rat differentially across the oestrus cycle. Soc. Neurosci. Abstr. (582.11).

Kabbaj, M., **Isgor, C.**, Watson S.J., Akil, H. (1999). Chronic nonhabituating physical stress and intermittent social stress during adolescence affect the HPA axis of the adult rat. 29th Annual Meeting of Neuroscience.

Huang, G.C., **Isgor, C.**, Akil, H., Watson, S.J. (2000). Regulation of estrogen receptor β mRNA across oestrus cycle in the rat brain. Soc. Neurosci. Abstr. (346.18).

Isgor, C., Kabbaj. M, Akil, H., Watson, S.J. (2000). Chronic nonhabituating physical and social stress during adolescence alters hippocampal morphology and gene expression in rats. Soc. Neurosci. Abstr. (571.11).

Lu, D., Healy, D.J., Young, E.A., Huang, G.C., **Isgor, C.**, Akil, H., Meador-Woodruff, J.H. (2000). Hippocampal NMDA receptor expression during the oestrus cycle. Soc. Neurosci. Abstr. (617.11).

Kabbaj, M., **Isgor, C.**, Watson, S. J., Akil, H. (2000). Chronic nonhabituating social stress during adolescence inhibits behavioral sensitization to amphetamine: role of dopamine receptors. Soc. Neurosci. Abstr. (656.16).

Isgor, C., Shieh, K.R., Akil, H., Watson, S.J. (2001). Colocalization of estrogen β-receptor messenger RNA with vasopressin, oxytocin and orphanin FQ in the rat hypothalamic paraventricular and supraoptic nuclei. 31st Annual Meeting of Society for Neuroscience.

Isgor, C., Kabbaj, M., Akil, H., Watson, S.J. (2002). Interaction between the novelty-seeking behavior and the oestrus cycle in the female rat: Dopaminergic correlates. 32nd Annual Meeting of the Society for Neuroscience.

International Neurostereology Workshop organized by Mark West, PhD University of Aarhus, Denmark in collaboration with Ignite Consultants, Denmark. July 6-12, 2002, Paris, France

Isgor, C., Slomianka, L., Watson, S.J. (2003). Hippocampal mossy fiber terminal field size is differentially affected in a rat model of risk-taking behavior. 33rd Annual Meeting of the Society for Neuroscience.

Isgor, C., Slomianka, L., Akil, H., Watson, S.J. (2004). Estrogen receptors α and β colocalize with Ki-67 and doublecortin immunoreactivity in proliferative regions of the adult rat brain. 34th Annual Meeting of the Society for Neuroscience.

Turner, C.A., **Isgor, C.,** Evans, S.J., Neal, C.R., Akil, H., Watson, S.J. (2004). Effects of early postnatal FGF-2 administration on neurogenesis, emotionality and gene expression in rats. 34th Annual Meeting of the Society for Neuroscience.

Perez, J. A., Turner, C. A., **Isgor, C.,** Watson, S. J., Akil, H. (2004) FGF-2, a possible predictor for emotional reactivity after environmental complexity. 34th Annual Meeting of the Society for Neuroscience.

Tao, R., Pearson, E., Ma, Z., **Isgor, C.** (2005) Cannabinoid (CB) 1 receptor antagonist blocks nicotine-induced conditioned place preference in the HR but not LR adolescents. 35th Annual Meeting of the Society for Neuroscience.

Isgor, C., Bhatti, A., Hall, P., Ma, Z., Tao, R. (2005) Cannabinoid 1 receptor antagonist treatment reverses behavioral sensitization to nicotine in adolescent rats with novelty seeking phenotype. 35th Annual Meeting of the Society for Neuroscience.

Isgor, C., Bhatti, A., Hall, P., Ma, Z., Tao, R. (2006) Hippocampus mediates the behavioral sensitization to nicotine in peripubertal-juvenile rats: Interaction with the novelty-seeking phenotype. 36th Annual Meeting of the Society for Neuroscience.

Tao, R., Jenney C., Zhang, G., Ma, Z., Krishnamoorthy, S., **Isgor, C.** (2006) Involvement of 5-HT_{2A} but not 5-HT_{1A} receptors in the serotonin toxicity and syndrome. 36th Annual Meeting of the Society for Neuroscience.

Isgor, C., Bhatti, A. S., Aydin, C., Hall, P., Ma, Z., Tao, R. (2007) A cannabinoid receptor (CB) 1 antagonist, AM251, reverses nicotine craving in a rat model of novelty-seeking behavior: regulation of hippocampal 5HT neurotransmission. 37th Annual Meeting of the Society for Neuroscience.

Bhatti, A., Aydin C., Oztan, O., Hall, P., **Isgor, C.** (2007) Chronic stress interactions with phenotypic predisposition for nicotine craving: the novelty-seeking phenotype and hippocampal neuropeptide Y. 37th Annual Meeting of the Society for Neuroscience.

Guthrie KM, De La Puente R, **Isgor, C.** (2007) Ki-67 expression in the intact and target-deprived olfactory epithelium. 37th Annual Meeting of the Society for Neuroscience.

Aydin C., Bhatti A.S., Oztan O., **Isgor C.** (2008) The novelty-seeking phenotype predicts expression of behavioral sensitization to nicotine: implications for neuropeptidergic regulation in amygdale. 38th Annual Meeting of the Society for Neuroscience.

Oztan O., Aydin C., Bhatti A.S., Tobiansky D., **Isgor, C.** (2008) Effects of HDAC2 silencing on the neurotrophic factor family and inflammatory cytokine gene expression in a rat model of novelty-seeking phenotype: implications for behavioral sensitization to nicotine. 38th Annual Meeting of the Society for Neuroscience.

Bhatti A.S., **Isgor C.** (2008) Differential effects of cannabinoid (CB) 1 receptor antagonist or bupropion in the mossy fibre reorganization following behavioral sensitization to nicotine in a rat model of novelty-seeking. 38th Annual Meeting of the Society for Neuroscience.

Aydin C., Oztan O, **Isgor, C.** (2009) The role of chromatin remodeling in synaptic organization of hippocampal mossy fibres following behavioral sensitization to nicotine in a rat model of novelty-seeking: effects of a selective neuropeptide Y2 receptor antagonist (submitted abstract). 39th Annual Meeting of the Society for Neuroscience.

Oztan O., Aydin C., **Isgor C.** (2009) Chronic intermittent social stress differentially regulates hippocampal mossy fibre terminal fields in a rodent emotional reactivity model: role of histone deacetylases and brain derived neurotrophic factor in mossy

fibre remodeling (submitted abstract). 39th Annual Meeting of the Society for Neuroscience.

Aydin C., Oztan O., **Isgor C.** (2010) Epigenetic regulation of the BDNF gene following behavioral sensitization to nicotine in a rat model of novelty-seeking: implications of anxiety-like behavior and mossy fibre plasticity. 40th Annual Meeting of the Society for Neuroscience

Oztan O., Aydin C., **Isgor C.** (2010) Epigenetic regulation of the BDNF gene following chronic variable physical and social stress in an outbred rat model of novelty-seeking is associated with hippocmpal mossy fibre morphology. 40th Annual Meeting of the Society for Neuroscience

Aydin C., Oztan O., **Isgor C.** (2011) Chromatin plasticity at the BDNF gene is associated with hippocampal mossy fibre remodeling following behavioral sensitization to nicotine in an outbred rat model of the novelty-seeking phenotype. NIDA/NIAAA Satellite Symposium at the World Congress on Psychiatric Genetics. Sept 9, 2011; Washington D.C.

Aydin C., Oztan O., **Isgor C.** (2012) Effects of a selective Y2R antagonist, JNJ-31020028, on nicotine-induced hippocampal mossy fibre plasticity in the novelty-seeking phenotype. 41st Annual Meeting of the Society for Neuroscience

Oztan O., Aydin C., **Isgor C.** (2012) Chronic variable stress-induced dendritic plasticity and associated changes in brain-derived neurotrophic factor in the hippocampus and the basolateral amygdala in the novelty-seeking phenotype: Implications for depressive- and anxiety-like behaviors. 41st Annual Meeting of the Society for Neuroscience

Guthrie K.M., Aydin C., Pare C, **Isgor, C.** (2013) Mossy fiber sprouting in the BDNF-enriched hippocampus. 42nd Annual Meeting of the Society for Neuroscience

Isgor C, Hossain F., Aydin C., Oztan O., Guthrie K. (2013) Dendritic analyses of hippocampal dentate gyrus granule and CA3 pyramidal neurons in brain-derived neurotrophic factor overexpressing mice. 42nd Annual Meeting of the Society for Neuroscience

McDole B, **Isgor C.,** Guthrie, KM. (2014) BDNF increases apical spine density of olfactory bulb granule cells *in vivo*. 43rd Annual Meeting of the Society for Neuroscience

Isgor C., Coombs P., Guthrie K. (2014) Progressive remodeling of hippocampal mossy fibres and dentate gyrus granule neuron dendritic arbors in the brain-derived neurotrophic factor overexpressing mice. 43rd Annual Meeting of the Society for Neuroscience

McDole B., **Isgor C.,** Guthrie K. (2014) Dendritic analysis of granule cells in the BDNF-enriched olfactory bulb. ACHEMS Meeting

Isgor C., Coombs P., Joseph D., Guthrie K. (2015) The over-expression of BDNF on adult neurogenesis and seizure vulnerability using a transgenic mouse model. 44th Annual Meeting of the Society for Neuroscience

C. YEPES, M. LAQUERRE, W. ZHOU, K. GUTHRIE, **C. ISGOR** (2016) Emergence of epilepsy in a transgenic mouse strain that overexpresses brain-derived neurotrophic factor in the forebrain. 45th Annual Meeting of the Society for Neuroscience

B. MCDOLE, **C. ISGOR**, K. GUTHRIE (2016) BDNF augmentation In vivo increases spine density in adult-born olfactory granule cells. 45th Annual Meeting of the Society for Neuroscience

R. P. VERTES, M. GIL, R. STCLAIR, R. LEMOS, K. KOROMA, **C. ISGOR** (2017) A proposed role for the nucleus of pontis oralis of the brainstem (NPO) in sudden unexpected death in epilepsy. 46th Annual Meeting of the Society for Neuroscience

M. S. HOSSAIN, A. POUGH, K. KOROMA, **C. ISGOR** (2018) Adult born dentate granule neurons show accelerated maturation in a transgenic mouse model of adult-onset spontaneous epilepsy. 47th Annual Meeting of the Society for Neuroscience

C. ISGOR, A. TYULMENKOVA, S. NICOLAS, A. TERHUNE, M. WARD-MOSES (2019) Cortical inactivity evoked by epileptic seizures is mediated by dysregulation of brainstem arousal circuits: Implications for REM and slow-wave sleep. 48th Annual Meeting of the Society for Neuroscience

Scientific Publications

Isgor, C., Sengelaub, D.R. (1998). Prenatal gonadal steroids affect adult spatial behavior, CA1 and CA3 pyramidal cell morphology in rats. Hormones and Behavior 34(special issue on Estrogen Effects on Cognition Across the Lifespan):183-198.

Kabbaj. M., **Isgor, C**., Watson, S.J., Akil, H. (2002). Stress during adolescence alters behavioral sensitization to amphetamine. Neuroscience 113(2):395-400.

Isgor, C., Huang, G.C., Akil, H., Watson, S.J. (2002). Correlation of estrogen β-receptor messenger RNA with endogenous levels of plasma estradiol and progesterone in the female rat hypothalamus, the bed nucleus of stria terminalis and the medial amygdala. Molecular Brain Research 106:30-41.

Isgor, C., Sengelaub, D.R. (2003). Effects of neonatal gonadal steroids on adult CA3 pyramidal neuron dendritic morphology and spatial memory in rats. Journal of Neurobiology 55(2):179-190.

Isgor, C., Shieh, K.R., Akil, H., Watson, S.J. (2003). Colocalization of estrogen β-receptor messenger RNA with vasopressin, oxytocin and orphanin FQ in the rat hypothalamic paraventricular and supraoptic nuclei. Anatomy and Embryology 206(6):461-469.

Isgor, C., Cecchi, M., Kabbaj, M., Akil, H., Watson, S.J. (2003). Estrogen receptor β in the paraventricular nucleus of hypothalamus regulates the neuroendocrine response to stress and is regulated by corticosterone. Neuroscience 121(4):837-845.

Isgor, C., Kabbaj, M., Akil, H., Watson, S.J. (2004). Delayed effects of chronic, variable stress during peripubertal-juvenile period on hippocampal morphology and on cognitive and stress axis functions in rats. Hippocampus 14(5):636-648.

Isgor, C., Slomianka, L., Watson, S.J. (2004). Hippocampal mossy fiber terminal field size is differentially affected in a rat model of risk-taking behavior. Behavioral Brain Research 153(1):7-14.

Torregrossa, M.M., **Isgor, C.**, Rice, K.C., Watson, S.J., Woods, J.H. (2004). The delta opioid receptor antagonist (+)BW373U86 regulates BDNF mRNA expression in rats. Neuropsychopharmacology 29(4):649-59.

Isgor, C., Watson, S.J. (2005). Estrogen receptor α and β messenger RNA expressions by proliferating and differentiating cells in the adult rat dentate gyrus and subventricular zone. Neuroscience 134:847-856.

Ma, Z., Pearson, E., **Isgor, C.,** Tao, R (2006). Evidence of reuptake inhibition responsible for mecamylamine-evoked increases in extracellular serotonin. Brain Research 1073-1074: 321-324.

Bhatti, A., Hall, P., Ma, Z., Tao, R., **Isgor, C**. (2007). Hippocampus modulates the behaviorally sensitizing effects of nicotine in a rat model of novelty-seeking: potential role for mossy fibres. Hippocampus 17(10): 922-933.

Kabbaj, M. & **Isgor, C.** (2007). Effects of chronic environmental and social stimuli during adolescence on mesolimbic dopaminergic circuitry markers. Neuroscience Letters 422(1): 7-12.

Ardiles, Y., de la Puente, R., Toledo, R., **Isgor, C.,** Guthrie, K.M. (2007). Response of olfactory axons to loss of synaptic targets in the adult mouse. Experimental Neurology 207(2):275-288.

Bhatti, A.S., Aydin, C., Oztan, O., Ma, Z., Tao, R., **Isgor, C.** (2009). Effects of cannabinoid receptor (CB) 1 antagonist AM251 on behavioral sensitization to nicotine in a rat model of novelty-seeking behavior: correlation with hippocampal 5HT. Psychopharmacology (Berl) 203(1):23-32.

Aydin, C., Oztan, O., **Isgor, C.** (2011) Vulnerability to nicotine abstinence-related social anxiety-like behavior: Molecular correlates in neuropeptide Y, Y2 receptor and corticotropin releasing factor. Neurosci Lett 490(3):220-225.

Aydin C., Oztan O., **Isgor, C.** (2011) Effects of a selective Y2R antagonist, JNJ-31020028, on nicotine abstinence-related social anxiety-like behavior, neuropeptide Y and corticotropin releasing factor mRNA levels in the novelty-seeking phenotype. Behav Brain Res 222(2):332-41.

Oztan, O., Aydin, C., **Isgor, C.** (2011) Chronic variable physical stress during the peripubertal-juvenile period causes differential depressive and anxiogenic effects in the novelty-seeking phenotype: Functional implications for hippocampal and amygdalar BDNF and the mossy fibre plasticity. Neurosci 192:334-44.

Oztan, O., Aydin, C., **Isgor, C.** (2011) Stressful environmental and social stimulation in adolescence causes antidepressant-like effects associated with epigenetic induction of the hippocampal BDNF and mossy fibre sprouting in the novelty-seeking phenotype. Neurosci Lett 501(2):107-11.

Aydin C., Oztan O., **Isgor C.** (2012) Long-term effects of juvenile nicotine exposure on abstinence-related social anxiety-like behavior and amygdalar cannabinoid receptor 1 (CB1R) mRNA expression in the novelty-seeking phenotype. Behav Brain Res 228(1):236-9.

Aydin C., Oztan O., **Isgor C.** (2012) Nicotine-induced anxiety-like behavior in a rat model of the novelty-seeking phenotype is associated with long-lasting neuropeptidergic and neuroplastic adaptations in the amygdala: effects of the cannabinoid receptor 1 antagonist AM251. Neuropharmacology 63(8):1335-45.

Hollis F, **Isgor C.,** Kabbaj M. (2013) The consequence of adolescent chronic unpredictable stress exposure on brain and behavior. Neuroscience 249:232-41.

Aydin C., Oztan O, **Isgor C.** (2014) Hippocampal Y2 receptor-mediated mossy fiber plasticity is implicated in nicotine abstinence-related social anxiety-like behavior in an outbred rat model of the novelty-seeking phenotype. Pharmacol Biochem Behav 125:48-54.

Isgor C., Pare C., McDole B, Coombs P., Guthrie K. (2015) Expansion of the dentate mossy fiber-CA3 projection in the brain-derived neurotrophic factor-enriched mouse hippocampus. Neuroscience 288:10-23.

McDole B., **Isgor C.,** Pare C., Guthrie K. (2015) BDNF over-expression increases olfactory bulb granule cell dendritic spine density *in vivo*. Neuroscience 304:146-60.

Isgor C, Aydin C, Oztan O, Libreros S, Iragavarapu-Charyulu V (2020) Inter-individual differences in immune profiles of outbred rats screened for an emotional reactivity phenotype. Journal of Neuroimmunology 347:577349.

Oztan O, Aydin C, **Isgor C** Chronic variable stress during juvenile period leads to opposite effects in depressive-like behavior in LRHR rats associated with differential epigenetic plasticity at the hippocampal BDNF gene (*in review* Stress)

Tyulmenkova A, Ward-Moses M, Nicolas S, Keith D, **Isgor C** Integration of immature mossy fibre axon terminals into the adult functional circuitry under the influence of epilepsy (*in review* Epilepsy Currents)

Scientific Affiliations

1994-present	Member, Society for Neuroscience
1993-present	Member, American Psychological Society
1993-present	Member, American Psychological Association

References

Stanley J. Watson, Jr. M.D., Ph.D., Co-Director and Research Professor
The University of Michigan
Molecular and Behavioral Neuroscience Institute
Theophile Raphael Professor of Neurosciences
205 Zina Pitcher Place
Ann Arbor, MI 48109-0720, U.S.A.
Tel: (734) 763-3725
E-mail: watsons@umich.edu

Huda Akil, Ph.D., Co-Director and Senior Research Professor
The University of Michigan
Molecular and Behavioral Neuroscience Institute
President of the Society for Neuroscience, 2002
Gardner C. Quarton Professor of Neurosciences
Member of the National Academy of Sciences
205 Zina Pitcher Place
Ann Arbor, MI 48109-0720, U.S.A.
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Dale R. Sengelaub, Ph.D.
Department of Psychology & Program in Neural Science
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Biographical Sketch

Name: Kailiang Jia, Associate Professor
Address: Department of Biological Sciences, Florida Atlantic University, 777 Glades Road, Boca Raton, FL 33431
Email: kjia@fau.edu

Education and Training

1996-2001	Ph.D., University of Missouri, Columbia, MO
1993-1996	M.S., Chinese Academy of Medical Sciences, Beijing, China
1988-1993	B.S., Qingdao University Medical College, Qingdao, Shandong, China

Positions and Employment

2015 – present	Associate Professor, tenured, Department of Biological Sciences, Florida Atlantic University, Boca Raton, Florida
2009 – 2015	Assistant Professor, tenure track, Department of Biological Sciences, Florida Atlantic University, Boca Raton, Florida
2007 – 2009	Instructor, Department of Internal Medicine, UT Southwestern Medical Center, Dallas, Texas
2004 – 2007	Research Scientist, Department of Internal Medicine, UT Southwestern Medical Center, Dallas, Texas
2001 – 2004	Postdoctoral Associate, Genetics Area Program and Molecular Biology Program, Division of Biological Sciences, University of Missouri, Columbia, Missouri

Honors

2014 - 2015	Researcher of Year Award, Florida Atlantic University
2007 - 2011	Ellison Medical Foundation New Scholar in Aging Program
1999	Glenn Foundation /American Federation of Aging Research Scholar

Research Interest

Autophagy is an evolutionarily conserved lysosomal degradation pathway that is present in all eukaryotic cells and conserved from yeast to humans. Autophagy has been linked to many human disease conditions including aging, cancer and neurodegeneration. In *C. elegans*, autophagy is required for various longevity signals in the regulation of *C. elegans* life span. We recently found that autophagy regulates *C. elegans* larval development, fat metabolism and adult longevity via a neuroendocrine mechanism. My long-term research goal is to understand the role of autophagy in pathogenesis of age-related human diseases including neurodegeneration, immunosenescence and obesity.

Selected Publications

1. Ray Jia, Jiuli Zhang and Kailiang Jia (2019). Neuroendocrine regulation of fat metabolism by autophagy gene *atg-18* in *C. elegans* dauer larvae. FEBS Open Bio 9(9): 1623–1631.

2. Justin Minerly, Jiuli Zhang, Thomas Parker, Tiffany Kaul and Kailiang Jia (2017). The cell non-autonomous function of ATG-18 is essential for neuroendocrine regulation of *Caenorhabditis elegans* lifespan. PLoS Genet. 13(5):e1006764. doi: 10.1371/journal.pgen.1006764.

3. Thomas Parker and Kailiang Jia (2017). Intestinal Autophagy Defends Against *Salmonella* Infection. p.291-302 in Autophagy: Cancer, Other Pathologies, Inflammation, Immunity, Infection, and Aging. Hayat E, editor. United Kingdom: Academic Press. ISBN-13: 978-0128054208, ISBN-10: 0128054204

4. Di Chen, Jiuli Zhang, Justin Minnerly, Tiffany Kaul, Donald Riddle and Kailiang Jia (2014). *daf-31* Encodes the Catalytic Subunit of N Alpha-Acetyltransferase that Regulates *Caenorhabditis elegans* Development, Metabolism and Adult Lifespan. PLoS Genet 10(10): e1004699. doi:10.1371/journal.pgen.1004699.

5. Alexander Curt, Jiuli Zhang, Justin Minnerly and Kailiang Jia (2014). Intestinal autophagy activity is essential for host defense against *Salmonella typhimurium* infection in *Caenorhabditis elegans*. Developmental and Comparative Immunology. 45:214-218.

CURRICULUM VITAE

NANCY AARON JONES, Ph.D.

Associate Professor
Charles E. Schmidt College of Science
Department of Psychology and Behavioral Neuroscience
(Affiliate Faculty: FAU Brain Institute and Center for Complex Systems)
Florida Atlantic University, John D. MacArthur Campus
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Education

Ph.D. University of Maryland-College Park, December 1994.
Developmental Psychophysiology
Dissertation: The stability of EEG power and asymmetry and its relation to personality in 4- and 7-year-old children.
(Major Professor: Nathan A. Fox, Ph.D.)

M.A. University of Maryland-College Park, May 1990.
Developmental Psychophysiology
Thesis: Electroencephalogram asymmetry during emotionally evocative films and its relation to positive and negative affectivity.
(Major Professor: Nathan A. Fox, Ph.D.)

B.A. University of Wisconsin-Madison, May 1986, General Psychology
Thesis Paper: The recognizability of infant and monkey facial expressions by naive and experienced observers.
(Major Professor: Steve Suomi, Ph.D.)

Professional Work Experience/Employment

Associate Professor, 1997-present, Florida Atlantic University, Jupiter Campus. (Assistant Professor from 1997 and then tenured and promoted to Associate in 2003). Appointed to: FAU Brain Institute, 2016; Appointed to: Center for Complex Systems, 2018. (Ad hoc adjunct faculty at Davie campus 1996 and 1997).

Research Assistant Professor & Postdoctoral Research Assistant, 1994-1997 University of Miami, School of Medicine, Miami, Florida. Director of the Psychophysiological Development Laboratory at the Touch Research Institute.

Research Project Coordinator, 1993-1994, Sheppard and Enoch Pratt Hospital, Towson, Maryland.

Graduate Research Assistant, 1986-1994, Institute for Child Study, Department of Human Development, University of Maryland, College Park, Maryland.

Undergraduate Research Assistant, 1984-1986, University of Wisconsin-Madison, Harry Harlow Primate Laboratory, Madison, Wisconsin.

Refereed Works / Journal Publications

Underlined names: Current and former graduate students for whom I have mentored
**Starred names: Undergraduate students for whom I have mentored

2021

*Argueta, A., Sloan, A., **Jones, N.A.** & Kelso, S. (2020/2021). Emergence of agency in

infants. *FAU Undergraduate Research Journal*.

Hardin, J., **Jones, N.A.,** Mize, K.D., & Platt, M. (2021). Affectionate touch in the context of breastfeeding and maternal depression influences infant neuro-developmental and temperamental substrates. *Neuropsychobiology.* http://dx.doi.org/10.1159/000511604

Jones, N.A. & Mize, K.D. (invited article). Infant temperament and its association with neurophysiological markers in the context of maternal depression and anxiety. *Current Opinion in Behavioral Sciences.* Special issue on: Neurobiology of temperament, personality and psychopathology: What's next?

2020

Hardin, J., **Jones, N.A.,** Mize, K.D., & Platt, M. (2020). Parent-training with Kangaroo Care impacts mother-infant neuroendocrine activity & infant neurophysiological development. *Infant Behavior and Development, 58,* 101416, https://doi.org/10.1016/j.infbeh.2019.101416

Pratt, B., Longo, J., Gordon, S., & **Jones, N.A.** (2020). Perceptions of breastfeeding for women with perinatal depression: A descriptive phenomenological study. *Issues in Mental Health Nursing.* http://dx.doi.org/10.1080/01612840.2019.1691690

2019

Shanok, N., **Jones, N.A.,** & Lucas, N. (2019). Assessing children's performance on the facial emotion recognition task with familiar and unfamiliar faces: An autism study. Advanced Online Publication. *Child Psychiatry and Human Development*. https://doi.org/10.1007/s10578-019-00870-z

Shanok, N., & **Jones, N.A.** (2019). Mindfulness meditation intervention (MMI) alters neurophysiological symptoms of anxiety/depression in preadolescents. *Journal of Psychophysiology. (*Advance online publication). http://dx.doi.org/10.1027/0269-8803/a000244

2018

Aults, C.D., Machluf, K., Sellers, P.D. & **Jones, N.A.,** (2018). Adolescent girls' biological sensitivity to context: heart rate reactivity moderates the relationship between peer victimization and internalizing problems. *Evolutionary Psychological Science* (advance online publication). https://doi.org/10.1007/s40806-018-0176-2

Jones, N.A., & Sloan, A. (2018). Neuro-hormones and temperament interact during infant development. *Philosophical Transactions of Royal Society, B, 18(54),* http://dx.doi.org/10.1098/rstb.2017.0159.

2017

Gartstein, M.A., Prokasky, A., Bell, M.A., Calkins, S.D., Bridgett, D., Braungart-Rieker, J, Leerkes, E., Cheatham, C., Das Eiden, R., Mize, K.D., **Jones, N.A.,** Mireault, G., & Seamon, E. (2017). Latent profile and cluster analysis of infant temperament: comparisons across person-centered approaches. *Developmental Psychology, 53(10),* 1811–1825. http://dx.doi.org/10.1037/dev0000382

2016

Jones, N.A. & Mize, K.D. (2016). Introduction for the special issue: psychophysiology and psychobiology in emotion development. *Journal of Experimental Child*

Psychology 142, 239–244. https://doi.org/10.1016/j.jecp.2015.10.013

2015

Aults, C., Cooper, P., Pauletti, R., **Jones, N.A.** & Perry, D.G. (2015). Child sex and respiratory sinus arrhythmia reactivity as moderators of the relation between internalizing symptoms and aggression. *Applied Psychophysiology and Biofeedback, 40(4),* 269-276. https://doi.org/01.1007/s10484-015-9294-9

2014

Mize, K.D., Pineda, M., Blau, A.K., Marsh, K., & **Jones, N.A.** (2014). Infant physiological and behavioral responses to a jealousy provoking condition. *Infancy,* 1-11. https://doi.org/10.1111/infa.12046.

*Barrera, C., **Jones, N.A.,** & Mize, K.D. (2014). Feeding patterns influence brain development in infancy. *FAU Undergraduate Research Journal, 3(1),* 1-12*.*

2012

Mize, K.D., & **Jones, N.A.** (2012). Infant physiological and behavioral responses the loss of maternal attention to a social rival*. International Journal of Psychophysiology, 83,* 16-23. https://doi.org/10.1016/j.ijpsycho.2011.09.018

Jones, N.A. (2012). Delayed reactive cries demonstrate emotional and physiological dysregulation in newborns of depressed mothers*. Biological Psychology, 89,* 374-381. https://doi.org/10.1016/j.biopsycho.2011.11.011

*Pineda, M., & **Jones, N.A.** (2012). The longitudinal stability of jealousy in infancy. *FAU Undergraduate Research Journal, 1(1),* 55-63.

2010

Diego, M., **Jones, N.A.,** & Field, T. (2010). EEG in 1-week, 1-month and 3-month-old infants of depressed and non-depressed mothers. *Biological Psychology, 83 (1),* 7-14. https://doi.org/10.1016/j.biopsycho.2009.09.007

2009

Jones, N.A., Field, T., & Almeida, A. (2009). Right frontal EEG asymmetry and behavioral inhibition in infants of depressed mothers. *Infant Behavior and Development. 32(3),* 298-304. https://doi.org/10.1016/j.infbeh.2009.04.004

2006

Diego, M.A., Field, T., **Jones, N.A.,** & Hernandez-Reif, M. (2006). Withdrawn and intrusive maternal interaction style and infant frontal EEG asymmetry shifts in infants of depressed and non-depressed mothers. *Infant Behavior and Development, 29,* 220-229. https://doi.org/10.1016/j.infbeh.2005.12.002

Diego, M.A., **Jones, N.A.,** Field, T., Hernandez-Reif, M., Schanberg, S., Kuhn, C., Gonzalez-Gracia, A. (2006). Maternal psychological distress, prenatal cortisol and fetal weight. *Psychosomatic Medicine, 68,* 747-753. https://doi.org/ 10.1097/01.psy.0000238212.21598.7b

2005

Jones, N.A. (2005). The protective effects of breastfeeding for infants of depressed mothers. *Breastfeeding Abstracts, 24,* 19-20.

2004

Diego, M.A., Field, T., **Jones, N.A.,** Hernandez-Reif, M., Cullen, C., Schanberg, S., &

Kuhn C. (2004). EEG responses to mocked facial expressions by infants of depressed mothers. *Infant Behavior and Development, 27*, 150-162. https://doi.org/1016/j.infbeh.2003.10.001

Jones, N.A., Field, T., Davalos, M., & Hart, S. (2004). Greater right frontal eeg asymmetry and non-empathetic behavior are observed in children prenatally exposed to cocaine*. International Journal of Neuroscience, 114,* 459-480. https://doi.org/1016/10.1080/00207450490422786

Jones, N.A., McFall, B.A., & Diego, M.A. (2004). Patterns of brain electrical activity in infants of depressed mothers who breastfeed and bottle feed: the mediating role of infant temperament. *Biological Psychology, 67,* 103-124. https://doi.org/10.1016/j.biopsycho.2004.03.010

Vestal, A., & **Jones, N.A.** (2004). Peace building and conflict resolution in preschool children. *Journal of Research in Childhood Education, 19*, 131-142. https://doi.org/10.1080/02568540409595060

2003

Hart, S., **Jones, N.A.,** & Field, T. (2003). Atypical expressions of jealousy in infants of intrusive- and withdrawn-depressed mothers. *Child Psychiatry and Human Development*, 33 (3), 193-207. https://doi.org/10.1023/A:1021452529762,

Tornek, A., Field, T., Hernandez-Reif, M., *Diego, M.A. & **Jones, N.A.** (2003). Music effects on eeg in intrusive and withdrawn mothers with depressive symptoms. *Psychiatry, 66 (3),* 234-243. PMID: 14587360

2002

*Diego, M., Field, T., Hart, S., Hernandez-Reif, M., **Jones, N.A,** Cullen, C., Schanberg, S., & Kuhn, C. (2002). Facial expressions and eeg in infants of intrusive and withdrawn mothers with depressive symptoms. *Depression and Anxiety, 15,* 10-17. https://doi.org/10.1002/da.1079

2001

Dieter, J., Field, T., Hernandez-Reif, M., **Jones, N.A.,** Lecanuet, J.P., Salman, F.A., & Redzepi, M. (2001). Maternal depression and increased fetal activity. *Journal of Obstetrics and Gynecology, 21,* 468-473, https://doi.org/10.1080/01443610120072009

Jones, N.A., Field, T., Hart, S., Lundy, B., & Davalos, M. (2001). Maternal self-perceptions and reactions to infant crying among intrusive and withdrawn depressed mothers. *Infant Mental Health Journal, 22,* 576-586.

Jones, N.A., Field, T., Fox, N.A., Davalos, M., & *Gomez, C. (2001). EEG during different emotions in 10-month-old infants of depressed mothers. *Journal of Reproductive and Infant Psychology, 19(4),* 295-312. https://doi.org/10.1080/02646830120103374

2000

Jones, N.A., Field, T., & Davalos, M. (2000). Right frontal EEG asymmetry and lack of empathy in preschool children of depressed mothers. *Child Psychiatry and Human Development, 30,* 189-204. https://doi.org/10.1023/A:1021399605526

1999

Hart, S., Field, T., **Jones, N.A.,** & Yando, R. (1999). Intrusive and withdrawn behaviors of mothers interacting with their infants and boyfriends. *Journal of Child Psychology & Psychiatry & Allied Disciplines, 40,* 239-245. https://doi.org/10.1017/S0021963098003382

Hart, S., **Jones, N.A.,** Field, T., & Lundy, B. (1999). One-year-old infants of intrusive and withdrawn depressed mothers. *Child Psychiatry and Human Development, 30,* 111-120. https://doi.org/10.1023/A:1021902418770

Jones, N.A., & Field, T. (1999). Massage and music therapies attenuate frontal EEG asymmetry in depressed adolescents. *Adolescence, 34,* 529-534.

Lundy, B., **Jones, N.A.,** Field, T., Nearing, G., Davalos, M., Pietro, P., Schanberg, S., & Kuhn, C. (1999). Prenatal depression effects on neonates. *Infant Behavior and Development, 22,* 119-129. https://doi.org/10.1016/S0163-6383(99)80009-5

1998

*Diego, M., **Jones, N.A.,** Field, T., Hernandez-Reif, M., Schanberg, S., Kuhn, C., McAdam, V., Galamaga, B., Galamaga, M. (1998). Aromatherapy positively affects mood, eeg patterns of alertness and math computations. *International Journal of Neuroscience, 96,* 217-224. https://doi.org/10.3109/ 00207459808986469

Jones, N.A., Field, T., & Davalos, M. (1998). Massage therapy attenuates right frontal eeg asymmetry in one-month-old infants of depressed mothers. *Infant Behavior and Development, 21,* 527-530. https://doi.org/10.1016/S0163-6383(98)90025-X

Jones, N.A., Field, T., Fox, N.A., Davalos, M., Lundy, B., & Hart, S. (1998). Newborns of mothers with depressive symptoms are physiologically less developed. *Infant Behavior and Development, 21,* 537-541. https://doi.org/10.1016/S0163-6383(98)90027-3

1997

Hart, S., Field, T., Stern, M., & **Jones, N.A.** (1997). Depressed fathers' stereotyping of infants labeled "depressed". *Infant Mental Health Journal, 18,* 436-445. https://doi.org/10.1002/(SICI)1097-0355(199724)18:4<436::AID-IMHJ9>3.0.CO;2-I

Jones, N.A., Field, T., Davalos, M., & Pickens, J. (1997). EEG stability in infants/children of depressed mothers. *Child Psychiatry and Human Development, 28,* 59-70. https://doi.org/10.1023/A:1025197101496

Jones, N.A., Field, T. Fox, N.A., Davalos, M., Malphurs, J., Carraway, K., Schanberg, S., & Kuhn, C. (1997). Infants of intrusive and withdrawn mothers. *Infant Behavior and Development, 20,* 175-186. https://doi.org/10.1016/S0163-6383(97)90020-5

Jones, N.A., Field, T., Fox, N.A., Lundy, B., & Davalos, M. (1997). EEG activation in 1-month-old infants of depressed mothers. *Development and Psychopathology, 9,* 491-505. PMID: 9327235

1993

Halberstadt, A., Fox, N.A., & **Jones, N.A.** (1993). Do expressive mothers have expressive children? The role of socialization in children's affect expression. *Social Development, 2,* 48-65. https://doi.org/10.1111/1467-9507.ep11637681

1992

Fox, N.A., Bell, M.A., & **Jones, N.A.** (1992). Individual differences in response to stress and cerebral asymmetry. *Developmental Neuropsychology, 8,* 161-184, https://doi.org/10.1080/87565649209540523

Jones, N.A., & Fox, N.A. (1992). Electroencephalogram asymmetry during emotionally evocative films and its relation to positive and negative affectivity. *Brain and Cognition, 20,* 280-299. https://doi.org/10.1016/0278-2626(92)90021-D

Books

Jones, N.A., Platt, M., Mize, K.D., & Hardin, J. (2019). *Developmental Research: A Guide for Conducting Research Across the Life Span*. Routledge: Taylor & Francis Publishing Group.

Hart, S. & **Jones, N.A.** (2018). *The Psychology of Rivalry*. NOVA Online Science Publishers.

Book Chapters

Jones, N.A., & Mize, K.D., (2019). Physiological and behavioral research methods across the prenatal and infant periods. In **N.A. Jones**, M. Platt., K.D. Mize, & J. Hardin (Eds). *Developmental Research: A Guide for Conducting Research Across the Life Span.* Routledge: Taylor & Francis Publishing Group.

Platt, M., & **Jones, N.A.** (2018). The physiology of rivalry in infancy. In S. Hart & **N. A. Jones** (Eds). *The Psychology of Rivalry*: NOVA Online Publishers.

Jones, N.A., Platt, M., & Mize, K.D. (2016). Breastfeeding impacts brain activation and interaction patterns in infants of depressed mothers. In J. Worobey (Ed.) *Infant Feeding: Parental Perceptions, Behaviors and Health Effects.* NOVA publishers.

Diego, M.A., & **Jones, N.A.** (2007). Neonatal antecedents of empathy. In T. Farrow & P. Woodruff (Eds.) *Empathy and Mental Health*. Cambridge University Press.

Jones, N.A., & Gagnon C. (2007). Neurophysiology of empathy. In T. Farrow & P. Woodruff (Eds.) *Empathy and Mental Health*. Cambridge University Press.

Jones, N.A., & Mize, K. (2007). Touch interventions positively affects development. In L. L' Abate, D. D. Embry, & M. S. Baggett (Eds.), *Handbook of Low-cost Interventions to Promote Physical and Mental Health: Theory, Research and Practice.* Springer-Verlag Publishers.

Works Currently Under Review

Books:

Shaffer, D., **Jones, N.A,** & Mize, K.D., & *Personality and Social Development*. Cengage.

Professional Journal Articles:

Shanok, N., *Saldias-Manieu, C., Chassin, V., Mize, K.D., & **Jones, N.A.** Mindfulness-training in preadolescents in school: The role of emotionality, EEG in theta/beta bands, creativity and attention.

Shanok, N., *Lugo, V., *Narine, B., Mize, K.D. & **Jones, N.A.** The relationship between maternal depression and infant neurophysiology: A dimensional approach.

Shanok, N., Lucas, N.N., *Cobty, K., Brooks, K., & **Jones, N.A.** Resting-state neurophysiological traits in high-functioning Autism Spectrum Disorder: Evidence for heterogeneity.

Shanok, N.A., *Meltzer, K., Frank, C., *Lugo, V., & **Jones, N.A.** Computerized inhibitory control training reduces anxiety in preadolescent students.

Conference Presentations and Invited Papers

(recent graduate (underlined) and undergraduate (starred) students are noted for presentations)

International and National Professional Presentations

2021 (Accepted for Presentation in Virtual Format).

- Bernardo, A., & **Jones, N.A.** Behavioral and Physiological Manifestations of Jealousy Across the First Year of Life. Society for Research in Child Development, April, 2021.
- Jones, N.A. & Longo, J. Childbirth and Newborn Care During the Coronavirus (COVID-19) Pandemic: Stories from Parents and Healthcare Workers. Society for Research in Child Development, April, 2021.
- Mize, K.D, Brooks, K., & **Jones, N.A.** Facial Emotion Recognition of Dynamical Morphing Facial Expressions in Children with Autism Spectrum Disorder. Society for Research in Child Development, April, 2021.
- *Martin, J., Sloan, A., & **Jones, N.A.** Neurohormonal Influences within the Mother- Infant Relationship: Oxytocin, Cortisol, and Maternal Attachment. National Council of Undergraduate Research conference, April, 2021.

2020 All conferences changed to Virtual Presentation due to COVID-19.

- **Symposium Paper Presentation:** M. Gartstein, (Symposium Chair). Novel approaches to electroencephalogram (EEG) lateralization: Beyond traditional asymmetry.
    - Gartstein, M. EEG Frontal Asymmetry changes during Emotion-Eliciting Tasks and Parent-Child Interaction Dynamics.
    - Bell, M.A. Predictors of Level of Negative Affect after Arm Restraint at 5 Months.
    - **Jones, N.A.,** Shanok, N., & Bernardo, A. Infant Neurophysiological Patterns and Temperament Are Linked to Maternal Depressive Symptoms During Development.
    - Discussant: Dr. Ross Vanderwert, International Conference on Infant Studies, July 2020.
- Bernardo, A., **Jones, N.A**., Mize, K.D., & Platt, M. Regaining Maternal Attention: Jealousy Responses Across the First Year of Life. International Congress on Infant Studies, July, 2020.
- Bernardo, A., **Jones, N.A.,** Mize, K.D., Platt, M., *Willson, E., & *Lyster A. Association between Infant EEG Asymmetry and Maternal Approach-Withdrawal Tendencies. International Congress on Infant Studies, July, 2020.

- Bernardo, A., **Jones, N.A.,** Mize K.D., Platt M., & *Thompson. H. The Relationship Between Temperament and Jealousy in Infants. Occasional Temperament Conference. November 2020.
- Bernardo, A., & **Jones, N.A.** Parental Socialization and Temperament Influences Empathy Development in Preschoolers. Occasional Temperament Conference. November 2020.
- *Martin, J., Sloan, A., & **Jones, N.A.** Neurohormonal Influence on the Mother-Infant Relationship: A Study of Oxytocin, Cortisol, and Maternal Attachment. International Congress on Infant Studies, July, 2020.
- Shanok, N. *Lugo, V., *Narine, B., *Pollack, A., & **Jones, N.A.** Examining Maternal Depression and Infant Resting-State Neurophysiology: A Dimensional Perspective. International Congress on Infant Studies, July, 2020. Declined presentation at virtual conference.
- Shanok, N., *Meltzer, K., Frank, C., *Lugo, V., & **Jones, N.A.** The Efficacy of Executive Function Training for Reducing Childhood Anxiety. American Psychological Society Conference, Summer, 2020.
  Awarded "Building Bridges" APS Poster Award
- Sloan, A., **Jones, N.A.** & Kelso, J.A.S. Coordinative Processes Underlying the Emergence of Infant Agency. International Congress on Infant Studies, July, 2020.
- *Willson, E., Bernardo, A., & **Jones, N.A.,** Infant Physiological Responses to a Social Rival. Southeastern Psychological Association. Conference. October, 2020.

2019

- Symposium Organizer: **Jones, N.A.** (Chair). The Unfolding of Brain and Behavior Within Affective and Social Development, 3 Papers and 1 Discussant. Society for Research in Child Development Biennial Meeting, March 2019.
  - **Jones, N.A.,** Mize, K.D., Sloan, A., Potts, J., *Martin, J., Hardin, J., & Platt, M. Concomitant brain and affective development in infancy.
  - Bell, M.A., Deater-Deckard, K., Ashley, R., & Zhou, Y. Brain development in early self-regulation
  - Chow, C., Poole, K., & Schmidt, L. Brain development in shy children: Temperament, context, and anxiety
  - Discussant: Tobias Grossmann

- Bernardo, A., **Jones, N.A.,** & Mize, K.D. & Platt, M. Behavioral and Physiological Displays of Jealousy in 12-Month-Old Infants. The 4th Lancaster International Conference on Infant and Early Child Development Lancaster University, UK, August, 2019.
- Shanok, N. & **Jones, N.A.** The Nature of Facial Emotion Recognition Impairments in Children on the Autism Spectrum. Society for Research in Child Development Biennial Meeting, March 2019.
- Shanok, N., Reive, C., Mize, K., *Cobty, K., *Bakir, I., & **Jones, N.A.** Mindfulness Meditation Alters Neurophysiological Symptoms of Anxiety in

Preadolescents, Society for Research in Child Development Society for Research in Child Development Biennial Meeting, March 2019.

- Sloan, A. & **Jones, N.A.** Maternal and Infant Oxytocin Interact with Infant Temperament. Society for Research in Child Development Society for Research in Child Development Biennial Meeting, March 2019.

2018

- Bernardo, A., **Jones, N.A.,** & Mize, K.D. Interaction of Siblings and Maternal Sensitivity on Displays of Jealousy in 9-Month-Old Infants. Occasional Temperament Conference, Murcia, Spain. May 2018.
- **Jones, N.A.,** Mize K.D., & Hardin, J. Prenatal Depressive Symptoms and Attachment Quality Inform Breastfeeding and Postnatal Bonding During Development. Occasional Temperament Conference, Murcia, Spain. May, 2018.
- **Jones, N.A,** Mize, K.D, Hardin, J., & Platt, M. EEG Power of Infants as a Function of Maternal Depression and Feeding Status. International Congress of Infant Studies Conference, Philadelphia, Pennsylvania, July, 2018.
- Mize, K.D, Platt, M., **Jones, N.A.,** Bjorklund, D.F., & Bernardo, A., Does Concordance between Jealousy Behaviors and Physiology Reveal Continuity or Discontinuity Across the First Two Years of Life? International Congress of Infant Studies Conference, Philadelphia, Pennsylvania, July, 2018.
- Sloan, A., *Clayton, Y., *Joissaint, N. *Lozano, Y., *Martinez, V., Hardin, J. & **Jones, N.A.** Maternal Influence on Early Infant Emotional Regulation: A Study of 3-month Infant Behavior, Cortisol and Frontal EEG? International Congress of Infant Studies Conference, Philadelphia, Pennsylvania, July, 2018.
- *Tessier K., & **Jones, N.A.** Do Interventions at Birth Interfere With Intended Breastfeeding Duration? International Congress of Infant Studies Conference, Philadelphia, Pennsylvania, July, 2018.

2017

- Aults, C., & **Jones, N.A.** BAS Reward Responsiveness Moderates the Relation Between Peer Victimization and Aggression in Adolescent Girls. Society for Research in Child Development Biennial Meeting, April, 2017, Austin, Texas.
- Platt, M., **Jones, N.A.,** & *Palomino, M.V., Behavioral Expressions of Jealousy and Attachment Security in Infancy Society for Research in Child Development Biennial Meeting, April, 2017, Austin, Texas.

2016

- **Jones, N.A.,** Sloan, A., Platt, M., & Mize, K.D. Neurodevelopmental and Emotional Interactive Patterns in Breastfeeding Dyads. International Congress of Infant Studies Conference. May 2016, New Orleans, Louisiana.
- Platt, M., **Jones, N.A.,** & Mize, K.D. Behavioral and Physiological Expressions of Jealousy Across the First Year of Life. International Congress of Infant Studies Conference. May 2016, New Orleans, Louisiana.

2015

- Aults, C., Pauletti, R., **Jones, N.A.** Perry, D. & Cooper, P. The Role of Respiratory Sinus Arrhythmia in the Association Between Internalizing

Difficulties and Aggression in Preadolescence. Society for Research in Child Development Biennial Meeting, March 2015, Philadelphia, Pennsylvania.

- Hardin, J., **Jones, N.A.,** Pineda, M., Mize, K.D., & *Vassilopoulos, A. The Impact of Kangaroo Care on Mother-Infant Neuroendocrine Functioning and Dyadic Bonding. Society for Research in Child Development Biennial Meeting, March, 2015, Philadelphia, Pennsylvania.
- **Jones, N.A.,** Mize, K., Pineda, M., & Hardin, J. Breastfeeding and Maternal Depression: Effects on Infant Physiology and Behavior. Society for Research in Child Development Biennial Meeting, March 2015, Philadelphia, Pennsylvania.
- Pineda, M., **Jones, N.A.,** Mize, K.D., & Hardin, J. The Impact of Kangaroo Care on Mother-Infant Interactive Relationships. Society for Research in Child Development Biennial Meeting, March, 2015, Philadelphia, Pennsylvania.
- Worch, S., **Jones, N.A.,** & Mize, K.D. Brain Activity and Mood Are Influenced by Mindfulness Meditation in Children. Society for Research in Child Development Biennial Meeting, March, 2015, Philadelphia, Pennsylvania.

2014

- Hardin, J., Pineda, M., Mize, K., & **Jones, N.A.** Oxytocin and Patterns of EEG Asymmetry in Infants in Relation to Maternal Dysphoric Mood. 19th Biennial International Conference on Infant Studies, Berlin, Germany, July, 2014.
- Pineda, M., Mize, K., & **Jones, N.A.,** Maternal Emotional State and Infant Behaviors Predict Jealousy Expressions in Infants. 19th Biennial International Conference on Infant Studies, Berlin, Germany, July, 2014.
- **Jones, N.A.,** *Barrera, C., & Mize, K., EEG Coherence in Infants is Impacted by Early Experiences: Breastfeeding and Kangaroo Mother Care Exposure. 19th Biennial International Conference on Infant Studies, Berlin, Germany, July, 2014.

2013

- Aults, C., **Jones, N.A.,** & Cotler, J. Psychophysiological Measures of Aggression and Victimization in a Non-Clinical Sample of Middle-School Youth. Society for Research in Child Development, Seattle, Washington, April, 2013.
- **Jones, N.A.,** *Barrera, C., Mize, K.D., & Hardin, J. Neural Activity from Birth to 3-Months as a Function of Feeding Patterns. Society for Research in Child Development, Seattle, Washington, April, 2013.
- Lucas, N.N., **Jones, N.A.,** Pineda, M., & Marsh, K.L. Processing of Emotional Expressions and Neural Activity in Preschool-age Children. Society for Research in Child Development, Seattle, Washington, April, 2013.
- Lucas, N.N., Pineda, M., & **Jones, N.A.** Atypical EEG Activity and Functional Connectivity in Children with Autism. Society for Neuroscience Conference, San Diego, California. November 2013.
- Marsh, K.L., **Jones, N.A.,** & Mize, K.D. Physiological Regulation and the Development of Empathy During Early Childhood. Human Behavior and Evolution Society Conference, Miami, Florida July, 2013.

- Marsh, K.L., Mize, K.D, & **Jones, N.A..** Physiological Regulation and Socio-Emotional Regulation in Preschoolers during Emotionally-Evocative Stories. Society for Research in Child Development, Seattle, Washington, April, 2013.
- Mize, K.D., Pineda, M., Marsh, K.L & **Jones, N.A.** (2013). Early Jealousy Development. Human Behavior and Evolution Society Conference, Miami, Florida, July, 2013.
- Worch, S., **Jones, N.A.,** Mize, K.D., *McGruder, T., & *McDole, B. Enhancing Positive Affect in Youth: The Physiological Effects of Mindfulness Meditation. Society for Research in Child Development, Seattle, Washington, April, 2013.

2012

- Cotler, J., **Jones, N.A.,** & Mize, K.D., Do you feel what I feel: Cardiac patterns during another infant's cry sound for neonates of depressed mothers. International Conference on Infant Studies, Minneapolis, Minnesota, June 2012.
- Hardin, J., *Barrera, C., **Jones, N.A.,** & Mize, K.D., Feeding method and quality of mother-infant communication influence patterns of infant brain development. Poster submitted for presentation at the International Conference on Infant Studies, Minneapolis, Minnesota, June 2012.
- *Kelly, M., **Jones, N.A.,** & Mize, K.D., Breastfeeding optimizes the regulation of emotions for infants of depressed mothers. Poster submitted for presentation at the International Conference on Infant Studies, Minneapolis, Minnesota, June 2012.
- Marsh, K., Pineda, M., Mize, K.D., **Jones, N.A.,** & *Kelly, M. Longitudinal Stability of jealousy in infancy International Conference on Infant Studies, Minneapolis, Minnesota, June 2012.

2011

- Corbett, M., & **Jones, N.A.,** Attenuating the Cortisol Stress Response and Test Anxiety: A Pilot Study of a Mindfulness Meditation Intervention. Society for Research in Child Development Biennial Meeting in Montreal, Quebec, Canada, 2011.
- Kadin-Pessoa, A., & **Jones, N.A.,** Parental Responsiveness and Child Participation in the Development of Emotion Regulation. Society for Research in Child Development Biennial Meeting in Montreal, Quebec, Canada, 2011.
- Klco, S., **Jones, N.A.,** & Mize, K. Mindfulness Meditation and Brain Activation Patterns in Children. Society for Research in Child Development Biennial Meeting in Montreal, Quebec, Canada, 2011.
- Mize, K.D, **Jones, N.A.,** & *Craft, D. Patterns of Physiology and Temperament during Emotion-Eliciting Events. Society for Research in Child Development Biennial Meeting in Montreal, Quebec, Canada, 2011.
- *Salvatore, J., Kadin-Pessoa, A., & **Jones, N.A.** Maternal and Paternal Effects on Children's Cardiac Reactivity to Emotional Stories. Conference for the Society for Personality and Social Psychology, San Antonio, TX, January, 2011.

2010

- **Jones N.A.,** Mize, K.D., & Sader, J. (2010). Infant Brain Maturation as a Function

of Maternal Mood and Infant Feeding Method. International Society of Infant Studies Biennial Conference, Baltimore, Maryland, March, 2010.

- Mize, K.D., **Jones, N.A.,** & Blau, A. (2010). Infants Exhibit Left Frontal Brain Activity During the Loss of Maternal Attention to a Social Object. International Society of Infant Studies Biennial Conference, Baltimore, Maryland, March, 2010.
- Kadin, A. & **Jones, N.A.** (2010). A Multi-Index Approach to Early Childhood Emotional Development. The Conference of Human Development, New York, New York, April 2010.

2009

- Symposium Presenter: **Jones, N.A.,** & Mize K.D. (2009). Infants with Left Anterior EEG Asymmetry Demonstrate More Jealousy Behaviors During Loss of Exclusive Maternal Attention. Society for Research in Child Development Conference, Denver, Colorado, April 2009.
- Almeida, A., Pessoa, A., *Epstein, M., Mize, K.D., & **Jones N.A** (2009). Temperamental Factors and Empathy Development in Children. Society for Research in Child Development Conference, Denver, Colorado, April 2009.
- Mize, K.D., **Jones, N.A.,** & Blau, A. (2009). Temperament and Jealousy Responses. Society for Research in Child Development conference, Denver, Colorado, April 2009.
- *Sanchez, D., Mize, K.D., & **Jones, N.A**. (2009). The Effect of Mindfulness Meditation on Children's Brain Electrical Activity and Creativity. Society for Research in Child Development Conference, Denver, Colorado, April 2009.

2008

- **Jones, N.A.** Breastfed Infants Demonstrate Enhanced Socio-Emotional Interactive Responses. International Conference on Infant Studies, Vancouver, Canada, March 2008.
- **Jones, N.A.,** & Gagnon, C. Tonic Cardiac Rhythms and Regulation in Newborns of Depressed and Non-Depressed Mothers. International Conference on Infant Studies, Vancouver, Canada, March 2008.
- *Epstein, M., Mize, K.D., **Jones, N.A.,** & *Mackleer, L. (2008). Student-Faculty Mentoring: Personality & Relationship Satisfaction Poster presented at American Psychological Society Convention in Chicago, IL in July 2008.

2007

- **Jones, N.A.,** Gagnon, C.M., *Batignani, C.L., *Urbina, V., & Rideaux T., Physiological and Emotional Regulation in Infants of Depressed Mothers who Breastfeed. Boston, Massachusetts, Society for Research in Child Development Conference. March, 2007.
- Gagnon, C.M., **Jones, N.A.,** *Rideaux, T., & *Contreras, A. Breastfeeding as a Therapeutic Intervention for Maternal Post-Partum Depression. American Psychology Association Conference. 2007.
- *Periss, V.A., **Jones N.A.,** Mize, K.D., & Gagnon, C.M., Empathy Development and Peer Relationships in Preschoolers of Depressed Parents. Boston,

Massachusetts, Society for Research in Child Development Conference. March, 2007.

2006

- **Jones, N.A.,** Gagnon, C. & Mize, K.D. Nurturing Touch is Beneficial for Depressed Mothers and their Infants. Presented at the International Conference of Infant Studies, Kyoto, Japan, June, 2006.
- **Jones, N.A.** & Schmidt, L. EEG, Behavioral Inhibition and Disinhibition in Children of Depressed Mothers. Presented at the International Conference of Infant Studies, Kyoto, Japan, June, 2006.
- Gagnon, C., Mize, K., **Jones, N.A.,** & *Dubecky, A. Nurturing Touch Leads to more Optimal Patterns of Brain Organization. Presented to the American Psychological Society, New York, NY, May, 2006.

2005

- **Jones, N.A.** Symposium Participant: Interaction Patterns, EEG and Cognitive Performance Across the First Year in Infants of Intrusive and Withdrawn Mothers. Society for Research in Child Development. Atlanta Georgia. April 2005.
- **Jones, N.A.** Heart Rate Patterns During Distress Sounds in Newborns of Depressed. Society for Research in Child Development. Atlanta Georgia. April 2005.
- Kane, S., *Johnson, L. & **Jones, N.A.** Mothers Parental Influences on the Development of Empathy in Preschoolers. Society for Research in Child Development. Atlanta Georgia. April 2005.
- Diego, M.A., **Jones, N.A.** & Field, T. Maternal Neuro-endocrine Function Mediates the Relationship Between Maternal Emotional Distress and Fetal Development. In M.A. Diego (Chair). Symposium presented at the Society for Research in Child Development, Atlanta, Georgia.
- **Jones, N.A.** Predicting Depression from Infants: Physiological and Bio-Behavioral Concomitants. Presented at Child Depression Consortium Meeting Hosted by the Academic Division of Child Psychiatry, Department of Psychiatry, University of Pittsburgh Medical Center. www.wpic.pitt.edu/child_depression_consortium

2004

- **Jones, N.A.** Symposium Chair: Is My Mommy Sad, Nervous, or Interested in Another Baby? What Maternal Mood and Direction of Attention Mean to Infants. Organized a 3 member panel and 1 discussant.
- **Jones, N.A.** presentation: Are Depressed Mothers-Infants Dyads Benefited by Breastfeeding? International Society for Infant Studies Conference, May 2004.
- **Jones, N.A.,** Diego, M.A. & McFall, B., Are Depressed Mothers-Infants Dyads Benefited by Breastfeeding? International Society for Infant Studies Conference, May 2004.
- **Jones, N.A.** Rates of Exclusive Breastfeeding Patterns Prior to Hospital Discharge. International Society for Infant Studies Conference, May 2004.

2003

- **Jones, N.A.,** Breastfeeding enhances maternal perception of infant temperament and dyadic interaction patterns. Society for Research in Child Development Conference, April 2003.
- **Jones, N.A.,** & McFall, B. Depressed mothers demonstrate an inability to attend and to imitate 3-month infant behaviors. Society for Research in Child Development Conference, April 2003.

2003

- Breastfeeding enhances maternal perception of infant temperament and dyadic interaction patterns. Society for Research in Child Development Conference, April 2003.
- Depressed mothers demonstrate an inability to attend and to imitate 3-month infant behaviors. Society for Research in Child Development Conference, April 2003.

2002

- Social-emotional learning: Teaching conflict resolution to preschoolers. Head Start 6th National Research Conference. Washington D.C. June, 2002.
- Symposium Chair. The evolution and impact of depression across development. Organized a 5 member panel and discussant. Paper Title: Delayed reactive cries and emotional differentiation signifies uncertain empathic development for newborns of depressed mothers. International Society for Infant Studies Conference, April 2002.
- Breastfeeding stability promotes positive infant temperament and optimal EEG patterns in infants of depressed mothers. International Society for Infant Studies Conference, April 2002.
- Maternal perception of her infant as mediated by depression, maternal childhood, and social support. International Society for Infant Studies Conference, April 2002.
- Invited Paper: Physiological and psychological factors affecting breastfeeding in depressed dyads. Palm Beach County Health Department Residency Program. August, 2002.

2001

- Symposium Chair: Mothers' Milk, It does a Baby Good. Psychosocial Factors that effect breastfeeding during the first year. Organized 4 member panel and discussant. Paper Title: Factors that influence exclusive breastfeeding and infant health. Society for Research in Child Development, Minneapolis, MN, April, 2001.
- Newborns of depressed mothers and their response to cry and coo sounds. Society for Research in Child Development, Minneapolis, MN, April, 2001.
- Invited Paper: Psychosocial factors affecting breastfeeding. Invited Address. La Leche League of Florida Conference. Orlando, FL, October, 2001.

2000

- Invited Paper: Maternal depression and later childhood affective problems. Kawanis Club. March, 2000.
- Infant jealousy and attachment patterns in infants of depressed mothers. Twelfth

Biannual Conference on Infant Studies, Brighton, England, July, 2000.
- Newborns of depressed mothers exhibit physiological dysregulation. Twelfth Biannual Conference on Infant Studies, Brighton, England, July, 2000.

1999
- Depressed mothers' ratings of mother-infant interactions. Society for Research in Child Development, Albuquerque, New Mexico, April, 1999.
- Depressed mothers report less empathic responses to infant cries. Society for Research in Child Development, Albuquerque, New Mexico, April, 1999.

1998
- EEG patterns during different emotions. Eleventh Biannual Conference on Infant Studies, Atlanta, Georgia, April 1998.
- EEG patterns and inhibition in infants of depressed mothers. Eleventh Biannual Conference on Infant Studies, Atlanta, Georgia, April 1998.
- Brain electrical activity and biochemical levels in infants of depressed mothers. Society of Psychophysiological Research, Denver, Colorado, September 1998.

1997
- Behavior and physiology in infants of intrusive and withdrawn mothers. Society for Research in Child Development, Washington, D.C., April 1997.
- Physiology of one-week-old infants of depressed mothers. Society for Research in Child Development, Washington, D.C., April, 1997.

1996
- One-month-old infants of depressed mothers and right frontal asymmetry. Tenth Biannual International Conference on Infant Studies, Providence, Rhode Island, April, 1996.
- The stability of right frontal asymmetry in children of depressed mothers. Tenth Biannual International Conference on Infant Studies, Providence, Rhode Island, April, 1996.

1995
- Brain electrical activity and personality in 4- and 7-year-old children. Society of Research in Child Development, Indianapolis, Indiana, March, 1995.

1993
- The role of temperament and emotionality in the development of attachment. Society for Research in Child Development, New Orleans. Louisiana, March 1993.

1992
- Relations between infant reactivity at 4 months and emotional responsivity at 9 months. Eighth Biannual International Conference on Infant Studies, Miami, Florida, May, 1992.
- Hemispheric asymmetry in infants of depressed and non-depressed mothers. Eighth Biannual International Conference on Infant Studies, Miami, Florida, May, 1992.

1991

- Behavioral and physiological reactivity predict fear and frustration in infancy. Society for Research in Child Development, Seattle, WA, April, 1991.

1990

- Infant temperament and attachment predict behavioral inhibition at 24 months. Seventh Biannual International Conference on Infant Studies, Montreal, Canada, April 1990.
- Hemispheric lateralization during emotional experience and its relation to personality style. Society of Psychophysiological Research, Boston, MA, October, 1990.

1989

- Infant temperament and attachment: A new look at an old issue. Society for Research in Child Development, Kansas City, MO, April 1989.

1988

- Laboratory and maternal report measures of temperament and their relationship to heart period variability. Sixth Biannual International Conference on Infant Studies, Washington D.C., April 1988.
- The relationship between heart period variability and reactivity at 5-and 14-months of age. Sixth Biannual International Conference on Infant Studies, Washington D.C., April 1988.
- EEG asymmetry and negative emotionality in 14-month-old infants. Society for Psychophysiological Research, San Francisco, CA, October 1988

1985

- Recognizability of infant and rhesus monkey facial expressions by naive and experienced observers. Seventh Annual Meeting of the American Society of Primatologists, Niagara Falls, New York, June 1985.

Local Professional Presentations

- **Jones, N.A.,** (submitted but cancelled due to COVID). Invited Address to the Children's Healing Institute's 17th Annual Turn on the Light Conference. Presentation on COVID's impact on mothers and Infants. October 2020.
- *Martin, J., & **Jones, N.A.** Neurohormonal Influence on the Mother- Infant Relationship: A Study of Oxytocin, Cortisol, Maternal Attachment, Postpartum Depression, and Breastfeeding Efficacy. Presented at the Tin'th Annual OURI Conference, FAU, April 2020.
- *Lyster, A., Bernardo, A., & **Jones, N.A.** The Effects of Maternal Depression and the Implications on Attachment Styles of Mother-Infant Dyads. Presented at the Tin'th Annual OURI Conference, FAU, April 2020.
- *Argueta, A., Sloan, A., **Jones, N.A.,** Kelso, J.A.S. & Fuchs. Understanding the Origins of Human Agency. Summer OURI presentation for SURF recipients, FAU, April 2019.
- Jorda, M., Barry, C., Edwards, K., & **Jones, N.A.** The Meaning of School BMI Screening and Referral to the Parents/Guardians of 1st, 3rd and 6th Grade Students. Poster presented at Expanding Nursing Roles to Enhance the Quality

and Excellence of Care Delivery, Conference of the Nursing Consortium of South Florida, September, 2015, Davie, Florida.

- *Olivova, J. & **Jones, N.A.** The Effects of Oxytocin and Cortisol Pre and Postpartum Levels in Mother–Infant Bonding. FAU OURI symposium, April, 2015
- **Jones, N.A.** WAVES Infant Emotions Lab. Presentation at Synapse. Society for Neuroscience, Jupiter campus. February, 2014.
- Corbett, M., **Jones, N.A.,** *McGruder, T., *McDole, B., & *Gilkes C. Patterns of Stress Reactivity to a Stressor Paradigm in School-Aged Children: HPA Response and Individual Characteristics. Max Planck Sunposium, Feb, 2013, West Palm Beach, FL.
- Hardin, J., Pessoa-Kadin, A., Pineda, M., **Jones, N.A.,** Mize, K.D., *O'Gnad, A., & *Barrera, C. The Oxytocinergic Bonding System Relates to Prenatal and Postnatal Bonding: A Pilot Study. Max Planck Sunposium, February, 2013, West Palm Beach, FL.
- Corbett, M., *McGruder, T., *Gilkes C. & **Jones, N.A.** Patterns of Stress Reactivity to a Stressor Paradigm in School-Aged Children: Do differences in Temperament, Anxiety and Affect Drive HPA Habituation? FAU's Graduate Research Day, April 2013.
- Cotler, J., & **Jones, N.A.** Cardiac Patterns during Another Infant's Cry Sound for Neonates of Depressed Mothers. FAU's Graduate Research Day, April 2013.
- *O'Gnad & **Jones, N.A.,** Kangaroo Care Effects on Brain Maturation and Levels of Oxytocin. Undergraduate Research Conference, March, 2013.
- *McDole, B., Hardin, J., **Jones, N.A.,** & Mize, K.D. The Bidirectional Interaction of Oxytocin and Cortisol Levels in Mother-Infant Dyads: a Pilot Study. FAU's Undergraduate research conference, April, 2013.
- *Barrera, C. & **Jones, N.A.** Feeding Patterns Effect Brain Development in Infancy. FAU's OURI research symposium, April, 2012.
- *Pineda, M., **Jones, N.A.,** & Mize, K.D., Longitudinal Stability of Jealousy in Infancy. FAU's OURI research symposium, April, 2012.
- **Jones, N.A.,** Invited Presentation in 2012.Socio-Emotional and Neurophysiological Regulation in Infants of Depressed Mothers: Implications for Infant Feeding Patterns and Dyadic Attunement. Presented at the Turn on the Light Conference. Palm Beach County Convention Center, October, 2012.
- **Jones, N.A.** Invited Symposium Speaker for: *Turn on the Light: Seventh Annual South Florida Conference on Child Abuse and Neglect.* Presented to the *Children's Healing Institute. Symposium title:* Socio-Emotional and Neurophysiological Regulation in Infants of Depressed Mothers: Implications for Infant Feeding Patterns and Dyadic Attunement. October, 2010.
- **Jones, N.A.** Infants of Depressed Mothers and Breastfeeding. Florida Infant Mental Health Conference. Presentation accepted and withdrawn by PI due to funding issues, 2006.
- **Jones, N.A.** Invited Presentations: 1) Maternal Depression: Effects on Infants Who are Breastfed vs. Bottle Fed. 2) Infant Temperament and How it Influences

Breastfeeding Stability between Mothers and Infants. Florida Lactation Consultant Conference. April 2004.

Grants Awarded

(over $400,000 in grants and awards)

Federal Grants

R03-HD081333-02 (Cuevas-PI) 4/2016-3/2017
NICHD: EEG Mu Rhythm Analysis of Infant Social Information Processing.
Role: Consultant for Infant EEG measures.

R03-MH61888-01- Jones, N. (PI) 10/2000-09/2001
NIMH: EEG and feeding patterns in infants of depressed mothers
Role: PI

T34: NIH-National Institute of General Medical Sciences 04/2020-03/2025
(Keene, Murphey & Fraizer-PIs)
U-RISE at Florida Atlantic University
The central goal of this proposed program is to expand the pool of students from Florida Atlantic University (FAU) who enter PhD, MD/PhD, or related programs in biomedical science.
Role: Targeted Faculty

Internal Grants/Awards

2020-2021 Three OURI undergraduate grant awards, 2 for students teams and 1 for an individual student.

2020 Professional Development Scholarship from Psychology Department, awarded to Aliza Sloan for funding Movement analysis system for collaborative project with Dr. Kelso's lab.

2019 Scholar of the Year at Florida Atlantic University. Associate Professor Level.

2019-20 CESCOS funding to simulate research funding. Project Title: Neurodevelopment and Mother-Infant Attachment Patterns. My role: PI. Extended to 2021 due to COVID delays.

2019 SURF funding for Amy Argueta, Project Title: Understanding the Origins of Infant Agency, My role: Mentor

2018-19. Junior Faculty Research Mentoring Award (Mentee: Cooley, Morgan) My Role: Mentor. Paid in 2020.

2013-18. DOR University Seed grant Award. Cortisol and Oxytocin Interactions and the Maternal-Infant Socio-Emotional Relationship. My role: PI.

2013-14 Technology Grant: Developmental Psychophysiology and Neurohormone Lab for updating EEG equipment, lab computers, lab freezer and lab assistant set-up. My role: PI.

2012-13 Internal Charles E. Schmidt, College of Science Seed Grant Award. My role: PI.

2011-21 Undergraduate Research Awards, Role: Sponsor (twelve awards). My Role: Mentor.

2011-17, 2020 Graduate Research Award Role: Primary Sponsor (four awards). My

Role: Mentor.

2005-13. FAU Internal IRB contract (co-chair and chair service) from Sponsored Research.

2001-2002 New Research Development Award, FAU grant program. Title: Familial influences on the development of empathy in preschoolers of depressed mothers. My role: PI.

1999-2000: Research Initiation Award, FAU grant program, Title: EEG and feeding during mother-infant interaction. My role: PI.

Grants Currently Under Review: External

MPI-R01: NICHD Gartstein, M., Bell, MA., & Jones, N.A.
Title: Precursors of Anxiety: The Role of Lateralized Brain Activation and Maternal Sensitivity
Role: PI for Florida Site

Internal funding application:

Bernardo, A., (2020). Salivary Cortisol Training Request. My Role: Mentor. Science Graduate Research Support Scholarship.

Previous Grant Submissions: External

Jones, N.A. Mize, K.D., Li, Z., & Maniaci, M., (2020). R15 to NICHD: HD105178-01
Title: Attachment and social threat system formation during 12 and 24 months: Associated behavioral and neurodevelopmental substrates.
My role: PI. Not funded

Jones, N., Mize, K.D., Li, Z., & Maniaci, M., (2019). R15 HD099646-01 & A1 NICHD: Developing Social attachment and social threat systems across the first two years. Role: PI, Revision submitted, Impact Score 33, sent to funding council but ultimately not funded.

Gartstein, M., Bell, M.A., & Jones, N.A. (2019). MPI R01MH121444-01 & A1 NICHD: Precursors of Anxiety: The Role of Lateralized Brain Activation and Maternal Sensitivity, Role: PI for Florida Site, Revision submitted, scored but not funded

Shanok, N. (2019). F31 fellowship. NICHD: The Efficacy of Emotional Working Memory Training in Reducing Anxiety in Preadolescents. Role: Primary Sponsor. Not funded.

Shanok, N. (2019). SRCD SECC Dissertation Funding Award. Efficacy of Emotional Working Memory Training in Reducing Anxiety in Preadolescents, My Role: Faculty Sponsor. Not Funded.

Jones, N. A. (2013). R15 Affective Neurophysiology During Breast Feeding for Infants of Depressed Mothers. Submitted to NICHD in February and Resubmission in November, 2013. Not Funded.

Jones, N.A. & Mize, K.D. (2011). Oxytocin and Breastfeeding in Infant and their Depressed Mothers. Submitted to Gates Foundation’s Grand Challenges Explorations Grants (Round 7) for research in Nutrition for Healthy Growth of Infants and Children. April 2011. Not funded.

Mize, K.D., & Jones, N.A. (2011). Mindfulness and EEG in Depressed Mothers. Gates

Foundation's Grand Challenges Explorations Grants (Round 7) for research in Nutrition for Healthy Growth of Infants and Children. April, 2011. Not funded.

Jones, N.A. (2010). Neurophysiology and socio-emotional regulation in infants of depressed mothers. Submitted to NIMH the Integrative Studies of Biology and Behavior Program. Proposal # R15 MH093840-01. Not funded.

Jones, N.A. & Mize, K.D. (2009). Investigating the protective effects of early and extended contact in infants of depressed mothers. Submitted to NIMH the Integrative Studies of Biology and Behavior Program. Proposal #R01 MH091390-01. Not funded.

Jones, N.A. & Mize, K.D. (2006). Investigating the effects of contact on infants of depressed mothers. Letter of intent and accepted for full proposal submission. March of Dimes. Proposal number FY2007-1017. Not funded.

Jones, N.A., (2005). Feeding program for depressed mothers and infant outcome. Submitted to NIMH, 6, Exploratory Development Grant for Mental Health Research, R01. Not funded.

Jones, N.A., (2005). NICHD: R03 Small Grants Program. Empathy in preschoolers of depressed mothers. Not funded.

Jones, N.A., (2005). Development of empathy in depressed and aggressive families. Submitted to NSF. Career Awards Program. Not funded.

Jones, N.A., (2005). Breastfeeding and infant health and development. Submitted to Palm Health Care Foundation. Not funded.

Jones, N.A., (2005). NIMH, R03 Small Grants program: Familial influences on empathy development in preschoolers of depressed mothers. Submitted to Revision submitted. Not Funded.

Internal:

Jones, N.A., Mize, K.D., Bernardo, A., & Hart, S. (2018). Infant neurophysiological and socio-emotional responses to physical and psychological separation from their mother. Neuroscience Pilot Award (NPA) Program. Not Funded

External Grant Collaborations

A Novel Intervention for Promoting Breastfeeding in High-Risk Women. Gates Foundation's Grand Challenges Explorations Grants (Round 7) for research in Nutrition for Healthy Growth of Infants and Children. April 2011. Co-PI on Dr. Sybil Hart's submission. Not funded.

The ontogenesis of jealousy: The role of attachment. Submitted to NICHD by Dr. Sybil Hart, R21 Exploratory/Developmental Research Program: Revision Dates: June 2006-2008. Consultant. Not funded.

The ontogenesis of jealousy. Submitted to NIMH by Dr. Sybil Hart, Texas Tech University, Nancy Aaron Jones, Ph.D. Consultant. Not funded.

Prenatal and neonatal responses of children of depressed mothers. Submitted by Tiffany Field, University of Miami School of Medicine, Nancy Aaron Jones, Collaborator. Not funded.

Pain relief for fibromyalgia patients. Submitted by Tiffany Field, University of Miami School of Medicine, Nancy Aaron Jones, Collaborator. Not funded.

Massage therapy in autistic children. Submitted by Tiffany Field, University of Miami School of Medicine, Nancy Aaron Jones, Collaborator. Not funded.

Media Coverage of My Research Lab

- FAU Science Connect Press release. Depressed Moms Who Breastfeed Boost Babies' Mood and Mutual Touch. https://www.fau.edu/newsdesk/articles/breastfeeding-study.php
- OWL Magazine: The Effect of COVID-19 on Research at FAU (2020).
- Kangaroo Care Article press release. http://www.fau.edu/newsdesk/articles/kangaroo-care-study.php
- MedicalResearch.com article. https://medicalresearch.com/mental-health-research/kangaroo-care-linked-to-better-infant-brain-development/53646/
- WebMD article on Kangaroo Care publication. https://www.webmd.com/parenting/baby/features/skin-to-skin-baby-brain#1
- Science Daily Article: Children with autism are in 'in tune' with mom's feelings like other childrenhttps://www.sciencedaily.com/releases/2019/03/190320101949.htm
- US News and World Report: Kids With Autism 'In Tune' With Mom's Feelings: Study. https://www.usnews.com/news/health-news/articles/2019-03-28/kids-with-autism-in-tune-with-moms-feelings-study
- Palm Beach Post: FAU study looks at post-partum depression http://palmbeachhealthbeat.blog.palmbeachpost.com/2016/03/23/fau-study-looks-at-post-partum-depression/)
- Sun Sentinel: Studying the mom-baby bond http://www.sun-sentinel.com/features/south-florida-parenting/sfp-all-you-need-is-love-20160815-story.html
- FAU press release: FAU Study on Depression Examines Levels of ‘Love’ Hormone and its Impacts on Mother-Baby Emotional Bonding. Boca Raton, FL. (March 23, 2016.
- Parenting Magazine, The Love Hormone and the Mother-Infant Bond. August 2016.
- Ivanhoe Medical Breakthroughs production: https://www.ivanhoe.com/medical-breakthroughs/baby-bonding-love-hormone/, picked up in Michigan, Pennsylvania, and Alabama.
- NBC-6 Interview Parent to Parent, WPLG Interview on maternal depression and infant development.

Teaching and Academic Instruction

1997-present Assistant and Associate Professor: Florida Atlantic University, Charles E. Schmidt College of Science. North Palm Beach Campus (Jupiter Campus).

1996-1997 Adjunct Professor; Florida Atlantic University, College of Liberal Arts. Davie Campus, Davie, Florida.

1987-1993 Instructor: Institute for Child Study, Department of Human Development, University of Maryland, College Park, Maryland.

Courses Taught

In am the instructor for primarily upper division undergraduate courses at the Jupiter campus. Below is a list of the most representative courses I've taught since 2003.

CLP 4144 Abnormal Psychology
DEP 3053 Psychology of Human Development
DEP 4095 Personality and Social Development
DEP 4115 Infant Development
DEP 4797C Human Development Laboratory
PPE 4003 Personality Theories
PPE 4700 Experimental Studies in Personality
PSB 4323 Human Psychophysiology
PSY 3213 Research Methods in Psychology
PSY 3234 Experimental Design and Statistical Inference
SOP4320C Social Behavior Laboratory
SYP 4002 Current Issues in Social Psychology

Supervision of Graduate Students

Dissertation Chair (in alphabetical order).

Maria Corbett, Degree conferred, May, 2017.
Title: Are Temperament, Personality, & Affectivity Influential factors in HPA Axis Reactivity in School-Aged Children?

Miguel Diego, Degree conferred: August 2004.
Title: Maternal neuroendocrine function and fetal development

Chantal Gagnon, Degree conferred: May 2012.
Title: Empathy and bullying behaviors in middle and high school children.

Jillian Hardin (changed from Sader). Conferred: May 2014.
Title: Breastfeeding and Kangaroo Care: Bio-behavioral measures of dyadic bonding, infant cortical maturation and infant HPA reactivity.

Nikola Lucas, Degree conferred: December 2013
Title: EEG coherence and emotions in autistic children.

Krystal D. Mize, Degree conferred: August 2008
Title: Infant Jealousy Responses: Temperament and EEG.

Melannie Platt, Degree conferred: August, 2017.
Title: Behavioral Expressions of Jealousy across the First Two Years of Life: Associations with EEG Asymmetry, Cortisol Reactivity and Attachment Security.

Nathaniel A. Shanok, Conferred: May 2020.
Title: Inhibitory Control Performance as a Function of Preadolescent Anxiety and Resting-State Neurophysiology.

Dissertation Committee Member

Christopher Aults, 2016.
Maria Beatriz-Jurado, 2013.

Brooke Corby, 2006.
Charles Dukes, 2019.
Roger McIntosh, 2012.
Andrez Paz, 2016.
Krystal St. Peter, in progress.
Gerry Starrat,1998.
Bernadette Stevenson, 2001.
Janna Taft, 2003.
Idaly Velez Uribe, 2017

Multidisciplinary Department Dissertation Committee Member

Susan Boklaga, changed advisors, College of Education
Mary Jorda, 2015, College of Nursing
Amanda Justice, student withdrew, Exercise Science, College of Education
Jennifer Malhoyt-Lee, 2018, College of Education
Beth Pratt, 2017, College of Nursing
Carol Reive, 2019, College of Nursing
Anita Vestal, student at NOVA Southeastern University, graduated 2000.

Master's Student Thesis Chair

Amanda Almeida, Completed August 2009.
Thesis title: EEG in preschool children and the development of empathy.
Christopher Aults, Completed December, 2012.
Thesis title: Psychophysiological Measures of Aggression and Victimization in Early Adolescence
Seanceray A. Bellinger, Completed December, 2017.
Title: An exploration of testosterone mediated effects on auditory learning in Northern Bobwhite Quails
Angela Bernardo, Completed Summer 2020.
Title: Behavioral and Physiological Manifestations of Jealousy During the First Year of Life: Implications for Cortisol Reactivity, EEG Asymmetry, and Mother-Infant Attachment.
Alexis Blau, Completed August, 2010.
Thesis title: The development of jealousy.
Katy Brooks, Completed, May, 2020.
Thesis title: Facial Emotion Recognition Ability in Children with Autism Spectrum Disorders.
Kira Chankersingh, student moved to College of Education Mental Health,
Victoria Chassin, in progress.
Joseph Cotler, Completed May 2013.
Thesis title: Cardiac Patterns during another Infant's Cry Sounds in Neonates of Depressed Mothers
Maria Corbett, Completed December, 2011.
Thesis title: The effects of a mindfulness meditation intervention on attention, affect, anxiety, mindfulness, and salivary cortisol in

school-aged children.

Miguel Diego, Completed December, 2002
Thesis title: EEG in 1-week, 1-month and 3-month-old infants of depressed and non-depressed mothers.

Jessica Dolan, student withdrew.

Chantal Gagnon, Completed August, 2007. Non-thesis.

Aviva Kadin-Pessoa, Completed August, 2010.
Thesis title: Developing mechanisms of self-regulation: An integrative perspective.

Sara Klco, Completed, May, 2010.
Thesis title: A neuropsychological examination of the effects of mindfulness mediation in elementary school children.

Alexandra Lyster, in progress.

Kathryn Marsh, Completed August, 2013.
Thesis title: Emotional and physiological regulation during parent-child interaction in preschoolers.

Alexandra L. Montena, Completed August, 2017.
Thesis title: Emotional and behavioral effects within the triadic Family System: Actor-partner interdependence between parents and preschoolers.

Jamayne Potts, Completed May 2019.
Thesis title: The Physiological and Psychological effects of Breastfeeding on subsequent Mother-Infant Bonding.

Jillian Sader, Completed May 2011.
Thesis title: The development of mother-infant communication through touch and gaze patterns in depressed and non-depressed dyads.

Jenna Salley, in progress.

Nathaniel Shanok, Completed August, 2017.
Thesis title: Assessing Children's Performance on the Facial Emotion Recognition Task with Familiar and Unfamiliar Faces : An Autism Study.

Aliza Sloan, Completed December, 2017.
Thesis title: Maternal influence on early infant emotional regulation: A study of 3-month infant behavior, cortisol and frontal EEG.

Kristina Smatrakaleva, in progress.

Sarah Worch, Completed August 2014.
Thesis title: Neuroplasticity and the Developing Brain: The Psychophysiological Effects of Mindfulness Meditation on School-Aged Children

Master's Student Thesis Committee Member

Eli Fennell, in progress. Advisor: Gizelle Anzures, Fall, 2019

Amanda K. Justice, Advisor: Monica Rosselli, Summer, 2003

Merike Lang, Advisor: Monica Rosselli, Spring 2018

Michelle Lubomski, Davie, Advisor: Lauri Jensen-Campbell, 1999
Towhid Nishat, Advisor: Monica Rosselli, Spring 2015
Roger McIntosh, Advisor Monica Rosselli, Fall, 2010
Colleen M. Sheehan, Advisor: Allan Nash, 1998
Jamie Simpkiss, Advisor: Allan Nash, Fall, 2000
Krystal St. Peter, Advisor Alan Kersten, Summer, 2019
Valerie Starratt, Advisor Monica Rosselli, transferred advisors.
Allison Weinstein, Advisor Marissa Greif, Summer 2012

Undergraduate Students Honors Thesis Chair:

Christina Adams: Completed May, 2015
Title: The Effects of Mindfulness Meditation on Affect and Brain Activity in Elementary-Aged Children.
Moran Amrani, Psychology Department, Completed May 2001.
Title: Breast-Feeding: Its effects on mother and child.
Chloe Barrera, Completed May, 2012
Title: Feeding Patterns Effect Brain Development in Infancy
Darcel Craft: Psychology Department, Completed May 2011.
Title: The effects of empathy development in preschoolers of depressed parents.
Aquelina Dubecky, Psychology Department. Competed December, 2005.
Title: Touch behaviors.
Jamie Eggenberger: Psychology Department, Completed, December 2010.
Title: An EEG coherence analysis of the effects of mindfulness meditation in school-aged children.
Traci Ingersoll. Completed Summer, 2013
Title: Literary Review on Emotional Well-Being and Positive Interventions
Samantha Kane, Harriet Wilkes Honors College, FAU, Completed May 2004.
Title: Familial patterns of empathy in preschoolers.
Alexandra Lyster, Completed Spring 2020
Title: The Impact of Maternal Depression on Attachment Behavior and Cortisol Levels of Infants
Jessica Martin, December, 2019 (Student in Neuroscience with Kenneth Dawson-Scully)
Title: Neurohormonal Influence on the Mother- Infant Relationship: A Study of Oxytocin, Cortisol, Maternal Attachment, Postpartum Depression, and Breastfeeding Efficacy
Aurora O'Gnad. Completed Spring, 2013.
Title: Kangaroo Care and the Effects on Brain Maturation.
Jana Oliveria. Honors Biology Program, completed 2015.
Title: The Effect of Oxytocin & Cortisol Levels in Mother-Infant Bonding
Melannie Pineda, Completed Spring, 2012.
Title: The Longitudinal Stability of Jealousy in Infancy.
Tatiana Poole. Summer 2019.

Title: Maternal Depression and Infant EEG Patterns
Joseph Salvatore. Psychology Department, Completed, August, 2010.
Title: Behavioral and physiological indices of emotion in preschoolers.
Dayana Sanchez, Psychology Department. Completed, August 2008.
Title: The effects of mindfulness meditation on children's brain electrical activity and creativity.
Hannah Thompson. Infant Emotionality and EEG, Completed, May 2019
Title: Infant Jealousy Interacts with Temperament and EEG.
Jessica Wassung, Harriet Wilkes Honors College (Co-advisor Julie Earles).
Completed August 2006.
Title: Effects of parental depression on empathy development in preschoolers.
Emily Willson, Harriet Wilkes Honors College (Co-advisor Julie Earles).
Completed December 2019.
Title: Infant Behavioral and Physiological Displays of Jealousy and Responses to a Social Rival
Plus 8 Honor's College internships, 2013 2014, 2015, 2016, 2019.

Service Activities

Department Service

Psychology Department, Graduate Committee, 2007-2011. 2018-2021.
Psychology Department, Executive Committee Member, 2016-2021.
Psychology Department, Undergraduate Committee 1997 -2005 & 2011-2014.
Appointed as Chair, 2014-2016.
Search Committees:
IBrain Co-Hire Search committee 2019-2020.
Psychology Department search committee member in Social Psychology, 2017-2018.
Chair Search, Psychology Departmental in developmental/developmental neuroscience, 2015-2016.
Psychology Department search committee member in cognitive neuroscience 2014-2015.
Psychology Department search committee member in open/quantitative 2013-2014.
Psychology Department search committee member experimental psychology 2011-2012.
Psychology Department visiting search committee member for statistics Summer 2009-2010.
Psychology Department search committee member in developmental 2006-2007.

Campus Service

Grievance Committee Chair, Jupiter Campus Psychology Department. 2010-2017.
Faculty Advisor for MacArthur Campus Psychology Club. 1997-2006
Search Committees: Honor's College Search for Psychology Faculty 1998-1999.
Academic Advisor for Jupiter Campus, 2000.

Co-Chair: Jupiter Campus Search, 2002-2003.
MacAwards Committee, Jupiter Campus, 2004-2005.
University Faculty Council. Elected to North Campus Senate Branch, Representative-at-Large. 2000-2001.

University Service

Delores A. Auzenne Graduate Fellowship Committee Reviewer, 2020.
SURF reviewer. Office of Undergraduate Research and Inquiry Reviewer, 2020.
Lecturer on Human Subject Protections for Responsible Conduct of Research, 2012-2016.
Institutional Review Board: Alternate Member: University of Miami, 1996-1997.
Institutional Review Board: Member: Florida Atlantic University, 1998-2013, ad hoc reviewer 2014, 2016, 2017-2020
Vice Co-Chair 1999-2005.
Chair, 2005-2013.
Meeting with Vice President for Research and Research committee to establish Health Sciences IRB committee, 2013.
Chair IRB subcommittee to revise the on-line application forms, 2006.
Chair IRB subcommittee to revise the IRB rules and regulations of the committee, 2006.
Subcommittee to review new FDA form, August, 2009.
Subcommittee to audit FAU's studies pertaining to FDA regulations, September, 2009-2010.
Subcommittee Member to review IRB forms for FDA regulations and clinically-based research compliance, 2009-2010.
IRB Subcommittee to revise By-Laws, 2000.
Search Committee: Dean for the College of Science, 2005-2006.
President's Commission on the Status of Women, Served 1997- 2000, Appointed member 1998-2000. Mentoring Subcommittee.
Grant Reviewer, Presidential Research Awards, 2000, 2001.
Grant Reviewer, FAU Division of Sponsored Research, New Project Development Awards, December, 2005, 2006.

Professional Development

2020 FAUs Center for Online and Continuing Education Training
2012-13 Faculty Learning Community for OURI

Professional Service

Editorial Board Member: *Early Education and Development,* 2019-present
Austrian Science Fund (FWF) Grant Reviewer. Reviewer on 1 application. Summer, 2020.
Review of U.S.-Israel Binational Science Foundation - application 2019161 [MIR]. Note: This review, I had to decline as there was a conflict of interest with the investigators (as I knew one of the investigators well). I did provide the granting agency suggestions for other reviewers, January, 2020

MRC Grant Peer Review, UK grant. Title: PretermMotherNewbornNetwork: East-West African programme on mechanisms, economic & developmental impact of kangaroo care to improve preterm outcomes. Funders Reference: MR/V035118/1. December, 2020.

National Institutes of Health – Center for Scientific Review. Special emphasis panel/Scientific review group. *2013/*ZRG1 RPHB-P (02*)*. Feb, 2013.

National Institutes of Health – Center for Scientific Review. 2013-2014: ZRG1 F16-L (20) L - Fellowships: Risk, Prevention and Health Behavior. Meeting in March & November, 2014, July & November 2015. March, July and November 2016, March, 2017. March, July, November, 2018, November 2019.

Special Emphasis Panel/Scientific Review Group 2017/01 ZRG1 BBBP-B (03) M, Reviewer on 3 applications.

Discovery Grant Reviewer, Natural Sciences and Engineering Research Council of Canada (NSERC). Biological Systems and Functions (EG 1502) subcommittee, 3 reviewed, two in 2017 and one in 2016.

Review of Promotion and Tenure for faculty member in Clinical Psychology at Idaho State University, 2018.

Conference Reviewer for International Congress of Infant Studies 2017-2018: Panel Reviewer for Emotional Development. Reviewed 2 symposium presentations, 4 poster presentations and 1 flash presentation.

Reviewer, The Israel Science Foundation, on the Individual Research Grants. Proposal number 879/18-34, invited again in 2019 but had a conflict.

Conference Reviewer for Society for Research in Child Development, 2018-2019. Panel Reviewer for Psychophysiology. Reviewed 2 symposium presentations and 6 poster presentations

Ad Hoc reviewer for:
Analyses of Social Issues and Public Policy, Archives of Pediatrics and Adolescent Medicine, Biological Psychology, Biological Psychiatry, BMC Pregnancy and Childbirth, Child Development, Development and Psychopathology, Developmental Psychology, Developmental Psychobiology, Developmental Science, Early Human Development, Emotion Review, Infant and Child Development, Infancy, Infant Behavior and Development, Infant Mental Health Journal, International Journal of Behavioral Development, Health Psychology, Journal of Affective Disorders, Journal of Autism and Developmental Disorders, Journal of Development Origins of Health and Disease, Journal of Early Childhood Research, Journal of Experimental Child Psychology, Journal of Media and Communication Studies, Journal of Mental Health & Clinical Psychology, Journal of Pediatric Psychology, Journal of Personality, Journal of Reproductive and Infant Psychology, Journal of Women's Health, Issues & Care, Maternal and Child Health Journal, Neurotoxicology and Teratology, Plos ONE, Psychological Science, Psychoneuroendocrinology, Psychophysiology, Social Development, The American Journal of Clinical Nutrition

Community Group Service

Boca Raton Community Hospital, Breastfeeding rates research project, 2000-2001.
Palm Beach County Breastfeeding Coalition, Chair-Elect, 2000-2003, Chair 2003-2004. Member 2005-2006, 2010-present. Elected to Executive Committee as a Professional Advisor/Consultant for 2014-2015. Chair summer, 2017-2018. Executive committee 2019-2020.
Palm Beach County Head Start, PEACE Project, 1999-2001.
Palm Beach County School District, School Readiness Outcome Coalition, 1999-2000.
The Children's Healing Institute. Turn on the Light Conference Presenter on Child Abuse and Neglect, 2010, 2012. Volunteer in 2014-2019, 2020.
Department of Children and Families, Training Series for Employees, 2019.
Guardian Ad Litem, Palm Beach County, 15th District Court. 2017-2019, on leave in 2020 due to COVID.

Honors and Awards

Teaching Awards and Nominations

2015-2016 Northern Campus Exceptional Faculty Nomination. Charles E. Schmidt, College of Science, Florida Atlantic University MacArthur Campus.
2013-2014 Northern Campus Exceptional Faculty Award Nomination, Charles E. Schmidt, College of Science, Florida Atlantic University MacArthur Campus.
2012-2013 Northern Campus Exceptional Faculty Award Nomination, Charles E. Schmidt, College of Science, Florida Atlantic University MacArthur Campus.
2010-2011 Northern Campus Exceptional Faculty Award, Charles E. Schmidt, College of Science, Florida Atlantic University MacArthur Campus.
2009-2010 Northern Campus Exceptional Faculty Award Nomination, Charles E. Schmidt, College of Science, Florida Atlantic University MacArthur Campus.
2006-2007 MacAward Nomination, Exceptional Faculty Award, Charles E. Schmidt, College of Science, Florida Atlantic University MacArthur Student Government.
2002-2003 MacAward Exceptional Faculty Award, Charles E. Schmidt, College of Science, Florida Atlantic University MacArthur Student Government.
2001-2002 MacAward Exceptional Faculty, Charles E. Schmidt, College of Science, Florida Atlantic University MacArthur Student Government.
1999-2000 Teacher of the Year & Advisor of the Year Award, Charles E. Schmidt College of Science, Florida Atlantic University MacArthur Student Government.
1998-1999 Outstanding Faculty Advisor Award, Florida Atlantic University, North Palm Beach Student Government.

Honors and Awards from Community

2020 Invited Address: Children's Healing Institute. *Turn on the Light: Annual South Florida Conference on Child Abuse and Neglect.* October, 2020 (conference canceled due to COVID-19).
2019 Certificate of Appreciation for Service as Chair. Palm Beach County

Breastfeeding Coalition

2019 Certificate of Appreciation. Division of Child and Families. Palm Beach County.

2016 Elected to PBC Breastfeeding Coalition as Chair-Elect. Changed to Chair in May, 2017- Dec. 2018

2014 Elected to PBC Breastfeeding Coalition Executive Committee as professional advisor/consultant.

2012 Invited Address: Children's Healing Institute. *Turn on the Light: Annual South Florida Conference on Child Abuse and Neglect.* October, 2012.

2010 Invited Address: Children's Healing Institute. *Turn on the Light: Annual South Florida Conference on Child Abuse and Neglect.* October, 2010.

2000 Palm Beach County Breastfeeding Task Force Certificate of Appreciation.

1999 Invited Guest: To Honor Members of the Community who Have Contributed to Head Start Programs of Palm Beach County. Invited by Dr. Carmen Nicholas, Director of Palm Beach County Head Start.

List of References

Dr. David Bjorklund
Florida Atlantic University
Department of Psychology
777 Glades Road
Boca Raton, FL 33431-0991
dfbjorklund@gmail.com

Dr. Tiffany Field, Professor
Director of the Touch Research Institute
University of Miami School of Medicine
P.O. Box 016820 (D-820)
Miami, Florida 33101
305-243-6781
E-mail: TField@med.miami.edu

Dr. Martha Ann Bell
Department of Psychology
Virginia Tech, VA 24061
540-231-3652
E-mail: mabell@vt.edu

Dr. Sybil Hart, Ph.D.
Texas Tech University
Department of Human Development & Family Studies
Box 41162
Lubbock, TX 79409-1162
E-mail: Sybil.Hart@ttu.edu

Additional references available upon request

CURRICULUM VITAE

Marc Kantorow, Ph.D. FARVO

Professor of Biomedical Science
Associate Dean for Graduate Programs
Charles E. Schmidt College of Medicine
Florida Atlantic University
777 Glades Rd.
BC71 RM 207
Boca Raton, FL 33431-0991
Office: 561-297-2910
Lab: 561-297-3754
mkantoro@health.fau.edu

EDUCATION

1991 PhD GENETICS: The George Washington, University Washington DC

Dissertation: "Genetic and biochemical characterization of the molecular interactions required for activation of the *E. coli* cAMP receptor protein by 3'-5' cyclic adenosine monophosphate." Qualifying: Molecular Biology *(with Distinction)*, Protein Biochemistry *(with Distinction)* and Molecular Genetics *(with Distinction)*.

1985 BS BIOLOGY (*Cum Laude*) Towson State University, Towson Maryland

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PROFESSIONAL EXPERIENCE

Present

2007- present Professor (tenured) Department of Biomedical Sciences, Charles E. Schmidt College of Medicine, Florida Atlantic University

2021-present Associate Dean for Graduate Programs. Charles E. Schmidt College of Medicine, Florida Atlantic University

Past

2016-2021	Assistant Dean for Graduate Programs. Charles E. Schmidt College of Medicine, Florida Atlantic University
2013-2016	Director of Graduate Programs Charles E. Schmidt College of Medicine
2004-2006	Associate Chair. Department of Biomedical Science Charles E. Schmidt College of Medicine
2004-2007	Associate Professor (tenured). Department of Biomedical Sciences Charles E. Schmidt College of Medicine Florida Atlantic University
1999-2003	Assistant Professor Department of Biology Eberly College of Arts and Science West Virginia University
1997-1999	Assistant Research Professor The Jules Stein Eye Institute UCLA Medical School Los Angeles CA
1996-1997	Senior Staff Fellow Laboratory of Molecular and Developmental Biology National Eye Institute, National Institutes of Health Bethesda MD (Chief Dr. Joram Piatigorsky)
1991-1996	Post-Doctoral Research Fellow Laboratory of Molecular and Developmental Biology, National Eye Institute National Institutes of Health Bethesda MD (Chief: Dr. Joram Piatigorsky)
1987-1991:	Graduate Student Center for Advanced Research in Biotechnology National Institute of Standards and Technology and George Washington University Department of Genetics Rockville MD and Washington DC (Advisor: Dr. Keith McKenney)

GRANTS

Current:

NIH R01 EY029708 **2019-2024 (2 percentile)**	$1,738,565.00 EY (as PI) “Hypoxia Regulation of the Eye Lens” Florida Atlantic University
NIH R01 EY026478 **2020-2025 (18 percentile)**	$2,926,200.00 (as MPI) with Sue Menko (MPI) “Regulatory role of P13K signaling pathways in lens differentiation” Florida Atlantic University and Jefferson University MPI Grant

COMPLETED:

NIH R01 EY 026478 **2015-2019 (4 percentile)**	$2,278493 **(**as PI) with Dr. A. Sue Menko (MPI) National Eye Institute, NIH **“**Repurposing classical death pathways for signalling roles in lens differentiation” Florida Atlantic University
Rand Eye Institute **2015-2016**	$50,000.00 (as PI) “ Engineering of Ocular Tissues” Florida Atlantic University
NIH R01 EY 13022 **2009-2014 (13 percentile)**	$1,752,000.00 (as PI) National Eye Institute NIH “Molecular Analysis of Microdissected Human Lenses” Florida Atlantic University
NIH NOT 2009-2010	$258,000 NOT OD 056 Recovery Act (as PI) National Eye Institute NIH "Repair of alpha-crystallin" Florida Atlantic University
NIH R01 EY 13022 **2004-2009 (7 percentile)**	$1,561,590.00 (as PI) National Eye Institute NIH "Molecular Analysis of Microdissected Human Lenses" Florida Atlantic University
AHAF 2005-2007	$100,000 American Health Assistance Foundation for Macular Degeneration (as PI) “The role of methionine sulfoxide reductase in retinal function and age-related macular degeneration” Florida Atlantic University

PHS 2006-2007	Palm Healthcare Foundation BJ Harris Fund for Macular Degeneration (as PI) $15,000 Florid Atlantic University
NIH R01 13022 **1999-2004 (12 percentile)**	$966,220.00 (as PI) National Eye Institute NIH "Molecular Analysis of Microdissected Human Lenses" West Virginia University

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FELLOWSHIPS, AWARDS and NOMINATIONS

2018	Researcher of the Year (Professor), Florida Atlantic University
2016	Distinguished Teacher of the Year, Charles E. Schmitt College of Medicine, FAU
2015	Certificate of Appreciation for Service on the Association for Research and Visual Science Members in Training Committee (2011-2014)
2014	Gold Fellow of the Association for Research in Vision and Ophthalmology
2012	Silver Fellow of the Association for Research in Vision and Ophthalmology
2012	Certificate Appreciation for Service on the Association for Research in Vision and Ophthalmology Program Committee as Lens Section Chair (2009-2010) and lens section member (2007-2009)
2008	Top Reviewer J*. Experimental Eye Research*
2005	Researcher of the Year (Associate Professor), Florida Atlantic University
2005	Associate Professor Researcher of the Year, Charles E. Schmidt College of Science
2008	Certificate of Appreciation for Organizing the Young Investigator Program Platform for the International Conference on Eye Conference of Eye Research International Society for Eye Research
2003	Outstanding Researcher Award, Eberly College of Arts and Sciences, West Virginia University
2002	Cataract Research Award, National Foundation for Eye Research, Association for Research in Vision and Ophthalmology
2002	Nominated for the Eberly College Outstanding Researcher Award, Eberly

College of Arts and Science, West Virginia University

2001 Nominated for the Benedum Distinguished Scholar Award, West Virginia University

2000 Nominated for the Cataract Research Award, National Foundation for Eye Research, Association for Research in Vision and Ophthalmology

1999 Cooperative Cataract Research Conference Travel Award, National Foundation for Eye Research

1994 International Conference on Eye Research Travel Award International Society for Eye Research

1991-1996 Intramural Research Training Award, National Eye Institute, NIH, Bethesda, MD

1987-1990 Pre-Doctoral Fellowship, Center for Advanced Research in Biotechnology, Rockville, MD

1985-1987 Research Fellowship, George Washington University

1984-1985 John J. Leidy Scholarship, Towson State University

PUBLICATIONS

1. Novel mitochondrial derived Nuclear Excisosome degrades nuclei during differentiation of prosimian Galago (bush baby) monkey lenses. Costello MJ, Gilliland KO, Mohamed A, Schey KL, Johnsen S, Brennan LA, **Kantorow M**. PLoS One. 2020 Nov 12;15(11):e0241631. doi: 10.1371/journal.pone.0241631. eCollection 2020. PMID: 33180800

2. Brennan L, Disatham J, **Kantorow M**. Hypoxia regulates the degradation of non-nuclear organelles during lens differentiation through activation of HIF1a. Exp Eye Res. 2020 Sep;198:108129. doi: 10.1016/j.exer.2020.108129. Epub 2020 Jul 3. PMID: 32628953; PMCID:

3. Lens differentiation is characterized by stage-specific changes in chromatin accessibility correlating with differentiation state-specific gene expression. Disatham J, Chauss D, Gheyas R, Brennan L, Blanco D, Daley L, Menko AS,

Kantorow M. Developmental Biology. 2019 Sep 1;453(1):86-104. doi: 10.1016/j.ydbio.2019.04.020. Epub 2019 May 25. PMID: 3113673

4. BNIP3L/NIX is required for elimination of mitochondria, endoplasmic reticulum and Golgi apparatus during eye lens organelle-free zone formation. Brennan LA, McGreal-Estrada R, Logan CM, Cvekl A, Menko AS, **Kantorow** M. Experimental Eye Research. 2018 Sep;174:173-184. doi: 10.1016/j.exer.2018.06.003. Epub 2018 Jun 4. PMID: 29879393

5. Parkin elimination of mitochondria is important for maintenance of lens cell ROS levels and survival upon oxidative stress exposure. Lisa Brennan, Joseph Khoury and **Marc Kantorow.** Biochimica Biophysica Acta (BBA) Molecular Basis of Disease. 2017 1863)1) 21-32. doi: 10.1016/j.bbadis.2016.09.020.

6. Identification and ultrastructural characterization of a novel nuclear degradation complex in differentiating lens fiber cells. M. Joseph Costello, Lisa A. Brennan, Kurt O. Gillaland, Snoke Johnson, **Marc Kantorow.** PloS One. 2017 11(8): e0160785. doi: 10.1371**.**

7. Chromatin remodeling enzyme Snf2h/Smarca5 regulates embryonic lens differentiation and denucleation. Shuying He, Saima Limi, Rebecca S. McGreal, Qing Xie, Lisa Ann Brennan, Wanda Kantorow, Juraj Kokavec, Romit Majumdar, Harry Hou, Winfried Edelmann, Wei Liu, Ruth Ashery-Padan, Jiri Zavadil, **Marc Kantorow**, Arthur Skoultchi, Tomas Stopka, Ales Cvekl. Development. 2016. 143(11):1937-47.

8. Guidelines for the use and interpretation of assays for monitoring autophagy (3rd edition). Klionsky et al, **Kantorow** et al.., Autophagy. 2016. 12(1):1-222.

9. Integrin αVβ5-mediated Removal of Apoptotic Cell Debris by the Eye Lens and Its Inhibition by UV Light Exposure. Dan Chauss, Lisa Brennan, Olga Bakina and **Marc Kantorow**. Journal of Biological Chemistry (JBC) 2015. 290(51):30253-66.

10. Chromatin features, RNA polymerase II and the comparative expression of lens genes encoding crystallins, transcription factors, and autophagy mediators. J Sun, S Rockowitz , Daniel Chauss, P Wang, **Marc Kantorow**, Deyou Zheng and Ales Cvekl. Molecular Vision. 2015. 21:955-73.

11. Differentiation state-specific mitochondrial dynamic regulatory networks are revealed by global transcriptional analysis of the developing chicken lens. Daniel Chauss, Subhasree Basu, Suren Rajakaruna, Z Ma, Victoria Gau, Sara Anastas, Lisa Brennan, J. Fielding Hejtmancik, A. Sue Menko and **Marc**

Kantorow. Genes, Genomes and Genetics G3 (Bethesda). 2014. 13;4(8):1515-27.

12. Chaperone-independent mitochondrial translocation and protection by αB-crystallin in RPE cells. Rebecca McGreal, Lisa Brennan, Wanda Lee Kantorow, Jeffrey Wilcox, Jianning Wei, Daniel Chauss and **Marc Kantorow**. Experimental Eye Research 2013. 110:10-7.

13. Spatial expression patterns of autophagy genes in the eye lens and induction of autophagy in lens cells. Lisa Brennan, Wanda Lee Kantorow WL, Daniel Chauss, Rebecca McGreal, Shuying He, Lynsey Matucci, Jianning Wei, Amer Riazuddin, Ales Cvekl A, J. Fielding Hejtmancik and **Marc Kantorow**. Mol Vis 2012.

14. αB-crystallin/sHSP protects cytochrome c and mitochondrial function against oxidative stress in lens and retinal cells. Rebecca McGreal, Wanda Lee Kantorow, Daniel Chauss, Jianning Wei, Lisa Brennan and **Marc Kantorow**. Biochim Biophys Acta (BBA). 2012. 1820(7):921-30.

15. Oxidative stress defense and repair systems of the ocular lens. Lisa Brennan, Rebecca McGreal and **Marc Kantorow.** Frontiers in Bioscience (Elite Ed). 2012. 4:141-55.

16. Mutations in FYCO1 cause autosomal-recessive congenital cataracts. Chen J, Ma Z, Jiao X, Fariss R, **Kantorow** WL, **Kantorow** M, Pras E, Frydman M, Pras E, Riazuddin S, Riazuddin SA, Hejtmancik JF. American Journal of Human Genetics 2011 Jun 10;88(6):827-38. doi: 10.1016/j.ajhg.2011.05.008

17. TXNL6 Is A Novel Oxidative Stress-Induced Reducing System for Methionine Sulfoxide Reductase A Repair of alpha-Crystallin and Cytochrome c in the Eye Lens. Lisa Brennan, Wanda Lee, and **Marc Kantorow**. PloS One. 2010. 5;11.

18. Efficient generator of lens progenitor cells and lentoid bodies from human embryonic stem cells in chemically defined conditions. Chunbo Yang, Ying Yang, Lisa Brennan, Eric Bouhissira, **Marc Kantorow** and Ales Cvekl. FASEB J 2010. 24:3274-83.

19. Methionine sulfoxide reductase A (MsrA) restores alpha-crystallin chaperone activity lost upon methionine oxidation. Lisa Brennan, Wanda Lee, Frank Giblin, Larry David and **Marc Kantorow**. Biochim Biophys Acta., 2009. 1790:1665-72.

20. Deletion of mouse MsrA results in HBO-induced cataract: MsrA repairs mitochondrial cytochrome c. Lisa Brennan, Wanda Lee, Tracy Cowell, Frank Giblin, and **Marc Kantorow**. Mol. Vis., 2009. 15:985-99.

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INVITED PRESENTATIONS

2020 XXIV International Congress for Eye Research: Title - **Bioinformatics approaches to optical development of the lens. Marc Kantorow,** Joshua Disatham and Lisa Brennan. Buenos Aires, Argentina. Oct 2020. *Meeting Canceled*

2018 **International Conference on Lens Research.** "Hypoxia Regulation of lens remodeling" **Marc Kantorow,** Joshua Disatham and Lisa Brennan, Kona Hawaii, December 2018.

2018 **XXII International Conference on Eye Research**, Tokyo, Japan, Oxidative Stress Regulation of Organelle Function by α-Crystallin

2017 **International Conference on Lens Research,** Kona Hawaii, Hypoxia controls lens fiber cell remodeling by regulating the elimination of mitochondria, endoplasmic reticulum and Golgi apparatus through HIF1a-directed transcriptional regulation of BNIP3L expression.

2016 **Oakland Eye Institute, Oakland University, Rochester MI** Redox control of lens protection and remodeling.

2016 **XXII International Conference on Eye Research**, Tokyo, Japan, Oxidative Stress Regulation of Organelle Function by α-Crystallin

2016 **International Conference on Lens Research,** Kona Hawaii, alpha-crystallin prevents mitochondrial ROS release and apoptosis by protecting cytochrome c.

2015 **UCLA Medical School, Jules Stein Eye Institute**, Los Angeles, CA, Mitochondrial Biology of the Eye Lens

2015 **Thomas Jefferson University Annual Research Symposium.** Mitochondrial Regulation and Protection in the Eye.

2015 **Association for Research in Vision and Ophthalmology**, Denver, CO, BNIP3L mediates mitochondrial clearance in the developing eye lens

2014 **XXI International Conference on Eye Research**, San Francisco, USA Integrin αVβ5-mediated phagocytosis by lens epithelial cells increases cell survival under apoptotic conditions

2014 **Association of Anatomy, Cell Biology and Neurobiology Chairpersons Meeing, San Juan Puerto Rico** Mitochondrial Dynamics in the eye lens.

2014 **Association for Research in Vision and Ophthalmology**, Special Symposium on Autophagy in the Eye: Mitophagy in lens protection and development, Orlando, FL

2013 **Association for Research in Vision and Ophthalmology**, alpha crystallin regulation of mitochondrial function, Seattle, WA

2013 **Association of Anatomy and Cell Biology National Conference AACBNC** Mitochondrial biology through the ocular eye lens, San Juan Puerto Rico

2013 **Mitochondria in Ocular Health and Disease Symposium,** Mitochondria in Ocular Health and Disease Jefferson University, Philadelphia, PA

2012 **XX International Conference on Eye Research**, The role of autophagy in lens maintenance, protection and differentiation. Berlin, Germany

2012 **Association for Research in Vision and Ophthalmology**, Alpha crystallin protects cytochrome c against oxidative stress inactivation, Ft. Lauderdale, FL

2011 **University of Nebraska (Lincoln),** Anti-oxidant systems of the eye lens, Lincoln, Nebraska

2011 **Association for Research in Vision and Ophthalmology**, TXNL6 is a novel reducing system for repair of alpha-crystallin by methionine sulfoxide reductase, Ft. Lauderdale, FL

2011 **Laboratory of Molecular and Developmental Biology Symposium, National Eye Institute, NIH.** Role of repair and antioxidant enzymes in lens biology and cataract formation

2010 **European Association for Vision and Eye Research,** MsrA and prevention of oxidative-stress induced lens cell death, Crete Greece

2010 **XIX International Conference on Eye Research**, MsRA repairs methionine oxidized α-crystallin and cytochrome c maintain and regulating chaperone activity and apoptosis in lens cells. Montreal, Canada

2010 **Association for Research in Vision and Ophthalmology**, Special symposium on lens crystallins: Regulation and repair of alpha-crystallin/sHSP by methionine sulfoxide reductase. Ft. Lauderdale, FL

2008 **XVIII International Conference on Eye Research**, MsRA repairs lens cytochrome c and α-crystallin. Beijing, China

2008 **Oregon Health and Science University**, MsRA repairs lens cytochrome c and α-crystallin. Portland, Oregon

2008 **Association for Research in Vision and Ophthalmology**, Global Analysis of lens cataract-associated gene expression differences in human donors, Ft. Lauderdale, FL

2006 **XVII International Conference on Eye Research**, Global analysis of cataract-associated gene expression changes, Buenos Aires, Argentina

2005 **Association for Research in Vision and Ophthalmolog**y, Special symposium: Global gene expression and bioinformatics methods in ocular research Global gene expression analysis in the ocular lens, Ft. Lauderdale, FL

2005 **University of Miami, Bascolm Palmer Eye Institute**, Methionine Sulfoxide Reductases (Msrs) are Key Repair Enzymes. Miami, Florida

2004 **Columbia University**, Gene-expression and age-related human cataract. New York

2004 **XVI International Conference on Eye Research**. Identification and localization of lens methionine sulfoxide reductases and their role in oxidative stress protection, Sydney, Australia

2004 **Mayo Clinic**, The Genetics of age-related human cataract. Rochester, MI

2003 **Oakland University**, **Oakland Eye Institute**, Global gene expression in age-related human cataract. Oakland, Michigan

2003 **The Abe Spector Honorary Symposium on Lens Research,** Differential display age-related gene expression changes in the eye lens. Long Island, NY

2003 **European Association for Vision and Eye Research Conference**, Increased expression of osteonectin in age-related human cataract, Alicante,Spain

2002 **XV International Conference on Eye Research**, The role of metallothioneins in the maintenance of lens transparency. Geneva, Switzerland

2002 **Kansas State University**, Department of Biology. Lens transparency and gene expression. Manhattan, KS

2002 **Ashland College, Department of Biology**. Global analysis of gene expression. Ashland, Ohio

2001 **National Eye Institute, NIH**,-Gene Expression and age-related cataract

2001 **UCLA Medical School, Jules Stein Eye Institute,** Differential Induction of Human Lens Metallothioneins. Los Angeles, CA

2001 **Johns Hopkins University School of Medicine, Department of Ophthalmology**, Gene Expression and Human Cataract, Baltimore MD

2000 **West Virginia University, Department of Ophthalmology,** Differential Expression of Cataract responsive Genes. Morgantown, WV

1999 **West Virginia University, College of Arts and Sciences Homecoming Lecture,** Journey Into the New Mellenium: Understanding Genes and Genomes Morgantown, WV

1999 **Einstein College of Medicine**, **Department of Ophthalmology,** Differential Display and Gene Expression in Cataractogenesis. Bronx, NY

1999 **West Virginia University**, **Department of Biochemistry**, Techniques in Gene Expression Analysis. Morgantown, WV

1999 **National Eye Institute, NIH**, Differential Display analysis of cataract responsive genes.

ABSTRACTS
(* platform)

1. "Hypoxia regulates lens fiber cell differentiation to form the mature transparent eye lens" Lisa A. Brennan, Joshua Disatham and **Marc Kantorow**. Accepted for paper presentation at the Association for Research in Vision and Ophthalmology (ARVO) meeting Baltimore, MD, May 2020. *Meeting cancelled.*

2. "Hypoxia regulation of lens structure and function" Lisa Brennan, Joshua Disatham, **Marc Kantorow**. Paper " XXIV International Congress for Eye Research**,** Buenos Aires, Argentina. Oct 2020 *Meeting Canceled*

3. "Genome-wide chromatin mapping and transcriptome analysis reveals chromatin regulation as a novel mechanism for controlling gene expression during lens differentiation". *Joshua Disatham[1], D. Chauss[2], R. Gheyas[3], L. A. Brennan[1], D. Blanco[1], L. Daley[1], A. Menko[3],* ***M. Kantorow[1]****.* [1]Charles E**.** Schmidt College of

Medicine, Florida Atlantic University; [2]National Institute of Health NIDDK; [3]Thomas Jefferson University. Poster presentation by Joshua Disatham at the Association for Research in Vision and Ophthalmology (ARVO) meeting Vancouver, May 2019.

4. *Chromatin Regulation of lens gene expression and differentiation". Joshua Disatham, Lisa Brennan, A. Sue Menko, **Marc kantorow,** Association for Research in Vision and Ophthalmology "Vancouver CA, May 2019

5. *"Hypoxia regulation of lens structure and function". Lisa Brennan, Joshua Disatham, **Marc Kantorow**. Sept 2018. XXIII International Congress for Eye Research**.** Belfast, UK.

6. *"Hypoxia Regulation of lens remodeling" **Marc Kantorow,** Joshua Disatham and Lisa Brennan, International Conference on Lens Research. Kona Hawaii, December 2018.

7. *Hypoxia controls lens fiber cell remodeling by regulating the elimination of mitochondria, endoplasmic reticulum and Golgi apparatus through HIF1-directed transcriptional regulation of BNIP3L expression. **Marc Kantorow,** Joshua Disatham, Rebecca McGreal, Caitlin Logan, Sue Menko, Ales Cvekl and Lisa Brennan, Conference on Lens Research 2017, Kona Hawaii

8. *Elimination of Mitochondria, Endoplasmic Reticulum and Golgi during lens cell differentiation to form the lens organelle-free zone requires the mitophagy protein BNIP3L and is regulated by the transcription factor HIF1α. Lisa Brennan, Rebecca McGreal, Caitlin Logan, Ales Cvekl, A. Sue Menko, and **Marc Kantorow**. Association for Research in Vision and Ophthalmology 2017, Baltimore, MD.

9. A role for the PI3K regulator PIK3IP1 in signaling the autophagy-dependent removal of organelles during lens development. Rifah Gheyas, Lisa A. Brennan , **Marc Kantorow**, A Sue Menko. Association for Research in Vision and Ophthalmology 2017, Baltimore, MD.

10. *α-crystallin prevents mitochondrial ROS release and apoptosis by protecting cytochrome c. **Marc Kantorow** and Lisa Brennan International Conference on Lens Research 2016, Kona Hawaii

11. *Oxidative Stress Regulation of Organelle Function by α-Crystallin. Marc Kantorow, Lisa Brennan, Kyran Bharath, Josef Khoury. XXII International Conference on Eye Research, 2016, Tokyo, Japan

12. *Mitochondrial and Nuclear Translocation by α-Crystallin and Protection of Lens Cells Against UV-light and Oxidative Exposures. Lisa Brennan, Rebecca McGreal, Dan Chauss, Josef Khoury, Larry David, Sue Menko and **Marc**

Kantorow. Association for Research in Vision and Ophthalmology 2016, Seattle, WA.

13. *BNIP3L/Nix is required for mitochondrial elimination through mitophagy and the subsequent elimination of endoplasmic reticulum during the lens fiber cell differentiation program. Lisa Brennan, Karem Aktan, Suren Rajakaruna, Rebecca McGreal, Daniel Chauss, Ales Cvekl, A. Sue Menko, **Marc Kantorow**. Association for Research in Vision and Ophthalmology 2015, Denver, CO.

14. Parkin-directed mitophagy is required for lens cell survival upon exposure to cataract-associated environmental insults. **Marc Kantorow**, Karem Aktan , Daniel Chauss , Lisa A. Brennan. Association for Research in Vision and Ophthalmology 2015, Denver, CO.

15. *Integrin αVβ5-mediated phagocytosis by lens epithelial cells increases cell survival under apoptotic condition. **Marc Kantorow**, Daniel Chauss, Lisa Brennan. XXI International Congress for Eye research, San Francisco, July 21st 2014.

16. *Parkin-directed mitophagy governs lens epithelial cell mitochondrial degradation under oxidative stress conditions. Lisa Brennan, Daniel Chauss, **Marc Kantorow**. XXI International Congress for Eye research, San Francisco, July 21st 2014.

17. *Mitochondrial dynamics in the eye lens from development through cataract formation. **Marc Kantorow** in Minisymposium: Autophagy and Proteolysis in Ocular Health and Disease. Wed 7th May 2014. Association for Research in Vision and Ophthalmology 2014, Orlando, FL

18. *Parkin regulates mitochondrial quality control in oxidative stress-treated lens epithelial cells through mitophagy. Lisa A. Brennan, Daniel Chauss, Subhasree Basu, A S. Menko and **Marc Kantorow**. Association for Research in Vision and Ophthalmology 2014, Orlando, FL

19. *Lens epithelial cells use phagocytosis as a mechanism to remove apoptotic cellular debris. Daniel Chauss, Lisa A. Brennan, Bettina Teng and **Marc Kantorow.** Association for Research in Vision and Ophthalmology 2014, Orlando, FL

20. Chaperone-independent mitochondrial translocation, oxidative stress protection and prevention of apoptosis by αB-crystallin. Bettina Teng, Rebecca S. McGreal, Daniel Chauss, Lisa A. Brennan and Marc Kantorow. Association for Research in Vision and Ophthalmology 2014, Orlando, FL

21. Autophagy pathways of the eye lens and their potential functions in lens protection and differentiation. **Marc Kantorow,** Dan Chauss, J. Fielding Hejtmancik and Lisa Brennan.

22. *The role of autophagy in lens maintenance, protection and differentiation. **M. Kantorow**, L.A. Brennan, W. Lee Kantorow, D. Chauss, R.S. McGreal, A. Riazuddin, A. Cvekl, J.F. Hejtmancik. XX International Congress for Eye research, Berlin, July 2012.

23. *Repair of α-crystallin chaperone activity by MsrA and protection of lens mitochondria. L. Brennan, R.S. McGreal, W. Lee Kantorow, D. Chauss, **M. Kantorow.** XX International Congress for Eye research, Berlin, July 2012.

24. FYCO1 implicated in the pathogenicity of autosomal recessive congenital cataracts. S.A. Riazuddin, J. Chen, Z. Ma, X. Jiao, R. Fariss, W.L. Kantorow, **M. Kantorow**, E. Pras, M. Frydman, E. Pras, S. Riazuddin, J.F. Hejtmancik. XX International Congress for Eye research, Berlin, July 2012.

25. The role of FYCO1 in lens and retinal autophagy. W. Lee Kantorow, L. Brennan, D. Chauss, L. Walsh, S. He, A. Cvekl, S.A. Riazuddin, J.F. Hejtmancik, **M. Kantorow**. XX International Congress for Eye research, Berlin, July 2012.

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27. FYCO1 mutations and function in autosomal recessive congenital cataract. James F. Hejtmancik, Jianjun Chen, Zhiwei Ma, Xiaodong Jiao, Wanda L. Kantorow, Eran Pras, Moshe Frydman, Sheikh Riazuddin, **Marc Kantorow**, S. Amer Riazuddin. Association for Research in Vision and Ophthalmology 2012, Ft. Lauderdale, FL

28. *The role of FYCO1 and autophagy in lens defense, differentiation and cataract formation. Marc Kantorow, Wanda Lee Kantorow, Lisa A. Brennan, Daniel Chauss, Amer Riazuddin, Ales Cvekl, James F. Hejtmancik. Association for Research in Vision and Ophthalmology 2012, Ft. Lauderdale, FL.

29. αB-crystallin protects lens and retinal cell mitochondrial function under oxidative stress conditions. Rebecca S. McGreal, Daniel C. Chauss, Wanda Lee, Jianning Wei, Lisa A. Brennan, **Marc Kantorow**. Association for Research in Vision and Ophthalmology 2012, Ft. Lauderdale, FL

30. The Characterization of FYCO1 Expression and Function in Lens and Retinal Cells. Wanda Lee, Lisa A. Brennan, Daniel Chauss, Shuying He, Amer Riazuddin, Ales Cvekl, James F. Hejtmancik, **Marc Kantorow**. Association for Research in Vision and Ophthalmology 2012, Ft. Lauderdale, FL

31. *α-crystallin Protects against apoptosis in lens cells by directly protecting cytochrome c against methionine oxidation. Rebecca S. McGreal, Lisa A. Brennan, Wanda Lee, Daniel Chauss, **Marc Kantorow**. Association for Research in Vision and Ophthalmology 2011, Ft. Lauderdale, FL

32. TXNL6 is a novel oxidative stress-inducible activator of MsrA repair in lens and retina. Wanda Lee, Lisa A. Brennan, **Marc Kantorow**. Association for Research in Vision and Ophthalmology 2011, Ft. Lauderdale, FL

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34. Thioredoxin-like protein 6 (TXNL6) is an H_2O_2 inducible reducing system for methionine sulfoxide reductase A (MsrA) repair of oxidized proteins whose expression increases upon aging in the human lens. W. Lee, L. Brennan, R. McGreal, and **M. Kantorow**. EVER 2010. Crete, Greece.

35. *Cytochrome c and Alpha Crystallin are repaired by MsrA which can serve to protect lens mitochondria and play a role in apoptosis. **M. Kantorow.** XIX International Conference on Eye Research. 2010. Montreal, Canada

36. Alpha crystallin and cytochrome c form mitochondrial complexes with MsrA in lens and heart cells. R. McGreal, W.Lee, L. Brennan and **M.Kantorow**. XIX International Conference on Eye Research. 2010. Montreal, Canada

37. TXNL6 is expressed by the aging human lens and can serve as a lens reducing system for MsrA. W.Lee, L. Brennan, R. McGreal, and **M. Kantorow** XIX International Conference on Eye Research. 2010. Montreal, Canada

38. * Repair of α-Crystallin Chaperone Activity by MsrA: Implications for α-Crystallin Function in the Lens and Other Tissues. **M. Kantorow** 2010. Association for Research in Vision and Ophthalmology. Ft. Lauderdale, Florida.

39. * TXNL6 (RdCVF) is a Novel Lens Reducing System Required for MsrA Repair of α-Crystallin and Cytochrome c. L.A. Brennan[1], W. Lee[1], R. McGreal[1], L. David[2], **M. Kantorow**[1] 2010. Association for Research in Vision and Ophthalmology. Ft. Lauderdale, Florida.

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41. Expression and Localization of a Novel Lens Reducing System Called Thioredoxin-Like Protein 6 (TXNL6) in Human Lens and Retina. W. Lee, M. Demos, R. McGreal, L. Brennan, **M. Kantorow**. 2010. Association for Research in Vision and Ophthalmology. Ft. Lauderdale, Florida.

42. * Restoration of Cytochrome c and α Crystallin Function by Msra Repair Suggests an Important Role for Methionine Oxidation in Lens Epithelium Function and Cataract. L.A. Brennan[1], W. Lee[1], M. Markosian[1], M. Demos[1], F. Giblin[2], **M. Kantorow[1]**. 2009. Association for Research in Vision and Ophthalmology. Ft. Lauderdale, Florida.

43. MsrA repair and restoration of alpha-crystallin function in the lens. L. Brennan, W. Lee, and M. Kantorow. XVIII International Conference on Eye Research, 2008. Beijing, China.

44. Methionine sulfoxide reductase A is a lens redox sensor acting through Cyt c repair. W. Lee, L. Brennan, A. Sur, and **M. Kantorow**. XVIII International Conference on Eye Research, 2008. Beijing, China.

45. *MsrA repair of Cytochrome c and alpha crystallin function in human lens epithelium and cataract. **M.Kantorow**, L.Brennan, and W.Lee. XVIII International Conference on Eye Research, 2008. Beijing, China.

46. Molecular Characterization of a Sorsby Fundus Dystrophy (SFD) Mutants of TIMP-3. A. Hamze, W. Lee, **M. Kantorow**, K. Brew. 2007 Association for Research in Vision and Ophthalmology. Ft. Lauderdale, Florida.

47. *Critical Role of MsrA in Repair of Oxidized Cytochrome c for Mitochondrial Function and Apoptosis. L.A. Brennan, W. Lee, A. Sur, T. Cowell, F. Giblin, and **M. Kantorow**. 2007. Association for Research in Vision and Ophthalmology. Ft. Lauderdale, Florida.

48. *Sunday Symposium as Co-organizer and speaker. The Role of Mitochondria in Oxidative Eye Disease. **M. Kantorow** 2007. Association for Research in Vision and Ophthalmology. Ft. Lauderdale, Florida.

49. *MsrA and Peroxiredoxin 3 are required for mitochondrial function in human lens cells and protects lens cells against oxidative stress damage. **M. Kantorow** and W. Lee**.** XVII International Conference on Eye Research, 2006. Buenos Aires, Argentina.

50. *Peroxiredoxins I-VI are induced by H2O2 in human lens cells and mitochondrial-specific PRX3 protects lens cells against oxidative stress damage. W.Lee, M.A. Marchetti, T.M. Wells, E.Karlin, C.DeLeo, **M.Kantorow**. Investigative

Ophthalmology and Visual Science 2006. Association for Research in Vision and Ophthalmology. Ft. Lauderdale, Florida.

51. MsrA is required for mitochondrial function in human lens cells. M.Marchetti, T.L. Cowell, T.M. Wells, **M.Kantorow**. Investigative Ophthalmology and Visual Science 2006. Association for Research in Vision and Ophthalmology. Ft. Lauderdale, Florida.

52. *Three Distinct Human Lens Methionine Sulfoxide B Genes Are Important for Lens Cell Viability and Provide Distinct Levels of Oxidative Stress Resistance. M. Marchetti, G.O. Pizarro, D. Sagher, C. DeAmicis, W. Lee, J.F. Hejtmancik, H. Weissbach, and **M. Kantorow**. Investigative Ophthalmology and Visual Science 2005. Association for Research in Vision and Ophthalmology. Ft. Lauderdale, Florida.

53. *Expression and Localization of Methionine Sulfoxide Reductase A in the Retina. N.V. Gordiyenko, J.W. Lee, M. Marchetti, N. Tserentsoodol, R.N. Fariss, H. Weissbach, **M. Kantorow**, and I.R. Rodriguez. Investigative Ophthalmology and Visual Science 2005. Association for Research in Vision and Ophthalmology. Ft. Lauderdale, Florida.

54. * Identification and localization of methionine sulfoxide reductase A in human lens and its direct protection of lens cells against oxidative stress damage. **Marc Kantorow,** John R. Hawse, Jer Kuzak, Gresin O. Pizarro, Venkat Reddy, J. Fielding Hejtmancik International Conference on Eye Research, 2004, Sydney, Austrailia.

55. *Identification and localization of methionine sulfoxide reductase A in human lens and its direct protection of lens cells against oxidative stress damage. **Marc Kantorow,** John R. Hawse, Tracy L. Cowell, Sonia Habib, Gresin O. Pizarro, Venkat Reddy, J. Fielding Hejtmancik. Investigative Ophthalmology and Visual Science 2004 Association for Research in Vision and Ophthalmology. Ft. Lauderdale, Florida.

56. *Genomic and bioinformatics identification of human lens cell differentiation pathways. John R. Hawse, Candy DeAmicus-Tress, Tracy L. Cowell and **Marc Kantorow.** Investigative Ophthalmology and Visual Science 2004 Association for Research in Vision and Ophthalmology. Ft. Lauderdale, Florida.

57. The role of lens metallothioineins in defending against cadmium and oxidative stress. Vanita A. Padgankar, John R. Hawse, Victor R. Leverenz, S.E. Pellica, Frank Giblin and **Marc Kantorow.** Investigative Ophthalmology and Visual Science 2004 Association for Research in Vision and Ophthalmology. Ft. Lauderdale, Florida.

58. Regional variation in sensitivity of photoreceptors to hyperbaric oxygen treatment in normal and metallothionein-knockout mouse retinas. Michelle Nachman-Clewner, Ling Dang, Frank Giblin, JB Runco, **Marc Kantorow** and Jan Blanks. Investigative Ophthalmology and Visual Science 2004 Association for Research in Vision and Ophthalmology. Ft. Lauderdale, Florida.

59. *Identification of cataract-specific genes and their function in lens maintenance and cataract. **Marc Kantorow,** John Hawse, Quinglin Huang, Nancy Sheets, Doug Hosack, Richard Lempicki, J.Fielding Hejtmancik, Joseph Horwitz. EVER Meeting, Alicante, Spain, 2003

60. *Identification and functional clustering of global gene expression differences between age-related cataract and clear human lenses. John Hawse, Quinglin Huang, Nancy Sheets, Doug Hosack, Richard Lempicki, J.Fielding Hejtmancik, Joseph Horwitz and **Marc Kantorow.** Investigative Ophthalmology and Visual Science 2003 Association for Research in Vision and Ophthalmology. Ft. Lauderdale, Florida.

61. ***Marc Kantorow,** John R. Hawse and Venkat Reddy. Metal-activation and protection by stress-specific genes in the human lens. XV International Conference on Eye Research, Geneva Switzerland. 2002 Experimental Eye Research vol. 72 pg 85.

62. John R. Hawse, Weiyan Zhang, Quingling Huang, Nancy L. Sheets, Kevin M. Miller, Joseph Horwitz and **Marc Kantorow.** Decreased Expression of ribosomal proteins in age-related human cataract. Investigative Ophthalmology and Visual Science 2002 Association for Research in Vision and Ophthalmology. Ft. Lauderdale, Florida.

63. ***Marc Kantorow,** Nancy Sheets, J. Fielding Hejtmancik and Ales Cvekl. Up-regulation and stress induction of ARK tyrosine kinase in the Emory Mouse cataract. Investigative Ophthalmology and Visual Science 2002 Association for Research in Vision and Ophthalmology. Ft. Lauderdale, Florida.

64. Sumanto Goswami, Nancy L. Sheets, Bharesh Chauhan, J. Zavadil, Venkat Reddy, E. Bottinger, **Marc Kantorow** and Ales Cvekl. Elucidating the range of oxidative stress pathways in human lens epithelial cells: A cDNA microarray study. Investigative Ophthalmology and Visual Science 2002 Association for Research in Vision and Ophthalmology. Ft. Lauderdale, Florida.

65. *Ales Cvekl, Sumanto Goswami, Nancy Sheets, Bharesh Chauhan, Venkat Reddy, Deborah Carper and **Marc Kantorow**. Hydrogen peroxide induced oxidative stress response in human lens epithelial cells: a cDNA microarray study. Investigative Ophthalmology and Visual Science 2002 Association for Research in Vision and Ophthalmology. Ft. Lauderdale, Florida.

66. Mason Posner, S. Slow, Stephanie Runkle, Julie Hill, **Marc Kantorow** and Joseph Horwitz. Sequencing, tissue-specific expression and chaperone activity of zebrafish α-crystallin. Investigative Ophthalmology and Visual Science 2002 Association for Research in Vision and Ophthalmology. Ft. Lauderdale, Florida

67. John Hawse, Venkat Reddy and **Marc Kantorow.** The role of metallothioneins in lens maintenance and cataract. Cooperative cataract research group meeting. November 3, 2001, Kona Hawaii

68. ***Marc Kantorow**, Weiyan Zhang, Quing:Ling Huang, Joseph Horwitz. Decreased expression of ribosomal proteins in age-related human cataract. Cooperative cataract research group meeting. November 3, 2001, Kona Hawaii

69. *Ales Cvekl, Sumanto Goswami, Nancy Sheets, Bharesh Chauhan, Venkat Reddy, Deborah Carper and **Marc Kantorow**. Hydrogen peroxide induced oxidative stress response in human lens epithelial cells: a cDNA microarray study. Cooperative cataract research group meeting. November 3, 2001, Kona Hawaii.

70. J.R. Hawse, B.P. Opperman, W. Zhang, N. Sheets and **M. Kantorow**. Six isoforms of metallothionein are present in adult human lens epithelium. Investigative Ophthalmology and Visual Science 2001: **42,** 549 Association for Research in Vision and Ophthalmology. Ft. Lauderdale, Florida.

71. J. Hill, **M. Kantorow**, J. Horwitz, M. Posner. Differential Expression and chaperone function of the small heat-shock protein alpha-crystallin in the zebrafish. Joint annual meeting of ASIH and AES. 2001 State College, PA.

72. B.P. Opperman, J. Hawse, W. Zhang, N. Sheets, V.N. Reddy, **M. Kantorow**. Metallothionein IIa is highly induced by toxic metals in cultured human lens epithelial cells. Investigative Ophthalmology and Visual Science 2001: **42,** S673 Association for Research in Vision and Ophthalmology. Ft. Lauderdale, Florida.

73. W. Zhang, K. Cveklova, B. Opperman, **M. Kantorow**. Quantitation of PAX-6 and PAX-6(5a) transcript levels in adult human lens, cornea and retina. Investigative Ophthalmology and Visual Science 2001: **42,** S421 Association for Research in Vision and Ophthalmology. Ft. Lauderdale, Florida.

74. A. Cvekl, B.K. Chauhan, W Zhang, S. Goswami, **M. Kantorow**, K. Cveklova. Identification of genes regulated by PAX6 in the mouse lens and embryo. Investigative Ophthalmology and Visual Science 2001: **42,** S422 Association for Research in Vision and Ophthalmology. Ft. Lauderdale, Florida.

75. B.P. Oppermann, K.S. Magabo and **M. Kantorow**. Specific expression of metallothionein isoforms in normal human lens. Investigative Ophthalmology and

Visual Science 2000: **41,** S629 Association for Research in Vision and Ophthalmology. Ft. Lauderdale, Florida.

76. I.R. Rodriquez, E.F. Moreira, E.H. Sage and **M. Kantorow**. Localization of SPARC to the outer plexiform layer of the monkey retina and secretion by the macular RPE. Investigative Ophthalmology and Visual Science 2000: **41,** S613 Association for Research in Vision and Ophthalmology. Ft. Lauderdale, Florida.

77. ***Marc Kantorow,** Quing-Ling Wang, Kevin Miller, Joseph Horwitz and Deborah Carper. Differentially Expressed Genes in Human Age-related Cataract. US-Japan Cooperative Cataract Research Conference. 1999 Kona, Hawaii.

78. *Deborah Carper, **Marc Kantorow**, Frank J. Giblin, N. Ibaraki, L-R Lin, V. N. Ready and Abraham Spector. Differential Display Analysis of Oxidative Stress Models of Cataract. US-Japan Cooperative Cataract Research Conference. 1999 Kona, Hawaii.

79. ***Marc Kantorow**, E. Helene Sage, Ernesto Moreira and Ignacio Rodriquez. Increased Expression of SPARC in Cataractous Human Lenses and Monkey Macula RPE. . Investigative Ophthalmology and Visual Science 1999: **40,** S522 Association for Research in Vision and Ophthalmology. Ft. Lauderdale, Florida.

80. **Marc Kantorow**, W. Todd Kays, Joseph Horwitz, Qingling Huang, Jennifer Sun, Joram Piatigorsky and Deborah Carper. Differentially-expressed genes between normal and cataractous human lens epithelia. Investigative Ophthalmology and Visual Science 1998: **39,** S522 Association for Research in Vision and Ophthalmology. Ft. Lauderdale, Florida.

81. C.Y. Gao, **M. Kantorow**, J. Piatigorsky and P. Zelenka. BetaB2-crystallin is an in vitro substrate for CDK5-associated kinase activity in rat lens fiber cells. Investigative Ophthalmology and Visual Science 1998: **39,** S788 Association for Research in Vision and Ophthalmology. Ft. Lauderdale, Florida.

82. Y.S. Xu, **M. Kantorow** and J. Piatigorsky. Isolation and characterization of a corneal protein in zebrafish. Investigative Ophthalmology and Visual Science 1998: **39,** S1039 Association for Research in Vision and Ophthalmology. Ft. Lauderdale, Florida.

83. ***Marc Kantorow**, Joseph Horwitz. Yuri Sergeev, J. Fielding Hejtmancik and J. Piatigorsky. Extralenticular expression, cAMP-dependent kinase phosphorylation and autophosphorylation of BetaB2-crystallin. Investigative Ophthalmology and Visual Science 1997: **38,** S520 Association for Research in Vision and Ophthalmology. Ft. Lauderdale, Florida.

84. ***M. Kantorow**, A. Cvekl and J. Piatigorsky. Regulation of PAX-6 gene expression in the lens. Investigative Ophthalmology and Visual Science 1996:

37, S987 Association for Research in Vision and Ophthalmology. Sarasota, Florida.

85. ***M. Kantorow**, J. Horwitz, M.A.M. van Boekel, W. W. deJong and J. Piatigorsky. Tetramerization enhances autophosphorylation of lens αA-crystallin. Investigative Ophthalmology and Visual Science 1995: **36,** S387 Association for Research in Vision and Ophthalmology. Sarasota, Florida.

86. J.G. Ilagan, C.M. Sax, A. Cvekl, **M. Kantorow** and J. Piatigorsky. Members of the AP1 family interact with a downstream element PE2 in the mouse αA-crystallin promoter. Investigative Ophthalmology and Visual Science 1995: **36,** S882 Association for Research in Vision and Ophthalmology. Sarasota, Florida.

87. ***M. Kantorow** and J. Piatigorsky. A-crystallin/small heat shock protein has autokinase activity. Investigative Ophthalmology and Visual Science 1994: **35,** S1904 Association for Research in Vision and Ophthalmology. Sarasota, Florida.

88. C.M. Sax, **M. Kantorow**, A. Cvekl, R. Gopal-Srivastava, J.G. Ilagan and J. Piatigorsky. Functional and protein binding analysis of the mouse αA-crystallin PE1 regulatory region Investigative Ophthalmology and Visual Science 1994: **35,** S1706 Association for Research in Vision and Ophthalmology. Sarasota, Florida.

89. ***Marc Kantorow** and Joram Piatigorsky. Alpha-crystallin is an autokinase. Cooperative Cataract Research Group Meeting. 1994. Washington, D.C.

90. Ales Cvekl, **Marc Kantorow**, John F. Klement, Christina M. Sax and Joram Piatigorsky. Analysis of cis-acting elements and alpha-crystallin genes. J. Cell. Biochem. 1993: **17A,** 191. Keystone Symposium: Fundamental Mechanisms of Transcription. Copper Mountain, Colorado.

91. **Marc Kantorow**, Kevin Becker, Christina M. Sax, Keiko Ozato and Joram Piatigorsky. Binding of tissue-specific forms of αA-CRYBP1 to its regulatory sequence in the mouse αA-crystallin gene: double label immunoblotting of UV-crosslinked complexes. 1993 NIH Research Festival. Bethesda, MD.

92. **Marc Kantorow**, Ales Cvekl, Christina M. Sax and Joram Piatigorsky. In vitro and in vivo comparisons of mouse αA-crystallin footprints reveal differences in factor binding between lens and fibroblast cell lines. J. Cell. Biochem. 1992: **16E,** 181. Keystone Symposium: Fundamental Mechanisms of Transcription. Copper Mountain, Colorado.

93. **Marc Kantorow**, Ales Cvekl, Christina M. Sax and Joram Piatigorsky. Protein-DNA interactions of the mouse αA-crystallin promoter. 1992 NIH Research Festival. Bethesda, MD.

94. Joram Piatigorsky, **Marc Kantorow**, Ales Cvekl, Christina M. Sax, Rashmi Gopal-Srivastava and Peter Frederiske. Molecular Analysis of αA- and αB-crystallin gene expression in lens and non-lens cells. 1992 International Society for Eye Research. Stressa, Italy.

95. Joram Piatigorsky, Ales Cvekl, Andrew Cuthbertson, Cynthia Jaworsky**, Marc Kantorow**, H. John Roth, Christina M. Sax, Rashmi Gopal-Srivastava and Stanislav Tomarev. Molecular Biology of crystallins and enzyme crystallins. 1991 Cooperative Cataract Research Group Meeting. Honolulu, Hawaii.

96. **Marc Kantorow** and Keith McKenney. Site-Specific mutagenesis of the cAMP receptor protein by lac-Z fusion. 1988 Cold Spring Harbor Symposia: The molecular genetics of Bacteria and their Phages. Cold Spring Harbor, New York.

LABORATORY AND RESEARCH MENTORING

Post-doctoral Fellows and Research Professors

Lisa Brennan PhD	Associate Research Professor-2007-present
Yoni Hertz PhD	Assistant Research Professor 2014-2015
Wanda Lee PhD	Senior Post-doctoral Fellow 2007-2009
Maria Marchetti PhD	Assistant Research Professor-2004- 2006
Weiyan Zhang MD	Post-doctoral Fellow-1999-2001

PhD and MS Students Directed and Chaired

Rachel Zabizhin	MS Thesis Student 2020-present
Joshua Disatham	PhD Thesis Student 2017-present
David Blanco	MS Thesis Student 2018-2020
Angie Posada	MS Thesis Student Graduated 2019
Patrice Cherubin	MS Thesis Student Graduated 2019
Kawther Elsouri	MS Thesis Student Graduated 2019
Daniel Chauss	PhD Thesis Student Graduated 2016
Olga Bakina	MS Thesis Student Graduated 2016
Josef Khoury	MS Thesis Student, Graduated 2015
Alex Loumakis	MS Thesis Student Graduated 2015
Karem Aktan	MS Thesis Student Graduated 2015
Lyndzie Matucci	MS Thesis Student Graduated 2013
Daniel Chauss	MS Thesis Student Graduated 2012
Rebecca McGreal	PhD Thesis Student Graduated 2012
Wanda Lee	PhD Thesis Student Graduated 2007

Tracy Cowell	MS Thesis Student Graduated 2006
John Hawse	PhD Thesis Student Graduated 2004
Brian Oppermann	MS Thesis Student Graduated 2002

Medical, BS and HS Research Students Directed

Sydney Richner	Undergraduate Research Student 2020-present
Lauren Dally	Medical Research Student 2017-2018
Evan Dillican	Undergraduate Research Student 2015-2017
Daniel Daroszewski	Medical Research Student 2014-2015
Steven Freeland	Medical Research Student 2014-2015
J.D.Wilcox	Medical Research Student 2013-2014
Victoria Gau	Medical Research Student 2012-2013
Sara Anastasis	Medical Research Student, 2012-2013
Aaron Weiss	Medical Research Student 2009-2010
Alex Diaz	Undergraduate Research Student 2009
Mary Mercer	Medical Research Student 2009-2010
Marie Barnicoat	Undergraduate Research Student 2009-2010
Emily Braun	Undergraduate Research Student 2009-2010
Charles Goldring	HS Research Student 2009-2010
Michael Markosian	Medical Research Student 2008-2009
Michael Demos	Medical Research Student 2008-2009
Sarah Wolochatiuk	HS Research Student 2007-2008
Chris DeLeo	Medical Research Student 2005-2006
Casandra Donaudy	Undergraduate Research Student 2005-2006
Valerie Peicher	HS Research Student 2005-2006
Eric Karlin	Medical Research Student 2005-2006
Marie Barthelemy	Undergraduate Research Student 2004-2005
Candy Deamicus	Undergraduate Honors Research Student 2003-2005
Gresin Pizzaro	Undergraduate Student 2003-2004
Tracy Cowell	Undergraduate Honors Research Student 2002-2003
Tressa Jones	Undergraduate Honors Research Student 2001-2003
Eric Peterson	Undergraduate Honors Research Student 2001-2003
Ben Lopez	Undergraduate Honors Research Student 2002-2003

COURSES TAUGHT

Spring	**2020**	Human Genetics 38 students (graduate)

Spring	**2019**	Human Genetics 39 students (graduate)
Spring	**2018**	Human Genetics 33 students (graduate)
Fall	**2017**	Human Genetics 36 students (graduate)
Spring	**2016**	Human Genetics 31 students (graduate)
Spring	**2015**	Human Genetics 30 students (graduate)
Fall	**2014**	Molecular Cell and Biology 25 students (graduate) Problem Based Learning 8 students (medical)
Fall	**2013**	Molecular Genetics 15 lectures 64 students (medical) Problem Based Learning 8 students (medical)
Fall	**2012**	Molecular Genetics 15 lectures 64 students (medical) Problem Based Learning 8 students (medical) Molecular Cell and Biology 25 students (graduate)
Fall	**2011**	Molecular Genetics 15 lectures 64 students (medical) Problem Based Learning 8 students (medical)
Fall	**2010**	Molecular Genetics 15 lectures 64 students (medical) Problem Based Learning 8 students (medical) Molecular Cell and Biology 25 students (graduate)
Fall	**2009**	Molecular Genetics 15 lectures 64 students (medical) Problem Based Learning 8 students (medical)
Spring	**2009**	Molecular Cell and Biology 25 students (graduate)
Fall	**2008**	Molecular Genetics 15 lectures 64 students (medical) Problem Based Learning 8 Students (medical)
Spring	**2007**	Topics in Biomedical Science 25 students (graduate)
Fall	**2006**	Molecular Genetics 30 students (medical)
Spring	**2006**	Biomedical Seminar 15 students (graduate)
Fall	**2004**	Biomedical Seminar 15 students (graduate)
Spring	**2004**	Biomedical Seminar 15 students (graduate)

Fall	**2003**	Biomedical Sciences I 25 students (graduate) Intro to Biomedicine 30 (UG)
Fall	**2002**	Biology 219 The Living Cell -lecture + 9 lab sections 223 students (UG)
Spring	**2002**	Biology 709H Scientific Writing 6 students (graduate)
Fall	**2001**	Biology 219 The Living Cell -lecture +9 lab sections 227 students (UG)
Spring	**2001**	Biology 311 Advanced Cell and Molecular Biology- 69 students (UG)
Fall	**2000**	Biology 709H Scientific Writing 13 students (graduate)
Fall	**2000**	Biology 609 Biology Graduate Seminar 15 students (Graduate)
Spring	**2000**	Biology 311 Advanced Cell and Molecular Biology 60 students (UG)
Fall	**1999**	Biology 219 The Living Cell -lecture +9 lab sections 219 students (UG)

SERVICE TO THE PROFESSION

Grant Reviews and Study Sections

2020-2025 Permanent Member NIH, Biology and Development of the Eye (BDE) Study Section.

2019 Reviewer ad hoc NIH, Biology of the Visual System Study Section

2018 Reviewer NIH, Visual Cell Biology Special Emphasis Panel

2017 Chair and Reviewer NIH, Membrane Biology and Protein Processing Special Emphasis Panel.

2017 Reviewer ad hoc NIH, Biology Visual System Study Section

2016 Reviewer ad hoc NIH, Biology Visual System Study Section

2015	Reviewer ad hoc NIH, Biology Visual System Study Section
2014	Reviewer ad hoc NIH Cell Biology Special Emphasis Panel
2014	Reviewer ad hoc NIH Biology Visual System Study Section
2013	Reviewer and Chair ad hoc NIH Vision Special Emphasis Panel
2013	Reviewer ad hoc NIH, Biology Visual System Study Section
2013	Reviewer ad hoc NIH Special Emphasis Study Section
2012	Chair and Reviewer NIH, Cell Biology Special Emphasis Study Section
2010	Reviewer ad hoc National Institutes of Health, Visual Science Special Emphasis Panel
2010	Reviewer ad hoc National Institutes of Health
2009	Reviewer ad hoc National Institutes of Health, Anterior Eye Diseases
2008	Reviewer Department of Defense, Visual Sciences
2007	Reviewer Medical Research Council
2006	Reviewer: National Science Foundation-Cell Biology Group
2004	Reviewer Welcome Trust Research Foundation (UK)
2001	Reviewer Welcome Trust Research Foundation (UK)
1999	Reviewer Veterans Administration

Editorial Board Memberships

2018-present	Editorial Board Member -Investigative Ophthalmology & Visual Science
2012-present	Editorial Board Member-Journal of Molecular Vision
2001	Guest Editorial Board Member Investigative Ophthalmology and Visual Science

1999 Guest Editorial Board Member Investigative Ophthalmology and Visual Science

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Other Service to the Profession

National Eye Institute, NIH Audacious Goals Planning Committee 2012

National Alliance For Eye and Vision Research ARVO congressional advocate 2011

Association of American Medical Colleges (AAMC) Graduate Research, Education and Training (GREAT) Group Member 2017-present

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MEETING AND CONFERENCE ORGANIZATION

2020 Session Co-organizer: Oxygen regulation of Lens Homeostasis and Development. International Conference Eye Research, Buenos Aries, Argentina (Canceled due to COVID).

2019 Session Co-organizer and Co-Chair Oxygen and Redox Regulation on lens differentiation, homeostasis and transparency. International Conference on Lens Research, Kona, Hawaii

2018 Session Co-organizer and Chair- Redox Biology of the Eye Lens, International Conference Eye Research, Belfast, Ireland.

2017 Meeting Co-organizer - International Conference on Lens Research, Kona, Hawaii

2017 Session Organizer and Co-Chair, Lens Gene Expression, International Conference on Lens Research, Kona, Hawaii

2016 Session Moderator Cataractogenesis Association for Research in Vision and Ophthalmology Seattle Washington

2015 Program Committee International Conference on Lens Research, Kona Hawaii

2015 Session Moderator Cataract Mechanisms International Conference on Lens Research, Kona Hawaii

2015 Session Moderator Fiber cell biology Association for Research in Vision and Ophthalmology Denver CO

2014 Session Moderator Death and Differentiation: Novel Pathways in the lens. XXI International Congress for Eye Research, San Francisco, CA

2013 Panel Discussion Member Mitochondria in Ocular Health and Disease Symposium Jefferson University, Philadelphia, PA

2013 Session Moderator Cataract Mechanisms Association for Research in Vision and Ophthalmology, Seattle, WA 2013

2012 Session Moderator Lens Gene Regulation Association for Research in Vision and Ophthalmology, Ft. Lauderdale, FL, 2012

2011 Session Moderator Oxidative Stress and Lens Protective/Repair Mechanisms paper session. Association for Research in Vision and Ophthalmology, Ft. Lauderdale, FL, May 5, 2011

2010 Lens Program Co-Chair International Conference on Eye Research Meeting Montreal, Canada 2010.

2010 Lens Program Chair Association for Research in Vision and Ophthalmology, Ft. Lauderdale, FL

2010 Session Moderator Association for Research in Vision and Ophthalmology, Ft. Lauderdale, FL Lens Oxidation and repair

2009 Lens Program Committee Association for Research in Vision and Ophthalmology, Ft. Lauderdale, FL

2009 Session Moderator Association for Research in Vision and Ophthalmology, Ft. Lauderdale, FL Cataract Mechanisms and Lens Defense

2008 Lens Program Committee Association for Research in Vision and Ophthalmology, Ft. Lauderdale, FL

2008 Session Moderator Association for Research in Vision and Ophthalmology, Ft. Lauderdale, FL. Oxidative Stress, Protection and Repair Mechanisms

2008 Young Investigator Session Organizer: International Conference on Eye Research Meeting Beijing, China 2008.

2007 Lens Program Committee Association for Research in Vision and Ophthalmology, Ft. Lauderdale, FL

2007 Session Organizer, Moderator and Speaker: Association for Research in Vision and Ophthalmology, Ft. Lauderdale, FL. Sunday Symposium, "The Role of Mitochondria in Oxidative Eye Disease"

2006 Session Chair International Conference on Eye Research Meeting. Buenos Aires Argentina 2006. Transcriptional Biology of the Eye

2005 Session Moderator Protection against Cell Death in the Lens. Association for Research in Vision and Ophthalmology meeting, Ft. Lauderdale FL

2004 Session Moderator Lens gene expression. European Vision and Eye Research meeting, Alicante, Spain

2004 Session moderator Lens Life and Death in the Lens Session. Association for Research in Vision and Ophthalmology Ft. Lauderdale FL

2003 Session moderator Lens Animal Models Session. Association for Research in Vision and Ophthalmology meeting, Ft. Lauderdale FL

2002 Session Moderator Oxidative Stress Session, Cooperative Cataract Meeting Kona, HI

1999 Special Interest Group Symposia Organizer, Recent Advances in Gene expression technology. Association for Research in Vision and Ophthalmology meeting, Ft. Lauderdale FL.

ACADEMIC SERVICE AND COMMITTEES

2018-2019

College of Medicine Assistant Dean for Graduate Programs
Coordinator, College of Medicine Distinguished Research Seminar Series.
Provosts Committee on Faculty Teaching Development
Chair, Integrative Biology Biomedical Science PhD Program Committee
Chair, Graduate Strategic Planning Committee
Executive Committee Integrated Biology PhD Program

Tenured Faculty Committee (P&T)
AAMC Graduate, Research, Education and Training Group

2017-2018

College of Medicine Assistant Dean for Graduate Programs
Coordinator, College of Medicine Distinguished Research Seminar Series
Chair, Biomedical Science, 7-year Review Committee
Chair, Graduate Strategic Planning Committee
Chair, Integrative Biology Biomedical Science PhD Program Committee
Executive Committee Integrated Biology PhD Program
Tenured Faculty Committee (P&T)
AAMC Graduate, Research, Education and Training Group
Committee for Developing New MS in Data Science and Analytics
Exploratory Task Force for New Department in Biomedical Engineering

2016-2017

College of Medicine Assistant Dean of Graduate Programs
Coordinator, College of Medicine Distinguished Research Seminar Series
Chair, Graduate task force committee
Charles. E. Schmidt College of Medicine, Dean Search Committee
Tenured Faculty Committee (P&T)
AAMC Graduate, Research, Education and Training Group

2015-2015

College of Medicine Director of Graduate Programs
Coordinator College of Medicine Distinguished Research Seminar Series
Chair, Graduate task force committee
Biomedical Science Science Chair search committee
LCME accreditation committee-graduate programs and faculty development
Tenured Faculty Committee (P&T)

2013-2014

Graduate Committee
Research Committee
Tenured Faculty Committee (P&T)
LCME accreditation committee-graduate programs and faculty development

2011-2012

Graduate Committee
Research Committee
Tenured Faculty Committee (P&T)

2011-2012
Graduate Committee
Research Committee
Tenured Faculty Committee (P&T)

2010-2011
Graduate Committee
Research Committee
Tenured Faculty Committee (P&T)

2009-2010
Graduate Committee
Research Committee
Tenured Faculty Committee (P&T)
CMBB-Biomed Seminar Coordinator

2008-2009
Graduate Committee
Research Committee
Tenured Faculty Committee (P&T)
CMBB-Biomed Seminar Coordinator
Biomedical Science Chair Search Committee

2007-2008
Graduate Committee
Research Committee
Tenured Faculty Committee (P&T)
CMBB-Biomed Seminar Coordinator
University Outdoor Activities Committee
University Background Investigation Committee

2006-2007
Associate Chair- Biomedical Science
Chair: Basic Science Curriculum Planning Committee
Chair of Annual Review Committee
Chair of Integrative Biology PhD Admissions Committee
Graduate Committee
Research Committee
Tenured Faculty Committee (P&T)

2005-2006
Associate Chair- Biomedical Science
Chair of Annual Review Committee
Chair of Integrative Biology PhD Admissions Committee
Graduate Committee
College Strategic Planning Committee
Research Committee
Tenured Faculty Committee (P&T)
CMBB/Biomedical Seminar Series Coordinator

2004-2005
Graduate Committee
CMBB-Biomed Seminar Coordinator
College Strategic Planning Committee

	Research Committee Tenured Faculty Committee (P&T) Integrative Biology PhD Admissions Committee
2003-2004	Chairs Advisory **C**ommittee-WVU Graduate Committee-WVU/FAU Seminar Coordinator-WVU/FAU College Faculty Committee-FAU Research Committee-FAU Promotion and Tenure Committee (P&T)-FAU
2002-2003	Chairs Advisory **C**ommittee Biology Promotion and Tenure committee Graduate Committee Seminar Coordinator Developmental biologist search committee
2001-2002	Chairs Advisory Committee Biology Promotion and Tenure committee Eberly College Oustanding Researcher Awards Committee
2000-2001	Chair Environmental Physiologist Search Comm. Chairs Advisory **-**CFAC committee Biology Promotion and Tenure committee Eberly College Oustanding Researcher Awards Committee
1999-2000	Chairs Advisory Committee, Department of Biology,WVU Department of Biology Awards Committee,WVU Forensics Search committee
1995-1996	NIH Fellows Research Awards Review Committee
1995-1996	Foundation for Advanced Education in the Sciences Fellows Employment Committee
1994-1996	National Eye Institute Fellows Placement Committee

Memberships

Association for Research in Vision and Ophthalmology.

European Association for Vision and Eye Research.

International Society for Eye Research

Curriculum Vitae

Alex C. Keene

Professor, Department of Biological Sciences
Florida Atlantic University, Jupiter, FL 33458
Email: KeeneA@FAU.edu Phone:(561) 799-8053

Education

2002-2006 PhD, Biomedical Sciences
University of Massachusetts Medical School

2000-2002 BS, Biology (minor in Anthropology)
University of Massachusetts, Amherst

Research Experience

2020-Present **Florida Atlantic University**
Professor, Department of Biological Sciences

2015-2020 **Florida Atlantic University**
Associate Professor, Department of Biological Sciences

2011-2015 **University of Nevada, Reno**
Assistant Professor, Department of Biology

2008-2011 **New York University**
Post-Doctoral Research, Justin Blau (Advisor)

2006-2007 **Institute of Molecular Pathology, Vienna**
Post-Doctoral Research, Barry J. Dickson (Advisor)

2002-2006 **University of Massachusetts Medical School**
Dissertation Research, Scott Waddell (Advisor)

2000-2002 **University of Massachusetts, Amherst**
Undergraduate Research, Eric S. Corp and George N. Wade (Advisors)

Publications

1. Lloyd E, Chhouk, B, **Keene AC**, and Albertson RC. Diversity in rest-activity patterns among Lake Malawi cichlid fishes suggests novel axis of habitat partitioning. ***Biorxiv*****,** 2020.07.14.203505, and ***J. Exp. Biol.*** *in press*
2. Warren WC, Boggs TE, Borowsky R, Carlson BM, Ferrfuino E, Gross JF, Hillier L, Hu Z, **Keene** AC, Kenzior A, Kowalko JE, Tomlinson C, Kremitzki M, Lemieux ME, Graves-Lindsay T, McGaugh SE, Miller JT, Mommersteeg M, Moran RL, Peuss R, Rice E, Riddle MR, Sifuentes-Romero I, Stanhope BA, Tabin CJ, Thakur S, Yoshiyuki Y, and Rohner N. A chromosome level genome of *Astyanax mexicanus* surface fish for comparing populations-specific genetic differences contributing to trait evolution. ***Biorxiv*****,** 2020.07.06.189654, and ***Nature Comm.*** *In* press.
3. Shafer OT and **Keene AC.** The functions and regulation of *Drosophila* sleep. ***Curr Biol.*** (2021) 31(1): R38-R49.
4. Collie J, Granela O, Brown EB, and **Keene AC.** Aggression is induced by resource limitation in the monarch caterpillar. ***iScience***,(2020) 23 (12):101791.
5. Jaggard JB, Lloyd E, Yuiska A, Patch A, Fily Y, Kowalko JE, Appelbaum L, Duboue ER, and **Keene AC**. Cavefish brain atlases reveal functional and anatomical convergence across independently evolved populations. ***Science Advances.*** (2020) 6, 38, eaba3126.
6. Paz A, McDole B, Kowalko JE, Duboue ER, and **Keene AC**. Evolution of the acoustic startle response in Mexican cavefish. ***J. Exp B Mol Dev Evol.*** (2020), 10.1002, jez.b22988.
7. Chin JSR, Loomis CL, Albert LT, Medina-Trenche S, Kowalko J, **Keene AC**, and Duboue ER. Analysis of stress responses in *Astyanax* larvae reveals heterogeneity among different populations. ***J. Exp B Mol Dev Evol.*** (2020), 10.1002, jez.b22987.

8. Sifuentes-Romero I, Ferrufino E, Thakur S, Laboissonniere LA, Solomon M, Smith CL, **Keene AC**, Trimarchi JM, Kowalko JE. Repeated evolution of eye loss in Mexican cavefish: Evidence of similar developmental mechanisms in independently evolved populations. ***J. Exp B Mol Dev Evol.*** (2020), 10.1002, jez.b22977.
9. Stahl BA, Jaggard JB, Brown EB, **and** Keene AC. Sleep regulates the glial engulfment receptor Draper to promote Wallerian Degeneration. ***Current Biology.*** **(**2020), 30(6):1092-1101
10. Pamboro-Laure E, Brown EB and **Keene AC**. Dietary fatty acids promote sleep through a taste-independent mechanism. ***Genes, Brain, Behavior.*** (2020) (4):e12629
11. Brown EB, Shah KD, Faville R, *Kottler* B, and **Keene AC**. *Drosophila insulin-like peptide 2* mediates dietary regulation of sleep intensity**.** ***Plos Genetics*****,** 16(3):e1008270.
12. McGaugh SE, Passow CN, Jaggard JB, Stahl BA, and **Keene AC.** Unique transcriptional signatures of sleep loss across independently evolved cavefish populations. ***J. Exp. Zool*** **B**, (2020) 334 (7-8):497-510.
13. McGaugh SE, Kowalko JE, Duboue ER, Lewis P, Franz-Odendaal T, Rohner N, and Gross JB, and **Keene AC**. Dark world rises: The emergence of cavefish as a model for the study of evolution, behavior, and disease. ***J. Exp. Zool*** **B.** (2020) 334 (7-8):397-404.
14. Loomis C, Peuss R, Jaggard JB, Wang Y, McKinney S, Raftopoulos S, Raftopolos A, Whu D, Green M, McGaugh SE, Rohner N, **Keene AC**, and Duboue ER. An adult brain atlas reveals broad neuroanatomical changes in independently evolved populations of Mexican cavefish. ***Front Neuroanat.*** (2020) 13,88.
15. Chin JSF, Albert LT, Loomis CL, **Keene AC**, Duboue ER. Behavioral approaches to studying innate stress in zebrafish. ***J. Vis Exp.*** (2019), 10.3791/59092
16. Stahl BA, Jaggard JB, Chin JSR, Kowalko JE, **Keene AC**, and Duboue ER. Manipulation of gene function in Mexican cavefish. ***J. Vis. Exp****.* (2019), 10.3791/59093.
17. Jaggard JB, Lloyd E, Lopatto A, Duboue ER, and **Keene AC**. Automated measurements of sleep and locomotor activity in Mexican cavefish. ***J. Vis. Exp.*** (2019), 10.3791/59198
18. Stahl BA, Peuss R, McDole B, Kenzior A, Jaggard JB, Gaudenz K, Krishnan K, McGaugh SE, Duboue ER, **Keene AC**, and Rohner N. Stable transgenesis in Astyanax mexicanus using the Tol2 transposase system. *Dev Dyn.* (2019), 10.1002/dvdy.32.
19. Yurgel ME, Kakad P, Zandawala P, Nässel DR, Godenschwege TA, and **Keene AC**. Leucokinin neurons are modulated by feeding state and regulate sleep-metabolism interactions. ***Plos Biol****.* (2019) 17(2):e2006409
20. Brown EB, Slocumb ME, Szuperak M, Kerbs A, Gibbs AG, Kayser MS, and **Keene AC.** Starvation resistance is associated with developmentally specified changes in sleep, feeding, and metabolic rate. ***J Exp Biol.*** (2019) 10.1242/191049.
21. Zandawala M, Yurgel ME, Texada MJ, Liao S, Rewitz KF, **Keene AC**, and Nässel DR. Modulation of Drosophila post-feeding physiology and behavior by the neuropeptide leucokinin. ***Plos Genet.*** (2018) 14(11):e1007767.
22. Passow CN, Kono TJY, Stahl BA, Jaggard JB, **Keene AC**, and McGaugh SE. Nonrandom RNAseq gene expression associated with RNAlater and flash freezing storage methods. ***Mol Ecol Resources.*** (2018) doi:10.1111/1755-0998.
23. Stahl BA, Beco E, Davla S, Murakami K, Caicedo Moreno NA, van Meyel DJ, and **Keene AC.** The taurine transporter Eaat2 functions in ensheathing glia to modulate sleep and metabolic rate. ***Curr Biol.*** (2018) 28(22)3700-3708.
24. Herman A, Brandvain Y, Weagley J, Jeffery WR, **Keene AC**, Kono TJY, Bilandžija H, Borowsky R, Espinasa L, O'Quin K, Ornelas-García CP, Yoshizawa M, Carlson B, Maldonado E, Gross JB, Cartwright RA, Rohner N, Warren WC, and McGaugh SE. The role of gene flow in rapid and repeated evolution of cave-related traits in Mexican tetra, *Astyanax mexicanus*. ***Mol Ecol.*** (2018) 27(22)4387-4416).
25. Yurgel ME, Shah KD, Brown EB, Burns C, Bennick RA, DiAngelo JR, and **Keene AC**. *Ade2* functions in the *Drosophila* fat body to promote sleep. ***G3 (Bethesda)*** (2018) 8(11):3385-3395**.**
26. **Keene AC**, Duboue ER. The origins and evolution of sleep. (2018) *J Exp Biol*. 12;221(pt11).
27. Chin JSR, Gassant CE, Amaral P, Lloyd E, Stahl BA, Jaggard JB, **Keene AC**, and Duboue ER. Convergence on reduced stress in the Mexican Blind Cavefish. ***Dev Biol.*** (2018). 441(2):319-327.
28. Lloyd E, Olive C, Stahl BA, Jaggard JB, Amaral P, Duboue ER, and **Keene AC.** Evolutionary shift towards lateral line dependent prey-capture behavior in the blind Mexican cavefish. ***Dev Biol****.* (2018). 441(2):328-337.
29. Yurgel ME and **Keene AC**. Sleep: Helicon Cells Charge the Circuit. *Current Biology.* (2018). 28 (7) R317-319.
30. Jaggard JB, Stahl BA, Lloyd E, Prober DA, Duboue ER and **Keene AC**. Hypocretin underlies the evolution of sleep loss in the Mexican cavefish. (2017) ***eLife****,* 10 (1101) 122903.
31. Brown E, Torres J, Bennick RA, Rozzo V, Kerbs A, DiAngelo JR and **Keene AC.** Geographic variation in sleep and metabolic function is associated with latitude and temperature. (2017) ***Ecology and Evolution*** 10(1101) 182790.
32. Tauber JM, Brown E, Li Y, Yurgel ME, Masek P and **Keene AC.** A subset of sweet-sensing neurons identified by Ir56d are necessary and sufficient for fatty acid taste. (2017) ***Plos Genetics.*** 13(11):e1007059.
33. Stahl BA and **Keene AC**. To rebound or not to rebound. (2017) **Elife**, 6, e31646v.

34. Stahl BA, Slocumb ME, Chaitin H, DiAngelo JR and **Keene AC**. Sleep-Dependent Modulation of Metabolic Rate in *Drosophila.* (2017) ***Sleep****.* 40(8) zsx084.
35. Jaggard JB, Robinson B, Stahl BA, Oh I, Masek P, Yoshizawa M, and **Keene AC**. The lateral line confers evolutionarily derived sleep loss in the Mexican cavefish. ***J. Experimental Biology*****.** 220(2)284-93.
36. Murphy KR, Deshpande SA, Yurgel ME, Quinn JP, Weissbach JL, **Keene AC**, Dawson-Scully K, Huber R, Tomchik SM, Ja WW (2016). Postprandial Sleep Mechanics in Drosophila. (2016). ***Elife*** 5. pii: e19334.
37. Masek P and **Keene AC.** Gustatory processing and taste memory in Drosophila. (2016). ***J. Neurogenetics.*** 30(2) 112-21.
38. Murakami K, Yurgel ME, Stahl BA, Masek P, Mehta A, Heidker R, Bollinger W, Gingras RM, Kim YJ, Ja WW, Suter B, DiAngelo JR, **Keene AC**. *translin* is required for metabolic regulation of sleep (2016). ***Current Biology***. 26(7):972-80.
39. Arble DM, Bass J, Behn CD, Butler MP, Challet E, Czeisler C, Depner CM, Elmquist J, Franken P, Grandner MA, Hanlon EC, **Keene AC**, Joyner MJ, Karatsoreos I, Kern PA, Klein S, Morris CJ, Pack AI, Panda S, Ptacek LJ, Punjabi NM, Sassone-Corsi P, Scheer FA, Saxena R, Seaquest ER, Thimgan MS, Van Cauter E, Wright KP. Impact of sleep and circadian disruption on energy balance and diabetes: A summary of workshop discussions (2015) ***Sleep*****.** 38(12):1849-60.
40. Garbe DS, Bollinger WL, Vigderman A, Masek P, Gertowski J, Sehgal A and **Keene AC.** Context specific comparison of sleep acquisition system in *Drosophila* (2015). ***Biology open*****.** 4(11):1558-68
41. Seidner G, Robinson JE, Wu M, Worden K, Masek P, Roberts SW, **Keene AC** and Joiner WJ. Identification of privileged neurons with a privileged role in sleep homeostasis in *Drosophila melanogaster* (2015). ***Current Biology*****.** (22):2928-38.
42. Slocumb ME, Regalado JM, Yoshizawa M, Neely GG, Masek P, Gibbs AG, and **Keene AC.** Enhanced sleep in an evolutionarily adaptive response to starvation stress in *Drosophila* (2015). ***Plos One*****.** 10(7)eo131275.
43. Masek P, Worden K, Aso Y, Rubin GM, and **Keene AC.** A dopamine-modulated neural circuit regulating aversive taste memory in *Drosophila* (2015) ***Current Biology*****.** 25(11):1535-41.
44. **Keene AC** and Joiner WJ. Neurodegeneration: paying it off with sleep. ***Current Biology.*** (2015). 25(6):R234-6.
45. Yoshizawa M, Robinson BG, Duboue ER, Masek P, Jaggard, JB, O'Quin KE, Borowsky RL, Jeffery WR and **Keene AC**. Distinct genetic architecture underlies the emergence of foraging traits in the Mexican cavefish (2015) ***BMC Biology*** 20 (13):15.
46. Yurgel ME, Masek P, DiAngelo JR and **Keene AC**. Genetic dissection of sleep-metabolism interactions (2014) ***J Comp Physiol A*****.** 201 (9):869-77.
47. McGaugh SE, Gross JB, Aken B,, Blin M, Borowsky RB, Chalopin C, Hinaux H, Jeffery WR, **Keene AC,** Ma L, Minx P, Murphy D, O'Quin KE, Retaux S, Rohner N, Searle SM, Stah BA, Tabin C, Volf JN, Yoshizawa M, and Warren WC. The cavefish genome reveals candidate genes for eye loss. (2014) ***Nature Communications*****.** 20(5):5307.
48. Murakami M and **Keene AC**. Development: Better sleep on it, children. (2014) ***Current Biology*****.** 24(12):R569-71.
49. Masek P, Reynolds L, Bollinger WL, Moody C, Mehta A, Yoshizawa M, Gibbs A, and **Keene AC.** Altered sleep and feeding contribute to starvation resistance in *Drosophila*. (2014) ***J. Exp. Biol***. 1(217):3122-32.
50. Masek, P and **Keene AC.** *Drosophila* Fatty Acid Taste Signals through the PLC Pathway in Sugar-Sensing Neurons (2013). ***Plos Genetics***. 9(9): e1003710.
51. Robertson M and **Keene AC**. Molecular Mechanisms of Age-Related Sleep Loss. (2013) ***Gerontology*****.** 9(4):334-9.
52. Sassu ED, McDermott JE, Keys BJ, Esmaeilli M, Keene AC, Birnbaum MJ, and Diangelo JR. Mio/dChREBP coordinately increasees fat mass by regulation lipid synthesis and feeding behavior in Drosophila. (2012) ***Biochem Biophys Res Commun***. 426 (1):42-8.
53. Masek, P and **Keene AC**._ Dopamine: On the threshold of sleep. (2012) ***Current Biology***. 11(22):R949-51.
54. Duboue ER, Borowsky RB, and **Keene AC.** ß-adrenergic signaling regulates evolutionarily derived sleep loss in the Mexican Cavefish. (2012) ***Brain, Behavior, Evolution*****.** 21(80):233-43.
55. **Keene AC** and Masek P. Optogenetic induction of aversive taste memory. (2012) ***Neuroscience*****. 11(**222):173-80.
56. **Keene AC** and Sprecher SG. Seeing the light: Photobehavior in fruit fly larvae. (2011) ***Trends in Neuroscience.*** 35(2):104-110.
57. Neely, GG*, **Keene AC***, Duchek P, Chang EC, Wang QP, Aksoy YA, Rosenzweig M, Costigan M, Garrity P, and Penninger JM. TRPA1 regulates thermal nociception in *Drosophila.* (2011) ***Plos One,*** 6(8);e24343.
58. Dus M, Min SH, Lee GY, **Keene AC**, and Suh GB. Taste-independent detection of the caloric content of sugar in *Drosophila*. (2011) ***Proc. Natl. Acad. Sci. USA***. 108(28);11644-9.
59. **Keene AC,** Mazzocchi EO, Blau J, Desplan C and Sprecher SG. Distinct photoreceptor neurons mediate *Drosophila* light avoidance and circadian clock entrainment. (2011) ***J.*** **Neuroscience.** 31(17):6527-34.
60. Duboue ER, **Keene AC**, and Borowsky RB. Evolutionary convergence on sleep loss in cavefish populations. (2011) ***Current Biology*** 8; 671-76.

61. McDonald DM and **Keene AC**. The sleep-feeding conflict: Understanding behavioral integration through genetic analysis in Drosophila. (2010) ***Aging***, 2(8):1-4.
62. **Keene AC,** Duboue ER, McDonald DM, Dus, M, Suh GB, Waddell, S and Blau J. Clock and cycle limit starvation-induced sleep loss in *Drosophila*. (2010) ***Current Biology*****,** 20(13)**:**1209-15.
63. Neely GG, Hess A, Costigan M, **Keene AC**, Goulas S, Langeslag M, Griffith RS, Belfer I, Smith, SB, Gupta V, Xia X, Aman S, Arora S, Sarangi R, Debasis D, Novatchkova M, Pospisilik JA, Rosenzwig M, Truong D, Elling U, Schramek D, Angjeli B, Zoranovic T, Cronin S, Dietzl G, , Subramaniam S, Garrity PA, Bellen HJ Woolf CJ and Penninger JM et al. A genome wide *Drosophila* screen for heat nociception identifies A2D3 as an evolutionarily-conserved pain gene. **(2010)** Cell. **1**43 (4);628-38.
64. Neely GG, Kuba K, Amann S, Isobe K, Zhang L, Cammarato A, Elmen L, Gupta V, Arora S, Srangi R, Dan D, Fuijisawa S, Usami T, Xia C, **Keene AC**, Pospisilik A, Elling U, Berger C, Novatchkova M, Koglgruber R, Isobe M, Imai Y, Subramaniam S, Kimura A, Bodmer R, and Penninger JM. A global *in vivo* Drosophila RNAi screen identifies NOT3 as a key regulator of heart function. (2010) ***Cell.*** 14 (1): 142-153.
65. **Keene AC** and Waddell S. *Drosophila* olfactory memory: single genes to complex neural circuits. (2007) ***Nature Neuroscience Reviews*****.** 8(5):341-54.
66. Krashes MJ*, **Keene AC***, Leung B, Armstrong JD, and Waddell S. Sequential use of mushroom body neuron subsets during *Drosophila* odor memory processing. (2007) ***Neuron*** 53(1):103-15.
67. **Keene AC***, Krashes MJ*, Leung B, Bernard JA, and Waddell S. *Drosophila* Dorsal Paired Medial neurons provide a general mechanism for memory consolidation. (2006) ***Current Biology***. 16(15):1524-30.
68. Yu D, **Keene AC**, Srivatsan A, Waddell S and Davis RL. *Drosophila* DPM neurons form a delayed and branch-specific memory trace after olfactory classical conditioning. (2005) ***Cell*** 123 (5): 945-57.
69. **Keene AC** and Waddell S. *Drosophila* olfactory memory: Dopamine signals punishment? (2005) ***Current Biology***. 15(22):R932-4.
70. **Keene AC**, Stratmann M, Keller A, Perrat PN, Vosshall LB, and Waddell, S. A benzaldehyde odor memory in *Drosophila* requires uniquely timed Dorsal Paired Medial neuron output. (2004) ***Neuron*** 44(3):521-33.
71. Ding H, Schwartz DS, **Keene A**, Affar E, Fenton L, Shi Y, Zamore PD, and Xu Z. Selective silencing by RNAi of a dominant allele that causes amytrophic lateral sclerosis. *(*2003) ***Aging Cell*** 2(4):209-17.
72**. Keene AC**, Jones JE, Wade GN, and Corp ES. Forebrain sites of NPY action on estrous behavior in Syrian hamsters. (2003) ***Physiology and Behavior*** 78(4-5):711-6.
73. Jones JE, Pick RR, Davenport MD, **Keene AC**, Corp ES, and Wade GN. Disinhibition of female sexual behavior by a CRH receptor antagonist in Syrian hamsters. (2002) ***American Journal of Physiology- Regulatory, Integrative and Comparative Physiology*** 283(3):R591-7.

Works listed on Preprint Server and/or are Under Review:

1. Mack KL, Jaggard JB, Persons JL, Passow CN, Stahl BA, Ferrufino E, Tsuchiya D, Smith SE, Slaughter B, Kono JY, Kowalko JE, Rohner N, **Keene AC,** and McGaugh SE. Covergent dysregulation of the circadian clock in cavefish populations. ***Biorxiv*****,** 2020.01.14.906628, and *under review.*
2. Patch A, Paz A, Holt K, Duboue ER, Kowalko JE, **Keene AC,** and Fily, Y. Kinimatic analysis deconstructs the evolved loss of schooling behavior in cavefish. ***Biorxiv*****,** 2020.01.31.929323, and *under review.*
3. Brown EB, Shah KD, Palermo J, Dey M, Dhanukar A, and **Keene AC.** Ir56d-dependent fatty acid responses in *Drosophila* uncovers taste discrimination between different classes of fatty acids. ***Biorxiv*****,** 2020.05.27.119602, and *under review.*
4. O'Gorman M, Thakur S, Imrie G, Moran RL, Duboue E, Rohner N, McGaugh SE, **Keene AC,** and Kowalko JE. Pleiotrpic function of the *oca2* gene underlies the evolution of sleep loss and albinism in cavefish. ***Biorxiv*****,** 2020.09.27.314278, and *under review.*
5. Murakami K, Parermo J, Stanhope BA, and **Keene AC.** A screen for sleep and starvation resistance identifies a wake-promoting role for the auxiliary channel *unc79.* ***Biorxiv****,* 2021.02.08.43060.

Books, Book Chapters, and Education

1. **Keene AC** and Appelbaum L. "Sleep in fish models." ***The Handbook of Sleep*****.** *Oxford University Press*. *In press.*
2. Duboue ER and **Keene, AC**. "Investigating the evolution of sleep in the Mexican cavefish.**"** ***The Biology and Evolution of the Mexican cavefish*** (2015). 1st edition. San Diego. Academic Press/Elsevier, pp. 291-304.
3. Keene AC, Yoshizawa, M and McGaugh SE (2015). Biology and evolution of the Mexican cavefish. 1st edition, San Diego. Academic Press/Elsevier.
4. Paz A and **Keene AC.** What can a blind fish teach us about sleep. ***Frontiers for Young Minds*****.** August, 2019. DOI: 10.3389
5. Heckscher E, **Keene AC**, Waddell; S and Zhang B. Drosophila Neurobiology: A Laboratory Manual, Cold Spring Harbor Press, *in Preparation* (Volume 2).

Current Research Support

NIH T34GM136486 05/2020-04/2025
URISE at Florida Atlantic University
This proposal is to establish a program that supports undergraduates from underrepresented backgrounds to prepare for doctoral programs in biomedical science.
Role: PI $1,300,000

NIH 1R01GM127872 05/2018-04/2022
Genetic architecture underlying natural variation in sleep loss and obesity.
This award uses Mexican cavefish to identify novel genes regulating sleep and obesity.
Role: MPI (MPI with McGaugh) $1,900,000

NSF-IOS 165674 09/2018-09/2021
The neural mechanisms of sleep loss in Mexican cavefish. This grant examines the role of Hypocretin in the evolution of cavefish sleep loss.
Role: PI $333,000

NSF-DEB 174231 06/2018-06/2021
Contributions of albinism to fitness and the evolution of the Mexican cavefish.
This grant examines the relationship between albinism and sleep loss in cavefish and develops gene-editing approaches in cavefish.
Role: Co-PI (with Johanna Kowalko) $200,000

NIH R01HL143790 08/2018-07-2023
Elucidation of Genetic Effects on Sleep and Circadian Traits
This grant seeks to identify novel sleep genes through human GWAS studies and validate targets in the fruit fly model.
Role: MPI (with Phil German, Penn; Struan Grant, CHOP) $3,400,000

NIH R01HL143790S1 08/2019-07-2020
Elucidation of Genetic Effects on Sleep and Circadian Traits (Supplement)
This is a supplement to identify sleep genes that contribute to the progression of Alzheimer's Disease.
Role: MPI (with Phil German, Penn; Struan Grant, CHOP) $444,510

NIH R01DC017390 10/2018-09/2022
The Neural Basis for Fatty Acid Taste
This grant seeks to identify receptors and neural mechanisms governing fatty acid taste in the fruit fly.
Role: PI (with Anupama Dahanukar, UC-Riverside, MPI) $1,600,000

US-Israel BSF SP#2018-190 10/2018-9/2022
Dissection the function and evolution of the hypothalamic NTS-MCH-HCRT circuit
This is a collaborative grant that examines the role of hypothalamic circuitry in the zebrafish and Mexican cavefish.
Role: MPI (With Lior Appelbaum, Bar-Ilan University) $230,000

NSF-DBI 1852175 10/2019-09/2022
Site REU: Summer Integrative Neuroscience Experience in Jupiter
This is a site award to support a summer Research Experience for Undergraduates program at FAU, Scripps, and the Max Planck Florida Institute.
Role: PI $383,000

Florida Dept of Health 21A02 2/2020-2/2022
The Cellular Basis for Neurodegeneration in a Drosophila Model of Alzheimer's Disease
This grant employs genomic and bioinformatic approaches in the fly taste system to identify novel regulators of Alzheimer's disease. $200,000
Role: PI

Completed Research Support

NIH 1R01 NS085252 06/2014-12/2020
The role of neural *translin* in metabolic regulation of sleep. This grant examines neural mechanisms underlying the integration of sleep and metabolism.
Role: PI $1,407,426

NIH 1R21NS105071 04/2018-08/2020
Development of genetic tools for functional analysis of sleep in cavefish.
This proposal seeks to develop genetic tools to label sleep circuits and develop a brain atlas in cavefish.
Role: PI $398,000

NSF IOS-1426265 06/2015-01/2019
The neural circuitry underlying taste memory. This grant investigates neural plasticity in dopamine neurons required for taste memory in the fruit fly.
Role: PI $397,896

NIH R15 NS080155 05/2013-04/2016
Dietary and Endocrine regulation of Sleep: NIH Area Grant. The grant seeks to determine the dietary factors that regulate sleep in *Drosophila*.
Role: PI $368,404

NSF IOS-125762 06/2013-05/2016
Evolutionary basis for sleep loss in the Mexican Cavefish: NSF/IOS Grant. This grant investigates the evolutionary and genetic basis for sleep loss in Mexican cavefish.
Role: PI $347,041

NIH P20 GM103650 09/2013-09/2015
Center for Integrative Neuroscience: COBRE Program Grant, NIGMS. Target faculty on this program grant. My subproject investigates the relationship between sleep deprivation and stress in fruit flies.
Role: Project Leader/Target Faculty $424,000

NIH P20 GM103513 08/2014-08/2015
Generating a molecular fingerprint for Drosophila Peptidergic neurons. This is a pilot grant award for single-cell analysis that is a component of a COBRE award to Kent Sanders.
Role: Subaward recipient $50,000

NIH 5P20RR016464 07/2011-08/2013
Nevada IDeA Network of Biomedical Research Excellence: INBRE Program Grant, NIGMS. Target faculty on this program grant. My subproject investigates the neural basis for memory loss in sleep-deprived fruit flies.
Role: Project Leader/Target Faculty $238,000

Swiss NSF, Systems X 04/2013-04/2018
SynaptiX-The Systems Biology of Forgetting.
This grant seeks to understand the neurological basis for forgetting memories.
Role: Co-PI, with Simon Sprecher, University of Fribourg) $1,950,000

NIH F32GM086207 09/2008-07/2011
Postdoctoral NRSA with advisor Justin Blau: **Genetic dissection of larval light avoidance**.
This fellowship aimed to identify the neural circuitry regulating circadian rhythms and light avoidance in *Drosophila* larvae.
Role: Trainee/PI

HFSP LT0061 09/2007-08/2008
Postdoctoral Human Frontiers Long-Term Fellowship with advisor Barry Dickson.
Identification of courtship song-specific fruitless neurons in *Drosophila.*
This fellowship aimed to establish a high-throughput assay for acquisition and analysis of courtship song.
Role: Trainee/PI

NIH F31MH073311 09/2004-09/2007

Predoctoral NRSA with advisor Scott Waddell: **The role of acetylcholine in *Drosophila* memory**.
The grant investigated the role of acetylcholine release from extrinsic mushroom body neurons in memory consolidation.
Role: Trainee/PI

Awards and Honors
2019 Kavli Fellow
2019 FAU Researcher of the Year Award
2018 FAU Division of Research Mentorship Award
2018 FAU College of Science Teaching Award (Northern Campuses)
2016 International Behavioral and Neurogenetics Society (IBANGS) Young Investigator Award
2015 Sleep Research Society Young Investigator NIDDK/NIH Award
2014 Gordon Research Conference, Chronobiology, Junior Investigator Presentation Award
2006 Dean's Award for Outstanding Doctoral Thesis, UMass Medical School
2005 Dean's Award for Outstanding Research Achievement, UMass Medical School

Courses Taught (Since 2011)
Fall 2011: Neuroscience Journal Club
Spring 2012: Neurobiology
Fall 2012: Introduction to Neuroscience
Spring 2013: Neurobiology
Fall 2014: Techniques in Neuroscience
Spring 2015: Neurobiology
Fall 2016: Comparative Animal Behavior. Sections in Jupiter, Boca and Davie
Fall 2017: The Life and Science of Oliver Sacks, Jupiter
Spring 2018: Comparative Animal Behavior. Sections in Jupiter, Boca and Davie
Fall 2018: The Life and Science of Oliver Sacks, Boca
Spring 2019: Comparative Animal Behavior. Sections in Jupiter, Boca and Davie
Fall 2020: Laboratory Basics (U-RISE NIH Training Course)
Spring 2021: Intro to Biomedical Science (U-RISE NIH Training Course)

Trainees outcomes (Selected, including pre-FAU trainees)
2014-2020 James Jaggard, Doctoral Student, Current Postdoc in Philippe Mourrain's lab at Stanford
2015-2019, Bethany Stahl, Postdoc. Currently Executive Director of Campus Operations, FAU-Jupiter
2011-2015, Pavel Masek, Postdoc. Currently Assistant Professor at Binghamton University
2012-2015, Masato Yoshizawa, Postdoc, Currently Assistant Professor at University of Hawai'i
2013-2018, Maria Yurgel, PhD student, Currently Postdoc in Samer Hattar's lab at NIH
2015-2017, John Tauber, Technician, Currently PhD Student in Neurobiology at MIT
2014-2017, Melissa Slocumb, Undergrad/MS student, Currently technician at Stanford Medical School
2013-2017, Beatriz Robinson, Undergrad/Technician, Currently PhD student at Stanford Neurobiology
2012-2015, Kurtresha Worden, Undergrad, Currently PhD student at UC-Berkeley MCB, and HHMI Gilliam Fellow
2014-2015 Josue Regalado, Undergrad, Currently PhD student at Rockefeller University

Service and Professional Development
Service to the Institution
Outreach and FAU Service
2015-2019, Co-Director, Neuroscience and Behavior B.S. Program (FAU)
2016 Co-Chair, Hiring committee for Assistant Professor, Department of Psychology
2016, Hiring committee for Assistant Professor, Honors College
2017, Hiring committee for Assistant Professor, Honors College
2017 Co-Chair, Hiring committee for Assistant Professor, Department of Psychology
2017- Organizer, Flies on the Beach/South Florida Fly Meeting hosted at FAU
2017- Present, Osher Lifelong Learning Scholarship Committee
2018-Present, College of Science Seed Funding Committees
2020-Present: Division of Research Advisory Council
2018-Present: Integrative Biology and Neuroscience PhD Program Committee
2019-Present: Co-Director, STEM Innovation and Inclusion Program (SIIP) at FAU

Service to the Discipline

2015-Instructor, Cold Spring Harbor Neurobiology of Drosophila Course
2016-Present, Co-Director, Cold Spring Harbor Neurobiology of Drosophila Course
2016, Ad hoc member, NIH Neuroendocrinology, Neuroimmunology, Sleep, and Rhythms Study Section
2016, NSF-Integrative Organismal Systems, Modulation Study Section
2015, 2019 and 2021, Organizer, *Astyanax* International Meeting
2019 NSF-Integrative Organismal Systems, Modulation Study Section
2016-Present, Standing Member, NIH Molecular Neurogenetics Study Section
2019-Present, Affiliate, *BioRxiv*, Cold Spring Harbor Press

CURRICULUM VITAE

NAME James Alexander Scott Kelso
Glenwood and Martha Creech Eminent Scholar Chair in Science
Professor of Psychology and Neuroscience
Professor of Biological Sciences
Professor of Biomedical Sciences
Florida Atlantic University
Boca Raton, Florida 33431

Tel: 561-297-2230
FAX: 561-297-3634
E-mail: kelso@ccs.fau.edu

BORN February 27, 1947
Derry ~ Londonderry, N. Ireland

CITIZENSHIP

United States (Currently hold US, UK and Irish Passports)

EDUCATION

University of Wisconsin, Madison, Ph.D. 1975
University of Wisconsin, Madison, M.Sc. 1973
University of Calgary, Alberta, Canada B.S. 1972
Stranmillis University College, Queens University Belfast, N. Ireland 1965-1969

ACADEMIC POSITIONS

2018- Glenwood and Martha Creech Eminent Scholar Chair in Science (Reappointed)

2009- Professor of Computational Neuroscience, University of Ulster (Emeritus, 2016)

1985-2018 Glenwood and Martha Creech Eminent Scholar Chair in Science. Professor of Complex Systems & Brain Sciences, Professor of Psychology and Neuroscience, Professor of Biological Sciences, Professor of Biomedical Sciences, Florida Atlantic University, Boca Raton, Fl

1985-2005 Founder and Director, Center for Complex Systems and Brain Sciences

1995 Co-Director, Santa Fe Institute Summer School in Complex Systems

1997 Invited Senior Fellow, The Neurosciences Institute, San Diego

2000 Distinguished Visiting Professor, University of Marseille

1982-85	Senior Research Staff, Haskins Laboratories, Yale University Professor, Departments of Psychology and Biobehavioral Sciences (Behavioral Genetics Unit), University of Connecticut.
1986	Guest Professor, USSR Academy of Sciences, Moscow
1984	Guest Professor, Institute for Theoretical Physics, University of Stuttgart
1983	INSERM Research Professor, Lyons, France
1978-82	Senior Research Staff, Haskins Laboratories, Yale University Associate Professor, Departments of Psychology and Biobehavioral Sciences (Unit of Behavioral Genetics), University of Connecticut
1975-1978	Assistant Professor and Director, Motor Behavior Laboratory The University of Iowa
1976	Invited Assistant Professor (Summer Semester) The University of Texas at Austin
1969-71	Schoolmaster, Coleraine Academical Institution, Coleraine, N. Ireland

HONORS AND AWARDS

2018	The B.F. Skinner Lecture, ABAI, San Diego, California
2018	The Tourtellotte Lecture, Kalamazoo College, Michigan
2017	President of the International S.T.E.P.S (**S**cience, **T**echnology, **E**conomics & **P**olitics for **S**ociety) Foundation & Chairman of The Olympiads of the Mind
2016	Elected Honorary Member of The Royal Irish Academy (Hon. MRIA)
2016	Emeritus Distinguished Professor Award, Ulster University
2016	Member of World Economic Forum (Brain Research and Neurotechnologies)
2012	Fellow of The Society of Experimental Psychologists (SEP)
2011	Bernstein Prize, International Society of Motor Control (ISMC)
2010	Cathedra Chair, Universidado Federal de Minas Gerais (UFMG), Belo Horizonte, Brazil
2008	President, Foyle College (est. 1617) Former Pupils Association
2007	Pierre de Fermat Laureate (Chaire d' Excellence)
2007	Geraldine Pellecchia Memorial Lecture on Coordination and Cognition, University of Connecticut
2006	Director's Innovations Award, National Institute of Mental Health
2005	A.S. Iberall Memorial Lecture, University of Connecticut
2005	F.J. McGuigan Prize Lecture, American Psychological Association
2004	Fellow, AAAS: "For innovative use of brain imaging and behavioral techniques to uncover the principles and mechanisms of coordination"
2002	Docteur Honoris Causa, Republic of France and University of Toulouse (est.1228)

2001	Francois Erbsmann Prize (with V.K. Jirsa, A.Fuchs & K.J. Jantzen)
2001	Neurosciences Research Program Fellow, La Jolla, California
2000	*Rugby* Magazine, Feb 29, Voted All-time All-American USA Eagles
2000	Distinguished Lecture Series, International School for Computable Economics, Trento, Italy
1999	US Delegation to inaugurate the National Brain Research Institute of India, New Delhi
1999	Distinguished Scientist Award, NASPSPA
1999	Smithsonian Institution Lecturer, Washington, DC
1999	Brain Bursary Lectures, London, UK
1998	Invited Fellow, Center for Advanced Studies in the Behavioral Sciences
1997	Senior Scientist Award, National Institute of Mental Health
1997	MERIT Award, National Institute of Mental Health
1996	Professorial Excellence Award, State University System of Florida.
1996	Sir Runrun Shaw Fellow, Chinese University of Hong Kong
1995-1999	President, South Florida Chapter, Sigma Xi (Scientific Research Society)
1991	W.J. Bryan Lectures in Cognitive Science, Indiana University
1990	Founding Fellow, American Psychological Society
1990	Distinguished Alumni Research Achievement Award, The University of Wisconsin, Madison (rec'd from Chancellor Donna Shalala)
1989	Kenwood-Smith Lectures, University of North Carolina
1989	Centennial Lecture, University of Tokyo, Japan
1986	Fellow, American Psychological Association
1986	American Society of Biomechanics (Honorary member)
1984	Nominated Fellow, Center for Advanced Study in the Behavioral Sciences
1984	Fellow, Center for Interdisciplinary Research (ZIF), Bielefeld, FRG.
1979	Fellow, NATO Advanced Study Institute on Motor Control, Senanque, France.
1977	Old Gold Fellow, University of Iowa.
1973-1975	University Research Fellow, University of Wisconsin, Madison.

PROFESSIONAL SOCIETIES

American Association for the Advancement of Science (Fellow)
American Psychological Association, Divisions 1 and 3 (Fellow)
American Psychological Society (Fellow)
International Neural Network Society
Psychonomic Society
Associate, Behavioral and Brain Sciences
Sigma Xi, Scientific Research Society
American Society of Biomechanics (Honorary member)
Society for Neuroscience
Society of Experimental Psychologists (Fellow)
International Society of Motor Control
New York Academy of Sciences

EDITORSHIPS

1981-1988 Executive Editor, *Journal of Motor Behavior* (Editor Emeritus, 1988-)
1981-1989 Editorial Board, *Journal of Experimental Psychology: Human Perception and Performance*
1988- Editorial Board (Founding Member) *Neural Networks.*
1990-2000 Editorial Board, *International Journal of General Systems*
1992- Editorial Board, *Human Movement Science*
1996-2007 Editorial Board, *Motor Control*
2002- Editorial Board, *Chaos and Complexity Letters*
2002- Founding Editor, *Understanding Complex Systems*, Springer, Berlin-Heidelberg
2004- Editorial Board, *Cognitive Processing*
2006- Editorial Board, *Springer Series in Synergetics*
2011- Editorial Board, *Cognitive Systems Monographs (COSMOS)*, Springer Verlag
2013- Editorial Board, *Connection Science*
2019- Editorial Board, *Adaptive Behavior*
2020- Co-Executive Editor, *Frontiers in Network Physiology*

ADVISORY BOARDS

1982 Executive Board, International Society for Ecological Psychology.
Elected to the first Board of Directors
1995- Foundation for Biomusicology, Stockholm, Sweden and Florence, Italy
2003 - Scientific Advisory Board, Plexus Institute
1997- World Council, The Einstein Institutes
2009- Advisory Board, Intelligent Systems Research Institute, University of Ulster
2016-2018 Member of the Global Future Council on Neurotechnologies and Brain Science, World Economic Forum

SAMPLES OF SERVICE

Regular reviews for funding agencies around the world, including The Welcome Trust (UK), The Riken Brain Institute (Professorial Tenure Committee), Japan, NSF, MRC (Canada), Australian Medical Research Council, Templeton Foundation, Israel Research Foundation, Netherlands Organisation for Scientific Research

Since 1987, organized regular satellite meetings to the Society for Neuroscience, sponsored by the National Institutes of Health (and occasionally the Office of Naval Research and the National Science Foundation), dealing with various topics surrounding neurobehavioral dynamical systems, including Dynamical Neuroscience I (1991) to XX (New Orleans, 2012).

Inaugural Review Panel, Theoretical/Mathematical /Computational Neuroscience, NIMH, 1989-1990

Special Emphasis Review Panel, NIH, *Neuroinformatics/Human Brain Project*, Washington, D.C.

Consultant, NIMH, *New Directions for Neuroscience: The Next 10 Years*. Washington, D.C., 1995.

Advisory Board*, Restructuring NIH Peer Review Process and Study Sections in Cognitive and Behavioral*

Neuroscience, Washington, DC 1997

Invited Speaker, *Future Career Opportunities in Neuroscience: Computational Neuroscience.* Special meeting for NIH Predoctoral Fellows. Washington, D.C., 1999.

NIMH/US delegation to inaugurate the National Brain Research Institute of India, New Delhi, 1999

Invited Speaker, NIH Training Director's meeting for recruitment of minority students in the Neurosciences: *Computational Neuroscience: The brain as a complex dynamical system*, Washington, D.C., 2000

Member, Review Panel for Sylvio O.Conte Centers for Neuroscience Research, NIH/NIMH, 2005

Member, Review Panel, NIH/NINDS Fellowship Program, 2005

Member, Review Panel, K99/R00 NIH Pathway to Independence Awards, 2012

NSF Reviewer, International Science Collaboration (ORA) Program, 2013

Member (ex officio) NIMH Board of Scientific Counselors, June, 2014 (invited, 2018).

Member, Special Emphasis Panel, BRAIN Initiative, NIH/NINDS, July, 2014

Member of the Global Future Council on Neurotechnologies and Brain Science for the World Economic Forum (2016-2018)

Member of Study Section to review Institutional Training Grants in Neuroscience, NIMH, Nov., 2018

SELECTED INVITED LECTURES

In the U.S.: *Brandeis University, Brown University*, *Rockefeller University, Harvard University, MIT, Yale University, Columbia University, University of Pennsylvania, Duke University, University of Miami, University of Florida, Emory University, University of Chicago, University of Illinois, University of Minnesota, University of Wisconsin, Madison, Indiana University, University of Colorado, Penn State University, Ohio State University, University of Texas, Austin, USC, UC San Diego, UCLA, University of Oregon, Rutgers University, etc.*

In South America: *Sao Paulo, Brazil, UFMG, Belo Horizonte, Ouro Preto, National Autonomous University of Mexico (UNAM)*

In Canada: *McGill University, University of Montreal, York University, Laval, Waterloo, Western Ontario, Calgary, Simon Fraser, U. British Columbia, etc.*

In the U.K. and Ireland: *Oxford, Cambridge, Trinity College Dublin, Queens University Belfast, University of Ulster, University of Sheffield, NUI Galway, UCD, etc.*

In Australia and New Zealand: *Universities of Queensland, Melbourne, Adelaide, Sydney, Western Australia (Perth), University of Otago (Dunedin)*

In Europe: Finland (*Helsinki);* Germany (*Bielefeld, Hamburg, Heidelberg, Stuttgart, Berlin, Potsdam, Munich, Leipzig, Schloss Elmau*); France (*Marseilles, Lyons, Arc et Senanque, Toulouse, Paris, Nice, Montpellier*); Greece (*Chania, Crete*); Italy (*Bologna, Trieste, Milano, Perugia, Trento, Elba, Erice, Sicily*); Portugal (*Sintra, Lisbon*); Spain (*Barcelona*); Sweden (*Royal Swedish Academy of Sciences; Foundation for Biomusicology*, *Sigtuna, etc.);* Switzerland (*Maccolin, Ascona);* The Netherlands *(Free University of Amsterdam, Royal Dutch Academy of Science; Technical University Delft);* Belgium (*Free University of Brussels;* KU*Leuven)*

In Russia: *Moscow (Academy of Sciences), Suzdal*

In Japan: *University of Tokyo; ATR Kyoto.*

In India: *The National Brain Research Institute, New Delhi*

In China and Taiwan: *Chinese University of Hong Kong, National University of Taiwan*

SELECTED KEYNOTE ADDRESSES

International Neuropsychology Symposium, Oxford, England, "Toward a theory of apractic syndromes" (1978).

NATO Advanced Study Institute: "Coordinative Structures as Dissipative Structures: Theory and Experiment", Abbaye de Senanque, France (1979)

International Conference on Attention and Performance, "Contrasting Perspectives on Order and Regulation in Movement", Jesus College, Cambridge (1980)

Nonlinearities in Brain Function, Kroc Foundation, Santa Barbara, USA (1982)

VII Commonwealth Games International Conference, Brisbane, Australia (1982)

Complex Systems: Operational Approaches in Neurobiology, Physics and Computers, Schloss Elmau, Germany (1984)

Physics of Complexity, International Center for Theoretical Physics, Trieste, Italy (1986)

American Society of Biomechanics (1987)

51st Meeting of the German and British Physical Societies, Berlin, Germany (1987)

Centennial Symposium, Information creation in biological complex systems, University of Tokyo, Tokyo, Japan (1989)

Kenwood-Smith Lectures, University of North Carolina, Greensboro (1989)

Sigma Xi (Scientific Research Society) Lecturer (1990)

Solvay Foundation Symposium, Self-organization, emergent properties and learning, University of Texas, Austin (1990)

W. J. Bryan Lectures in Cognitive Science, Indiana University (1991)

IVth Waddington Memorial Conference, Significance and Form in Nature and Art, Spello-Perugia, Italy (1993)

25th Anniversary Symposium, Nonlinear Systems in Medicine and Biology, Purdue University (1994)

Man, Mind, and Music, Milano, Italy (1994)

Sports, Dance, Movement, and the Brain, Art Institute of Chicago (1995)

Gordon Conference on Multisegmental Motor Control: Neural, Behavioral, and Biomechanical Approaches, New Hampshire (1995)

International Conference on Intentional and Perceptual Dynamics, Amsterdam (1995)

The Fourth International Conference on Simulation of Adaptive Behavior, Cape Cod, MA (1996)

Sir Runrun Shaw Lectures, Chinese University of Hong Kong (1996)

Developmental Science and the Holistic Approach, Wiks Castle and the Nobel Institute Stockholm (1997)

Smithsonian Institution Lecture, Washington, D.C., "How the brain changes its mind" (1999)

Distinguished Lecture Series (5), Guarantors of *Brain*, London, England, "The self-organizing coordination dynamics of brain and behavior" (1999)

Plenary talk, NIH delegation to inaugurate the National Brain Research Institute of India, Delhi, October (1999; Gandhi's birthday).

Fondazione Carlo Erba meeting on "The Emergence of Mind" Milano, Italy, April (2000)

Keynote Speaker, "Great Unsolved Problems in Biology". Society for Experimental Biology, Cambridge, England, August (2000)

Distinguished Lecture Series (3) on Coordination Dynamics at The International School for Computable Economics, October (2000), Trento, Italy.

Herbstakademie on "Self- Organization of Cognition and applications to psychology", Nov. (2000), Monte Verita, Switzerland. "Cognitive Coordination Dynamics"

Opening address, "Directed self-organization", International Conference on Coordination Dynamics 2002, Delray Beach, May, 9-12, 2002.

Keynote Speaker, International Conference on "Uncertainty and Surprise", Ilya Prigogine Center, University of Texas, Austin, April, 2003

Opening address, Cognitive Science in the 21st Century, Sao Paulo, Brazil, April, 2003.

Invited Speaker, Royal Dutch Academy of Science meeting on "Binding and its Breakdown", Amsterdam, The Netherlands, September, 2003.

Distinguished Lecturer, "New vistas for the plasticity of brain" National Yang-Ming University, Taiwan, February, 2004

Jane Goodall Distinguished Scientist Lecture, CREST, Portland, Oregon, March, 2004

Presidential (Human Kinetics) Lecture, NASPSPA, Vancouver, BC, June, 2004.

Plenary Speaker, Symposium on "Dynamic Approaches to Consciousness", Antwerp, Belgium, June, 2004

FJ McGuigan Prize Lecture for Understanding the Mind, APA Convention, Washington, DC, August, 2005

A S Iberall Distinguished Lecture on Life and the Sciences of Complexity, University of Connecticut, December 2, 2005

Keynote speaker, International meeting on Cognitive Neuroscience and Motor Control, Dunedin, New Zealand, 7-9 December, 2005

Keynote address, Inaugural Meeting of EuCognition, A European Union research programme to develop Artificial Cognitive Systems, Nice, France, Feb., 16, 2006.

Conference Exceptionelle du Pr. J.A.Scott Kelso, «Coordinating Brains » Dr Honoris Causa de l'Université Paul Sabatier, Oct., 27, 2006.

Keynote address, IBM Almaden Institute Symposium on "Navigating Complexity", San Jose, California, April, 10-11, 2007.

Invited speaker, Templeton Foundation Symposium on "Top down causation and volition", Yosemite, California, April 19-21, 2007.

Opening address, International Symposium on "Brain-Mind in Probabilistic Hyperspace" Istanbul, Turkey, October 19-21, 2007.

Inaugural Geraldine Pellecchia Memorial Lecture on Coordination and Cognition, University of Connecticut, Storrs, October 26, 2007.

Invited Speaker, 8th Olympiad of the Mind Symposium, "Brain Research: Improving Global Harmony", National Academies of Science, Washington, DC, November, 14-16, 2007.

Invited Speaker, Parmenides Foundation "Dynamics in and of attractor landscapes", Elba, May 21-23, 2008.

Keynote Speaker, Delft School of Design "TransThinking the City: Architecture in Mind, Delft, Holland, October 31-Nov 1, 2008.

Pierre de Fermat Lecture, "A brief history of coordination". Symposium on 'Brain, Behavior and Beyond' held in honor of J.A. Scott Kelso, Pierre de Fermat Laureate, University of Toulouse, April, 24, 2009.

B.F. Skinner Lecture, "The complementary nature of coordination dynamics", Advanced

Behavioral Analysis International, Phoenix, Arizona, May, 2009.

Invited Lecture, Society for Psychology and Philosophy, "Mechanisms and principles of adaptive change" Bloomington, Indiana, June, 2009

Keynote Speaker, International Workshop on Rhythmicity and Motor Control, "Coordination dynamics of rhythmic behavior" Sheffield, England, July1-4, 2009.

Invited speaker, Computer Science Research Institute Workshop, University of Ulster "Challenges for Computational Neuroscience: How to handle complexity", Belfast, N. Ireland, July 7-8, 2009.

Invited address, 7th International Congress on Progress in Motor Control, "Control and Coordination Dynamics", Marseille, France, July 22-25, 2009.

Invited participant, Ernst Strüngmann Forum, "Dynamic Coordination in the Brain: From Neurons to Mind", Frankfurt am Main, Germany, August 16-21, 2009.

Invited response to Dr Bert Sakmann, Nobel Laureate, International Conference on Cognitive Robotics, University of Ulster, Derry~Londonderry, N. Ireland, September, 2009.

Invited address "Coordination, Complementarity and Understanding" NSF Meeting on Neurocognitive Networks, Boca Raton, Fla, Jan 28-29, 2010

Keynote speaker, "Coordination, Chimeras and Complementarity", International Conference on Brain Coordination Dynamics, March 1-5, 2010.

Keynote Speaker, Nour Foundation Symposium on "Shifting Realities", New York Academy of Sciences, May 12, 2010

Invited Lecture Series (6) "The Science of Coordination: Coordination Dynamics" Technical University of Lisbon, June 1-2, 2010

Keynote Speaker, 21st International Conference on Artificial Intelligence and Cognitive Sciences (AICS 2010), Aug 30-Sept 1, 2010

Invited Speaker, Opportunities and Challenges in Social Neuroscience, Utrecht, The Netherlands, March 21-23, 2011

Grande Conferencia, "Coordination and The Complementary Nature", Programa Cathedra, UFMG, Brazil, June 27, 2011.

Keynote Speaker "Music, Mind and Movement", Belo Horizonte, Brazil, July 1, 2011.

Invited speaker, International Conference on Perception and Action XVI, "Some consequences of bidirectional coupling between humans, machines and nervous systems. Ouro Preto, Brazil, July 9, 2011

Keynote Speaker, International Conference of the European SKILLS project, Montpellier, France, Dec 15-16, 2011 "How humans learn new skills".

Opening address, International Conference on Rethinking Meaning, "The Four Ms: Matter, Meaning, Movement and Myth", University of Bologna, Italy, April 12-13, 2012.

Invited Speaker, NIH Conference on Criticality in Neural Systems, "Criticality and coordination in people and brains", Natcher Auditorium, April 30-May, 1, 2012.

Keynote Speaker, European Cooperation in Science and Technology Meeting on The Physics of Competition and Conflict, "Coordination, Conflict and Complementarity", Aras Moyola, Galway, Ireland, July 11-14, 2012.

Co-Organizer and Invited Speaker, NIMH sponsored Dynamical Neuroscience XX, "The neural choreography of social interaction: How people and brains couple". New Orleans, October 11-12, 2012

Invited participant, Round Table on "Life and Movement", New Helix Center, New York City, October 26, 2012.

Invited Speaker, Tribute to the work of Maxine Sheets-Johnstone, SPEP, University of Rochester, November, 2-4, 2012.

Invited Seminar, NINDS Human Motor Control Section "The Neural Choreography of Behavior: Multiscale Coordination Dynamics", November, 30, 2012.

Keynote Speaker, Intelligent Systems Research Summit, "Brain breakthroughs: From cells to society", Derry~Londonderry, N. Ireland, June 11-12, 2013.

Plenary Speaker, 4th International Conference on Cognitive Neurodynamics, "Bidirectional coupling between humans, machines and nervous systems", Sigtuna, Sweden, June, 23-27, 2013.

Plenary Speaker, 18th European College of Sports Science, "The neural choreography of coordinated behavior", Barcelona, Spain, June 26-29, 2013.

Keynote Speaker, International Conference on Complexity, Cognition, Urban Planning and Design, "Cities as Coordinative Structures", Delft, Holland, October 10-12, 2013.

Invited Speaker, International Conference on Diversity in Macroeconomics. Economic & Social Research Council (UK), "Dynamic neuromarkers and neuromarker dynamics of social coordination", Colchester, England, February 24-25, 2014.

Invited Colloquium, Cognitive Science Program, University of Connecticut, "Coordinative structures, criticality and Crick's conjecture", April 3-4, 2014.

Invited Speaker, International Conference on Social Science, "The neural choreography of social coordination", Honolulu, Hawaii, May 28-31, 2014.

Invited Speaker, 2014 IEEE International Conference on Systems, Man & Cybernetics, "Coordination Dynamics: Bidirectional coupling between humans, machines and brains". San Diego, CA, Oct 5-8, 2014

Keynote Speaker, 18th Herbstakademie on The Circularity of Mind and Body, "The dynamical origins of conscious agency", Heidelberg, Germany, March 26-28, 2015.

Invited Howard Hughes Medical Institute (HHMI) Lecture "Coordinated movement: Making the familiar strange", The Claremont Colleges, June, 17-18, 2015.

Keynote Address, Society for Complex Systems in Cognitive Science, "From finger wiggling to mobile jiggling: Self Organizing Self", Pasadena, California, July 21, 2015

Keynote Address, 25th Anniversary of Society for Chaos Theory and Life Sciences, "Night thoughts of a dynamicist", Gainesville, Fla, July 29-31st, 2015

Invited Seminar, Intelligent Systems Research Centre, "On the origins of agency", Ulster University, Magee Campus, Derry, N. Ireland, September 29th, 2015.

Invited Visiting Scientist Lectures, The Weizmann Institute of Science, Rehovot, Israel, Contemporary Systems Biology Group, "The Coordination Dynamics of Moving Bodies" and "The Origins of Agency", November 5th-11th, 2015.

Invited Lecture "On the self-organizing origins of agency", Washington University, St Louis, December 2nd, 2015.

Invited Lecture, "Self-organizing self", The Cognitive & Brain Sciences Institute, UC Berkeley, April, 29th, 2016.

Keynote speaker, "On the self-organizing origins of agency", Rapaport-Klein Study Group, Austen Riggs Center, Stockbridge, MA, June 16th-19th, 2016

Invited Speaker, "Bidirectional coupling of bodies, brains, babies and machines", Etore Majorana Foundation Meeting on Dynamical Coupling: From brain-to-brain to social interaction, Erice, Sicily, Sept 7-13, 2016.

Keynote Speaker, "Self-Organizing Coordination Dynamics of Bodies, Brains, Babies and Machines", Nebraska Research & Innovation Conference on Biomechanics, University of Nebraska, Omaha, Oct 12- 14, 2016.

Invited Speaker, Bernstein Prize Ceremony, 2017. Introduction to Sten Grillner's Research, Progress in Motor Control XI, Miami, Florida, July 19-22, 2017.

Invited Speaker, 9th Olympiad of the Mind, Walls and Borders and Strangers on the Shore: On Learning to Live Together from the Perspective of the Science of Coordination and The Complementary Nature, Chania, Crete, Sept 14-16, 2017.

Keynote Speaker, "Principles of Coordination: Synergies of Synergies", International Congress on Complex Systems in Sport: Linking theory and practice, Camp Nou, Barcelona, Oct 5-6, 2017.

The Tourtellotte Lecture, "The laws that bind us", Kalamazoo College, May 6-8, 2018

The B.F. Skinner Lecture, "Matter, Movement and Mind", ABAI Annual Conference, San Diego, CA, May, 27, 2018

Keynote Speaker, "Social coordination: Laws of the many, the few and the in between", International Conference on Social Cognition in Humans and Robots, Hamburg, Germany, September 28-30, 2018.

Invited Lecture, "The measure of man: From two to infinity", Conference on Coordination Dynamics and Mathematical Education, UC Berkeley, October 24-26, 2018.

Invited talk, "Coordination Dynamics: The Laws that Bind Us", Presidential Scholars in Society and Neuroscience, Columbia University, March 11, 2019.

Invited seminar, "Concepts, methods and tools of Coordination Dynamics for The Complementary Nature of Living Together", First Buffalo Symposium, Pine Ridge Reservation, South Dakota, May 16-18, 2019.

Keynote Address. "What binds us? The 'new' science of coordination", Summer School in Cognitive Science, UNAM, Mexico City, June 2-7, 2019.

Keynote Speaker, Neural Oscillation Conference 2019: Towards Integrative Understanding of Human Nature, Kyoto, Japan, Nov.17-19, 2019.

Keynote Address, VI JORNADAS FIDIAS, Charlas FID "Becoming a Metastabilian", Nov. 14-15, 2020.

Plenary Lecture, International Conference on Complex Systems (CCS2020), "On Coordination", December 4-11, 2020.

PUBLICATIONS[1]

2021/in press

Argueta, A., Sloan, A., Jones, N., & Kelso, J.A.S. (in press). Emergence of agency in infants. *FAU Undergraduate Research Journal*

Kelso, J.A.S. (submitted). On the physical basis of biological coordination: Uniting the many and the few

Torrents, C., Balagué, N., Hristovski, R., Almarcha, M., & Kelso, J.A.S. (in press) Metastable coordination dynamics of collaborative activity in educational settings. *Sustainability*

2020

Alderson, T., Bokde, A., Kelso, J.A.S., Maguire, L., & Coyle, D. (2020). Metastable neural dynamics underlies cognitive performance across multiple behavioural paradigms. *Human Brain Mapping*, 41, 3212-3224. DOI: 10.1002/hbm.25009

Baillin, F., Lefebvre, A., Pedoux, A., Beauxis, Y., Engemann, D., Maruani, A., Amsellem, F., Kelso, J.A.S., Bourgeron, T., Delorme, R., Dumas, G. (2020) Interactive psychometrics for autism with the Human Dynamic Clamp: Interpersonal synchrony from sensory-motor to socio-cognitive domains. *Frontiers in Psychiatry 11:510366. doi: 10.3389/fpsyt.2020.510366*

Dodel, S., Tognoli, E., & Kelso, J.A.S. (2020) Degeneracy and complexity in neuro-behavioral correlates of team coordination. *Frontiers in Human Neuroscience-Cognitive Neuroscience* https://doi.org/10.3389/fnhum.2020.00328. Special Issue on Neurodynamics of Teams: Theory, Models, and Applications

Dumas, G., Moreau, Q., Tognoli, E., & Kelso, J.A.S. (2020). The Human Dynamic Clamp reveals the fronto-parietal network linking real-time social coordination and cognition. *Cerebral Cortex*, 30 (5), 3271-3285.

Fuchs, A., & Kelso, J.A.S. (2020). Movement Coordination. In *Synergetics* (A.Hutt & H.Haken, Eds.), pp. 287-308. Springer, New York https://doi.org/10.1007/978-1-0716-0421-2_341.

Kelso, J.A.S. (2020) On becoming a Metastabilian. FIDIAS2020 Cadiz and Malaga DOI: 10.13140/RG.2.2.16106.95684

[1] Excluding Conference Abstracts

Kelso, J.A.S. (2020) On Coordination. CCS2020 Plenary Address DOI: 10.13140/RG.2.2.14848.66568

Tognoli, E., & Kelso, J.A.S. (2020) Spectral dissociation of lateralized brain rhythms *Neuroscience Research,* 156, 141-146. https://doi.org/10.1016/j.neures.2019.12.006

Tognoli, E., Zhang, M., Fuchs, A., Beetle, C.B., & Kelso, J.A.S. (2020) Coordination Dynamics: A foundation for understanding social behavior. Special Issue on Sensorimotor Foundations of Social Cognition. *Frontiers in Human Neuroscience*| doi: 10.3389/fnhum.2020.00317

Zhang, M., Kalies, W.D., Kelso, J.A.S., & Tognoli, E. (2020) Topological portraits of multiscale coordination dynamics. *Journal of Neuroscience Methods*, 339, 108672. https://doi.org/10.1016/j.jneumeth.2020.108672

2019

Alderson, T., Bokde, A., Kelso, J.A.S., Maguire, L., & Coyle, D. (2019). Metastable neural dynamics underlies cognitive performance across multiple behavioural paradigms. bioRxiv June, 02 doi: https://doi.org/10.1101/657569doi

Benites, D., Tognoli, E., & Kelso, J. A. S. (in press). Dinâmicas de Coordenação e Metaestabilidade. In V. G. Haase & G. Gauer (Eds.), Elementos de Psicologia Cognitiva. Porto ALegre: ARTMED.

Dumas, G., Moreau, Q., Tognoli, E., & Kelso, J.A.S. (2019). The Human Dynamic Clamp reveals the fronto-parietal network linking real-time social coordination and cognition (bioRxiv May 27, 2019 651232) *Cerebral Cortex, 23 December, 2019*. https://doi.org/10.1093/cercor/bhz308

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PATENTS

Tognoli, E., & Kelso, J.A.S. (2013) System and method for analysis of spatio-temporal data. US Patent 8542916

Curriculum Vitae

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Professional Experience

December, 1989 - Received Bachelor of Science degree in Psychology from the University of Wisconsin

March, 1993 - Received M.S. degree from the Georgia Institute of Technology

July, 1995 - Attended summer school on cognitive modeling in ACT-R at Carnegie Mellon University

September, 1995 - Received Ph.D. degree with minor in Linguistics from the Georgia Institute of Technology

September 1995 to June 1998 - Postdoctoral research scientist at Indiana University as part of a developmental training grant

September 1997 to December 1997 - Adjunct professor at Indiana University

August 1998 to May 2004 - Assistant professor at Florida Atlantic University

May 2004 to Present – Associate professor at Florida Atlantic University

August 2015 to May 2018 – Master Teacher, Department of Psychology, Florida Atlantic University

January 2017 to Present – Director of Undergraduate Programs, Department of Psychology

Refereed Articles, Book Chapters, and Conference Proceedings

Kersten, A.W., Earles, J.L., Vernon, L.L., McRostie, N., & Riso, A. (in press). Negative emotion increases false memory for person/action conjunctions. *Cognition & Emotion*. doi.org/10.1080/02699931.2021.1891024

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Earles, J.L., & Kersten, A.W. (1999). Processing speed and adult age differences in activity memory. *Experimental Aging Research, 25*, 243-253. doi.org/10.1080/036107399244011

Earles, J.L., Kersten, A.W., Turner, J.M., & McMullen, J. (1999). Influences of age, performance, and item relatedness on verbatim and gist recall of verb-noun pairs. *Journal of General Psychology, 126*, 97-110. doi.org/10.1080/00221309909595354

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Kersten, A.W., & Billman, D.O. (1995). The roles of motion and moving parts in noun and verb meanings. *Proceedings of the Seventeenth Annual Conference of the Cognitive Science Society*. Hillsdale: Erlbaum.

Salthouse, T.A., & Kersten, A.W. (1993). Decomposing adult age differences in symbol arithmetic. *Memory and Cognition, 21*, 699-710. doi.org/10.3758/BF03197200

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Manuscripts Submitted for Publication

Kersten, A.W., Earles, J.L., & Brymer, J. Effects of age and self-performance on memory for who did what.

St. Peter, K.S., Vernon, L.L., & Kersten, A.W. The influence of movement on negative and positive emotional responses to animals.

Grants Submitted or Awarded

Project Title: Influences of Executive and Memory Functioning on Memory for the Sources of Actions and Words
Budget Period: 8/15/19 – 8/14/22
Funding Agency: National Institutes of Health
Principal Investigator: Alan Kersten
Award Amount: $437,674
Status: Awarded

Project Title: The Roles of Frontal and Medial Temporal Lobe Functioning in Memory for Events
Budget Period: 3/1/12 – 2/28/14
Funding Agency: Florida Atlantic University College of Science
Principal Investigator: Alan Kersten
Award Amount: $5,000
Status: Awarded

Project Title: Adult Age Differences in Binding Actors and Actions
Budget Period: 9/1/04 – 6/30/08
Funding Agency: National Institutes of Health
Principal Investigator: Alan Kersten
Award Amount: $206,700
Status: Awarded

Project Title: Adult Age Differences in Event Memory
Budget Period: 1/1/04 – 12/31/04
Funding Agency: Florida Atlantic University Division of Research
Principal Investigator: Alan Kersten
Award Amount: $14,900
Status: Awarded

Project Title: Verb Learning in English and Spanish Speakers
Budget Period: 8/1/00 – 7/31/01
Funding Agency: Florida Atlantic University Charles E. Schmidt College of Science
Principal Investigator: Alan Kersten
Award Amount: $5000
Status: Awarded

Awards

1999 APA Division of Experimental Psychology New Investigator Award in Experimental Psychology: General

2014 Florida Atlantic University Charles E. Schmidt College of Science Distinguished Teacher of the Year

2020 Florida Atlantic University Charles E. Schmidt College of Science Researcher of the Year – Associate Professor Level

Selected Conference Presentations

Kersten, A.W., Earles, J.L., Smithwick, M., & Petroz, C. (2020, November). Effects of distraction on source memory for actions. Paper presented at the Meeting of the Psychonomic Society, Austin, TX.

Kersten, A.W., Earles, J.L., Brydon, C., Lopes, M., & Boerth-Dryden, L. (2020, April). The PAC test: A novel method for testing the binding of features in episodic memory. Poster presented at the Cognitive Aging Conference, Atlanta, GA.

St. Peter, K., Vernon, L., & Kersten, A. (2020, April). Influence of movement on negative emotional reactions to animals. Poster presented at the Meeting of the Southeastern Psychological Association, New Orleans, LA.

Kersten, A.W., Earles, J.L., Smithwick, M., & Frank, C.S. (2019, November). Memory for the sources of actions and words. Paper presented at the Meeting of the Psychonomic Society, Montreal, Canada.

Kersten, A.W., Earles, J.L., Perry, J. (2018, November). Influences of actor appearance and movement features on action recognition. Poster presented at the Meeting of the Psychonomic Society, New Orleans, LA.

Kersten, A.W., Earles, J.L., Aucello, K., & Tautiva, E. (2018, April). Neuropsychological correlates of source memory for actions depend upon the number of sources. Plenary presentation at the Cognitive Aging Conference, Atlanta, GA.

Kersten, A.W., Earles, J.L., Vernon, L.L., McRostie, N., & Riso, A. (2017, November). Effects of emotional context on false memory for person/action conjunctions. Poster presented at the Meeting of the Psychonomic Society, Vancouver, BC.

Pruzansky. R.M., Kersten, A.W., & Earles, J.L. (2017, April). Children and adults benefit from object consistency when learning novel verbs. Paper presented at the Biennial Meeting of the Society for Research in Child Development, Austin, TX.

Kersten, A.W., & Earles, J.L. (2016, November). Executive function in older adults predicts source memory for actions only for small numbers of sources. Paper presented at the Meeting of the Psychonomic Society, Boston, MA.

Kersten, A.W., Earles, J.L., Khan, L., & Negri, L. (2016, October). Effects of attending to manner and path on memory for characters in events. Poster presented at the Second Annual Florida Psycholinguistics Meeting, Davie, FL.

Kersten, A.W., & Earles, J.L. (2016, May). Feelings of familiarity and false memory for specific associations resulting from mugshot exposure. Paper presented at Fishschrift: Applied Cognition and the Cognitive Interview: A Conference in Honor of Dr. Ron Fisher, Miami, FL.

Kersten, A.W., Earles, J.L., & Negri, L. (2015, November). Memory for characters and their motions in events. Paper presented at the Meeting of the Psychonomic Society, Chicago, IL.

Kersten, A.W., Earles, J.L., & Berger, J.D. (2014, November). Recollection and unitization in memory for people's paths and manners of motion. Paper presented at the Meeting of the Psychonomic Society, Long Beach, CA.

Pruzansky, R., Kersten, A.W., & Earles, J.L. (2014, May). Increasing complexity in a blocked learning order may facilitate novel verb generalization. Poster presented at the Convention of the Association for Psychological Science, San Francisco, CA.

Kersten, A.W., Earles, J.L., & Paulvin, C. (2014, April). Effects of frontal and medial temporal lobe functioning on memory for actors and their actions. Poster presented at the Cognitive Aging Conference, Atlanta, GA.

Kersten, A.W., Earles, J.L., & Paulvin, C. (2013, November). Frontal and medial temporal contributions to memory for actor-action associations. Paper presented at the Meeting of the Psychonomic Society, Toronto, ON.

Earles, J.L., Kersten, A.W., & Moriarity, B.L. (2013, November). Effects of semantic context on memory for nouns and verbs sharing the same root. Poster presented at the Meeting of the Psychonomic Society, Toronto, ON.

Kersten, A.W., & Terrazas, D. (2013, April). Attention to path and manner of motion in English- and Spanish-speaking children. Poster presented at the Biennial Meeting of the Society for Research in Child Development, Seattle, WA.

Pruzansky, R., Kersten, A.W., & Earles, J.L. (2013, April). Is he flooping or wuzzing? Novel verb generalization strategies of preschool children. Poster presented at the Biennial Meeting of the Society for Research in Child Development, Seattle, WA.

Kersten, A.W., Earles, J.L., & Berger, J.D. (2012, November). Recollection and unitization in associating actors with actions. Poster presented at the Meeting of the Psychonomic Society, Minneapolis, MN.

Earles, J.L., & Kersten, A.W. (2012, November). Influences of familiarity and recollection on memory for event roles. Poster presented at the Meeting of the Psychonomic Society, Minneapolis, MN.

Kersten, A., Earles, J.L., Walsh, J., & Keif, A.A. (2012, April). Effects of age and self-performance on memory for who did what. Poster presented at the Cognitive Aging Conference, Atlanta, GA.

Rowell, S.F., Earles, J.L., & Kersten, A.W. (2012, April). Effects of age on unconscious plagiarism. Poster presented at the Cognitive Aging Conference, Atlanta, GA.

Kersten, A.W. (2011, November). Attention to manner of motion and moving parts in object categorization. Paper presented at the Meeting of the Psychonomic Society, Seattle, WA.

Chin, S.L., & Kersten, A.W. (2011, July). Motion influences children's attention to object properties during noun learning. Poster presented at the Conference of the Cognitive Science Society, Boston, MA.

Kersten, A.W., Berger, J.D., & Earles, J.L. (2010, November). Effects of attending to manner and path on memory for actors. Poster presented at the Meeting of the Psychonomic Society, St. Louis, MO.

Earles, J.L., & Kersten, A.W. (2010, November). Effects of static and moving lineups on eyewitness memory for events. Paper presented at the Meeting of the Psychonomic Society, St. Louis, MO.

Chin, S.L., & Kersten, A.W. (2010, August). The application of the Less is More hypothesis in foreign language learning. Paper presented at the Conference of the Cognitive Science Society, Portland, OR.

Curtayne, E., Peluso, J., & Kersten, A. (2010, May). Thematic arousal and attention magnets: Different effects for reported emotional reactions and event valence. Poster presented at the Convention of the Association for Psychological Science, Boston, MA.

Earles, J.L., & Kersten, A.W. (2010, April). Age differences in the use of context to prevent binding errors in event memory. Poster presented at the Cognitive Aging Conference, Atlanta, GA.

Butler, L.A., & Kersten, A.W. (2010, March). Forgetting who did what: The impact of emotion on binding in memory. Poster presented at the American Psychology-Law Society Conference, Vancouver, BC.

Kersten, A.W., Meissner, C.A., Lechuga, J., Schwartz, B.L., Albrechtsen, J.S., & Iglesias, A. (2009, November).Classification of novel manners of motion by monolingual English and Spanish spea kersPaper presented at the Meeting of the Psychonomic Society, Boston, MA.

Earles, J.L., Kersten, A.W., Butler, L.A., & Rowell, S.F. (2009, November). Binding errors in memory for criminal actions and their perpetrators. Poster presented at the Meeting of the Psychonomic Society, Boston, MA.

Kersten, A.W., Chin, S.L., Earles, J.L., & Thomas, J.A. (2009, April). Attention to manner of motion during noun and verb learning. Paper presented at the Biennial Meeting of the Society for Research in Child Development, Denver, CO.

Kersten, A.W., Berger, J.D., & Earles, J.L. (2008, November). Associating human actors with two different kinds of motion. Paper presented at the Meeting of the Psychonomic Society, Chicago, IL.

Earles, J.L., Kersten, A.W., Vernon, L.L., & Starkings, R. (2008, November). Effects of emotion on feature memory and feature binding in event memory. Poster presented at the Meeting of the Psychonomic Society, Chicago, IL.

Kersten, A.W., & Earles, J.L. (2008, April). Effects of mugshot viewing on memory for events in young and older adults. Poster presented at the Cognitive Aging Conference, Atlanta, GA.

Earles, J.L., & Kersten, A.W. (2008, April). Effects of age and repetition on the binding of actors and actions. Poster presented at the Cognitive Aging Conference, Atlanta, GA.

Kersten, A.W., Chin, S.L., & Cedeno, M.A. (2007, November). Attention to manner of motion in a speeded classification task. Paper presented at the Meeting of the Psychonomic Society, Long Beach, CA.

Earles, J.L., Kersten, A.W., Curtayne, E.S., & Perle, J.G. (2007, November). Actor similarity and binding errors in event memory. Poster presented at the Meeting of the Psychonomic Society, Long Beach, CA.

Kersten, A.W. (2007, April). Attention to object properties during the learning of intrinsic and extrinsic motion verbs. Paper presented at the Biennial Meeting of the Society for Research in Child Development, Boston, MA.

Kersten, A.W., Meissner, C.A., Schwartz, B.L., Iglesias, A., & Albrechtsen, J.S. (2006, November). Effects of linguistic context and age of exposure to English on attention to manner of motion. Paper presented at the Meeting of the Psychonomic Society, Houston, TX.

Earles, J.L., Kersten, A.W., & Upshaw, C. (2006, November). False recollection of the role played by an actor in an event: Implications for eyewitness testimony. Poster presented at the Meeting of the Psychonomic Society, Houston, TX.

Kersten, A.W., & Earles, J.L. (2006, April). Effects of age and temporal proximity on false bindings of actors with actions. Poster presented at the Cognitive Aging Conference, Atlanta, GA.

Earles, J.L., Kersten, A.W., & Pacific, J.B. (2006, April). Effects of age and distraction on unconscious transference in eyewitness memory. Poster presented at the Cognitive Aging Conference, Atlanta, GA.

Kersten, A.W., Earles, J.L., & Lomer, A. (2005, November). Effects of age and response deadlines on unconscious transference in eyewitness memory. Paper presented at the Meeting of the Psychonomic Society, Toronto, ON.

Kersten, A.W., Earles, J.L., Klein, E., & Jonas, F. (2005, November). False associations of actors with actions as a result of mugshot viewing. Poster presented at the Meeting of the Psychonomic Society, Toronto, ON.

Kersten, A.W., & Iglesias, A. (2005, April). Children attend to intrinsic motions when learning nouns. Poster presented at the Biennial Meeting of the Society for Research in Child Development, Atlanta, GA.

Kersten, A.W., & Earles, J.L. (2004, November). Effects of semantic context on memory for nouns and verbs. Paper presented at the Meeting of the Psychonomic Society, Minneapolis, MN.

Kersten, A.W., Earles, J.L., Curtayne, E.S., & Pacific, J.B. (2004, April). Effects of familiarity and recollection on the binding of actors and actions in eyewitness memory. Paper presented at the Meeting of the Cognitive Aging Conference, Atlanta, GA.

Kersten, A.W., Earles, J.L., Curtayne, E.S., & Lane, J.C. (2003, November). Adult age differences in binding actors and actions in eyewitness memory. Poster presented at the Meeting of the Psychonomic Society, Vancouver, BC.

Earles, J.L., Kersten, A.W., Klein, E., & Phelan, A. (2003, November) Event memory in and out of context. Poster presented at the Meeting of the Psychonomic Society, Vancouver, BC.

Kersten, A.W., Meissner, C.A., Schwartz, B.L., & Rivera, M.L. (2003, April). Differential sensitivity to manner of motion in adult English and Spanish speakers. Paper presented at the Biennial Meeting of the Society for Research in Child Development, Tampa, FL.

Kersten, A.W., Earles, J.L., & Curtayne, E. (2002, November). Binding actors and actions in eyewitness memory. Paper presented at the Meeting of the Psychonomic Society, Kansas City, MO.

Earles, J.L., Kersten, A.W., & Curtayne, E. (2002, November). Effects of distraction on unconscious transference in eyewitness memory. Poster presented at the Meeting of the Psychonomic Society, Kansas City, MO.

Earles, J.L., Kersten, A.W., Berlin Más, B., & Miccio, D. (2002, April). Age differences in the effects of task-induced anxiety on task recall. Poster presented at the Cognitive Aging Conference, Atlanta, GA.

Kersten, A.W., & Rivera, M.L. (2001, November). English and Spanish speakers attend differently to attributes of novel events. Paper presented at the Meeting of the Psychonomic Society, Orlando, FL.

Earles, J.L., & Kersten, A.W. (2001, November). Older adults have difficulty remembering difficult activities. Poster presented at the Meeting of the Psychonomic Society, Orlando, FL.

Kersten, A.W. (2001, April). Attention to novel objects during verb learning in different languages. Poster presented at the Biennial Meeting of the Society for Research in Child Development, Minneapolis, MN.

Kersten, A.W., & Earles, J.L. (2000, November). A role for the motions of whole objects in object representations. Paper presented at the Meeting of the Psychonomic Society, New Orleans, LA.

Earles, J.L., & Kersten, A.W. (2000, November). Effects of semantic context on memory for nouns and verbs. Poster presented at the Meeting of the Psychonomic Society, New Orleans, LA.

Kersten, A.W., Earles, J.L., Dietrich, E., & Turner, S. (2000, April). The effects of age and encoding context on the recognition of nouns and verbs. Poster presented at the Cognitive Aging Conference, Atlanta, GA.

Kersten, A.W. (2000, February). The different types of motion conveyed by verbs and nouns in event descriptions. Paper presented at the Workshop on Conceptualization, Heidelberg, Germany.

Kersten, A.W., & Earles, J.L. (1999, November). Is less really more? Learning a miniature artificial language in adulthood. Paper presented at the Meeting of the Psychonomic Society, Los Angeles, CA.

Kersten, A.W. (1999, April). Children attend to objects as well as motions when learning verbs. Poster presented at the Biennial Meeting of the Society for Research in Child Development, Albuquerque, NM.

Kersten, A.W. (1998, November). Object-based and part-based attention during categorization of a complex object. Poster presented at the Meeting of the Psychonomic Society, Dallas, TX.

Earles, J.L., & Kersten, A.W. (1998, November). Influences of age and perceived activity difficulty on activity recall. Poster presented at the Meeting of the Psychonomic Society, Dallas, TX.

Earles, J.L., Kersten, A.W., Turner, J.M., & McMullen, J. (1998, April). Influences of age, performance, and context on verbatim and gist recall of verb-noun pairs. Poster presented at the Cognitive Aging Conference, Atlanta, GA.

Kersten, A.W. (1997, November). The development of noun and verb learning biases. Poster presented at the Meeting of the Psychonomic Society, Philadelphia, PA.

Earles, J.L., Kersten, A.W., & Downie, N. (1997, November). Directed forgetting of performed actions. Poster presented at the Meeting of the Psychonomic Society, Philadelphia, PA.

Kersten, A.W., Fancher, C., Remec, N.M., & Schaefer, J.M. (1997, April). Evidence for different learning biases when children learn nouns and verbs. Poster presented at the Biennial Meeting of the Society for Research in Child Development, Washington, DC.

Kersten, A.W., Goldstone, R.L., & Schaffert, A. (1996, November). The segmentation of events into features during category learning. Poster presented at the Meeting of the Psychonomic Society, Chicago, IL.

Earles, J.L., Kersten, A.W., Hadden, J., & Zola, R. (1996, November). Age differences in memory for nouns and verbs. Poster presented at the Meeting of the Psychonomic Society, Chicago, IL.

Kersten, A.W., & Billman, D.O. (1995, July). The roles of motion and moving parts in noun and verb meanings. Poster presented at the Conference of the Cognitive Science Society, Pittsburgh, PA.

Kersten, A.W., & Billman, D.O. (1994, November). Dynamic properties and frames of reference in object and event category learning. Paper presented at the Meeting of the Psychonomic Society, St. Louis, MO.

Kersten, A.W., & Billman, D.O. (1992, August). The role of correlational structure in learning event categories. Paper presented at the Conference of the Cognitive Science Society, Bloomington, IN.

Billman, D.O., & Kersten, A.W. (1991, November). Learning event categories: Effects of correlational structure. Paper presented at the meeting of the Psychonomic Society, San Francisco, CA.

General Research Interests

Language Development
Categorization
Memory and Aging
Event Perception and Memory
Object Recognition
Biological Bases of Perception and Memory

Teaching Interests

Psychology of Human Development
Cognition
Language Acquisition
Human Learning and Memory
Language and Thought
Human Memory and the Hippocampus
Memory and Eyewitness Testimony

Teaching Experience

May 2004 to Present – Associate Professor, Florida Atlantic University

August 1998 to May 2004 - Assistant Professor, Florida Atlantic University

September 1997 to December 1997 - Visiting Assistant Professor in Developmental Psychology at Indiana University

Spring 1995 - Instructor of Statistics lab at Georgia Tech

Summer 1994 - Lecturer in Introductory Psychology class at Georgia Tech

Winter 1992, 1993, and 1994 - Instructor of Cognition lab at Georgia Tech

Fall 1991 to Spring 1995 - Teaching assistant at Georgia Tech

Service

Journal reviews

Consulting Editor for *Memory & Cognition* – March 2016 to Present
Member of the Review Committee for the Psychonomic society – May 2018 to Present

Ad-hoc reviewer for *Acta Psychologica, Applied Cognitive Psychology, Applied Psycholinguistics, Behavioural Brain Research,* the Biennial Meeting of the Society for Research in Child Development, *Child Development, Cognition, Cognitive Science, Consciousness and Cognition, Developmental Review, Developmental Psychology, Developmental Science, Experimental Aging Research, Experimental Psychology,* the *Journal of Child Language,* the *Journal of Cognitive Psychology,* the *Journal of Cognitive Science,* the *Journal of Experimental Child Psychology,* the *Journal of Experimental Psychology: Applied,* the *Journal of Experimental Psychology: Human Perception and Performance,* the *Journal of Experimental Psychology: Learning, Memory, and Cognition,* the *Journals of Gerontology, Series B: Psychological Sciences and Social Sciences,* the *Journal of Memory and Language, Language Learning & Development, Memory, Memory & Cognition,* the *Proceedings of the Cognitive Science Society, Psychology & Aging, PLOS ONE, Psychonomic Bulletin & Review,* and the *Quarterly Journal of Experimental Psychology*.

Grant proposal reviews

Ad-hoc reviewer for the National Science Foundation and for the Economic & Social Research Council.

Andy V. Khamoui, PhD
Assistant Professor
Department of Exercise Science & Health Promotion
Florida Atlantic University

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Office: (561) 297-4450 | Email: akhamoui@fau.edu

Education

2009-2014	Florida State University, Tallahassee, FL Doctor of Philosophy in Exercise Physiology *Dissertation: Exercise dependent skeletal muscle plasticity and signaling in cancer cachexia*
2006-2009	California State University, Fullerton, Fullerton, CA Master of Science in Kinesiology
2002-2006	Whittier College, Whittier, CA Bachelor of Arts in Kinesiology

Academic and Professional Honors

2020	Early Career Fellow, Transdisciplinary Research in Energetics and Cancer (TREC) Training Program, NCI R25CA203650 (PI: Irwin)
2014	Dean's Scholar, College of Human Sciences, Florida State University (awarded by Dean to thesis/dissertation producing graduate students with a cumulative GPA≥3.9)
2013	Dissertation Research Grant, The Graduate School, Florida State University
2013	Dissertation Research Grant, College of Human Sciences, Florida State University
2013	Member, The Honor Society of Phi Kappa Phi (top 10% within college)
2011	Florence Smith McAllister Endowed Fellowship, College of Human Sciences, Florida State University
2009	Outstanding Graduate Student, Department of Kinesiology, California State University, Fullerton (one award per year)
2009	Nominee, Outstanding Thesis, College of Health and Human Development, California State University, Fullerton
2008	Graduate Equity Fellowship, Office of Graduate Studies, California State University, Fullerton, (86 applicants, 16 awarded)
2008	Honorable Mention, California Pre-Doctoral Program, The California State University

Positions and Employment

2020- **Faculty Member**
Brain Institute, Florida Atlantic University, Jupiter, FL

2020- **Associate Faculty**
Integrative Biology Graduate Program, Biomedical Science and Neuroscience concentrations
Florida Atlantic University, Boca Raton, FL

2020- **Faculty Member**
Institute for Human Health and Disease Intervention, Florida Atlantic University, Jupiter, FL
Contribute to activities of the cancer research group within the institute

2016- **Assistant Professor, Tenure-Track**
Department of Exercise Science & Health Promotion
Florida Atlantic University, Boca Raton, FL
Responsible for independent research on tissue-specific metabolism and mitochondrial function (adipose, liver, and skeletal muscle) in pre-clinical cancer cachexia, aging, and metabolic disease, seeking to identify therapeutic targets that improve supportive care and treatment options. Use of omics technologies and bioinformatics to identify candidate therapeutic targets.
Teach undergraduate and graduate level courses and supervise student research.

2014-2016 **Postdoctoral Fellow**
Division of Respiratory & Critical Care Physiology & Medicine, Department of Medicine
Los Angeles Biomedical Research Institute at Harbor-UCLA Medical Center, Torrance CA
Studied mitochondrial function in mouse and fly models of genetically modified myostatin expression, maternal obesity, and aging (Mentors: Harry Rossiter PhD, Mina Desai PhD).
Operated the high-resolution respirometry core laboratory for collaborating partners in the UCLA Clinical and Translational Science Institute (CTSI) network

2009-2014 **Graduate Research Assistant**
Department of Nutrition, Food and Exercise Sciences
Florida State University, Tallahassee FL
Examined cellular and molecular responses of skeletal muscle to exercise and nutrition in rodent models of aging, obesity, and cancer cachexia (Mentor: Jeong-Su Kim PhD).

2009-2014 **Graduate Teaching Assistant**
Department of Nutrition, Food and Exercise Sciences
Florida State University, Tallahassee FL
Instructed undergraduate students in laboratory courses.

2007-2009 **Research Assistant**
Department of Kinesiology
California State University, Fullerton, Fullerton CA
Studied neuromuscular adaptations to high velocity exercise (Mentor: Lee Brown, EdD).

2007-2009 **Teaching Associate**
Department of Kinesiology
California State University, Fullerton, Fullerton, CA
Instructed undergraduate physical activity courses.

2005-2007 **Physical Therapy Technician**
California Rehabilitation & Sports Therapy, La Habra, CA
Administered therapeutic modalities and exercise programs in outpatient orthopedic clinic.

Publications

1. Visavadiya NP, Pena GS, and **Khamoui AV**. Mitochondrial dynamics and quality control are altered in a hepatic cell culture model of cancer cachexia. *Molecular and Cellular Biochemistry*. In press, 2020. PMID: 32797334

2. **Khamoui AV**, Tokmina-Roszyk D, Rossiter HB, Fields GB, and Visavadiya NP. Hepatic proteome analysis reveals altered mitochondrial metabolism and suppressed acyl-CoA synthetase-1 in colon-26 tumor-induced cachexia. *Physiological Genomics*. 52: 203-216, 2020. PMID: 32146873

3. Pena GS*, Paez HG*, Johnson TK*, Halle JL*, Carzoli JP*, Visavadiya NP, Zourdos MC, Whitehurst MA, and **Khamoui AV**. Hippocampal Growth Factor and Myokine Cathepsin B Expression following Aerobic and Resistance Training in 3xTg-AD Mice. *International Journal of Chronic Diseases*. Article ID 5919501, 2020. PMID: 32090058 *Student Authors

4. Gnaiger E and **MitoEAGLE Task Group** (I am one of 600+ authors of a consortium communication on experimental standards for the assessment of mitochondrial respiratory function). Mitochondrial physiology. *Bioenergetics Communications*. 2020. doi10.26124bec2020-0001.v1

5. Halle JL*, Pena GS*, Paez HG*, Castro AJ*, Rossiter HB, Visavadiya NP, Whitehurst MA, and **Khamoui AV**. Tissue-specific dysregulation of mitochondrial respiratory capacity and coupling control in colon-26 tumor-induced cachexia. *American Journal of Physiology-Regulatory, Integrative and Comparative Physiology*. 317: R68-R82, 2019. PMID: 31017805 *Student Authors

6. Lee S-R, **Khamoui AV**, and Jo E. Chronic fish oil consumption with resistance training improves grip strength, physical function, and blood pressure in community-dwelling older adults. *Sports* 7, 167, 2019.

7. Jo E, Worts PR, Elam M, Brown AF, **Khamoui AV**, Kim D-H, Yeh M-C, Ormsbee MJ, Prado CM, Cain A, Smith D, Snyder K, and Kim J-S. Resistance training during a 12-week protein supplemented VLCD treatment enhances weight-loss outcomes in obese patients. *Clinical Nutrition*. 38: 372-832, 2019. PMID: 29352654

8. **Khamoui AV**, Desai M, Ross MG, and Rossiter HB. Sex-specific effects of maternal and postweaning high-fat diet on skeletal muscle mitochondrial respiration. *Journal of Developmental Origins of Health and Disease*. 9: 670-677, 2018. PMID: 30111387

9. Lee S-R, **Khamoui AV**, Jo E, Zourdos MC, Panton LB, Ormsbee MJ, and Kim J-S. Effect of conjugated linoleic acids and omega-3 fatty acids with or without resistance training on muscle mass in high fat diet-fed middle aged mice. *Experimental Physiology*. 102(11): 1500-1512, 2017. PMID: 28795443

10. Rana A, Olivera M, **Khamoui AV**, Rera M, Aparicio R, Rossiter HB, and Walker DW. Inducing Drp-1 mediated mitochondrial fission in midlife prolongs healthy lifespan of Drosophila melanogaster. *Nature Communications*. 8(1): 448, 2017. PMID: 28878259

11. **Khamoui AV**, Yeh M-C, Park B-S, Kim D-H, Jo E, Arjmandi BH, and Kim J-S. Bone mineral density and content are differentially impacted by aerobic and resistance training in the colon-26 mouse model of cancer cachexia. *Applied Cancer Research*. 37:17, 2017. DOI 10.1186/s41241-017-0023-y

12. Zourdos MC, Bazyler CD, Jo E, **Khamoui AV**, Park B-S, Lee S-R, Panton LB, and Kim J-S. Impact of a submaximal warm-up on endurance performance in highly trained and competitive male runners. *Research Quarterly for Exercise and Sport*. 88(1):114-119, 2017. PMID: 27636554

13. **Khamoui AV**, Park B-S, Kim D-H, Yeh M-C, Oh S-L, Elam ML, Jo E, Arjmandi BH, Salazar G, Grant SC, Contreras RJ, Lee WJ, and Kim J-S. Aerobic and resistance training dependent skeletal muscle plasticity in the colon-26 murine model of cancer cachexia. *Metabolism*. 65(5): 685-698, 2016. PMID: 27085776

14. Park B-S*, **Khamoui AV***, Brown LE, Kim D-Y, Han K-A, Min K-W, and An G-H. Effects of elastic band resistance training on glucose control, body composition, and physical function in women with short- versus long-duration type 2 diabetes. *Journal of Strength and Conditioning Research*. 30(6):1688-1699, 2016. *Co-Lead Authors. PMID: 26562712

15. Zourdos MC, Jo E, **Khamoui AV**, Lee S-R, Park B-S, Ormsbee MJ, Panton LB, Contreras RJ, and Kim J-S. Modified daily undulating periodization model produces greater performance than a traditional configuration in powerlifters. *Journal of Strength and Conditioning Research*. 30(3): 784-791, 2016. PMID: 26332783

16. Jo E, Kim J-S, Ormsbee MJ, Prado CM, and **Khamoui AV**. The physiological basis for weight recidivism following severe caloric restrictive diet therapies: a molecular rationale for exercise- and nutrition-based treatment optimization. *Journal of Advanced Nutrition and Human Metabolism*. 2: e1105, 2016.

17. Lee S-R, **Khamoui AV**, Jo E, Park B-S, Zourdos MC, Panton LB, Ormsbee MJ, and Kim J-S. Effects of chronic high fat feeding on skeletal muscle mass and function in middle-aged mice. *Aging Clinical and Experimental Research*. 27(4): 403-411, 2015. PMID: 25647784

18. Zourdos MC, Henning PC, Jo E, **Khamoui AV**, Lee S-R, Park Y-M, Naimo M, Panton LB, Nosaka K, and Kim J-S. Repeated bout effect in muscle-specific exercise variations. *Journal of Strength and Conditioning Research*. 29(8): 2270-2276, 2015. PMID: 25647658

19. Lin Y-A, **Khamoui AV**, Liao C-C, Huang C-C, and Hsu M-C. Improvement of exercise performance and attenuation of a marker of muscle damage by Epimedium brevicornum supplementation in mice. *Adaptive Medicine*. 7(2): 97-105, 2015.

20. Kim J-S*, **Khamoui AV***, Jo E, Park B-S, and Lee W-J. β-hydroxy-β-methylbutyrate as a countermeasure for cancer cachexia: a cellular and molecular rationale. *Anti-Cancer Agents in Medicinal Chemistry*. 13(8): 1188-1196, 2013. *Co-Lead Authors. PMID: 23919746

21. Kim J-S, Park Y-M, Lee S-R, Masad IS, **Khamoui AV**, Jo E, Park B-S, Arjmandi BH, Panton LB, Lee W-J, and Grant SC. β-hydroxy-β-methylbutyrate did not enhance high intensity resistance training-induced improvements in myofiber dimensions and myogenic capacity in aged female rats. *Molecules and Cells*. 34(5): 439-448, 2012. PMID: 23149873

22. **Khamoui AV** and Kim J-S. Candidate mechanisms underlying effects of contractile activity on muscle morphology and energetics in cancer cachexia. *European Journal of Cancer Care*. 21(2): 143-157, 2012. PMID: 21880081

23. Tran TT, Brown LE, Coburn JW, Lynn SK, Dabbs NC, Schick MG, Schick EE, **Khamoui AV**, Uribe BP, and Noffal GJ. Effects of different elastic cord assistance levels on vertical jump. *Journal of Strength and Conditioning Research*. 25(12): 3472-3478, 2011. PMID: 21804422

24. Henning PC, **Khamoui AV**, and Brown LE. Preparatory strength and endurance training for U.S. Army basic combat training. *Strength and Conditioning Journal*. 33(5): 48-57, 2011

25. **Khamoui AV**, Brown LE, Nguyen D, Uribe BP, Coburn JW, Noffal GJ, and Tran T. Relationship between force-time and velocity-time characteristics of dynamic and isometric muscle actions. *Journal of Strength and Conditioning Research*. 25(1): 198-204, 2011. PMID: 19966585

26. Johnson TM, Brown LE, Coburn JW, Judelson DA, **Khamoui AV**, Tran TT, and Uribe BP. Effect of four different starting stances on sprint time in collegiate volleyball players. *Journal of Strength and Conditioning Research.* 24(10): 2641-2646, 2010. PMID: 20885191

27. Eurich AD, Brown LE, Coburn JW, Noffal GJ, Nguyen D, **Khamoui AV**, and Uribe BP. Performance differences between sexes in the pop-up phase of surfing. *Journal of Strength and Conditioning Research.* 24(10): 2821-2825, 2010. PMID: 20733519

28. Uribe BP, Coburn JW, Brown LE, Judelson DA, **Khamoui AV**, and Nguyen D. Muscle activation when performing the chest press and shoulder press on a stable bench vs. a swiss ball. *Journal of Strength and Conditioning Research*. 24(4): 1028-1033, 2010. PMID: 20300023

29. Schick EE, Coburn JW, Brown LE, Judelson DA, **Khamoui AV**, Uribe BP, Tran T, and Reyes C. A comparison of muscle activation between a smith machine and free weight bench press. *Journal of Strength and Conditioning Research*. 24(3): 779-784, 2010. PMID: 20093960

30. **Khamoui AV**, Brown LE, Coburn JW, Judelson DA, Uribe BP, Nguyen D, Tran T, Eurich AD, and Noffal GJ. Effect of potentiating exercise volume on vertical jump parameters in recreationally trained men. *Journal of Strength and Conditioning Research*. 23(5): 1465-1469, 2009. PMID: 19593219

31. Nguyen D, Brown LE, Coburn JW, Judelson DA, Eurich AD, **Khamoui AV**, and Uribe BP. Effect of delayed-onset muscle soreness on elbow flexion strength and rate of velocity development. *Journal of Strength and Conditioning Research*. 23(4): 1282-1286, 2009. PMID: 19568034

Professional Service

2020-	Guest Editor, "Skeletal Muscle Development from Infancy to Adolescence" on behalf of the journal *Children*
2020-	Reviewer, Journal of Cellular and Molecular Medicine
2018-	Reviewer, American Journal of Physiology-Cell Physiology
2018-	Reviewer, American Journal of Physiology-Endocrinology and Metabolism
2018-	Reviewer, Journal of Applied Physiology
2017-	Reviewer, Journal of Cachexia, Sarcopenia and Muscle
2017-	Reviewer, International Journal of Exercise Science
2015-	Reviewer, Muscle and Nerve
2013-	Reviewer, Journal of Strength and Conditioning Research
2011	Reviewer, Journal of Sports Science and Medicine
2010	Reviewer, European Journal of Sport Science

Teaching

<u>Undergraduate Courses</u>

Florida Atlantic University PET 3361 Nutrition in Health and Exercise

	IDS 4934 Human Mission to Mars. (This was a new course developed and implemented with 10 other faculty members from across the University. The overall goal of the course was to use a human mission to mars as the impetus for solving problems using the scientific method, and increase scientific literacy.) HSC 4140 Stress Management
Florida State University	PET 3380C Applied Exercise Physiology Laboratory (6 semesters) PET 3323C Anatomy & Physiology II Laboratory (9 semesters)
Cal State Fullerton	KNES 146 Weight Training

Graduate Courses

Florida Atlantic University	PET 5930 Skeletal Muscle Plasticity in Exercise and Disease PET 5077 Seminar in Exercise and Aging

Grants and Fellowships

Funded

1. Advancing our understanding of hepatic metabolism in cancer cachexia. Khamoui AV (PI) Summer Undergraduate Research Fellowship, May 2019. Undergraduate mentee: Damian Ragoonanan. Amount: $4,000

2. Defining the mechanisms of mitochondrial quality control to combat cancer cachexia. Khamoui AV (PI) Summer Undergraduate Research Fellowship, May 2017. Undergraduate mentee: Jessica Halle. Amount: $4,000

3. Advancing FAU Pillars and Platforms through High-Resolution Tissue Respirometry. Khamoui AV (PI). Technology Fee Award, Florida Atlantic University. Amount: $150,000. May 2017.

4. Individual Postdoctoral Fellowship. The Pulmonary Education and Research Foundation. $44,000 plus fringe benefits/year for 2014-2016.

5. Florence Smith McAllister Endowed Fellowship. College of Human Sciences, Florida State University. Funded for 2011-2012 academic year. Amount: $5,000.

6. Graduate Equity Fellowship. Office of Graduate Studies, California State University, Fullerton. Funded for 2008-2009 academic year. Amount: $2,500.

Pending

1. Tissue-specific regulation of cancer cachexia by acyl-CoA synthetase isoform-1. **Khamoui AV (PI)**, Visavadiya NP, and Fields GB. National Institutes of Health, Parent R01 PA-20-185. 1R01CA262588. October 2020. Amount: $1,283,792.00

2. Mitochondrial carrier proteins and energy metabolism in cancer cachexia. **Khamoui AV (PI)**, Visavadiya NP, and Fields GB. American Cancer Society, Research Scholar Grant #RSG CCE-135338. April 2020. Amount: $785,827.

Not Funded

1. Small Animal Core for Multidisciplinary Research and Education (SACMRE). Mid-scale RI-1 (M1:IP), National Science Foundation. Gografe S, Linley S, Blakely R, and Toll L (Co-PIs). Amount: $6 million. January 2019. **Role: Senior Personnel**

2. Crowdsourcing the genetic basis of healthy aging and individual success with diet and exercise. 1UL1 TR002550-01 Scripps Translational Science Institute. Nettles K (PI). Amount: $50,000. May 2018. **Role: Translational Research Liaison.**

3. **Khamoui AV (PI)**. Rehabilitation of skeletal muscle dysfunction in pulmonary arterial hypertension. 1F32HL131369. Ruth L. Kirschstein National Research Service Award (NRSA) Individual Postdoctoral Fellowship (Parent F32), PA-14-149, NIH. Submitted 04/2015. Amount: $174,187. **Impact Score: 40**

4. Kim J-S (PI), Grant SC, Levenson CW, and Arjmandi BH. Lifelong behavior modifications to combat sarcopenic obesity. Parent RO1, PA-11-260, NIH. Submitted 06/2012. Amount: $1,250,000. **Role: Administrative**.

5. Kim J-S (PI), Grant SC, Levenson CW, and Arjmandi BH. Exercise Countermeasure Strategies to Prevent Cancer Cachexia. American Cancer Society. RSG CCE-123801. Submitted 04/2012. $733,618**. Role: Grant Writer.**

Chapters

1. Huang C-J, **Khamoui AV**, Slusher AL, Fico BG. Cardiovascular reactivity and stress. In: Handbook of Research Methods in Health Psychology. Ragin DF and Kennan JP (Eds.). Routledge Taylor and Francis Group. New York, NY. In press, 2020.

2. **Khamoui AV**, Zourdos MC, and Brown LE. Needs Analysis. In: Conditioning for Strength and Human Performance 3rd Edition. Chandler TJ and Brown LE (Eds.). Abingdon, OX, UK: Routledge, 2018.

3. Zourdos MC, **Khamoui AV**, and Brown LE. Resistance Training Prescription. In: Conditioning for Strength and Human Performance 3rd Edition. Chandler TJ and Brown LE (Eds.). Abingdon, OX, UK: Routledge, 2018.

4. Brown LE, **Khamoui AV**, and Jo E. Test Administration and Interpretation. In: Conditioning for Strength and Human Performance 2nd Edition. Chandler TJ and Brown LE (Eds.). Philadelphia, PA: Lippincott Williams & Wilkins, 2012.

5. Brown LE and **Khamoui AV**. Agility Training. In: NSCA's Guide to Program Design. Hoffman, JR (Ed.). Champaign, IL: Human Kinetics, 2012.

6. Coburn JW, Brown LE, Malek MH, and **Khamoui AV**. Cardiovascular System and Aerobic Exercise Prescription. In: Training the Physical Dimensions of Fitness: Guidelines for the Community of Madrid. Gutierrez, AJ (Ed.). Madrid, Spain: Panamericana, 2009.

Columns

1. Park B-S, **Khamoui AV**, Brown LE, Kim D-Y, Han K-A, Min K-W, and An G-H. Does disease duration influence the exercise training responses of patients with type 2 diabetes? *Journal of Research in Medical Sciences*. 20(1): 105-106, 2015. PMID: 25767532

2. **Khamoui AV**, Willardson JM, and Dawes J. Is training to failure a safe and effective method for improving athletic performance? *Strength and Conditioning Journal*. 33(4): 19-20, 2011.

3. Henning PC and **Khamoui AV**. The Army's combat-relevant physical fitness test: a look ahead. *Tactical Strength and Conditioning Report*, NSCA, Issue 15, October 2010.

4. Henning PC and **Khamoui AV**. Physical training strategies to improve soldier load carriage. *Tactical Strength and Conditioning Report*, NSCA, Issue 14, July 2010.

5. **Khamoui AV**, Jo E, and Brown LE. Postactivation potentiation and athletic performance. *Hot Topics Series*, NSCA, September 24, 2009.

Abstracts

1. Castro AJ, Pena GS, Paez HG, Halle JL, Visavadiya NP, Zourdos MC, Whitehurst MA, and **Khamoui AV**. Mitochondrial Ant2 and Ucp2 Expression in Mouse Liver during Colon-26 Tumor-Induced Cachexia. Annual Meeting, ACSM, Orlando, FL, May 28-June 1, 2019.

2. Juber M, Carzoli JP, Sousa CA, Belcher DJ, Helms ER, **Khamoui AV**, Whitehurst M, and Zourdos MC. The effects of eccentric duration on squat and bench press concentric performance. Annual Meeting, ACSM, Orlando, FL, May 28-June 1, 2019.

3. Halle JL, Pena GS, Paez HG, Carzoli JP, Zourdos MC, Whitehurst M, and **Khamoui AV**. Mitochondrial respiratory capacity and coupling control of skeletal muscle in colon-26 tumor-induced cachexia. Annual Meeting, ACSM, Minneapolis, MN, May 29-June 2, 2018.

4. Pena GS, Halle JL, Carzoli JP, Paez HG, Zourdos MC, Whitehurst M, and **Khamoui AV**. Time-dependent alterations in liver and adipose mitochondrial respiration during colon-26 cancer cachexia. Annual Meeting, ACSM, Minneapolis, MN, May 29-June 2, 2018.

5. **Khamoui AV**, Desai M, Ross MG, and Rossiter HB. Maternal obesity programs offspring muscle mitochondrial function: response to postweaning diet. Annual Meeting, ACSM, Boston, MA, May 31-June 4, 2016.

6. **Khamoui AV**, Abraham A, Reisz-Porszasz S, and Rossiter HB. Skeletal muscle mitochondrial function in high-fat diet fed mice with genetically modified myostatin expression. Experimental Biology, FASEB, San Diego, CA, April 2-6, 2016

7. **Khamoui AV**, Kim D-H, Yeh M-C, Park B-S, Oh S-L, Elam ML, Worts PR, Jo E, Myers CM, Arjmandi BH, Salazar G, McCarthy DO, and Kim J-S. Aerobic and resistance training effects on skeletal muscle plasticity in colon-26 tumor-bearing mice. Annual Meeting, ACSM, San Diego, CA, May 26-30, 2015.

8. Jo E, Ormsbee MJ, Cain A, Snyder K, Elam M, Yeh M-C, Worts P, **Khamoui AV**, Kim D-H, Prado CM, Smith D, Brown AF, Kim J-S. The clinical application of periodized resistance training during a 12-week hypocaloric treatment for obesity. Annual Meeting, ACSM, San Diego, CA, May 26-30, 2015.

9. Yeh M-C, Jo E, Worts P, Cain A, Elam M, **Khamoui AV**, Kim D-H, Ormsbee MJ, Prado CM, Smith D, Snyder K, Kim J-S. The clinical application of periodized resistance training during a 12-week hypocaloric treatment for obesity. Annual Meeting, SEACSM, Jacksonville, FL, February 12-14, 2015.

10. Kim D-H, **Khamoui AV**, Yeh M-C, Park B-S, Oh S-L, Elam ML, Worts P, Myers C, Jo E, Arjmandi BH, and Kim J-S. Effect of aerobic and resistance training on C26 tumor-induced cachexia. Annual Meeting, SEACSM, Jacksonville, FL, February 12-14, 2015.

11. Jo E, Cain A, Prado CM, Ormsbee MJ, Arjmandi BH, Snyder K, Smith D, **Khamoui AV**, Yeh M-C, Kim D-H, Park B-S, Oh Seung-Lyul, and Kim J-S. A single-center evaluation of a proprietary hypocaloric treatment for morbid obesity. Annual Meeting, ACSM, Orlando, FL, May 27-31, 2014.

12. Oh S, Lee S-R, **Khamoui AV**, Jo E, Park B-S, Ormsbee MJ, Kim D-H, Yeh M-C, and Kim J-S. Effects of CLA/n-3 and resistance training on muscle quality in middle-aged mice during high-fat diet. Annual Meeting, ACSM, Orlando, FL, May 27-31, 2014.

13. Lee S-R, Jo E, **Khamoui AV**, Park B-S, Zourdos MC, Panton LB, Ormsbee MH, and Kim J-S. Resistance training and CLA/n-3 administration improve myofiber size and myogenic capacity in high fat diet-fed mice. Experimental Biology, FASEB, Boston, MA, April 20-24, 2013.

14. Park B-S, Henning PC, **Khamoui AV**, Jo E, Lee S-R, Zourdos MC, Kim D-H, Yeh M-C, and Kim J-S. HMB attenuates a loss of myofiber cross-sectional area during prolonged exercise with calorie restriction by enhancing regenerative capacity. Experimental Biology, FASEB, Boston, MA, April 20-24, 2013.

15. Lee S-R, **Khamoui AV**, Jo E, Park B-S, Zourdos MC, Bakhshalian N, Grant SC, Arjmandi BH, Ormsbee MH, and Kim J-S. Anti-catabolic effects of CLA/n-3 in resting and loaded muscles of high fat diet-fed mice. Annual Meeting, ACSM, San Francisco, CA, May 29-June 2, 2012.

16. Kim J-S, Lee S-R, Jo E, **Khamoui AV**, Park B-S, Zourdos MC, Hooshmand S, Arjmandi BH, Ormsbee MJ, and Grant SC. Fatty acid intake and exercise improve body composition and functionality in high fat diet-fed mice. Annual Meeting, ACSM, San Francisco, CA, May 29-June 2, 2012.

17. Zourdos MC, **Khamoui AV**, Jo E, Park B-S, Lee S-R, Panton LB, Contreras RJ, Ormsbee MJ, Wilson JM, and Kim J-S. Changes in maximal strength with two different models of daily undulating periodization in trained powerlifters. Annual Meeting, ACSM, San Francisco, CA, May 29-June 2, 2012.

18. Jo E, Zourdos MC, Wilson JM, Nosaka K, Lee S-R, Naimo M, Henning PC, Park Y-M, **Khamoui AV**, Park B-S, Panton LB, and Kim J-S. Varying muscle-specific exercise between consecutive training sessions does not diminish the repeated bout effect. Annual Meeting, ACSM, San Francisco, CA, May 29-June 2, 2012.

19. Park B-S, Henning PC, Lee S-R, Wilson JM, Park Y-M, Jo E, **Khamoui AV**, Zourdos MC, and Kim J-S. β-hydroxy-β-methylbutyrate (HMB) improves myogenesis and maintains strength in male mice during a 6-week catabolic condition. Experimental Biology, FASEB, Washington, DC, April 9-13, 2011.

20. Gochioco MK, Brown LE, Coburn JW, Beam WC, Schick EE, Dabbs NC, **Khamoui AV**, Tran TT, and Munoz CX. A comparison of the physiological profiles of mixed martial artists and football, basketball, and baseball players. National Conference, NSCA, Orlando, FL, July 14-17, 2010.

21. Munoz CX, Tran TT, Brown LE, Coburn JW, Lynn SK, Dabbs NC, Gochioco MK, Schick EE, **Khamoui AV**, Uribe BP, and Noffal GJ. Effects of assisted jumping on relative impact force and descent velocity. National Conference, NSCA, Orlando, FL, July 14-17, 2010.

22. Tran TT, Brown LE, Coburn JW, Lynn SK, Dabbs NC, Gochioco MK, Schick EE, **Khamoui AV**, Uribe BP, and Noffal GJ. Effects of different levels of assisted jumping on peak velocity, takeoff velocity, and relative rate of force development. National Conference, NSCA, Orlando, FL, July 14-17, 2010.

23. Park Y-M, Lee S-R, Wilson JM, Henning PC, Bakhshalian N, Ugrinowitsch C, Zourdos MC, Park B-S, Jo E, **Khamoui AV**, and Kim J-S. Influence of β-hydroxy-β-methylbutyrate (HMB) on body composition and neuromuscular function in old rats during resistance training. Annual Meeting, ACSM, Baltimore, MD, June 2-5, 2010.

24. Lee S-R, Wilson JM, Henning PC, Ugrinowitsch C, Park Y-M, Zourdos MC, Park B-S, **Khamoui AV**, Jo E, Grant SC, Panton LB, and Kim J-S. β-hydroxy-β-methylbutyrate (HMB) improves relative grip strength and sensorimotor function in middle aged and old rats. Annual Meeting, ACSM, Baltimore, MD, June 2-5, 2010.

25. Schick EE, Coburn JW, Brown LE, Judelson DA, **Khamoui AV**, Tran TT, and Uribe BP. Comparison of 1RM strength and muscle activation between the smith machine and free weight bench press in experienced and inexperienced lifters. Annual Meeting, ACSM, Baltimore, MD, June 2-5, 2010.

26. Gochioco MK, Schick EE, Dabbs NC, **Khamoui AV**, Tran TT, Brown LE, Coburn JW, and Beam WC. Physiological profile of amateur mixed martial artists. Annual Meeting, ACSM, Baltimore, MD, June 2-5, 2010.

27. Tran TT, Brown LE, Coburn JW, Lynn SK, Dabbs NC, Gochioco MK, Schick EE, **Khamoui AV**, Uribe BP, and Noffal GJ. Effects of different levels of assisted jumping on vertical jump height and relative ground reaction force. Annual Meeting, ACSM, Baltimore, MD, June 2-5, 2010.

28. Lee S-R, Park Y-M, Wilson JM, Henning PC, Zourdos MC, Bakhshalian N, Ugrinowitsch C, Park B-S, **Khamoui AV**, Jo E, and Kim J-S. Effects of β-hydroxy-β-methylbutyrate (HMB) on body composition in old sprague-dawley female rats during 10-week resistance training. Annual Meeting, SEACSM, Greenville, SC, February 11-13, 2010.

29. **Khamoui AV**, Brown LE, Tran TT, Uribe BP, Nguyen D, Gochioco MK, Schick EE, Jo E, Coburn JW, and Noffal GJ. Comparison of methods to calculate vertical jump displacement. Annual Meeting, SEACSM, Greenville, SC, February 11-13, 2010.

30. Schick EE, Coburn JW, Brown LE, Judelson DA, **Khamoui AV**, Tran TT, and Uribe BP. Comparison of 1RM strength and muscle activation between the smith machine and free weight bench press in experienced and inexperienced lifters. Annual Meeting, SWACSM, San Diego, CA, October 23-24, 2009.

31. Gochioco MK, Tran TT, **Khamoui AV**, Uribe BP, Nguyen D, Brown LE, Coburn JW, Judelson DA, Noffal GJ. Effect of sex and relative force on vertical jump takeoff velocity and jump height. Annual Meeting, SWACSM, San Diego, CA, October 23-24, 2009.

32. Tran TT, **Khamoui AV**, Uribe BP, Nguyen D, Gochioco MK, Brown LE, Coburn JW, Judelson DA, and Noffal GJ. Influence of training status and potentiating exercise volume on vertical jump rate of force and velocity development. Annual Meeting, SWACSM, San Diego, CA, October 23-24, 2009.

33. Johnson T, Brown LE, Coburn JW, Judelson DA, **Khamoui AV**, Uribe BP, and Tran T. Effect of starting stance on sprint time in NAIA volleyball players. National Conference, NSCA, Las Vegas, NV, July 8-11, 2009.

34. Schick E, Coburn JW, Brown LE, Judelson DA, **Khamoui AV**, Tran T, Uribe BP, and Reyes C. A comparison of muscle activation between a smith machine and free weight bench press. National Conference, NSCA, Las Vegas, NV, July 8-11, 2009.

35. **Khamoui AV**, Nguyen D, Uribe BP, Tran T, Jo E, Brown LE, Coburn JW, Judelson DA, and Noffal GJ. Relationship between dynamic kinematics and isometric force-time characteristics. National Conference, NSCA, Las Vegas, NV, July 8-11, 2009.

36. Tran T, Faulkinbury KJ, Stieg JL, **Khamoui AV**, Uribe BP, Dabbs NC, Jo E, Brown LE, Coburn JW, and Judelson DA. Effect of 10 repetitions of box jumps and depth jumps on peak ground reaction force. National Conference, NSCA, Las Vegas, NV, July 8-11, 2009.

37. Dabbs NC, **Khamoui AV**, Nguyen D, Uribe BP, Tran T, Jo E, Brown LE, Coburn JW, Judelson DA, and Noffal GJ. Difference in vertical jump performance by force production. National Conference, NSCA, Las Vegas, NV, July 8-11, 2009.

38. Uribe BP, **Khamoui AV**, Tran T, Nguyen D, Dabbs NC, Brown LE, Coburn JW, and Judelson DA. Rate of velocity development positively correlates with quadriceps cross sectional area. National Conference, NSCA, Las Vegas, NV, July 8-11, 2009.

39. Uribe BP, **Khamoui AV**, Tran T, Nguyen D, Brown LE, Coburn JW, and Judelson DA. Sex differences in hamstring relative torque. Annual Meeting, ACSM, Seattle, WA, May 27-30, 2009.

40. **Khamoui AV**, Uribe BP, Nguyen D, Tran T, Brown LE, Coburn JW, Judelson DA, and Noffal GJ. Effect of potentiating exercise volume on vertical jump height and velocity. Annual Meeting, SWACSM, San Diego, CA, November 14-15, 2008.

41. Tran T, Nguyen D, Uribe BP, **Khamoui AV**, Brown LE, Coburn JW, and Judelson DA. Relationships between rate of force development, rate of velocity development, peak velocity, and ground reaction force. Annual Meeting, SWACSM, San Diego, CA, November 14-15, 2008.

42. Uribe BP, **Khamoui AV**, Nguyen D, Tran T, Brown LE, Coburn JW, Judelson DA, and Noffal GJ. Influence of training status and varied back squat volume on vertical jump impulse. Annual Meeting, SWACSM, San Diego, CA, November 14-15, 2008.

43. **Khamoui AV**, Uribe BP, Nguyen D, Brown LE, Coburn JW, and Judelson DA. Effect of potentiating exercise volume on vertical jump. 6th International Conference on Strength Training, Colorado Springs, CO, October 30-November 2, 2008.

44. Uribe BP, **Khamoui AV**, Nguyen D, Brown LE, Coburn JW, and Judelson DA. The effects of postactivation potentiation on power. 6th International Conference on Strength Training, Colorado Springs, CO, October 30-November 2, 2008.

45. **Khamoui AV**, Uribe BP, Coburn JW, Brown LE, and Judelson DA. Effect of surface stability on EMG frequency during upper body resistance exercise. National Conference, NSCA, Las Vegas, NV, July 9-12, 2008.

46. Uribe BP, Coburn JW, Brown LE, Judelson DA, and **Khamoui AV**. The effect of surface type on muscle activation when performing the chest press and shoulder press. National Conference, NSCA, Las Vegas, NV, July 9-12, 2008.

Certifications and Certificates

2015	Practicum on Exercise Testing and Interpretation, Harbor-UCLA Medical Center
2006-	Certified Strength and Conditioning Specialist, NSCA

Memberships

2020	Cancer Cachexia Society
2010-	The American Physiological Society

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Education/Employment History

Education

2013	Ph.D., Genetics	Harvard University, Boston MA
2005	B.A., Biology	Brown University, Providence MA

Research experience/Employment

2018-present	**Assistant Professor**, Wilkes Honors College at Florida Atlantic University
2014-2018	**Adjunct Assistant Professor**, Iowa State University
2013-2018	**Assistant Scientist (Independent Postdoc)**, Iowa State University Research mentor: Dr. Jeffrey Essner
2007-2013	**Graduate Research**, Harvard University Research mentor: Dr. Clifford Tabin Thesis: The genetic basis of behavior in the blind Mexican cavefish, *Astyanax mexicanus*
2005-2007	**Research Technician**, Children's Hospital of Philadelphia Research supervisor: Dr. Michael Sebert
2004-2005	**Laboratory Assistant** and **Senior Thesis Project**, Brown University Research mentor: Dr. David Rand

Scholarship/Research/Creative Activity

Publications in print

Refereed journal articles – Research articles

Jaggard J, Lloyd E, Yuiska A, Patch A, Fily Y, **Kowalko JE**, Appelbaum L, Duboue ER, Keene AC. Cavefish brain atlases reveal functional and anatomical convergence across independently evolved populations. Science Advances. 2020 Sep 16; 6(38):eaba3126. doi: 10.1126/sciadv.aba3126. Print 2020 Sept.

Paz A, McDole B, **Kowalko JE**, Duboue ER, Keene AC. Evolution of the acoustic startle response of Mexican cavefish. Journal of Experimental Zoology Part B: Molecular and Developmental Evolution (Impact Factor: 1.897). 2020 Nov;334(7-8):474-485. doi: 10.1002/jez.b.22988. Epub 2020 Aug 10.

Chin JSR, Loomis CL, Albert LT, Medina-Trenche S, **Kowalko J**, Keene AC, Duboue ER. Analysis of stress responses in *Astyanax* larvae reveals heterogeneity among different

populations. Journal of Experimental Zoology Part B: Molecular and Developmental Evolution (Impact Factor: 1.897). 2020 Nov;334(7-8):486-496. Doi: 10.1002/jez.b.22987. Epub 2020 Aug 6.

Sifuentes-Romero I, Ferrufino E, Thakur S, Laboissonniere LA, Solomon M, Smith CL, Keene AC, Trimarchi JM, **Kowalko JE**. Repeated evolution of eye loss in Mexican cavefish*:* Evidence of similar developmental mechanisms in independently evolved populations. Journal of Experimental Zoology Part B: Molecular and Developmental Evolution (Impact Factor: 1.897). 2020 Nov;334(7-8):423-437. doi: 10.1002/jez.b.22977. Epub 2020 July 2.

Krishnan J, Persons JL, Peuß R, Hussan H, Kenzior A, Xiong S, Olsen L, Maldonado E, **Kowalko JE**, Rohner N. Comparative transcriptome analysis of wild and lab populations of *Astyanax mexicanus* uncovers differential effects of environment and morphotype on gene expression. Journal of Experimental Zoology Part B: Molecular and Developmental Evolution (Impact Factor: 1.897). 2020 Nov;334(7-8):530-539. doi: 10.1002/jez.b.22933. Epub 2020 Feb 4.

Stahl BA, Jaggard JB, Chin JSR, **Kowalko JE**, Keene AC, Duboue ER. Manipulation of gene function in Mexican cavefish. Journal of Visualized Experiments (Impact Factor: 1.325). 2019 April 22;(146). doi: 10.3791/59093.

Gunesch JT, Angelo LS, Mahaptra S, Deering RP, **Kowalko JE**, Sleiman P, Tobias JW, Monaco-Shawver L, Orange JS, Mace EM. Genome-wide analysis and functional profiling of human NK cell lines. Molecular Immunology (Impact Factor: 3.641). 2019 Nov;115:64-75. doi: 10.1016/j.molimm.2018.07.015. Epub 2018 Jul 24.

Tabin JA*, Aspiras A, Martineau B, Riddle M, **Kowalko J**, Borowsky R, Rohner N, Tabin CJ. Temperature preference of cave and surface populations of *Astyanax mexicanus*. Developmental Biology (Impact Factor: 2.895). 2018 Sep 15;441(2):338-344. doi: 10.1016/j.ydbio.2018.04.017. Epub 2018 April 25.

Klaassen H, Wang Y, Adamski K, Rohner N, **Kowalko JE**. CRISPR mutagenesis confirms the role of *oca2* in melanin pigmentation in *Astyanax mexicanus.* Developmental Biology (Impact Factor: 2.895). 2018 Sep 15;441(2):313-318. doi: 10.1016/j.ydbio.2018.03.014. Epub 2018 Mar 16.

Kowalko JE, Ma L, Jeffery WR. Genome Editing in *Astyanax mexicanus* Using Transcription Activator-like Effector Nucleases. Journal of Visualized Experiments (Impact Factor: 1.325). 2016 June 20; (112):54113. doi: 10.3791/54113.

Ma L, Jeffery WR, Essner JJ, **Kowalko JE**. Genome editing using TALENs in blind Mexican cavefish, *Astyanax mexicanus*. PLoS One (Impact Factor: 2.740). 2015 Mar 16; 10(3): e0119370. doi: 10.1371/journal.pone.0119370. eCollection 2015.

Kuo T, **Kowalko JE**, DiTommaso T, Nyambi M, Montoro DT, Essner JJ, Whited JL. TALEN-mediated gene editing of the *thrombospondin-1* locus in axolotl. Regeneration 2015 Apr 8;2(1):37-43. Doi: 10.1002/reg2.29. eCollection 2015 Feb.

Rohner N, Jarosz DF, **Kowalko JE**, Yoshizawa M, Jeffery WR, Borowsky RL, Lindquist S, Tabin CJ. Cryptic variation in morphological evolution: HSP90 as a capacitor for the loss of

eyes in cavefish. Science (Impact Factor: 41.845). 2013 Dec 13; 342(6164): 1372-5. Doi: 10.1126/science.1240276.

Kowalko JE, Rohner N, Linden TA, Rompani SB, Warren WC, Borowsky R, Tabin CJ, Jeffery WR, Yoshizawa M. Convergence in feeding posture occurs through different genetic loci in independently evolved cave populations of *Astyanax mexicanus*. Proceedings of the National Academy of Sciences (Impact Factor: 9.412). 2013 Oct 15; 110(42): 1633-8.

Kowalko JE, Rohner N, Rompani SB, Peterson BK, Linden TA, Yoshizawa M, Kay EH, Weber J, Hoekstra HE, Jeffery WR, Borowsky R, Tabin CJ. Loss of schooling behavior in cavefish through sight-dependent and sight-independent mechanisms. Current Biology (Impact Factor: 9.601). 2013 Oct 7; 23(19): 1874-83.

Kowalko JE, Sebert ME. The Streptococcus pneumoniae competence regulatory system influences respiratory tract colonization. Infection and Immunity (Impact Factor: 3.256). 2008 Jul;76(7):3131-40.

Refereed journal articles – Reviews/commentaries/Editorials

Kowalko JE, Franz-Odendall T, Rohner N. Introduction to the Special Issue: Cavefish – Adaptation in the dark. Journal of Experimental Zoology Part B: Molecular and Developmental Evolution (Impact Factor: 1.897). 2020 Nov; 334(7-8):393-396. doi: 10.1002/jez.b.23014. Epub 2020 Dec 1.

Mammola S, Amorim IR, Bichuette ME, Borges PA, Cheeptham N, Cooper SJB, Culver DC, Deharveng L, Eme D, Ferreira RL, Fiser C, Fiser Z, Fong DW, Griebler C, Jeffery WR, Jugovic J, **Kowalko JE**, Lilley TM, Malard F, Manenti R, Martinez A, Meierhofer MB, Niemiller ML, Northup DE, Pellegrini TG, Pipan T, Protas M, Reboleira ASPS, Venarsky MP, Wynne JJ, Zamajster M, Cardoso P. Fundamental research questions in subterranean biology. Biological Reviews Cambridge Philosophical Society (Impact Factor: 10.701). 2020 Dec;95(6):1855-1872. doi: 10.1111/brv.12642. Epub 2020 Aug 25.

Kowalko JE. In the Spotlight – Early Career Researcher. Journal of Experimental Zoology Part B: Molecular and Developmental Evolution (Impact Factor: 1.897). 2020 Nov;334(7-8):389-390. doi: 10.1002/jez.b.22989. Epub 2020 Aug 10.

McGaugh SE, **Kowalko JE**, Duboue E, Lewis P, Franz-Odendall T, Rohner N, Gross JB, Keene A. Dark world rises: The emergence of cavefish as a model of the study of evolution, behavior and disease. Journal of Experimental Zoology Part B: Molecular and Developmental Evolution (Impact Factor: 1.897). 2020 Nov;334(7-8):397-404. doi: 10.1002/jez.b.22978. Epub 2020 July 7.

Kowalko JE. Utilizing the blind cavefish Astyanax mexicanus to understand the genetic basis of behavioral evolution. Journal of Experimental Biology (Impact Factor: 3.014). 2020 Feb 7;223(Pt Suppl 1):jeb208835. doi: 10.1242/jeb.208835.

Encyclopedia articles

Kowalko JE. Adaptations: Behavioral. In White W, Culver D and Pipan T editors. Encyclopedia of Caves, 3rd Edition. Elsevier. p. 24-32. 2019 May 16.

Publications in Press

Warren WC, Aspiras A, Boggs TE, Borowsky R, Carlson BM, Ferrufino E, Gross JB, Hillier L, Hu Z, Keene AC, Kenzior A, **Kowalko JE**, Tomlinson C, Kremitzki M, Lemieux ME, Graves-Lindsay T, McGaugh SE, Miller JT, Mommersteeg MTM, Moran RL, Peuß R, Rice ES, Riddle MR, Sifuentes-Romero I, Stanhope BA, Tabin CJ, Thakur S, Yamamoto Y, Rohner N. High-quality *Astyanax mexicanus* genome sheds new light on evolution in the dark. *In press.* Nature Communications. Expected publication date: 2021.

Publications under review

Mack KL, Jaggard JB, Persons JL, Passow CN, Stahl BA, Ferrufino E, Tsuchiya D, Smith SE, Slaughter B, Kono TJY, **Kowalko JE**, Rohner N, Keene AC, McGaugh SE. Convergent dysregulation of the circadian clock in cavefish populations. *Under review at PLOS Genetics* Preprint: https://www.biorxiv.org/content/10.1101/2020.01.14.906628v1

O'Gorman M, Thakur S, Imrie G, Moran RL, Duboue E, Rohner N, McGaugh SE, Keene AC, **Kowalko JE**. Pleiotropic function of the *oca2* gene underlies the evolution of sleep loss and albinism in cavefish. *Under review at Current Biology.*
Preprint: https://www.biorxiv.org/content/10.1101/2020.09.27.314278v1

Patch A, Paz A, Holt K, Duboue E, **Kowalko JE**, Keene A, Fily Y. Kinematic analysis deconstructs the evolved loss of schooling behavior in cavefish. *Under review at PLoS Comp Biol.* Preprint: https://www.biorxiv.org/content/10.1101/2020.01.31.929323v2

Underlined = Dr. Kowalko's undergraduate mentees
* = K-12 mentees

Presentations

Research Talks

Examining the role of albinism in the evolution of the cavefish *Astyanax mexicanus.* University of Miami. Miami, Florida. 2020 (Invited talk)

Uncovering the genetic basis of trait evolution in the cavefish. Stowers Institute. Kansas City, Missouri. 2020 (Invited talk)

Examining the pleiotropic effects of mutations in the oculocutaneous albinism 2 gene in the cavefish A. mexicanus. Ecology, Evolution and Behavior Seminar Series, University of Minnesota. Saint Paul, MN. 2019 (Invited talk)

Uncovering the genetic basis of trait evolution in the cavefish Astyanax mexicanus. EEBB Seminar Series, Michigan State University. Lansing, MI. 2019 (Invited talk)

Leveraging genome editing to understand the genetic basis of complex traits. CMBB seminar series, FAU. 2019 (Internal FAU presentation)

Examining the pleiotropic effects of mutations in the *oculocutaneous albinism 2* gene in the cavefish *Astyanax mexicanus*. Society for Developmental Biology. Boston, MA. 2019 (Talk chosen from abstract submission)

Why the cavefish lost its pigment: Understanding the role of *oca2* in cavefish evolution. College of Saint Rose Colloquium Series. Albany, New York. 2019 (Invited talk)

The genetic basis of behavioral variation in natural populations. Journal of Experimental Biology Symposium on 'Genome editing for comparative physiology.' Massa Marittima, Italy. 2019 (Invited talk)

Elucidating the genetic basis of trait evolution in the cavefish. Astyanax International Meeting. Queretaro, Mexico. 2019 (Talk chosen from abstract submission)

Wilkes Honors College Forum talk. FAU. Fall 2018 (Internal FAU presentation)

Uncovering the role of the *oculocutaneous albinism 2* gene in the evolution of albinism in the Mexican cavefish *Astyanax mexicanus*. Society for Developmental Biology. Minneapolis, MN. 2017 (Talk chosen from abstract submission)

Uncovering the genetic basis of evolution. Midwest Zebrafish Conference. St. Louis, Missouri. 2015 (Talk chosen from abstract submission)

The genetic basis of loss of schooling behavior in the blind Mexican cavefish, *Astyanax mexicanus*. AAMHD/Midwest Zebrafish Meeting. Milwaukee, Wisconsin. 2013 (Talk chosen from abstract submission)

Genetic approaches to studying morphological and behavior traits in *Astyanax mexicanus*. Astyanax International Meeting. Cuidad Valles, Mexico. 2009 (talk chosen from abstract submission)

Research Posters

Thakur S, O'Gorman M, Benesh K, Hamill C, Keene A, **Kowalko JE** (2020) Genetic basis of behavioral evolution in the cavefish Astyanax mexicanus. Society for Developmental Biology. Virtual.

Thakur S, O'Gorman M, Keene A, **Kowalko JE** (2019) Uncovering the relationship between pigmentation and behavior in evolution of the blind Mexican cavefish. Zebrafish Neural Circuits and Behavior meeting. Cold Spring Harbor Lab. Cold Spring Harbor, NY.

Klaassen H, Greiner H, **Kowalko JE** (2016) Leveraging genome editing to uncover the genetic basis of trait evolution in an evo-devo model, Astyanax mexicanus. Society for Developmental Biology. Boston, MA.

Kowalko JE, Ma L, Jeffery W, Essner J (2015) Uncovering the genetic basis of evolution. Midwest Zebrafish Conference. St. Louis, Missouri.

Kowalko JE, Ma L, Jeffery W, Essner J (2014) Utilizing genome editing to explore the genetic basis of evolution in the cavefish *Astyanax mexicanus*. Society for Developmental Biology. Seattle, Washington.

Kowalko JE, Rohner N, Rompani S, Peterson B, Linden TA, Yoshizawa M, Jeffery WR, Hoekstra HE, Tabin CJ (2013) The genetic basis of loss of schooling behavior in the blind Mexican cavefish, *Astyanax mexicanus*. AAMHD/Midwest Zebrafish Meeting. Milwaukee, Wisconsin.

Kowalko JE, Yoshizawa M, Rohner N, Rompani S, Jeffery WR, Borowsky R, and Tabin C (2012) Exploring the evolution of behavior using the Mexican cave fish, *Astyanax mexicanus*. Genes and Behavior Gordon Research Conference. Galveston, Texas.

Kowalko JE, Yoshizawa M, Jeffery WR, Borowsky R, and Tabin C (2010) Exploring the evolution of behavior using the Mexican cave fish, *Astyanax mexicanus*. Genes and Behavior Gordon Research Conference. Ventura, California.

Undergraduate mentee co-authors are underlined.

Research presented by mentees

Sifuentes-Romero. Repeated evolution of eye loss: A role for rx3? Stowers Research Conference EvoDevo. Virtual. 2020. (Invited talk)

Sifuentes-Romero I, Ferrufino E, Thakur S, Solomon M, Kowalko JE. Repeated evolution of eye loss in *Astyanax mexicanus.* Society for Developmental Biology. Virtual. 2020. (Talk chosen from abstract submission)

Thakur S, O'Gorman M, Keene A, Kowalko JE. Leveraging gene editing to examine the genetic basis of convergent evolution. Southeast Regional Zebrafish Conference. Miami, FL. 2019. (Talk chosen from abstract submission)

Sifuentes-Romero I, Ferrufino E, Thakur S, Kowalko JE. Morphological variations in eye size: Does *rx3* play a role? Southeast Regional Zebrafish Conference. Miami, FL. 2019. (poster)

Ferrufino E, Thakur S, Duboue E, Keene A, Kowalko JE. Adapting genome engineering techniques for functional genetics in Mexican cavefish. Southeast Regional Zebrafish Conference. Miami, FL. 2019. (poster)

Sifuentes-Romero I, Ferrufino E, Thakur S, Kowalko JE. Morphological variations in eye size: Does *rx3* play a role? Astyanax International Meeting. Queretaro, Mexico. 2019. (poster)

Sifuentes-Romero I, Ferrufino E, Thakur S, Kowalko JE. Morphological variations in eye size in cavefish: Does *rx3* play a role? Pan-American Society for Evolutionary Developmental Biology. Coral Gables, Florida. 2019 (poster)

Thakur S, Solomon M, Cree-Newman A, Lloyd E, Jaggard J, Keene A, Kowalko JE. Examining the role of albinism in the evolution of cave populations of *Astyanax mexicanus*. Pan-American Society for Evolutionary Developmental Biology. Coral Gables, Florida. 2019 (poster)

Solomon M, Thakur S, Kowalko JE. Elucidating the role of eye loss in the evolution of adaptive traits in the cavefish *Astyanax mexicanus*. Pan-American Society for Evolutionary Developmental Biology. Coral Gables, Florida. 2019 (poster)

Holt K, Paz A, Patch A, Kowalko JE. Ontogeny of schooling and shoaling behavior in *Astyanax mexicanus*. Pan-American Society for Evolutionary Developmental Biology. Coral Gables, Florida. 2019 (poster)

Cree-Newman A, Jaggard J, Ferrufino E, Thakur S, Keene A, Kowalko JE. The role of maternal genetic effects in brain development and behavior in the cavefish *Astyanax mexicanus*. Pan-American Society for Evolutionary Developmental Biology. Coral Gables, Florida. 2019 (poster)

Holt K, Paz A, Patch A, Kowalko JE. Ontogeny of schooling and shoaling behavior in *Astyanax mexicanus*. Scripps Undergraduate Research Symposium. Jupiter, Florida. 2019 (poster)

Undergraduate mentee co-authors are underlined.
First author in this section is the presenter.

Grants

Funded

Evolutionary approaches to identify genetic architecture regulating aggression
PI: **Johanna Kowalko**
National Institutes of Health MIRA for Early Stage Investigators (R35)
$1,691,644
9/1/2020-8/31/2025

The relationship between eye morphogenesis and brain development
PI: **Johanna Kowalko**
National Institute for Health R15
$437,673
7/2/2020-6/30/2022

REU Site: Summer Integrative Neuroscience Experience (SINE) in Jupiter
PI: Alex Keene
Co-PI: **Johanna Kowalko**
National Science Foundation
1/15/2020-12/31/2022

Collaborative Research: The evolution of phenotypic plasticity in sleep across variable environments
PI: **Johanna Kowalko**
Co-PIs: Nicolas Rohner and Suzanne McGaugh
National Science Foundation
$463,232
11/1/2019-10/31/22

NSF-BSF: EDGE: Functional Genomics Toolkit for Genotype-Phenotype Mapping in Cavefish
PI: Erik Duboue
Co-PIs: **Johanna Kowalko**, Nicholas Rohner, Suzanne McGaugh
National Science Foundation
$1,148,464
9/1/2019-8/31/22

Uncovering the contributions of albinism to the evolution of the Mexican cavefish
PI: **Johanna Kowalko**
Co-PI: Alex Keene, Florida Atlantic University
National Science Foundation
$200,000
9/1/2018-8/31/2020, NCE to 2021

Pending

A screen for identifying insomnia genes
MPI: Johanna Kowalko
MPI: Alex Keene
National Institutes of Health R21
Score: 8th percentile

BII-Implementation: Interdisciplinary investigation of the relationship between ecosystems
PI: Alex Keene
co-PIs/senior personnel: Johanna Kowalko, Erik Duboue, Yaoen Fily, Suzanne McGaugh, Andrew Gluesenkamp, Magdalena Osburn, Jessica Hua
National Science Foundation

Courses taught at FAU

Courses

Fall 2019, 2020	PBC 4253: **Honors Developmental Biology**, undergraduates, Florida Atlantic University *This course was previously listed, but had not been taught recently, so I developed the course from scratch in Fall 2019, and made major revisions to the class to convert it to a remote course in Fall 2020.*
Spring 2020	BSC 4930-13H: **Honors Evolutionary Developmental Biology**, Undergraduates, Florida Atlantic University *This was a new course I developed.*
Spring 2020	BSC 4930-14H: **Honors CRISPR Technologies,** undergraduates, Florida Atlantic University *This was a new Course Based Undergraduate Research Experience course that I co-developed with Bethany Stanhope.*
Spring 2019	PCB 3063: **Honors Genetics**, undergraduates, Florida Atlantic University
2018-2021	BSC 4915: **Honors Dir Ind Res in Biology**, undergraduates, Florida Atlantic University
2020-2021	BSC 4970: **Honors Thesis in Biology**, undergraduates, Florida Atlantic University
Fall 2020	BSC 6905: **Directed Independent Study**, graduate students, Florida

Atlantic University

Supervision of Graduate students

Spring 2020	Christa Hamill	MS student, IB program
Spring 2018-present	Alexandra Paz	PhD student, IBN program, co-mentor

Supervision of Undergraduate students

FAU undergraduate students

Spring 2019	Marc Guttentag
Spring 2019-present	Alexia Bullock[%]
Spring 2019	Joelle Dwek
2018-2019	Reilly Bassford
Fall 2018-S2020	Michael Soloman*[%]
2018-2019	Meghana Arza
Fall 2018-present	Karla Holt[#%]
Fall 2019-present	Nikita Jayan*
Summer 2020-pres	Lama Al Abdul Razzak*
Summer 2020-pres	Manuel Contreras*
Fall 2020-present	Amanda Wade*
Fall 2020-present	Ari Aviles
Spring 2021-present	Anik Clark
Spring 2021-present	Ellen Polyakov

*Thesis students, present and current

Undergraduate thesis students with completed theses

Michael Soloman — Spring 2020
Title: Characterizing the relationship of the evolution of the lateral line to the evolution of other traits

Lama Al Abdul Razzak — Fall 2020
Title: Association of Cancer and Autism in Kids and Adolescents

Non-FAU students

Summer 2020	Jakiyah Lee	REU student
Summer 2020	Lilia Welsh	REU student
2018	Courtney Smith[#]	Iowa State University
2017-2018	Ellie Clark	Iowa State University
2016-2017	Emily Salmon	Iowa State University
2016-2017	Kay Adamski[#]	Iowa State University
2014, 2016-2017	Hannah Klaassen[#]	Iowa State University
2014-2016	Hanna Greiner	Iowa State University
2014	Rachel Weber	Iowa State University
2012-2013	Tess Linden[#]	Harvard University

[#]Indicates co-author on a paper

[%]Indicates the student gave a presentation at a conference

Advisees

Undergraduate

2018	Frida Zavala
2019	Mario Del Rio
2019-present	Ellen Diez
2019-present	Candice Hill
2019-present	Ellen Polyakov
2019-present	Maxx Sundeen
2019-present	Anthony Tulip
2020-present	Janara Arencibia
2020-present	Anna Armbrust
2020-present	Benjamin Bargeron
2020-present	Julianna Booth
2020-present	Drew Burgess
2020-present	Ianis Ciolacu
2020-present	Yessenia Concepcion
2020-present	Mikayla Kopf

Graduate

2020-present	Christa Hammill, MS student

Service

Service to the Institution

Department/College service

Fall 2020	member of the adhoc committee to review and revise WHC tenure guidelines
Fall 2020-present	member of the WHC Diversity taskforce, Chair of subcommittee on Diversity in Research
Spring 2020	Met with NIH delegates to discuss the Honors College and FAU
Spring 2020	Attended the WHC Benefactors Dinner
Spring 2020	Spoke at ISC 3933 Class about research
2018-2020	member of the WHC Undergraduate Symposium Committee
2019-2020	Search Committee member, Biology Instructor
Spring 2018	Attended Honors College Recruitment

University service

2021-present	member of the IMPRS graduate selection committee
2020-present	member of the IB graduate admissions committee
Summer 2020-pres.	Co-director of the SINE REU program
Spring 2020	Hosted Cliff Tabin, CMBB seminar speaker
Spring 2020	Hosted Kristen Kwan, CMBB seminar speaker
2019-present	advisor to the Network for Women in Stem FAU club

2019-2020	Organizer, Neurogenetics seminar series through I-HEALTH

Service to the Discipline

Paper reviewer

8/2018	JEZ part B: Molecular and Developmental Evolution
4/2019	Journal of Experimental Biology
6/2019	Journal of Experimental Biology
9/2019	Journal of Experimental Biology
9/2019	Scientific Reports
11/2019	ELife
11/2019	Genes, Brains and Behavior
11/2019	Neotropical Ichthyology
3/2020	ELife
5/2020	ELife
6/2020	Hydrobiologia
6/2020	BMC Biology
7/2020	ELife
10/2020	Current Biology
12/2020	BMC Neuroscience
12/2020	ELife

Other service

2020	Ad hoc reviewer – NSF EDGE proposal
2020	Admissions, NSF REU Summer Integrative Neuroscience Experience
2020	Mentor, Tri-institutional Network for Women in STEM Mentorship group
2020-2021	Steering Committee member, Tri-institutional Network for Women in STEM Mentorship group
2019-2020	Guest Editor, JEZ part B special issue on cavefish
Spring 2019	Led a discussion group at the Astyanax International Meeting

Service to the Community

2020-present	contributor to the podcast Research Diaries https://www.theresearchdiaries.com/bios *A second season of this podcast is currently being written/produced*

Past service

2016-2017	Member of the Biology Curriculum Committee, Iowa State University
2016-2017	Advisor, Alpha Lambda Delta Phi Eta Sigma, Iowa State University
2016-2017	Presenter, Women in Science and Engineering's Taking the Road Less Traveled, Iowa State University
Spring 2016	Evaluator, Biology 313 Lab poster session, Iowa State University
2009-2010	Tutor for Hinton Scholars AP Biology, high school students, Harvard University

Professional Development

Since FAU appointment:

Completed the Academic Continuity Course Build for Honors Developmental Biology, Fall 2020-Spring 2021, Florida Atlantic University

Attended webinar on “Designing Effective Assessments That Go Beyond the Grade.” Summer Institutes on Scientific Training, Fall 2020

Prior to FAU:

Courses and workshops:

The Federal Government in the Schools (Harvard Graduate School of Education)
Applying Cognitive Science Research Principles to Learning and Teaching (Harvard Graduate School of Education)
Teaching 101: Bringing Effective Teaching Practices to your Classroom (Division of Medical Sciences, Harvard University)
Micro-teaching Workshop (Derek Bok Center for Teaching and Learning, Harvard University)
Nano-teaching Workshop (Derek Bok Center for Teaching and Learning, Harvard University)
Classroom Training Workshop (Derek Bok Center for Teaching and Learning, Harvard University)
Philosophy of Education (Brown University)

Other professional development trainings/activities:

2014	National Academies Education Fellow in the Life Sciences
2010-2013	Harvard Division of Medical Sciences Education Path leader

Awards and Honors

2019	Division of Research Mentoring Award – Mentee
2017	Travel Award from Society for Developmental Biology
2016	Travel Award from Society for Developmental Biology
2014	Postdoc Travel Award from Society for Developmental Biology
2013	AAMHD/Midwest Zebrafish Meeting Student Poster Award
2012	Certificate of Distinction in Teaching, Derek Bok Center for Teaching and Learning
2009	National Science Foundation Graduate Research Fellowship
2005	B.A. awarded with Honors, Brown University

CURRICULUM VITAE
Zhongwei Li, Ph.D.

INSTITUTIONAL ADDRESS:

Department of Biomedical Science
Charles E. Schmidt College of Medicine
Florida Atlantic University
777 Glades Road, BC71, Boca Raton, Florida 33431
Phone: (561)297-3178, Fax: (561)297-0819, Email: zli@health.fau.edu

EDUCATION:

1982 B.S. Microbiology.
Liaoning University, Shenyang, China.
Concentrations: Biology, Chemistry, Microbiology.

1984 M.S. Microbiology.
Chinese Academy of Sciences (CAS), Shenyang, China.
Thesis: "Symbiotic nitrogen fixation by *Frankia* and woody host plants *Casuriana* and *Alnus* species."
Advisor: Dr. Jian Ding
Concentrations: Microbiology, Plant Physiology.

1989 Ph.D. Microbiology.
Chinese Academy of Sciences (CAS), Shenyang, China.
Dissertation: "Interaction of *Bradyrhizobium japonicum* with soybean host: Identification of genes of *B. japonicum* responsible for the synthesis of surface lipopolysaccharides that affect infectivity."
Advisor: Dr. Xianwu Zhang
Concentrations: Molecular genetics of microbe-plant interactions.

2001 M.S. Computer Sciences.
University of Miami, Miami, Florida.
Advisor: Dr. Victor Milenkovic
Concentrations: Computational Biology.

PROFESSIONAL EXPERIENCES:

2013-present **Professor (tenured)**. Department of Biomedical Science, Charles E. Schmidt College of Medicine, Florida Atlantic University, Boca Raton, FL.

Sept. 2017-present **Faculty Ombudsman of College of Medicine, Director of Faculty Development for the Department of Biomedical Science.** Florida Atlantic University, Boca Raton, FL.

Mar. 2016-Sept. 2017 **Interim Associate Dean for Faculty Affairs and Faculty Ombudsman**. Charles E. Schmidt College of Medicine, Florida Atlantic University, Boca Raton, FL.

Sept. 2015-Mar. 2016 **Interim Assistant Dean for Faculty Affairs and Faculty Ombudsman**. Charles E. Schmidt College of Medicine, Florida Atlantic University, Boca Raton, FL.

2016-2019 **Member** of i-HeAL Program at Healthy Aging Pillar.

2019-present **Member** of FAU Institute for Human Health and Disease Intervention (I-HEALTH).

2007-2013 **Associate Professor (tenured).** Department of Biomedical Science, Charles E. Schmidt College of Medicine (formally C.E.S. College of Biomedical Science), Florida Atlantic University, Boca Raton, FL.

2010-2013 **Director** of Year 1 Medical Course "Fundamentals of Basic Science".

2002-2007 **Assistant Professor.** Department of Biomedical Science, Charles E. College of Biomedical Science (Prior to 2006: C.E.S. College of Science), Florida Atlantic University, Boca Raton, FL.

2002-present **Member.** Center for Molecular Biology and Biotechnology, Florida Atlantic University, Boca Raton, FL.

2003-2010 **Assistant (2003-2007) and Associate Professor (2007-2010), (secondary).** Department of Biological Sciences, Florida Atlantic University, Boca Raton, FL.

2003-2010 **Assistant (2003-2007) and Associate Professor (2007-2010), (secondary).** Department of Chemistry and Biochemistry, Florida Atlantic University, Boca Raton, FL.

2007-2010 **Associate Professor (adjunct).** Department of Biochemistry and Molecular Biology, University of Miami Miller School of Medicine, Miami, FL.

2001-2002 **Instructor (adjunct).** Mos Institute of Technology, Philadelphia, PA.

2000-2002 **Staff Scientist.** DuPont Central Research and Development. Wilmington, DE.

1996-2000 **Research Assistant Professor.** Department of Biochemistry and Molecular Biology, University of Miami School of Medicine, Miami, FL.

1995-1996 **Postdoctoral Associate**. Division of Molecular Psychiatry, Yale University School of Medicine. (Advisor: Dr. Ronald S. Duman).

1991-1995 **Postdoctoral Fellow.** Department of Biochemistry, University of Connecticut Health Center. (Advisor: Dr. Murray P. Deutscher).

1989-1991 **Assistant Researcher.** Department of Microbiology, Institute of Applied Ecology, Chinese Academy of Sciences (CAS).

1985 **Research Associate.** Department of Microbiology, Institute of Forestry and Soil Sciences, Chinese Academy of Sciences (CAS).

AWARDS AND HONORS:

2008 Nominee for Researcher of the Year Award, Florida Atlantic University

2001 Way-To-Go Award, DuPont Central Research and Development.

1990 Research Excellence Award, Institute of Applied Ecology, Chinese Academy of Sciences, Shenyang, China.

1989 Presidential Distinguished Dissertation Award, Chinese Academy of Sciences.

1988 Outstanding Young Investigator Award, Joint Symposium of the 4th International Union of Biochemistry and Molecular Biology (IUBMB) and the 6th Chinese Biochemistry Conference, Nov. 6-11, 1988, Nanjing, China.

1986-1989 Research Assistantship, Institute of Applied Ecology, Chinese Academy of Sciences, Shenyang, China.

1982-1984 Research Assistantship, Institute of Forestry and Soil Sciences, Chinese Academy of Science.

1982 Award for Outstanding Undergraduate Research, Liaoning University, China.

1978-1982 Undergraduate Scholarship, Liaoning University, Shenyang, China.

RESEARCH:

GRANTS AND CONTRACTS:

1990-1992 **Principal Investigator,** New Investigator Award, National Scientific Foundation, China: "Structure of *Rhizobium fredii* surface polysaccharides and their roles in infection of soybean." RMB 35,000.

1992-1995 **Key Personnel**, NIH 7R01GM016317-28: "Enzymology and control of amino acid activation", PI: Dr. Murray P. Deutscher.

1996-2000 **Key Personnel**, NIH 5R01GM016317-32: "Enzymology and control of amino acid activation", PI: Dr. Murray P. Deutscher.

2003-2005 **Principal Investigator,** Contract DAAD13-02-C-0080 Subtask 15, funded by US Army Research, Development & Engineering Command (RDECOM) through University of South Florida Center for Biological Defense: "Genomics study of enterobacterial BT agents: identification of genes and sequence tags as targets for novel diagnosis and therapy." $124,527.00 (Direct: $90,090.00 including subcontract of $24,999 to Dr. L. Liao; Indirect: $34,437.00).

2004 **Principal Investigator,** New Project Development Award, Florida Atlantic University: "RNA metabolism in *Mycoplasma*." $15,000.00 (Direct $15,000.00).

2006-2008 **Principal Investigator,** Contract W911SR-06-C-0023 Principal Task Area 3, funded by US Army Research, Development & Engineering Command (RDECOM) through University of South Florida Center for Biological Defense: "Identification of genes essential for growth and prediction of antimicrobial targets in *Yersinia pestis*." $226,483 (Direct: $164,945; Indirect: $61,538). No-cost extension to Aug. 2008.

Jun. 8, 2005-May 31, 2009 **Principal Investigator,** Research Project in NIH SCORE Program S06GM073621 (Program Director: Dr. Gregg Fields): "RNA damage and quality control under oxidative stress." $827,610.00 (Direct: $600,000.00; Indirect: $227,610.00). No-cost extension to May 2010.

Sept. 26, 2007-Sept. 25, 2009 **Principal Investigator,** Contract W911SR-07-C-0084 Subagreement #6415-1012-61-A, funded by US Army Research, Development & Engineering Command (RDECOM) through University of South Florida Center for Biological Defense: "Identification of genes essential for growth and prediction of antimicrobial targets in *Yersinia pestis*." $168,126 (Direct: $120,071; Indirect: $48,055). Awarded, pending for laboratory inspection. No-cost extension to Sept. 2010.

Sept. 1, 2011-Aug. 31, 2012, **Principal Investigator,** Florida Dept. of Health and the James & Ether King Biomedical Research Program Bridge Fund grant: "RNA quality control against oxidative damage". $103,500 (Direct: $90,000; Indirect: $13,500).

Sept. 1, 2011-Aug. 31, 2014, NCE Aug. 31, 2015. **Principal Investigator,** NIH/NIGMS R15 grant: "RNA quality control against oxidative damage". $317,900 (Direct: $220,000; Indirect: $97,900).

May 16, 2013-May 15, 2014, **Principal Investigator** (Co-PI: Diane Baronas-Lowell, Herbert Weissbach), FAU HARI SG, $20,000.

Apr. 9, 2014-Apr. 8, 2015, **PI Sponsor** for FAU Undergraduate Research Grant, $920.

May 1, 2014-Apr. 31, 2016, **Co-Investigator** (PI: Y. Shibata), FAU Research Seed Grant, $25,000.

Jun. 1, 2014-May 31, 2017 **Co- Investigator** (PI: Y. Shibata), NIH/NIAID R15 grant, $380,552.

May 1, 2015-Oct. 31, 2018 **Principal Investigator,** Contract #AGR-15-47, TA Diagnostics, LLC. "Tests for feasibility of bacterial identification using a proprietary medical device". $149,831.

Jan. 15, 2016-Dec. 31, 2019 **Principal Investigator,** Subcontract to Florida Atlantic University, NIH R01 (PI: Dr. Jean Schaffer, Washington University St Louis) "Tissue Responses to Metabolic Stress". Subcontract fund is $80,752.

Feb. 17, 2016-Jun. 30, 2016, **PI Sponsor** for FAU Undergraduate Research Grant, $1,000.

Sept. 1, 2017-Aug. 31, 2018, **Principal Investigator,** FAU Institute for Healthy Aging and Lifespan Studies (I-HeAL) Pilot Award, "RNA oxidation as a potential cause and new biomarker for age-related neurodegeneration". $30,000.

Jan. 2018-Dec. 2018, **PI Sponsor** for FAU College of Medicine Graduate Research Grant, $5,000.

Aug. 1, 2018-Sept. 2, 2019, **Principal Investigator,** TA Diagnostics, LLC Contract # SP18-495 Li (PI) (terminated 12/31/2018) "Tests for feasibility of bacteria identification using a proprietary medical device". $89,388.

Oct. 1, 2018 – Sept. 30, 2021, **Co-Investigator** (PI: Xingquan Zhu, FAU College of Engineering) NSF MRI Award #1828181: "Acquisition of Artificial Intelligence & Deep Learning (AIDL) Training and Research Laboratory". $652,850.

Apr. 1, 2019 – June 30, 2021, **Co-Investigator** (PI: Nancy Jones, FAU College of Science) FAU Seed Grant for Initiative to Stimulate Extramural Research. $ 23,400.

Apr. 2, 2019-April 1, 2020, **Principal Investigator,** NIH Alzheimer Disease Sequence Project (ADSP) data use agreement. $0 (for data usage only).

Sept. 28, 2020-Sept. 27, 2021, **Principal Investigator,** "Biorepository: Study for Brain Health and Neurodegeneration", converted to maintain biorepository samples without additional funding from FAU I-HeAL Pilot Award (ZL as PI), "RNA oxidation as a potential cause and new biomarker for age-related neurodegeneration".

PENDING GRANTS AND CONTRACTS:

Principal Investigator, NIH R21, "Pathological mutations of human PNPase". Date of Submission: June 16, 2020.

Co-Investigator (PI: Dr. Nancy Jones, FAU College of Science), NIH R15, "Developing Social Attachment and Social Threat Systems Across the first two years". Date of Submission: June 25, 2020.

RESEARCH INFRASTRUCTURE AND RESOURCES:

2008, as Chair of Research Committee, College of Biomedical Science, led the application of equipment fund and was awarded $500,000 by Florida Department of Health for purchasing the FACSARIA cell sorting system in the College.

INVENTIONS:

1. **Li, Z.** (Inventor) "Use of unique sequence tags in the detection of bacteria". Disclosure accepted by FAU Office of Technology Transfer on June 17, 2005.

INVITED PRESENTATIONS:

1. Joint Symposium of the 6th Chinese Biochemical Conference and the 4th Meeting of International Union of Biochemistry and Molecular Biology (IUBMB), Nov. 11-14, 1988, Nanjing, China. "Tn5 mutagenesis of *Rhizobium fredii* SC2 and characterization of exopolysaccharide-deficient mutants for nodulation of soybean".
2. Los Alamos National Laboratory, Oct. 20, 1999. Los Alamos, NM. "Genomics studies of RNA processing in bacteria".
3. Mississippi State University, March 5, 2000. Starville, MS. "Bacterial RNA metabolism".
4. ISIS Pharmaceuticals, July 11, 2000. Carlsbad, CA. "RNA Processing in *E. coli*".
5. Pioneer Hi-Bred International, Inc, June 3, 2001, Johnston, IA. "Genomic data analysis and management".
6. DuPont Toxicology Division, May 9, 2002, Newark, DE. "Leveraging Bioinformatics Support to Biotechnology Research and Development".
7. Department of Biomedical Science Brown Bag Meeting, Florida Atlantic University, Nov. 15, 2002. "Non-coding RNAs".
8. Center for Molecular Biology and Biotechnology, Florida Atlantic University, Jan. 22, 2003. "Non-coding RNA Metabolism".
9. Department of Chemistry and Biochemistry, Florida Atlantic University, Sept. 12, 2003. "RNA metabolism and Quality Control under Oxidative Stress".
10. Department of Biomedical Science Brown Bag Meeting, Florida Atlantic University, Sept. 17, 2003. "RNA Degradation under Oxidative Stress".
11. Biodefense Roundtable, Dec. 10, 2003. Boca Raton, FL. "Control of Bacterial Bioterrorism Agents".
12. University of Delaware, Delaware Biotechnology Institute, July 6, 2004. Newark, DE. "RNA Metabolism and Quality Control".
13. The Fourth Annual Emerging Information Technology Conference (EITC04). Oct. 28, 2004, Princeton, NJ. "Genomic analysis of RNA processing".
14. Medical College of Georgia, Feb. 11, 2005. Augusta, GA. "RNA processing and damage-induced degradation in *E. coli*".
15. Sixth Annual Meeting of the Consortium of Biodefense Researchers. May 31-June 3, 2005, Clearwater, Florida. "Identification of essential genes of *Yersinia pestis* as possible drug target by genomic analysis".

16. Florida International University, November 8, 2005. Miami, FL. "RNA metabolism in *Escherichia coli*".
17. Seventh Annual Meeting of the Consortium of Biodefense Researchers. June 1, 2006, Clearwater, Florida. "Identification of essential genes in bacterial bioterrorism agents and prediction of antimicrobial targets".
18. Florida Atlantic University Biomedical Science Research Day, July 31, 2006. Boca Raton, Florida. "RNA damage and surveillance under oxidative stress".
19. University of Miami School of Medicine, April 20, 2007, Miami, Florida. "RNA damage and surveillance under oxidative stress".
20. Invited speaker in Enzyme Engineering Conference, July 25, 2007, Dalian, China. "Ribonucleases (RNases): Roles in RNA Metabolism and Application in Biotechnology".
21. Invited speaker in PepCon-2008, April 22, 2008 Shenzhen, China, Session 19, "Bioinformatics and Structural Proteomics", Forfeited.
22. Shantou University, April 26, 2008, Shantou, China. Forfeited.
23. Applied Life Sciences, Niigata University of Pharmacy and Applied Life Sciences, April 19, 2008, Niitsu, Niigata, Japan. Forfeited.
24. University of Miami Miller School of Medicine, April 16, 2010, Miami, Florida. "RNA quality control in *E. coli* under oxidative stress".
25. University of Miami Miller School of Medicine, July 8, 2010, Miami, Florida. "Identification of *Yersinia pestis* genes essential for surviving mammalian macrophage like cells by a genomic approach".
26. University of Colorado Denver, Department of Chemistry, February 26, 2021, Denver, Colorado (tentatively setup as virtual visit). "RNA damage and human diseases".

INSTRUCTION:

COURSES DEVELOPED / TAUGHT:

Medical Courses

1. **(University of Miami School of Medicine)** Instructor for Medical Biochemistry and Molecular Biology Group Discussions (1st year medical students). 1997-1999, 2 hours each year.
2. **(Florida Atlantic University)** Course Director of Fundamental Biomedical Science 1 (2010-2013).
3. **(Florida Atlantic University)** Lecturer for Molecular Genetics Section of "Molecular Basis of Life" and Microbiology Section of "Host Defense and Pathogens" (2004-2009 at Regional Campus of UMMSM), and Fundamental Biomedical Science (2010-present at FAU College of Medicine).
4. **(Florida Atlantic University)** Co-author of 4 Problem Based Learning cases. Facilitator of PBL Block 1 in the course Fundamental Biomedical Science (2005-present).

5. **(Florida Atlantic University)** Facilitator of IQ in the course Pathology and Therapeutics I (2013-2014). Facilitator of SLIQ in the course Pathology and Therapeutics III (2019-present), and Facilitator of SLIQ in the course Pathology and Therapeutics IV (2017-present).

Graduate Courses (Florida Atlantic University)

6. Course solely developed and taught: Biomedical Data and Informatics. BSC6459, 3 credits. (2015-present, was a required course for Biomedical Science MS Program during 2015-2019).
7. Course solely developed and taught: RNA Biology and Diseases. 3 credits, 45 lecture hours, 2005, 2007. PCB6525: graduate students; PCB4521: senior undergraduate students. This course was offered every other year during 2002-2010.
8. Course Director (2010-2011) and Instructor (2007-2016): Core Graduate Course: "Macromolecules and Human Diseases". 3 credits.
9. Lectures in the course Fundamental Topics in Human Health (FTHH, later changed to BCTA, 2017-present): 3 lectures (1.5 hr each) in molecular basis of life and bioinformatics.
10. Lecture in the course Integrative Biology I (2012-2019): 1.5 hour lecture each year.
11. Lecture in the course PCB 6933 Topics in Biomedical Sciences I, 2004-2008. Gave 3 lecture hours each year.
12. Coordinator of Journal Club: Center for Molecular Biology and Biotechnology/Biomedical Science, Coordinator: 2003-2004. Joint Coordinator in 2005-2007.
13. Coordinator of Seminar: jointly sponsored by Biomedical Science and Center for Molecular Biology and Biotechnology, 2007-2008.
14. Instructor for comprehensive exam for M.S. students: provided exam topics and evaluations for Mary Espinosa, Samantha Matthews, Ron Faugue, Odette Gordon, Brian Suarez, Alina Driver, Jasmine Prchal, Morolake Amole.

Undergraduate Courses (Florida Atlantic University)

15. Instructor of PCB 4930 Medical Scholar Program (7 students) for the Biochemistry and Molecular Genetics sections of Molecular Basis of Life**.** The students received 31 lectures from Miami. Fall 2003.

Professional Training Courses (Mos Institute of Technology, Philadelphia, PA)

16. Instructor of Bioinformatics Training Courses. 2001-2002, 2 sessions, gave 54 lecture hours in each session. Most of the 47 students became Certified Bioinformatics Specialist (CBS) and Certified Bioinformatics Master (CBM) from National Bioinformatics Institute.

RESEARCH TRAINING (Florida Atlantic University):

Graduated Thesis/ Dissertation Students

1. Maureen S. Lalonde: M.S. in Biomedical Sciences, FAU. Graduated in May 2006.
2. Gayatri Kollipara: M.S. Student in Biomedical Sciences, FAU. Graduated in Dec. 2007.
3. Jianan Zhang: M.S. Student in Biomedical Science, FAU. Graduated in Dec. 2007.
4. Jinhua Wu: Ph.D. Student in Integrative Biology, FAU. Aug. 2003-2008.
5. Min Liu: Ph.D. Student in Integrative Biology, FAU. Aug. 2005-2012.

6. Ravi Kumar Alluri: Ph.D. Student in Integrative Biology, FAU. Aug. 2007-2012.
7. Delaram Pourkalbassi Esfahani, MS Student in Biomedical Science, Spring 2014 - Summer 2016.
8. Sulochan Malla: Ph.D. Student in Integrative Biology, FAU. Aug. 2012-Dec. 2019.
9. Alexander Kwakye: M.S. Student in Biomedical Science, FAU, Aug. 2018-Aug. 2020.

Post-Docs (Florida Atlantic University)

10. Shaohui Wu: Ph.D.: Post-Doctoral Associate. 2003 – 2004.
11. Zhe Jiang, Ph.D.: Post-Doctoral Associate. Dec. 2005 – July 2006.
12. Yang Jiang, Ph.D.: Post-Doctoral Associate. Apr. 2007-Oct. 2007.
13. Sandhya Darsi, Ph.D.: Postdoctoral Associate. Aug. 2011-2012.

Laboratory Members and Trainees (Florida Atlantic University)

14. Xin Gong: Research Associate and Lab Manager. 2002-2010.
15. Edna Gamliel: Research Associate. Aug.-Dec., 2007.
16. Gayatri Kollipara: Research Associate. 2008-2010.
17. Haiyun Fu: Research Associate. 2013-2019.

Thesis/Dissertation Committee (Florida Atlantic University, University of Miami)

Served the committees of 20 Ph.D. and 2 M.Sc. students.

Research Students (Florida Atlantic University)

Instructed directed independent study or research rotation of 25 undergraduate students, 7 high school students, 3 Master of Science students, 4 Ph.D. Students, 5 MD students.

SERVICE:

GRANT / MANUSCRIPTS:

1989-present *Ad hoc* reviewer for *Journal of Microbiology, The FASEB Journal, European Journal of Biochemistry, Journal of Biological Chemistry, Journal of Molecular Biology, Microbiology, Molecular Microbiology, Nucleic Acid Research, RNA, PNAS, Oligonucleotides, Protein and Peptide Letters, Journal of Neurochemical Research, Free Radical Biology & Medicine, Current Cellular Biochemistry, BioTechniques*.

2004-present Grant review panel for *Alzheimer's Association*.

2012-present Grant Reviewer, *National Science Foundation of China*, microbiology and biochemistry sections.

EDITORIAL SERVICES:

1990-1992 Associate Editor, *Journal of Microbiology*.

1992 Associate Editor, *Biotechnology Development Policies in Liaoning Province*, China, Liaoning People's Press.

1993 Editorial Board, *Studies on Soil Microorganisms*, Shenyang Academic Press, ISBN 7-80556-725-5/S.7, Shenyang, China.

2004 Editorial Board, *Studies on Terrestrial & Marine Microorganisms*, ISBN 7-5381-4123-5. Liaoning Science and Technology Press, Shenyang, China.

2011-2016 Editorial Board, *Current Cellular Biochemistry*.

2013-2014 Editorial Board, *Frontiers in Genomic Physiology*

2016-present Editorial Board, *BAOJ Microbiology*

2016-present Editorial Board, *The Scientific Pages of Biomedical Research*

MEMBERSHIPS / SOCIETY SERVICES:

1985-1987 Founder & Chairman, Youth Scientific Association of the Institute of Forestry and Soil Science, Chinese Academia of Sciences, Shenyang, China.

1990-1992 Board of Directors, Liaoning Microbiology Society, China.

2001 Invited Member of Science and Technology Delegation, organized by Liaoning Province and Chinese Ministry of Science and Technology, July 2001.

2001-2014 Board Member, Vice President and Financial Officer of the Association of Chinese Bioinformaticians, USA.

2002 Coordinator of Sponsorship for the Second Chinese Conference on Bioinformatics, July 2002, Beijing, China.

2004 Chair of Bioinformatics Session and Member of Program Committee, Enhanced Information Technology Conference 04, Princeton, NJ, Oct. 2004.

2004-present Member, The RNA Society.

2005-presnet Member, American Society for Biochemistry and Molecular Biology (ASBMB).

2010-present Life-Time Member, Overseas Chinese Society for Microbiology (Sino-Micro).

2012 Session Chair, 3rd World DNA and Genome Day. Xi'an, China, Apr. 25-28, 2012.

2017 Organizing Committee Member, Co-Chair of Day 1 Session, and Workshop Conductor, Molecular Biology 2017, Philadelphia, USA, August 31-September 01, 2017.

2018 Representative of Co-Host Organization, BIT's 11th Annual World Protein & Peptide Conference (PepCon-2018 http://www.bitcongress.com/pepcon2018/) and BIT's 6th Annual Conference of AnalytiX-2018 (AnalytiX-2018 http://www.bitcongress.com/analytix2018/), Miami, FL, March 26-28, 2018.

COMMITTEES:

DuPont Toxicology: Member of Scientist Search Committee, 2001-2002.

Florida Atlantic University: 2002-present

Department of Biomedical Science: (1) Member (2003-2005) and Chair (2005-2006), Research Committee; (2) Member, Faculty Search Committee (2003-2004, 2008, 2010); (3) Member, Promotion and Tenure Committee (2006-2008).

Charles E. Schmidt College of Medicine (prior to 2010: CES College of Biomedical Science): (1) Chair, Promotion and Tenure Committee (2007-2009; 2013-2016); (2) Chair (2006-2007) and Member (2007-), Research Committee; (3) Member, Planning Committee for developing the new College of Biomedical Sciences, and Co-Chair, Development Subcommittee of the Planning Committee (2005-2006); (4) Member, Committee for Medical Curriculum (2006-2007, 2010); (5) Member, Research Day

Committee (2009 for student poster evaluation and award, 2010 for planning); (6) Member, Faculty Assembly Bylaws Revision Committee (2009-2010); (7) Member, Committee for Medical Students (2010); (8) Bridge Fund Committee (2010); (9) Secretory, Faculty Assembly (2012-2014). (10) Vice Chair, Faculty Assembly (2014-2016). (11) Search Committee for Chair of Biomedical Science Department (2014-2015); (12) Faculty Satisfaction Taskforce (2014-2015); (13) Graduate Studies Taskforce (2014-present); (14) College Marshal of FAU Commencement Program (2003-present).

Charles E. Schmidt College of Science: Member, Faculty Computing Committee, Charles E. Schmidt College of Science (2004-2007). Member, Executive Committee for Center of Molecular Biology and Biotechnology (2008-present).

University: (1) Member, University Promotion and Tenure Committee (2007-2009, 2013-2015); (2) Member, University Research Committee (2006-2007); (3) Member, Institutional Biosafety Committee (2004-2007); (4) Member, Presidential University Diversity Committee (2008-2010); (5) Member of HARI Executive Committee (Healthy Aging Research Initiative, 2010-2014); (6) Member, University Sustained Performance Evaluation Policy Committee (2014-2016). (7) Member, Radiation Safety Committee (2015-present). (8) Search Committee for Dean of College of Medicine (2016); (9) Member of FAU i-HeAL Executive Committee (2016-2018).

PUBLICATIONS:

Articles:

1. Wu Y, Wang S, Tang G, Xue D, Li H, Xia H and Li Z. (1981). Nitrogen-fixation by root nodules of soybean under various gaseous conditions. *J. Microbiol. (Chaoyang, China)* 1(3):25-29.
2. Li Z, Huang Y and Ding J. (1984) Isolation and infectivity of *Frankia sp.* At4 from root nodules of *Alnus tinctoria*. *J. Microbiol. (Chaoyang, China)* 4(2):29.
3. Li Z. and Ding J. (1985) Isolation and characterization of *Frankia sp.* from root nodules of *Alnus tinctoria* and studies of infectivity. *J. Microbiol. (Chaoyang, China)* 5(3):17-20.
4. Ding J, Shu F, Sun H, Huang Y, Xu Q, Li Z and Li W. (1985) Analysis of cellular chemical compositions of cultured *Frankia* strains. *J. Microbiol. (Chaoyang, China)* 5(4):17-19.
5. Ding J, Zhang Z, Li Z, Shu F, Sun H, Huang Y, Wu Y, Cui Y, Xu Q and Li W. (1986) Studies of *in vitro* nitrogen fixation activity of *Frankia* strains by gas chromatography. *J. Microbiol. (Chaoyang, China)* 6(2):33-34.
6. Ding J, Shu F, Sun H, Huang Y, Xu Q, Li Z, Wu Y, Zhang L, Zhu Y and Li W. (1986) Characterization of infrared absorption spectra of *Frankia*. *Acta Microbiologica Sinica* 26(4):285-289.
7. Li Z and Ding J. (1986) Isolation of *Frankia sp. FSCc01* and nodulation on *Casuarina cunninghamiana*. *Acta Microbiologia Sinica,* 26:295-301.
8. Ding J, Shu F, Sun H, Huang Y, Xu Q, Li Z, Wu Y, Zhang L, Zhu Y and Li W. (1987) Infrared absorption spectra of whole cells of *Frankia*. *J. Microbiol. (Chaoyang, China)* 7(2):6-10.

9. Qi B, Li Z, Wang S and Zhang X. (1987) Study on genetic characteristics of fast-growing *Rhizobium japonicum* from various soil types in Northeastern China. *J. Microbiol. (Chaoyang, China)* 7(Suppl.):27-31.

10. Wang S, Fu P, Lin J, Xue D, Qi B, Li Z, Xu G and Zhang X. (1989) Ecological distribution and characteristics of *Clycine soja* plants and their microsymbiont, *Sinorhizobium fredii* in Northeast China area. *J. Microbiol. (Chaoyang, China)* 9(3):35-40.

11. Zhang L, Li Z and Zhang Q. (1991) Cloning and expression of penicillin G acylase gene in *Bacillus megaterium*. *Chin. J. Biotechnol.* 7:63-72.

12. Kelly KO, Reuven NB, Li Z and Deutscher MP. (1992) RNase PH is essential for tRNA processing and viability in RNase-deficient *Escherichia coli* cells. *J. Biol. Chem.* 267: 16015-16018.

13. Tuohy TMF, Li Z (joint first author), Atkins JF and Deutscher MP. (1994) A functional mutant of $tRNA^{Arg}_2$ with 10 extra nucleotides in its TFC arm. *J. Mol. Biol.* 235:1369-1376.

14. Li Z. and Deutscher MP. (1994) The role of individual exoribonucleases in processing at the 3' end of *Escherichia coli* tRNA precursors. *J. Biol. Chem.* 269:6064-6071.

15. Li Z and Deutscher MP. (1995) The tRNA processing enzyme RNase T is essential for maturation of 5S RNA. *Proc. Natl. Acad. Sci. U.S.A.* 92:6883-6886.

16. Li Z, Zhan L and Deutscher MP. (1996) The role of individual cysteine residues in the activity of *Escherichia coli* RNase T. *J. Biol. Chem.* 271:1127-1132.

17. Li Z, Zhan L and Deutscher MP. (1996) *Escherichia coli* RNase T functions *in vivo* as a dimer dependent on Cysteine 168. *J. Biol. Chem.* 271: 1133-1137.

18. Li Z and Deutscher MP. (1996) Maturation pathways for *E. coli* tRNA precursors: a random multienzyme process in vivo. *Cell* 86:503-512.

19. Fitzgerald LR, Li Z, Machida CA, Fishman PH and Duman RS. (1996) Adrenergic regulation of ICER (inducible cyclic AMP early repressor) and ß1-adrenergic receptor gene expression in C6 glioma cells. *J. Neurochem.* 67:490-497.

20. Li Z, Vaidya VA, Alvaro JD., Iredale PA, Hsu R, Hoffman G, Fitzgerald L, Curran PK., Machida CA., Fishman PH., Duman RS. (1998) Protein kinase C-mediated down-regulation of beta1-adrenergic receptor gene expression in rat C6 glioma cells. *Mol. Pharmacol.* 54: 14-21.

21. Cheng ZF, Zuo Y, Li Z, Rudd KE and Deutscher MP. (1998) The *vacB* gene required for virulence in *Shigella flexneri* and *Escherichia coli* encodes the exoribonuclease RNase R. *J. Biol. Chem.* 273:14077-14080.

22. Li Z, Pandit S and Deutscher MP. (1998) 3' exoribonucleolytic trimming is a common feature of the maturation of small, stable RNAs in *Escherichia coli*. *Proc. Natl. Acad. Sci. U.S.A.* 95:2856-2861.

23. Li Z, Pandit S and Deutscher MP. (1998) Polyadenylation of stable RNA precursors *in vivo*. *Proc. Natl. Acad. Sci. U. S. A.* 95:12158-12162.

24. Li Z, Pandit S and Deutscher MP. (1999) Maturation of 23S ribosomal RNA requires the exoribonuclease RNase T. *RNA* 5:139-146.

25. Li Z, Pandit S and Deutscher MP. (1999) RNase G (CafA protein) and RNase E are both required for the 5' maturation of 16S ribosomal RNA. *EMBO J.* 18:2878-2885.

26. Deutscher MP and Li Z. (2001) Exoribonucleases and their multiple roles in RNA metabolism. *Prog Nucleic Acid Res Mol Biol.* 66:67-105.

27. Li Z and Deutscher MP. (2002) RNase E plays an essential role in the maturation of *Escherichia coli* tRNA precursors. *RNA* 8:97-109.

28. Li Z, Reimers S, Pandit S and Deutscher MP. (2002) RNA quality control: degradation of defective transfer RNA. *EMBO J.* 21:1132-1138.

29. Li Z, Gong X, Joshi VH and Li M. (2005) Co-evolution of tRNA 3' trailer sequences with 3' processing enzymes in bacteria. *RNA* 11:567-577.

30. Li Z, Wu J and DeLeo CJ. (2006) RNA damage and surveillance under oxidative stress. *IUBMB Life.* 58: 581-588.

31. Gong X, Tao R, Li Z. (2006) Quantification of RNA damage by reverse transcription polymerase chain reactions. *Anal. Biochem.* 357:58-67.

32. Liao L, and Li Z. (2007) Correlation between Gene Silencing Activity and Structural Features of Antisense Oligodeoxynucleotides and Target RNA. *In Silico Biology* 7:0036.

33. Tsuji S, Yamashita M, Nishiyama A, Shinohara T, Li Z, Myrvik QN, Hoffman DR, Henriksen RA and Shibata Y. (2007) Differential structure and activity between human and mouse intelectin-1: human intelectin-1 is a disulfide-linked trimer, whereas mouse homologue is a monomer. *Glycobiology* 17:1045-1051.

34. Lalonde MS, Zuo Y, Wang J, Gong X, Wu S, Malhotra A and Li Z. (2007) Exoribonuclease R in Mycoplasma genitalium can carry out both RNA processing and degradative functions and is sensitive to RNA ribose methylation. *RNA* 13:1957-1968.

35. Wu J and Li Z. (2008) Human polynucleotide phosphorylase reduces oxidative RNA damage and protects HeLa cell against oxidative stress. *Biochem Biophys Res Commun.* 372:288-292.

36. Wu J, Jiang Z, Liu M, Gong X, Wu S, Burns CM and Li Z. (2009) Polynucleotide Phosphorylase Protects Escherichia coli against Oxidative Stress. *Biochemistry* 48:2012–2020.

37. Li Z. and Deutscher MP. (2009) Analyzing the decay of stable RNAs. *Methods in Enzymology*, 447:31-45.

38. Bartra SS, Gong X, Lorica CD, Jain C, Nair MKM, Schifferli D, Qian L, Li Z, Plano GV and Schesser K. (2012) The outer membrane protein A (OmpA) of Yersinia pestis promotes intracellular survival and virulence in mice. *Microbial Pathogenesis* 52:41-46.

39. Liu M, Gong X, Alluri RK, Wu J, Sablo T and Li Z. (2012) Characterization of RNA damage under oxidative stress in *Escherichia coli*. *Biol. Chem.* 393:123-132.

40. Alluri, RK and Li, Z. (2012) A novel one-step mechanism for tRNA 3' end maturation by the exoribonuclease RNase R of *Mycoplasma genitalium*. *J. Biol. Chem*. 287: 23427-23433.

41. Li Z, Malla S., Shin B and Li J (2014) Battle against RNA oxidation: molecular mechanisms for reducing oxidized RNA to protect cells. *WIREs RNA* 5:335-46.

42. Qian L, Zhang W and Li Z (2014) Essential Gene Identification for a Microarray Data of Yersinia Pestis *2014 IEEE 14th International Conference on Bioinformatics and Bioengineering.* Pages:185 – 190.

43. Rehman O, Zhuang H, Muhamed A, Ibrahim A, Li Z (2019) Validation of miRNAs as Breast Cancer Biomarkers with a Machine Learning Approach. *Cancers (Basel)* 11(3):431.
44. Louis P, Mercer B, Cirone AM, Johnston C, Lee ZJ, Esiobu N, Li Z, Wei J, Dorey CK, Shibata Y and Nan C (2019) Dietary chitin particles, "1 mimetic fungi", ameliorate colitis in TLR2/CD14- and sex- dependent manners. *Infect Immun*. 23;87(5): e00006-19.
45. Schesser K, Bartra SS, Lorica CD, Qian L, Gong X, Bahnan X, Barreras H, Jr., Hernandez R, Li Z and Plano G (2019) Chromosomally-encoded Yersinia pestis type III secretion effector proteins promote infection in cells and in mice. *Front Cell Infect Microbiol*. 9(23):1-9.
46. Malla S. and Li Z (2019) Functions of Conserved Domains of Human Polynucleotide Phosphorylase on RNA Oxidation. *Insights Biomed Res.* 3: 62–67.

Book Chapters:

1. Ding J, Zhang Z, Li Z, Shu F and Cui Y. (1988) Nitrogen fixation by free-living *Frankia* strains analyzed by gas chromatography. In *Special Topics of Analytical Microbiology*, Eds. Guangsheng Cheng, Houchu Zhu, Fang Zhou, Academic Press, Beijing. Page 162-164.
2. Wang S, Lin J, Li Z, Xue D, Qi B, Xu G and Zhang X. (1992) Symbiotic nitrogen fixation resources: a study on *Sinorhizobium fredii* and *Bradyrhizobium japonicum* and their applications. In *The nitrogen fixation and its research in China*, Ed. Guo-Fan Hong, Springer-Verlag, Berlin Heidelberg. Page 487-499.
3. Ding J, Zhang Z, Shu F, Sun H, Huang Y, Xu Q, Li W, Li Z, Cui Y, Zou H, Wu Y, Zhang D and Li Y. (1992) Studies on the symbiotic nitrogen-fixing actinomycete *Frankia* in China. In *The nitrogen fixation and its research in China*, Ed. Guo-Fan Hong, Springer-Verlag, Berlin Heidelberg. Page 555-566.
4. Wang S, Li Z, Cui Y and Zhang X. (1993) Genetic studies of symbiotic nitrogen fixation and applications in agricultural development in China. In: *Studies on Soil Microorganisms*, Ed. Xianwu Zhang, Shenyang Academic Press, Shenyang, China. Page 130-138.
5. Li Z, Wang S, Zhang Q and Zhang X. (1993) Studies on the molecular mechanism of symbiotic nodulation of *Rhizobium fredii* and soybean. In: *Studies on Soil Microorganisms*, Ed. Xianwu Zhang, Shenyang Academic Press, Shenyang, Page 156-177.
6. Ding J, Zhang Z, Shu F, Sun H, Huang Y, Xu Q, Li W, Li Z, Wu Y, Cui Y, Zhang D, Li Y, Zou H and Hermann W. (1993) Studies on symbiotic nitrogen fixation by the actinomycete *Frankia* and non-legume plants. In: *Studies on Soil Microorganisms*, Ed. Xianwu Zhang, Shenyang Academic Press, Shenyang, China. Page 184-195.
7. Li Z, Wang J, Li X, Wang S, Zhang W, Lin J, Xue D, Xu G and Zhang X. (1993) Analysis of the composition of *Rhizobium fredii* exopolysaccharides. In: *Studies on Soil Microorganisms*, Ed. Xianwu Zhang, Shenyang Academic Press, Shenyang, China. Page 254-259.
8. Li Z, Wang S, Zhang Q and Zhang X. (1993) Identification of bacterial plasmids. In: *Studies on Soil Microorganisms*, Ed. Xianwu Zhang, Shenyang Academic Press, Shenyang, China. Page 561-564.
9. Li Z, Wang S, Zhang Q and Zhang X. (1993) Transposon Tn5 mutagenesis and construction of exopolysaccharide deficient mutants of *Rhizobium fredii*. In: *Studies on Soil Microorganisms*, Ed. Xianwu Zhang, Shenyang Academic Press, Shenyang, China. Page 565-573.

10. Wang S, Li Z, Cui Y, Hou Y, Li J, Zhang X. (1994) Application of microbial genetics in the development of agriculture. In *Current perspectives in microbial genetics*, Eds. Zhujia Sheng and Yongqing Chen, Fudan University Press, Shanghai, China. Page 217-222.
11. Wang S, Fu P, Lin J, Xue D, Qi B, Li Z, Xu G, Zhang X. (2004) Ecological distribution and characteristics of *Glycine soja* plants and their microsymbiont *Sinorhizobium fredii* in China. In Studies on Terrestrial & Marine Microorganisms, Eds. Wang S, Liaoning Science and Technology Press, Shenyang, China. Page 148-152.
12. Li Z. and Deutscher M.P. (2004) Endoribonucleases and exoribonucleases. In *Escherichia coli and Salmonella: Cellular and Molecular Biology*, the *EcoSal* Edition, Chapter 4.6.3 (http://www.ecosal.org/ecosal/index.jsp). American Society for Microbiology.
13. Li Z. and Kollipara, G. (2007) RNA metabolism and genetic diseases. In *Current Topics in Human Genetics: Studies of Complex Diseases*. Chapter 21, Eds. Deng, H, Shen, H, Liu, Y. and Hu, H, World Scientific Publishing, Toh Tuck Link, Singapore, Page 581-615.
14. Li Z. (2011) Pre-tNRA and Pre-rRNA processing in bacteria. In Encyclopedia of Biological Chemistry 2nd Edition, Ch. 277. Eds. Lennarz W. and Lane MD, Elsevier, New York, NY.
15. Li Z. (2020) Pre-tNRA and Pre-rRNA processing in bacteria (update). In Encyclopedia of Biological Chemistry 3rd Edition, MRW-BCH3. Elsevier, New York, NY.

Conference Presentations (*Platform):

1. *Li, Z., Wang, S., Zhang, Q., and Zhang, X. Tn5 mutagenesis of *Rhizobium fredii* SC2 and characterization of exopolysaccharide-deficient mutants for nodulation of soybean. *Joint Symposium of the 6th Chinese Biochemical Conference and the 4th Meeting of International Union of Biochemistry and Molecular Biology (IUBMB)*, Abstract No. K005. Nanjing, China. Nov. 11-14, 1988.
2. *Deutscher M.P., Reuven N.B., Kelly K.O. and Li Z. Multiple exoribonucleases and their role in tRNA metabolism. *Keystone Meeting on Nucleases,* Feb. 1992.
3. *Deutscher M.P., Reuven N.B., Li Z. and Kelly K.O. Multiple exoribonucleases participate in tRNA processing in E. coli. *15th Int'l tRNA Workshop*, Cap d'Agde, France, May 1993.
4. *Tuohy T.M.F., Li Z., Atkins J.F. and Deutscher M.P. A functional mutant of $tRNA^{Arg}_2$ with 10 extra nucleotides in its TFC arm. *15th Int'l tRNA Workshop*, Cap d'Agde, France, May 1993.
5. *Li Z. and Deutscher M.P. The specific role of RNases in 3' tRNA processing. *ASM Conference on the role of RNA decay and processing in biological systems.* Cape Cod, MA, 1994.
6. Li Z., Zhan L. and Deutscher M.P. A cysteine residue required for the activity of Escherichia coli RNase T. *ASM Conference on the role of RNA decay and processing in biological systems.* Cape Cod, MA, 1994.
7. *Li Z. and Deutscher M.P. The specific role of exoribonucleases in the 3' processing of E. coli tRNA precursors in vivo. *16th Int'l tRNA Workshop*, Madison, WI, May 1995.
8. *Deutscher M.P., Callahan C., Li Z., Reuven N., Zhang X., Zhou Z. and Zhu L. E. coli exoribonucleases and their role in RNA metabolism. *Second Int'l Meeting on Ribonucleases*, 1996, Groningen, Netherlands.

9. Li, Z. and Deutscher, M.P. Maturation of the *Escherichia coli* TyrT transcript: involvement of multiple endo- and exoribonucleases. Abstract No. 593, *17th Int'l Congr. of Biochem. Mol. Biol.,* San Francisco, CA, Aug. 24-29, 1997.
10. *Duman, R.S., Chen, J.S., Li, Z., Kelz, M.B., Zeng, G.O., Picciotto, M.R. and Nestler, E.J. Development of inducible, tissue specific CREB and dominant negative CREB transgenic mice. Abstract No. 164.10, *SFN 27th Annual Meeting.* New Orleans, LA, Oct. 25-30, 1997.
11. Li Z., Pandit, S. and Deutscher M.P. 3' Exoribonucleolytic trimming is a common feature of the maturation of small, stable RNAs in Escherichia coli. *Third Annual RNA Society Meeting,* Madison, WI. 1998
12. *Li Z., Pandit, S. and Deutscher M.P. Maturation and polyadenylation of stable RNA precursors. *FASEB Summer Conference on Mechanism of RNA Maturation and Decay*. July 1998, Portland, OR.
13. *Deutscher, M.P., Li Z. and Pandit S. RNase G (CafA protein) and RNase E are both required for the 5' maturation of 16S ribosomal RNA. *Fourth Annual RNA Society Meeting*. 1999.
14. Li Z., Pandit, S. and Deutscher M.P. The CafA protein (RNase G) together with RNase E is required for the maturation of 16S rRNA in Escherichia coli. *ASBMB 1999*. San Francisco, CA.
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16. *Li, Z. Pandit S, and Deutscher, M.P. Degradation of denatured tRNA by a poly(A) polymerase-dependent pathway. *Annual Conference on tRNA.* Cambridge, England, April 6-12, 2000.
17. *Li Z., Pandit, S. and Deutscher M.P. A role for poly(A) polymerase in the degradation of a mutant tRNA in *E. coli*. *Annual Conference on tRNA.* Cambridge, England, April 6-12, 2000.
18. *Li, Z. and Deutscher, M.P. An Important Role for RNase E in the Maturation of tRNA. *Annual Conference on tRNA.* Cambridge, England, April 6-12, 2000.
19. *Li Z. and Deutscher M.P. An important role for RNase E in the maturation of tRNA. *Fifth Annual RNA Society Meeting.* Madison, WI, 2000.
20. *Deutscher M.P., Li Z., Pandit S and Reimer S. RNases in bacterial RNA processing and decay. *FASEB Summer Conference*, Snowmass Village, CO, 2000.
21. Zhongwei Li, John Strobel, Alex van-Duser, Fan Wang, Wen-Ying Wang, Rita Dharmavaram and Pat Wyant. Use of SRS to Integrate and Manage Proprietary or Customized Genomic Data Products. *Techcon 2001*. Hershey, PA, May 6-9, 2001.
22. Li Z., Gong X.. (2003) Identification of non-coding RNAs and function prediction in *Escherichia coli*. *Biotech 2003*. Boca Raton, FL, March 13, 2003.
23. Liao L., Li Z.. (2003) Correlation between antisense activity and secondary structure of oligonucleotide sequences. *Intelligent Systems for Molecular Biology 2003 (ISMB 2003).* Brisbane, Australia, June 29 to July 3, 2003.
24. Li Z., Wu S. and Gong X. (2004) RNA quality control under oxidative stress in Escherichia coli. *FASEB Summer Conference on Post-translational Regulation of Gene Expression and RNA Decay.* Tucson, AZ, June 26 – July 1, 2004.

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26. *Li, Z., Joshi, V.H., Li, M. and Gong, X.. (2004) Genomic analysis of RNA processing. *The Fourth Annual Emerging Information Technology Conference (EITC04).* Princeton, NJ, USA, Oct. 28-29, 2004.
27. Li, Z., Gong, X., Joshi, V.H. and Li, M. (2005) AU-rich elements are selectively conserved in tRNA 3' trailer sequences in bacteria having RNase E. *Tenth RNA Society Meeting,* Banff, Canada, May 24-29, 2005.
28. *Li, Z., Gong, X., Liao L. and Craig R. (2005) Identification of essential genes of *Yersinia pestis* as possible drug target by genomic analysis. *Sixth Annual Meeting of the Consortium of Biodefense Researchers.* Clearwater, Florida. May 31-June 3, 2005.
29. Li, Z., Gong, X., Liao L. and Craig R. (2005) Identification of unique sequence tags for improved diagnoses of bacterial bioterrorism agents. *Sixth Annual Meeting of the Consortium of Biodefense Researchers.* Clearwater, Florida. May 31-June 3, 2005,
30. Li, Z., Gong, X., Wu, J. and Wu, S. (2005) RNA quality control protects cells against oxidative stress. *FAU Research Day*. Boca Raton, Florida. Oct. 20, 2005.
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32. Li, Z. and Xin Gong (2006) Reduced production of full length cDNA from oxidatively damaged RNA. *Annual Meeting of American Society for Biochemistry and Molecular Biology*. San Francisco, CA, April 1-5, 2006.
33. *Li, Z. (2006) Identification of essential genes in bacterial bioterrorism agents and prediction of antimicrobial targets. *Seventh Annual Meeting of the Consortium of Biodefense Researchers.* Clearwater, Florida. May 30-June 2, 2006.
34. Li, Z., Gong, X., Wu, J., Jiang, Z. and Wu, S. (2006) RNases degrade damaged RNA and protect *Escherichia coli* against oxidative stress. *FASEB Summer Conference on Post-transcriptional Control of Gene Expression: Mechanisms of mRNA Decay.* Snowmass, Colorado. June 24-29, 2006.
35. *Li, Z., Gong, X., Wu, J., Jiang, Z., Kollipara, G., Bhagavatula, N., Liu, M. and Wu, S. (2006) RNA damage and surveillance under oxidative stress. FAU Biomedical Science Research Day, Boca Raton, Florida. July 31, 2006.
36. *Li, Z. (2007) Ribonucleases (RNases): roles in RNA metabolism and application in biotechnology. Enzyme Engineering Conference, Dalian, China. July 22-27, 2007.
37. Li, Z. (2007) Ribonucleases: roles in RNA metabolism and application in biotechnology. Proceedings of Enzyme Engineering Conference, China Biotechnology (Suppl.), pp 41-42.
38. Wu, J., Gong, X., Kollipara, G., Wu, S., Liu, M., Jiang, Z., Zhang, J., Jiang, Y., Bhagavatula, N., and Li, Z. (2007) RNA damage and surveillance under oxidative stress. FAU Biomedical Science Research Day, Boca Raton, Florida. Oct. 4, 2007.

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44. Alluri, R.K. and Li, Z. (2009) Multiple factors influence tRNA 3' end maturation by RNase R in Mycoplasma genitalium. FAU Biomedical Research Day, Boca Raton, Oct. 22, 2009.
45. Liu M and Li Z. (2009) Control of damaged ribosomal RNA under oxidative stress. FAU Biomedical Research Day, Boca Raton, Oct. 22, 2009.
46. Alluri, R.K. and Li, Z. (2010) Multiple factors influence tRNA 3' end maturation by RNase R in Mycoplasma genitalium. FAU Graduate Research Day, Boca Raton, Apr. 9, 2010. FAU Graduate Research Day, Boca Raton, Apr. 9, 2010.
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48. Louda, D. and Li, Z. (2011) Incorporating Biochemistry into an Integrated Patient-Focused Curriculum. Third International Meeting of Association for Biochemistry Course Directors. April 30-May 4, 2011, Myrtle Beach, SC, USA.
49. Darsi, S. and Li, Z. (2011) On the level and elimination of oxidative stress-induced abasic RNA in *Escherichia coli*. Florida American Society of Microbiology 2011 Annual Meeting, Islamorada, FL. September 23-25, 2011. Refereed on the basis of abstract.
50. Alluri, R.K. Gong, X. and Li, Z. (2011) A novel role of *E. coli* tRNA pseudouridine synthase TruD under oxidtive stress. Florida American Society of Microbiology 2011 Annual Meeting, Islamorada, FL. September 23-25, 2011. Refereed on the basis of abstract.
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54. Cherish Lorica, Sara Schesser Bartra, Wael Bahnan, Lianfen Quian, Xin Gong, Zhongwei Li, Kurt Schesser, Gregory V. Plano. (2013) Characterization of novel chromosome-encoded type III secretion effector proteins of *Yersinia pestis*. Denver, CO, May 18-21, 2013. Refereed on the basis of abstract. Published as abstract.
55. Zhongwei Li. (2012) Control of oxidized rRNA and mRNA in E. coli under oxidative stress. RNA Club, Miami, FL. Nov. 14, 2012.
56. Min Liu and Zhongwei Li. (2013) Ribosomal RNA damage and degradation under oxidative stress. College of Medicine Research Day. May 17, 2013. Poster presentation.
57. Zhongwei Li. (2013) Deciphering life and disease at the molecular level and a study of RNA damage". Physics Colloquium Series, FAU Department of Physics, Boca Raton, FL, Sept., 27, 2013.
58. Zhongwei Li (2013) Mechanisms for eliminating oxidized RNA in E. coli. RNA Club, University of Miami Miller School of Medicine, Miami, FL, Nov. 18, 2013.
59. D. Mills, N. Martin, G. Rodriguez, and Z. Li. TruD's Effect on RNA Oxidation. FAU Undergraduate Research Symposium,Boca Raton, FL. March 28, 2014. (the team won Undergraduate Research Award at the symposium).
60. S. Malla and Z. Li. "Control of RNA oxidation as a potential novel mechanism for preventing mitochondrial dysfunction. FAU Graduate Research Day April 4, 2014. (The poster presentation was awarded the 3rd place in the competition).
61. Sulochan Malla, and Zhongwei Li. "ROLE OF hPNPASE IN REGULATING OXIDIZED RNA". NCI Symposium RNA Biology 2015, March 11-12, 2015, Natcher Conference Center, NIH, Bethesda, Maryland. (Refereed abstract).
62. Sulochan Malla, and Zhongwei Li. "ROLE OF hPNPASE IN REGULATING OXIDIZED RNA". FAU Graduate and Professional Research Day, March 13, 2015, Boca Raton, Florida. (Non-refereed abstract, poster presentation).
63. Daniel Bryan, Delaram Pourkalbassi Esfahani, Zhongwei Li. "Detection of oxidized RNA in living mammalian cells". FAU Medical Student Research, Scholarship and Service Learning Day 2015, March 13, 2015, Boca Raton, Florida. (Non-refereed abstract, poster presentation).
64. Darius Mills, Zhongwei Li. "Novel Protein, TruD, Binds to Oxidized RNA and Increases Cell Viability in E.coli under Oxidative Stress". National Council on Undergraduate Research 19th Annual Posters on the Hill Conference, Washington, DC, April 15-16, 2015. (Refereed abstract, poster presentation).
65. Sulochan Malla, Zhongwei Li (2015) Role of human polynucleotide phosphorylase (hPNPase) in controlling oxidized RNA. 2015 Symposium on RNA Biology XI: RNA Tool and Target. October 16-17, 2015, Durham, NC.
66. Giovana Jaen, Pamela Ferrera and Zhongwei Li (2016) RNA Damage and Modification on Protein Synthesis. FAU 6th Annual Undergraduate Research Symposium, April 1, 2016. Boca Raton, FL.
67. Delaram Pourkalbassi Esfahani, Michael Lu and Zhongwei Li. (2016) The Potential Role of Stress Granules and Processing Bodies in Eliminating Oxidatively Damaged RNA. FAU College of Medicine Spring Graduate Student Research Day. April 15, 2016. Boca Raton, FL.

68. Sulochan Malla, Zhongwei Li (2016) Human polynucleotide phosphorylase (hPNPase) reduces oxidized RNA and protects cells under oxidative stress. FAU College of Medicine Spring Graduate Student Research Day. April 15, 2016. Boca Raton, FL.
69. Jules Chatoff, Zhongwei Li, James Silver, Michael Band, Haiyun Fu, Irving Itzkan. Development of Mie Scattering Spectrometry for quick diagnosis of infectious bacteria in clinical samples, 2016 Military Health System Research Symposium, Orlando, FL, August 15-18, 2016.
70. Sulochan Malla, Zhongwei Li (2017) A Role for human polynucleotide phosphorylase (hPNPase) in controlling oxidized RNA. FAU College of Medicine Spring Graduate Student Research Day. April 14, 2017. Boca Raton, FL.
71. Sulochan Malla, Zhongwei Li (2017) Role of human polynucleotide phosphorylase (hPNPase) in controlling oxidized RNA. NCI RNA Biology 2017, April 24th - 25th, 2017. Natcher Conference Center, NIH Bethesda, Maryland.
72. *Zhongwei Li (2017) Selective degradation of oxidized RNA. 2nd International Conference on Nucleic Acids, Molecular Biology and Biologics, August 31- September 01, 2017, Philadelphia, PA.
73. Patricia Louis, Janet Menzie, Zhongwei Li, Minoru Koi, C Kathy Dorey, Changlong Nan, Yoshimi Shibata (2018) Dietary anti-IBD effects of chitin in both sexes. 2018 International Congress on Integrative Medicine and Health, 5/11/18, Baltimore, MD.
74. Sulochan Malla & Zhongwei Li (2018) Unraveling the molecular mechanism of human polynucleotide phosphorylase (hPNPase) in downregulating oxidized RNA in human cells and associated human diseases. RNA 2018, May 29-June 3, 2018, Berkeley, CA.
75. *Zhongwei Li. “Selective Elimination of Oxidized RNA: A General Mechanism of Cellular RNA Quality Control”. BIT 2018, March 26-28, 2018, Miami, FL.
76. Sulochan Malla, Sarvika Bommakanti and Zhongwei Li (Poster) “Exploring the molecular mechanisms of human polynucleotide phosphorylase (hPNPase) in controlling oxidized RNA and cell viability”, College of Medicine Graduate Research Day, April 5, 2019, Boca Raton, FL.
77. Alexander Kwakye and Zhongwei Li (Poster) Analyses of Alzheimer’s Disease Genomic Data Using Computational and Statistical Models. College of Medicine Graduate Research Day, April 5, 2019, Boca Raton, FL.
78. Alexander Kwakye and Zhongwei Li (Poster) Analyses of Alzheimer’s Disease Genomic Data Using Computational and Statistical Models. Graduate and Professional Research Day, April 5, 2019, Boca Raton, FL.
79. Sarvika Bommakanti, Sulochan Mallaand Zhongwei Li (Poster) “The role of human polynucleotide phosphorylase (hPNPase) in downregulating oxidized RNA”. FAU 9th Annual Undergraduate Research Symposium, Apr. 8, 2019.

    ** My student Sarvika Bommakanti won FIRST PLACE for her poster presentation.
80. Colleen Silva, Zhongwei Li, Andrea Chen, Chere Lucas Anthony. Microbiologic Characteristics of Skin and Soft Tissue Infections. 24th World Congress of Dermatology (WCD), June 10-15, 2019, Milan, Italy.

81. Min Liu, Ravi K. Alluri, Haiyun Fu and Zhongwei Li (2020) RNA oxidative damage is affected by RNA structures. RNA 2020 (25th Annual Meeting of the RNA Society, online this year), May 26-31, 2020.
82. Alexander Kwakye and Zhongwei Li (2020) Gene Expression analyses of Alzheimer's Disease (AD). Graduate Program in Genetics Retreat, Stony Brook University, February 10, 2020.
83. Alexander Kwakye and Zhongwei Li (2020) Analyses of Alzheimer's Disease (AD) genomic data using computational and statistical models. 12th Annual Integrative Biology (IB) Retreat, Florida Atlantic University. Boca Raton, FL, February 14, 2020.

BIOGRAPHICAL SKETCH

Provide the following information for the Senior/key personnel and other significant contributors.
Follow this format for each person. **DO NOT EXCEED FIVE PAGES.**

NAME: Macleod, Gregory Talisker

eRA COMMONS USER NAME (credential, e.g., agency login): GMACLEOD

POSITION TITLE: Professor of Biology

EDUCATION/TRAINING *(Begin with baccalaureate or other initial professional education, such as nursing, include postdoctoral training and residency training if applicable. Add/delete rows as necessary.)*

INSTITUTION AND LOCATION	DEGREE *(if applicable)*	Completion Date MM/YYYY	FIELD OF STUDY
University of Sydney – Sydney, NSW. Australia	B.Sc. (Hons.)	11/1986	Biology & Physiology
AGSM, University of New South Wales – Sydney	M.B.A.	11/1990	Management
University of Sydney – Sydney	Ph.D.	07/1999	Neuroscience
University of Sydney – Sydney	Postdoctoral	06/2000	Neuroscience
University of Toronto – Toronto, ON. Canada	Postdoctoral	05/2004	Neuroscience
University of Arizona – Tucson, AZ. USA	Postdoctoral	09/2006	Neuroscience

A. Personal Statement

I have the technical expertise, experience, personnel and scientific environment necessary to successfully carry out the proposed research project. My laboratory investigates presynaptic mechanisms that influence the probability of neurotransmitter release and the changes in release probability over time (synaptic plasticity). This interest encompasses two research foci:

i) the mechanisms through which mitochondria are coordinated to serve presynaptic physiology, and,

ii) the ways in which pH changes within the presynaptic terminal and synaptic cleft contribute to synaptic plasticity.

Our work on presynaptic mitochondria led to a clarification of the role of mitochondria in presynaptic Ca^{2+} handling in *Drosophila* motor neurons[a] followed by a demonstration that cytosolic Ca^{2+} levels play an important role in coordinating mitochondrial energy metabolism with presynaptic activity[b]. In the process we developed a number of genetically-encoded fluorescent reporters that reveal the changes in Ca^{2+}, ATP, superoxide and pH in the mitochondria and cytosol of *Drosophila* motor neurons *in situ*[c]. Our work on pH regulation at the synapse arose from observations of anomalous fluorescence signals emanating from GFP-based Ca^{2+} indicators in presynaptic terminals. Using genetically-encoded pH indicators (GEpHIs) we have established that the anomalous fluorescence signals are the result of substantial nerve activity dependent pH transients in the presynaptic cytosol and mitochondrial matricies. Most recently we made direct imaging measurements of cleft pH at conventional glutamatergic synapses in *Drosophila* and the mouse and found that the predominant change in pH during neurotransmission is alkalinization, rather than acidification[d]. Any acidification occurring as a result of exocytosis is likely to be exceedingly rapid and confined to microdomains within the cleft. These observations raise many questions regarding the impact of pH changes on synaptic plasticity. We are currently developing tools to measure and optically control cytosolic and mitochondrial pH *in situ* and *in vivo*.

a. Chouhan AK, Zhang J, Zinsmaier KE & Macleod GT (2010) Presynaptic mitochondria in functionally different motor neurons exhibit similar affinities for Ca^{2+} but exert little influence as Ca^{2+} buffers at nerve firing rates *in situ*. *J.Neurosci.*, 30, p.1869.

b. Chouhan AK, Ivannikov MV, Lu Z, Sugimori M, Llinas RR & Macleod GT (2012) Cytosolic calcium coordinates mitochondrial energy metabolism with presynaptic activity. *J.Neurosci.*, 32, p.1233.

c. Macleod GT & Ivannikov MV (2017). Examining mitochondrial function at synapses *in situ*. In, Yuriy M. Usachev & Stefan Strack (Eds.), Neuromethods: Techniques to investigate mitochondrial function in neurons. Springer Science + Business Media., 123, p.279.
c. Stawarski M, Hernandez RX, Feghhi T, Borycz JA, Lu Z, Agarwal AB, Reihl KD, Tavora R, Lau AWC, Meinertzhagen IA, Renden R, Macleod GT (2020) Neuronal Glutamatergic Synaptic Clefts Alkalinize Rather Than Acidify during Neurotransmission. *J Neurosci*., 40, p.1611.

B. Positions and Honors

Positions and Employment

1987-88 Research Assistant, Dept of Physiology, University of Sydney, NSW, Australia
1991-93 Management & Consulting, Godfrey Pembroke; Dalton Pacific; Sydney, NSW, Australia
1993-94 Research Assistant, Dept of Physiology, University of Sydney, NSW, Australia
1999-00 Postdoctoral Research Fellow, Dept of Physiology, University of Sydney, NSW, Australia
2000-03 Postdoctoral Research Fellow (CIHR), Dept of Physiology, University of Toronto, ON, Canada
2004-06 Research Associate, ARL Division of Neurobiology, University of Arizona, Tucson, AZ
2006-13 Assistant Prof., Physiology Dept, University of Texas Health Science Center San Antonio, TX
2013-20 Associate Prof., Wilkes Honors College, Florida Atlantic University, Jupiter, FL
2020- Professor, Wilkes Honors College, Florida Atlantic University, Jupiter, FL

Other Experience and Professional Memberships

2003- Member, Society for Neuroscience
2005- Member, Genetics Society
2004-06 Speaker, *Drosophila* Neurobiology: Genes, Circuits & Behavior course
2007-09, 11-12 NSF: Organismal Systems, ad hoc reviewer
2009 &13 AHA: ad hoc reviewer
2010-11 Italian Ministry of Health, ad hoc reviewer
2012-14 Organizer, *Drosophila* Neurobiology: Genes, Circuits & Behavior course
2012-19 NIH ad hoc reviewer: NINDS Special Emphasis; Molecular Neuroscience: Mechanisms and Pathways, Special Emphasis, Fellowships ZRG1 F03A-N (20) L; Biophysics of Neural Systems (BPNS)
2018-20 Deutsche Forschungsgemeinschaft (DFG), ad hoc reviewer

Honors

2002-04 Canadian Institutes of Health Research (CIHR) Postdoctoral Research Fellowship

C. Contributions to Science

As both a graduate student and a postdoctoral fellow my contributions to science were largely dictated through the interests of my mentors. These were productive phases of my career as evidenced by 10 first author papers on the subject of synaptic physiology in well-known journals.

Since becoming a Principal Investigator I have established two research foci:
(1) the presynaptic mechanisms through which mitochondria support neurotransmission, and,
(2) the presynaptic mechanisms that implement pH homeostasis.

(1) Our work on presynaptic mitochondria in *Drosophila* motor neurons led to a clarification of the role of mitochondria in presynaptic Ca^{2+} handling, as we established that mitochondrial Ca^{2+} uptake *per se* does not limit cytosolic Ca^{2+} levels at physiological firing rates. This finding received further clarification, when we established that mitochondrial Ca^{2+} uptake is critical for elevating the rate of mitochondrial energy metabolism during intense endogenous activity related to locomotion[a]. We subsequently established that the same functionally differentiated motor neurons operate at different levels of energy efficiency in terms of the number of glutamate molecules released per ATP molecule hydrolyzed[b]. Thus, cytosolic Ca^{2+} levels play an important role in coordinating mitochondrial energy metabolism with presynaptic activity. In the process we developed a number of genetically-encoded fluorescent reporters that reveal the changes in Ca^{2+}, ATP, superoxide and pH in the mitochondria and cytosol of *Drosophila* motor neurons *in situ*. These tools have allowed us to determine

mitochondrial Ca^{2+} levels in presynaptic mitochondria relevant to changes in their energy metabolism[c]. The same tools recently allowed us to investigate the role of the mitochondrial isocitrate dehydrogenase (IDH3) which is not only stimulated by Ca^{2+} that enters during nerve activity, but whose metabolites (alpha-ketoglutarate) regulate neurotransmission[d]. Furthermore, in collaboration with Ian Meinertzhagen, we have just completed an ultrastructure-function study across different larval motor neuron terminals, to provide a framework for understanding how different genes contribute to mechanisms that coordinate presynaptic power supply with power demand.

a. Chouhan AK, Ivannikov MV, Lu Z, Sugimori M, Llinas RR & Macleod GT (2012) Cytosolic calcium coordinates mitochondrial energy metabolism with presynaptic activity. *J.Neurosci.*, 32, p.1233.
b. Lu Z, Chouhan AK, Borycz JA, Lu Z, Rossano AJ, Brain KL, Zhou Y, Meinertzhagen IA, Macleod GT (2016) High-probability neurotransmitter release sites represent an energy-efficient design. *Current Biology*, 26, p.2562.
c. Ivannikov MV & Macleod GT (2013) Mitochondrial free Ca^{2+} levels and their effects on energy metabolism in Drosophila motor nerve terminals. *Biophys.J.*, 104, p.2353.
d. Ugur B, Bao H, Stawarski M, Duraine LR, Zuo Z, Lin YQ, Neely GG, Macleod GT, Chapman ER & Bellen HJ (2017) The Krebs cycle enzyme isocitrate dehydrogenase 3A couples mitochondrial metabolism to synaptic transmission. *Cell Reports*, 21, p.3794.

(2) Our work on presynaptic pH regulation arose from observations of anomalous fluorescence signals emanating from GFP-based Ca^{2+} indicators in presynaptic terminals. Using genetically-encoded pH indicators (GEpHIs) we have established that the anomalous fluorescence signals are the result of substantial activity-dependent pH transients in the presynaptic cytosol[a] and mitochondrial matricies. We went on to quantify the cytosolic pH transients using ratiometric GEpHIs and we also established that these transients occur *in vivo*. In a subsequent study we discovered that the vesicular glutamate transporter (VGLUT) plays a role in realkalinizing the presynaptic cytosol by acting as a Na^+/H^+ exchanger when deposited on the plasmamembrane during exocytosis[b]. Our most recent finding, that the synaptic cleft alkalinizes during activity, and that this alkalinization is substantial *in vivo*[c,d], raises many questions regarding the impact of pH changes on neurotransmission and short-term synaptic plasticity. We have now adapted several of our cleft-targeted GEpHIs for application in mouse central nervous system.

a. Rossano AJ, Chouhan AK & Macleod GT (2013) Genetically-encoded pH-indicators (GEpHIs) reveal activity-dependent cytosolic acidification of *Drosophila* motor nerve termini *in vivo*. *J.Physiol. (Lond)*, 591, p.1691.
b. Rossano AJ, Kato A, Minard KI, Romero MF, Macleod GT (2017) Na^+/H^+-exchange via the *Drosophila* vesicular glutamate transporter (DVGLUT) mediates activity-induced acid efflux from presynaptic terminals. *J.Physiol. (Lond)*, 595, p.805.
c. Stawarski M, Justs KA, Hernandez RX & Macleod GT (2018) The application of 'kisser' probes for resolving the distribution and microenvironment of membrane proteins *in situ*. *J.Neurogenetics*, 32, p.236.
d. Stawarski M, Hernandez RX, Feghhi T, Borycz JA, Lu Z, Agarwal AB, Reihl KD, Tavora R, Lau AWC, Meinertzhagen IA, Renden R, Macleod GT (2020) Neuronal Glutamatergic Synaptic Clefts Alkalinize Rather Than Acidify during Neurotransmission. *J.Neurosci.*, 40, p.1611.

Complete List of Published Work in MyBibliography:
http://www.ncbi.nlm.nih.gov/sites/myncbi/1h9Rivm_5yi5O/bibliography/46019341/public/?sort=date&direction=descending

D. Additional Information: Research Support and/or Scholastic Performance

Pending Research Support (pending review)

NIH R01 NS061914 Macleod (PI)
Dates: **07/01/21 – 06/30/26**
Title: **"Neuronal mechanisms controlling number and function of presynaptic mitochondria."**
Granting Agency: **NINDS**
Summary: *Mitochondria, often described as power-houses of the cell, accumulate at sites within nerve cells where the power is needed. We are investigating the mechanisms that distribute mitochondria to where they are most needed to maintain the essential function of nerve cells. A better understanding of these mechanisms is essential, as a number of neurodegenerative diseases are associated with a failure of mitochondria to supply power as needed.*
Total Funds Requested: **$1,845,759** (includes 49.5% indirect costs for FAU)

Ongoing Research Support

NIH R01 NS103906 Macleod (PI)
Dates: **02/01/18 – 01/31/23**
Title: **"The impact of synaptic cleft pH fluctuations on short-term synaptic plasticity"**
Granting Agency: **NINDS**
Summary: *The connections between nerve cells vary in strength according to their recent history of activity. These activity-dependent changes in strength underlie the computing capacity of brain circuits. We are proposing that activity-dependent changes in acid levels around these connections have a substantial influence on connection strength and require investigation to allow a full understanding of the computing capacity of circuits, and insight into the neurological disorders associated with acid-base imbalance.*
Total Awarded: **$1,754,022** (includes R56 funding and 49.5% indirect costs for FAU)

NIH R01 NS078179 O'Connor-Giles (PI), Role: PI sub-award
Dates: **12/15/18 – 12/14/23**
Title: **"Molecular mechanism of synapse assembly and function"**
Granting Agency: **NINDS**
Summary: *To support complex behavior, neural circuits, the functionally connected neurons that give rise to thought and behavior, must be both reliable and flexible. The proposed research extends our advances in understanding the molecules that organize synaptic connections for robust communication to determine how synapses with distinct properties are established and the role of synaptic diversity in allowing circuits to respond to a broad range of changing inputs. We assist with the physiological assays required for this project.*
Total Funds Requested as Sub-Awardee: **$155,786** (includes 49.5% indirect costs for FAU)

Completed Research Support (last 3 years only)

NIH R01 NS061914 Macleod (PI)
Dates: **09/15/13 – 06/30/18**
Title: **"Neuronal mechanisms controlling number and function of presynaptic mitochondria."**
Granting Agency: **NINDS**
Summary: *Mitochondria, often described as powerhouses of the cell, accumulate in nerve endings where a lot of energy is needed for communicating with other nerve cells and for maintaining the correct concentrations of ions such as Ca^{2+}. We are investigating the mechanisms that distribute mitochondria according to the energy demands at different synapses of a neuron. It is essential that we gain a better understanding of these mechanisms, as a failure of mitochondria to satisfy energy demands has been associated with neurodegenerative diseases.*
Total Awarded: **$1,225,104** (included 49.5% indirect costs for FAU)

MICHAEL R. MANIACI

Curriculum Vitae (February 2021)

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EMPLOYMENT

Associate Professor, Dept. of Psychology, Florida Atlantic University	Aug 2020 – Present
Assistant Professor, Dept. of Psychology, Florida Atlantic University	Feb 2015 – Aug 2020
Instructor, Dept. of Psychology, Florida Atlantic University	Aug 2014 – Feb 2015
Lecturer, Dept. of Psychology, Brock University	Aug 2013 – Jul 2014

EDUCATION

Ph.D in Social-Personality Psychology with Certificate in Quantitative Methods University of Rochester, Rochester, NY	2015
M.A. in Social-Personality Psychology with Honors/Distinction University of Rochester, Rochester, NY	2009
B.A. in Psychology with Honors/Distinction, Summa cum laude Albright College, Reading, PA	2004

SCHOLARSHIP/RESEARCH: PUBLICATIONS IN PRINT

REFEREED JOURNAL ARTICLES

Crasta, D., Rogge, R. D., **Maniaci, M. R.**, & Reis, H. T. (in press). Toward an optimized measure of perceived partner responsiveness: Development and validation of the Perceived Responsiveness and Insensitivity Scale (PRI). Psychological Assessment.

Joel, S., Eastwick, P. W., Allison, C. J., Arriaga, X. B., Baker, Z. G., Bar-Kalifa, E., Bergeron, S., Birnbaum, G., Brock, R. L., Brumbaugh, C. C., Carmichael, C. L., Chen, S., Clarke, J., Cobb, R. J., Coolsen, M. K., Davis, J., de Jong, D. C., Debrot, A., DeHaas, E. C., ... Wolf, S. (2020). Machine learning uncovers the most robust self-report predictors of relationship quality across 43 longitudinal couples studies. *Proceedings of the National Academy of Sciences, 117*(32), 19061-19071.

Mizrahi, M., Reis, H. T., **Maniaci, M. R.**, & Birnbaum, G. E. (2019). When insecurity dampens desire: Attachment anxiety in men amplifies the decline in sexual desire during the early years of romantic relationships. *European Journal of Social Psychology, 49*, 1223-1236.

Girme, Y. U., **Maniaci, M. R.**, Reis, H. T., McNulty, J. K., Carmichael, C. L., Gable, S. L., Baker, L. R., & Overall, N. C. (2018). Does support need to be seen? Daily invisible support promotes next day relationship well-being. *Journal of Family Psychology, 32*, 882-893.

Reis, H. T., **Maniaci, M. R.**, & Rogge, R. D. (2017). Compassionate acts and everyday emotional well-being among newlyweds. *Emotion, 17,* 751-763.

Rogge, R. D., Fincham, F. D., Crasta, D., & **Maniaci, M. R.** (2017). Positive and negative evaluation of relationships: Development and validation of the Positive-Negative Relationship Quality (PN-RQ) scale. *Psychological Assessment, 29,* 1028-1043.

Finkel, E. J., Norton, M. I., Reis, H. T., Ariely, D., Caprariello, P. A., Eastwick, P, W., Frost, J. H., & **Maniaci, M. R.** (2015). When does familiarity promote versus undermine interpersonal attraction? A proposed integrative model from erstwhile adversaries. *Perspectives on Psychological Science, 10,* 3-19.

Maniaci, M. R. & Rogge, R. D. (2014a). Caring about carelessness: Participant inattention and its effects on research. *Journal of Research in Personality, 48,* 61-83.

Reis, H. T., **Maniaci, M. R.**, & Rogge, R. D. (2014). The expression of compassionate love in everyday compassionate acts. *Journal of Social and Personal Relationships, 31,* 651-676.

Reis, H. T., **Maniaci, M. R.**, Caprariello, P. A., Eastwick, P. W., & Finkel, E. J. (2011a). Familiarity does indeed promote attraction in live interaction. *Journal of Personality and Social Psychology, 101,* 557-570.

Reis, H. T., **Maniaci, M. R.**, Caprariello, P. A., Eastwick, P. W., & Finkel, E. J. (2011b). In live interaction, does familiarity promote attraction or contempt?: A reply to Norton. *Journal of Personality and Social Psychology, 101,* 575-578.

Reis, H. T., Smith, S. M., Carmichael, C. L., Caprariello, P. A., Tsai, F. F., Rodrigues, A., & **Maniaci, M. R.** (2010). Are you happy for me? How sharing positive events with others provides personal and interpersonal benefits. *Journal of Personality and Social Psychology, 99,* 311-329.

Maniaci, M. R., & Reis, H. T. (2010). The marriage of positive psychology and relationship science: A reply to Fincham and Beach. *Journal of Family Theory and Review, 2,* 47-53.

BOOK CHAPTERS

Reis, H. T., Crasta, D., Rogge, R. D., **Maniaci, M. R.**, & Carmichael, C. L. (2017). Perceived partner responsiveness scale. In D. L. Worthington & G. D. Bodie (Eds.), *The sourcebook of listening research: Methodology and measures* (pp. 516-521). Hoboken, NJ: Wiley.

Maniaci, M. R. & Rogge, R. D. (2014b). Conducting research on the Internet. In H. T. Reis & C. M. Judd (Eds.), *Handbook of research methods in social and personality psychology* (2nd edition, pp. 443-470). New York: Cambridge University Press.

Reis, H. T., Gable, S. L., & **Maniaci, M. R.** (2014). Methods for studying everyday experience in its natural context. In H. T. Reis & C. M. Judd (Eds.), *Handbook of research methods in social and personality psychology* (2nd edition, pp. 373-403). New York: Cambridge University Press.

OTHER PUBLICATIONS

Maniaci, M. R. (2009a). Couple identity. In H. T. Reis & S. Sprecher (Eds.) *Encyclopedia of human relationships* (pp. 335-337). Thousand Oaks, CA: Sage.

Maniaci, M. R. (2009b). Need for belonging. In H. T. Reis & S. Sprecher (Eds.), *Encyclopedia of human relationships* (pp. 165-168). Thousand Oaks, CA: Sage.

REFEREED CONFERENCE PRESENTATIONS

(Underlined name indicates a supervised student co-author.)

Cope, M. A., & **Maniaci, M. R.** (2021, February). *Emergence of close relationship construals: An Action Identification approach*. Poster to be presented at the Society for Personality and Social Psychology annual conference, online.

Legate, N., Nguyen, T., Moller, A., Legault, L., **Maniaci, M. R.**, Weinstein, N., Ebersole, C., & Chartier, C. (2020, September). *PSACR003: Motivating social distancing*. Paper presented at the Psychological Science Accelerator 2020 Conference, online.

Maniaci, M. R., & Haas, J. (2020, February). *Interest in personality feedback and inattentive responding*. Poster presented at the Society for Personality and Social Psychology annual conference, New Orleans, LO.

Szabolcsi, V. & **Maniaci, M. R.**, (2020, February). *Self-regulatory orientations and relationship quality*. Poster presented at the Society for Personality and Social Psychology annual conference, New Orleans, LO.

Colom Cruz, A. & **Maniaci, M. R.**, (2019, February). *Should chivalry be dead? Benevolent sexism, gender, and competence in close romantic relationships*. Poster presented at the Society for Personality and Social Psychology annual conference, Portland, OR.

Gilad, C., & **Maniaci, M. R.**, (2019, February). *The interplay of dominance, power, and prosociality in interpersonal relationships*. Poster presented at the Society for Personality and Social Psychology annual conference, Portland, OR.

Maniaci, M. R., & Colom Cruz, A. (2019, February). *Locomotion and assessment orientations influence relational catalyst support*. Poster presented at the Society for Personality and Social Psychology annual conference, Portland, OR.

Maniaci, M. R., Colom Cruz, A., & Sachs, E. (2018, July). *Self-regulatory orientations and support for a partner's exploration*. Paper presented at the International Association for Relationship Research conference, Fort Collins, CO.

Mizrahi, M., Reis, H. T., **Maniaci, M. R.**, & Birnbaum, G. E. (2018, July). *When insecurity dampens desire: Attachment anxiety in men amplifies the decline in sexual desire during the early years of romantic relationships*. Paper presented at the International Association for Relationship Research conference, Fort Collins, CO.

Colom Cruz, A. & **Maniaci, M. R.**, (2018, March). *Should chivalry be dead? Provision of dependency-oriented help towards women*. Poster presented at the Society for Personality and Social Psychology annual conference, Atlanta, GA.

Colom Cruz, A., & **Maniaci, M. R.** (2017, November). *Provision of dependency oriented help*. Paper presented at the annual conference of the Society of Southeastern Social Psychologists, Atlantic Beach, FL.

Colom Cruz, A., & **Maniaci, M. R.** (2017, May). *Benevolent sexism, gender, and dependency-oriented helping*. Poster presented at the Association for Psychological Science Annual Convention, Boston, MA.

Colom Cruz, A., & **Maniaci, M. R.** (2017, January). *Benevolent sexism and type of support provided in online dyadic interactions*. Poster presented at the Society for Personality and Social Psychology Attitudes and Social Influence Preconference, San Antonio, TX.

Crasta, D., **Maniaci, M. R.**, Rogge, R. D., & Reis, H. T. (2017, January). *Do you need validation from your landlord? Perceived partner responsiveness across relationship types*. Poster presented at the Society for Personality and Social Psychology annual conference, San Antonio, TX.

Maniaci, M. R., & Reis, H. T. (2017, January). *Regulatory mode and social motivation: Locomotion orientations influence interpersonal goal pursuit and relationship quality*. Poster presented at the Society for Personality and Social Psychology annual conference, San Antonio, TX.

Maniaci, M. R., & Reis, H. T. (2016, November). *Locomotion and assessment orientations, interpersonal goal pursuit, and relationship functioning among college roommates*. Presented at the annual conference of the Society of Southeastern Social Psychologists, Asheville, NC.

Maniaci, M. R., & Reis, H. T. (2016, July). *Implicit ambivalence in romantic relationships*. Presented at the bi-annual conference of the International Association for Relationship Research, Toronto, Canada.

Rogge, R. D., Fincham, F., Crasta, D., & **Maniaci, M. R.** (2016, July). *Positive and negative evaluation of relationships: Development and validation of the Positive-Negative Relationship Quality (PN-RQ) scale*. Presented at the bi-annual conference of the International Association for Relationship Research, Toronto, Canada.

Crasta, D., Rogge, R. D., & **Maniaci, M. R.** (2016, July). *Clarifying the structure of perceived partner responsiveness: Organizing relationship science's favorite organizing construct*. Presented at the bi-annual conference of the International Association for Relationship Research, Toronto, Canada.

Maniaci, M. R., & Rogge, R. D. (2016, April). *Comparing insufficient effort responding across recruitment sources and settings*. Presented at the annual conference of the Society for Industrial and Organizational Psychology, Anaheim, CA.

Maniaci, M. R., & Reis, H. T. (2016, January). *Discrepancies between implicit and explicit evaluations predict change over time in newlyweds' relationship satisfaction*. Presented at Society for Personality and Social Psychology annual conference, San Diego, CA.

Girme, Y., Overall, N., **Maniaci, M. R.**, Reis, H. T., McNulty, J., Hammond, M., & Carmichael, C. (2016, January). *Balancing relatedness and autonomy: When and for whom invisible support fosters autonomy versus nurtures relatedness over time*. Presented at Society for Personality and Social Psychology annual conference, San Diego, CA.

Girme, Y., Overall, N., **Maniaci, M. R.**, McNulty, J., & Reis, H. T. (2015, May). *Subtle and unnoticed, but strengthening and nurturing: Invisible support fosters greater personal*

achievements and relationship satisfaction over time. Presented at the annual conference of the Association for Psychological Science, New York, NY.

Reis, H. T., & **Maniaci, M. R.** (2015, March). *How compassionate love benefits relationships*. Presented at the annual conference of the International Convention of Psychological Science, Amsterdam, Netherlands.

Maniaci, M. R. (2015, February). *Congruence between implicit and explicit evaluations predicts newlyweds' reactivity to daily relationship events*. Presented at Society for Personality and Social Psychology annual conference, Long Beach, CA.

Maniaci, M. R. (2015, February). *Adult attachment and the congruence between implicit and explicit evaluations in newlywed marriage*. Presented at the Close Relationships Preconference at the annual conference of the Society for Personality and Social Psychology, Long Beach, CA.

Maniaci, M. R., & Reis, H. T. (2014, April). *Positive emotions and the expression of compassionate love in newlyweds' daily interaction*. Presented at the Society for Affective Science Positive Emotions Preconference, Washington, DC.

Reis, H. T., **Maniaci, M. R.**, & Kumashiro, M. (2014, February). *Responsiveness helps explain why visible support is good for your relationship*. Presented at Society for Personality and Social Psychology annual conference, Austin, TX.

Maniaci, M. R., & Rogge, R. D. (2014, February). *Evaluating the quality of data collected from crowdsourcing, Internet forums, and undergraduate participant pools*. Poster presented at Society for Personality and Social Psychology annual conference, Austin, TX.

Rogge, R. D., **Maniaci, M. R.**, & Marin, S. D. (2014, February). *The joke's on you: Positive and negative uses of humor moderate its impact on relationship satisfaction over 6 months*. Poster presented at Society for Personality and Social Psychology annual conference, Austin, TX.

Rodgin, S. L., **Maniaci, M. R.**, Lee, K., & Reis, H. (2014, February). *Self-regulation and first impressions: The influence of regulatory mode on liking and willingness to disclose*. Poster presented at Society for Personality and Social Psychology annual conference, Austin, TX.

Rogge, R. D., Marin, S. D., & **Maniaci, M. R.** (2013, January). *Exploring the roles of humor in romantic relationships: Development and validation of the Laughter in Marriage – A Functional Assessment of Objectives (LMFAO) Scale*. Poster presented at Society for Personality and Social Psychology annual conference, New Orleans, LA.

Maniaci, M. R., & Reis, H. T. (2013, January). *Interaction goals moderate the association between familiarity and attraction*. Poster presented at Society for Personality and Social Psychology annual conference, New Orleans, LA.

Crasta, D. J., **Maniaci, M. R.**, & Rogge, R. D. (2013, January). *Clarifying the measurement of perceived partner responsiveness*. Poster presented at Society for Personality and Social Psychology annual conference, New Orleans, LA.

Reis, H. T., & **Maniaci, M. R.** (2012, October). *Familiarity breeds liking*. Presented at the Attraction and Relationships Preconference, Society of Experimental Social Psychology annual meeting, Austin, TX.

Maniaci, M. R., Reis, H. T., & Tomlinson, J. M. (2012, July). *Beyond a static view of loneliness: Daily experiences of loneliness, social interaction, and well-being*. Presented at the biennial conference of the International Association for Relationship Research, Chicago, IL. [Symposium co-chaired with L. C. Hawkley]

Maniaci, M. R., Reis, H. T., Caprariello, P. A., Eastwick, P. W., & Finkel, E. J. (2012, July). *Reconsidering the role of familiarity in interpersonal attraction*. Presented at the biennial conference of the International Association for Relationship Research, Chicago, IL.

Reis, H. T., **Maniaci, M. R.**, & Rogge, R. D. (2012, July). *The expression of compassionate love in newlyweds' everyday interaction*. Presented at the biennial conference of the International Association for Relationship Research, Chicago, IL.

Law, W., **Maniaci, M. R.**, & Reis, H. T. (2012, January). *Food sharing increases trust*. Poster presented at Society for Personality and Social Psychology annual conference, San Diego, CA.

Maniaci, M. R. & Rogge, R. D. (2012, January). *Caring about carelessness: Measuring participant inattention using the Attentive Responding Scale*. Poster presented at Society for Personality and Social Psychology annual conference, San Diego, CA.

Reis, H. T., Rogge, R. D., **Maniaci, M. R.**, & Lee, S. (2012, January). *Implicit and explicit predictors of relationship development and deterioration*. Presented at Society for Personality and Social Psychology annual conference, San Diego, CA.

Maniaci, M. R., Reis, H. T., & Tomlinson, J. M. (2011, January). *Daily fluctuations in loneliness, social interaction, and well-being*. Poster presented at Society for Personality and Social Psychology annual conference, San Antonio, TX.

Reis, H. T., **Maniaci, M. R.**, Caprariello, P. A., Eastwick, P. W., & Finkel, E. J. (2010, October). *Familiarity does indeed lead to attraction*. Presented at the annual meeting of the Society for Experimental Social Psychology (SESP), Minneapolis, MN.

Maniaci, M. R., & Reis, H. T. (2010, July). *Perceived and actual similarity of sense of humor in relationships*. Presented at the bi-annual conference of the International Association for Relationship Research, Herzliya, Israel.

Maniaci, M. R., & Reis, H. T. (2010, January). *Laughing together: The role of perceived and actual similarity of sense of humor in relationships*. Poster presented at Society for Personality and Social Psychology annual conference, Las Vegas, NV.

Maniaci, M. R., & Reis, H. T. (2009, February). *Are you lonesome tonight? Daily experiences of loneliness*. Poster presented at Society for Personality and Social Psychology annual conference, Tampa, FL.

Maniaci, M. R., Rashid, T., & Anjum, A. (2005, October). *Predictors of dyadic adjustment in love and arranged marriages*. Poster presented at the 4th International Positive Psychology Summit, Washington, DC.

GRANT APPLICATIONS

EXTERNAL (FUNDED)

NASA, Minority University Research and Education Project (MUREP). $323,681. 2019-2021
MUREP Aerospace Academy for engaging future explorers in south Florida with grades 6-12 NASA STEM education.
Role: Independent Evaluator (PI: M. Arockiasamy).

EXTERNAL (PENDING REVIEW)

National Science Foundation, ECR. $497,743 (pending review). *Modeling in-the-moment fluctuations in student learning experiences throughout the semester and their impact on course outcomes in Statics.* 2020
Role: Co-PI (PI: K. Sobhan).

INTERNAL (FUNDED)

Brock University, CRISS Internal Research Grant. $1,800 (funded). *Implicit partner evaluations and maintenance in close relationships.* Role: PI. 2013

TEACHING AND MENTORING

Undergraduate Courses Taught at FAU

Experimental Design and Statistical Inference (PSY 3234) – Fall 2014, Spring 2016, Summer 2017, Fall 2017, & Summer 2019

Social Psychology (SOP 3004) – Spring 2019, Spring 2020, & Spring 2021

Graduate Courses Taught at FAU

Advanced Social Behavior Seminar (SOP 6079) – Fall 2017

Close Relationships Seminar (PSY/PPE 6930) – Spring 2015, Spring 2017, & Spring 2019
Developed this course to provide graduate training in close relationships research.

Experimental Design 1 (PSY 6206) – Fall 2015, Fall 2016, Fall 2018, Fall 2019, & Fall 2020

Experimental Design 2 (PSY 6207) – Spring 2021

Multilevel Modeling and Longitudinal Methods (PSY 6930) – Spring 2018, Spring 2020
Developed this course as a new advanced quantitative graduate seminar.

Supervision of Graduate Students

Doctoral Dissertation Committee Chair

Adriana Colom Cruz, Ph.D. candidate in Experimental Psychology (FAU) 2018
Title: *Benevolent Sexism and Support Provision in Close Relationships.*
Currently a Visiting Assistant Professor at University of Puerto Rico at Mayaguez
Corinne Gilad, Ph.D. candidate in Experimental Psychology (FAU) 2019

Title: *The Interplay of Dominance, Power, and Prosociality in Interpersonal Relationships.*
Currently a Postdoctoral Research with the U.S. Army Research Institute

Master's Thesis Committee Chair

Jeffrey Hanrahan, M.A. in Psychology (FAU); Entered Ph.D. program (U.Conn.) 2016
Title: *Social Interaction on Facebook.*
Corinne Gilad, M.A. in Psychology (FAU); Entered Ph.D. program (FAU) 2017
Title: *The Effects of Competition on Empathy and Prosociality*.
Justin Haas, M.A. in Psychology (FAU) 2018
Title: *Reducing Inattentive Responding by Promoting Autonomous Motivation*.
Joshua Sheppard, M.A. in Psychology (FAU) 2018
Title: *Building a Profile of Inattentive Participants: Attachment Theory and Inattentive Responding*.
Liliya Yurchyshyn, M.A. in Psychology (FAU) In Progress
Title: *Attachment Security and Perceptions of Support Receipt*.
Angalee Wilson, M.A. in Psychology (FAU) In Progress
Title: *Daily Loneliness in Young and Older Adults*.
Morgan Cope, M.A. in Psychology (FAU) In Progress
Title: *The Emergence of Close Relationship Construals: An Action Identification Approach*.
Richard Matic, M.A. in Psychology (FAU) In Progress

Doctoral Dissertation Committee Member

Karin Machluf, Chair: David Bjorklund (FAU) 2015
Nicholas Brown, Chair: Ryne Sherman (FAU) 2016
Cody Hiatt, Chair: Brett Laursen (FAU) 2016
Shrija Dirghangi, Chair: Brett Laursen (FAU) 2016
Alex Wong, Chair: Robin Vallacher (FAU) 2016
Amy Hartl, Chair: Brett Laursen (FAU) 2016
Ashley Jones, Chair: Ryne Sherman (FAU) 2017
Daniel Dickson, Chair: Brett Laursen (FAU) 2017
Stephanie Welsh, Chair: Erika Hoff (FAU) 2017
Melannie Platt, Chair: Nancy Jones (FAU) 2017
Idaly Velez Uribe, Chair: Monica Rosselli (FAU) 2018
Melissa Huey, Chair: Brett Laursen (FAU) 2018
Anne Fennimore, Chair: Arthur Sementelli (FAU; School of Public Admin.) 2018
David Goldsztajn, Chair: Andrzej Nowak (FAU) 2019
Nathanial Shanok, Chair: Nancy Jones (FAU) 2020

Master's Thesis Committee Member

Sammy Penaloza, Chair: David Bjorklund (FAU) 2016
Michele Stoehr, Chair: Robin Vallacher (FAU) 2017
Kim Hojecki, Chair: Ryne Sherman (FAU) 2017

Nathaniel Shanok, Chair: Nancy Jones (FAU)	2017
Alexandra Montena, Chair: Nancy Jones (FAU)	2017
C. William Blackmon, Chair: Robin Vallacher (FAU)	2017
Steven Bell, Chair: Ryne Sherman (FAU)	2017
Forrest (Marvin) Norman, Chair: Monica Rosselli (FAU)	2018
Valeria Torres, Chair: Monica Rosselli (FAU)	2018
Merike Lang, Chair: Monica Rosselli (FAU)	2018
Fernanda Arruda, Chair: Monica Rosselli (FAU)	2018
Joseph Williams, Chair: Robin Vallacher (FAU)	2018
Jamayne Potts, Chair: Nancy Jones (FAU)	2019

Supervision of Undergraduate Students

Undergraduate Honors Theses and Research Grants

Vanessa Szabolcsi, Undergraduate Research Grant, $600 (FAU) 2018 – 2019
Self-regulatory orientations and relationship quality.
Poster presented at FAU Undergraduate Research Symposium (April, 2019) and at the SPSP national conference (February, 2020)

Vanessa Szabolcsi, Honors Thesis, Department of Psychology (FAU) 2020
Title: *The influence of dark triad traits on interpersonal relationships and transactive goal pursuit*.
Poster presented at FAU Undergraduate Research Symposium (April, 2020)

Undergraduate Independent Study/Research

I have supervised research training for more than 100 undergraduate students through the Directed Independent Study/Research (DIS/DIR) course, along with additional volunteers.

SERVICE AND PROFESSIONAL DEVELOPMENT

SERVICE TO THE INSTITUTION

Institutional Review Board (IRB) Member	2020 - 2021
Department of Psychology Social/Personality Area Coordinator	2020 - 2021
Department of Psychology Participant Pool Director	2019 - 2021
Department of Psychology Website Committee Member/Chair	2018 - 2020
Undergraduate Research Symposium, Poster Judge	2018
Department of Psychology Search Committee Member (Assistant Professor)	2019 - 2020
Department of Psychology Search Committee Member (Quantitative Instructor)	2018 - 2019
Department of Psychology Search Committee Member (Quantitative Instructor)	2017 - 2018
Department of Psychology Search Committee Member (Assistant Professor)	2017 - 2018
Frontiers in Science Committee Member	2016 - 2017
Department of Psychology Undergraduate Committee Member	2015 - 2017
Department of Psychology Assessment Committee Member	2015 - 2020
Graduate Research & Inquiry Program Grant Reviewer	2015
Graduate & Professional Research Day, Poster Reviewer/Judge	2015 - 2018
Panelist at “Meeting of the Minds” event promoting undergraduate research	2015 - 2017

Coordinating participant pool (SONA) and Qualtrics Internet research platform	2015 - 2019
Psychology Honors Seminar, Guest Lecturer	2014 - 2019
Departmental Colloquium Committee Member/Chair	2014 - 2019

SERVICE TO THE DISCIPLINE

Ad hoc reviewing for: *Applied Psychology: International Review; CyberPsychology & Behavior; European Journal of Social Psychology; Journal of Experimental Child Psychology; Journal of Family Psychology; Journal of Positive Psychology; Journal of Research in Personality ("Outstanding Reviewer Status" in 2016); Journal of Social and Personal Relationships; Motivation and Emotion; Personal Relationships; Personality and Social Psychology Bulletin; Social Psychological and Personality Science*	Ongoing
National Science Foundation (NSF) Reviewer	2019 - 2020
International Association for Relationship Research (IARR) Conference Reviewer	2019 - 2020
SSHRC Doctoral Award Departmental Appraisal Committee (Brock University)	2013
Summer teaching training workshop, discussion leader	2013
SPSP 2012 Humor Preconference Poster Reviewer	2011
SPSP 2011 Conference Poster Review Committee	2010
Teaching assistant training workshop, discussion leader	2010

HONORS AND AWARDS

Emory Cowen Award for Best First-Authored Article, University of Rochester	2013
Alfred Baldwin Award for Excellence in Research, University of Rochester	2012
Nowlis Award for Excellence in Teaching and Mentoring, University of Rochester	2012
Student Poster Award Winner, Society for Personality and Social Psychology	2012
Student Travel Award, Society for Personality and Social Psychology	2012
Student Conference Award, International Association for Relationship Research	2012
Graduate Organizing Group Conference Award, University of Rochester	2012
Jacob K. Javits Commended Scholar, U.S. Department of Education	2007
Robert L. and Mary L. Sproull University Fellowship, University of Rochester	2006
Outstanding Individual Contribution to Psychology Award, Albright College	2005
Psychology Department Award for merit and service, Albright College	2005
The Muhlenberg Goodwill Prize for service, Albright College	2005
James Walker and Dr. Edward Gilbert Scholarship for Altruism, Albright College	2004
Eugene L. Shirk Memorial Scholarship for merit and service, Albright College	2001
Broadbent Scholarship for merit and service, Broadbent Foundation	2001

CURRICULUM VITAE FOR SARAH SHAW MILTON

Department of Biological Sciences
Florida Atlantic University
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Boca Raton, FL 33431

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Fax: (561) 297-2749
E-mail: smilton@fau.edu

Current position:
Interim Chair, Department of Biological Sciences, Florida Atlantic University
Full Professor, Tenured, Department of Biological Sciences, Florida Atlantic University.

Affiliations:
2016 – present Member, FAU Brain Institute
2016 – present Member, FAU pillar: Healthy Aging
2016 – present Member, FAU pillar: Marine and Environmental Science (Harbor Branch)
2008 – present Member, FAU Center for Molecular Biology and Biotechnology (CMBB)

Higher Education

Ph.D. (1994), University of Miami Rosenstiel School of Marine and Atmospheric Science, Miami, Florida; Marine Biology and Fisheries (Biological Oceanography). Academic Supervisor: Dr. Peter Lutz. Dissertation Title: The Physiology of Hypoxia and Anoxia Tolerance in Three Species of Turtle: The Loggerhead Sea Turtle (*Caretta caretta*), Green Sea Turtle (*Chelonia mydas*), and freshwater *Trachemys scripta*.

B.A. Biology (1988), magna cum laude, Cornell University, Ithaca, New York; Honors: With Distinction in all Subjects. Honors Supervisor: Dr. Rodney Dietert. Induction of the Transferrin Receptor in Inflammatory Chicken Peritoneal Macrophages.

Appointments/Employment

2019-	Professor and Interim Chair, Biological Sciences, Florida Atlantic University
2015 -	Co-director: Program for Master of Science in Marine Science and Oceanography
2016- 2019	Associate Director of the Integrative Biology PhD Program
2012-2019	Associate Professor, Biological Sciences, Tenured, Florida Atlantic University
2006- 2011	Assistant Professor, Biological Sciences, Florida Atlantic University
2005- 2011	Joint appointment, Assistant Professor, Dept of Biomedical Science, Florida Atlantic University
2005-2006	Visiting Assistant Professor, Biological Sciences, Florida Atlantic University
1996-2005	Research Assistant Professor and Adjunct Lecturer, Florida Atlantic University
1996-1997	Adjunct Lecturer, Palm Beach Community College
1995-1996	Postdoctoral Fellow, Florida Atlantic University
1994-1995	Senior Biologist, Evans Environmental and Geological Science and Management, Inc, Miami FL

1992 – 1996 Adjunct Lecturer, Florida Atlantic University

Scholarship/Research/Creative Activity

Summary of Research

My research is broadly described as Environmental Physiology, investigating the effects of environmental stressors on animal physiology and adaptive mechanisms of survival. I currently have two main branches of research: (1) survival of the brain in the absence of oxygen, using whole animal and cell cultures to examine the physiological, cellular, and molecular adaptations that allow anoxia-tolerant organisms to survive without oxygen, using the model organisms *Trachemys scripta* (turtle) and *Drosophila melanogaster* (fruit fly) to look for new therapeutic targets for stroke, aging, and other diseases of ischemia, anoxia, and oxidative stress, and (2) Sea turtle physiology and conservation, with a variety of projects ranging from the energetics of hatchling disorientation, the impacts of climate change on turtles (nest success, hatchling physiology, erosion and flooding) to developing therapeutic treatments for sea turtles exposed to toxic red tides.

Peer Reviewed Publications (Refereed Works)

Google Scholar (as of 10/1/19): Total citations 1342, h-index 21, i10-index 29

Refereed Journal Publications in Print: (* graduate student author, ** undergraduate student author, † post-doc author)

Tezak* B, Sifuentes-Romero† I, **Milton S**, Wyneken J. 2020. Identifying Sex of Neonate Turtles with Temperature-dependent Sex Determination via Small Blood Samples. Sci Rep. 2020 Mar 19;10(1):5012.

Mahneva* O, Risley* MG, John C, **Milton SL**, Dawson-Scully K, Ja WW. In vivo expression of peptidylarginine deiminase in *Drosophila melanogaster*. PLoS One. 2020 Jan 15;15(1)

Reiterer, Melissa* and **Milton, Sarah**. 2020. Induction of foxo3a protects turtle neurons against oxidative stress. Comp. Biochem. Physiol. A May 2020 243.

Mahneva* O, Caplan* SL, Ivko** P, Dawson-Scully K, **Milton SL**. 2019. NO/cGMP/PKG activation protects *Drosophila* cells subjected to hypoxic stress. Comp Biochem Physiol C Toxicol Pharmacol. 223:106-114.

Reiterer, Melissa*; Schmidt-Kaster, Rainald and **Milton, Sarah**. 2019. Methionine Sulfoxide Reductase (Msr) Dysfunction in Human Brain Disease. Free Radical Research. 11 pp.

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Bladow, Rachel* and **Milton, Sarah.** 2019**.** Embryonic mortality in green (*Chelonia mydas*) and loggerhead (*Caretta caretta*) sea turtle nests increases with cumulative exposure to elevated temperatures. J. Expt. Mar. Biol. Ecol. In press.

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Itzel Sifuentes-Romero†, Boris M. Tezak* **Sarah Milton**, Jeanette Wyneken. 2018. Hydric environmental effects on turtle development and sex ratio. Zoology, 126: 89-97.

Pankaew, Karen* and **Milton, Sarah**. 2018. The Effects of Extended Crawling on the Physiology and Swim Performance of Loggerhead and Green Sea Turtle Hatchlings. Journal of Experimental Biology. 221(1). 10pp.

Cocilova, Courtney*; Bossart, Gregory; Flewelling, Leanne; Granholm, April; and **Milton, Sarah**. 2017. Tissue uptake, distribution and excretion of brevetoxin-3 in the freshwater turtle *Trachemys scripta* and the diamondback terrapin *Malaclemys terrapin*. Aquatic Toxicology Mar 7;187:29-37.

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Ahles, Natasha* and **Milton, Sarah**. 2015. Mid-Incubation Relocation and Embryonic Survival in Loggerhead Sea Turtle Eggs. Journal of Wildlife Management. 80(3): 430-437.

Sanchez, Jamila R; **Sarah L Milton**, Kevin C Corbit, and Rochelle Buffenstein. 2015. Multifactorial Processes to Slowing the Biological Clock: Insights from a Comparative Approach. Experimental Gerentology 71: 27-37.

Kesaraju, Shailaja*, Nayak Gauri*; Prentice, Howard M; **Milton, Sarah L**. 2014. Upregulation of Hsp72 mediates anoxia/reoxygenation neuroprotection in the freshwater turtle via modulation of ROS. Brain Research 1582:247-256.

Larson, John; Drew, Kelly; Folkow, Lars; **Milton, Sarah;** Park Thomas. 2014. No oxygen? No problem! Intrinsic brain tolerance to hypoxia in vertebrates. Journal of Experimental Biology, 217(Pt 7):1024-1039.

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downregulation and recovery in the anoxia-tolerant turtle. Journal of Comparative Biochemistry and Physiology. 147(2):277-290.

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Milton, Sarah; Gauri Nayak*, Shailaja Kesaraju*, Laura Kara*, and Howard Prentice. 2007. Suppression of reactive oxygen species production in the anoxia-tolerant turtle *Trachemys scripta*. Journal of Neurochemistry, 101(4):993-1001.

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Prentice, Howard; **Milton, Sarah;** Scheurle, Danielle; and Lutz, Peter. Gene transcription of brain voltage-gated potassium channels is reversibly regulated by oxygen supply. American Journal of Physiology: Regulatory Integrative and Comparative Physiology. 285(6): R1317-R1321, 2003.

Milton, Sarah; Manuel, Liscia; and Lutz Peter. 2003. Slow death in the leopard frog *Rana pipiens*: neurotransmitters and anoxia tolerance. Journal of Experimental Biology. 206(22): 4021-4028.

Lutz, Peter; Prentice, Howard; and **Milton, Sarah**. 2003. Is turtle longevity linked to enhanced mechanisms for surviving brain anoxia and reoxygenation? Experimental Gerentology 38:797-800.

Milton, Sarah; John W. Thompson*; and Peter L. Lutz. 2002. Mechanisms for maintaining extracellular glutamate in the anoxic turtle striatum. American Journal of Physiology 282: R1317 – R1323.

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Milton, Sarah; Schulman, Alexa; and Peter L. Lutz. 1997. The effects of aragonite sand on the nesting and hatching success of loggerhead sea turtles. Journal of Coastal Research. 13:904-913.

Hylland, Patrick; **Sarah Milton**, Marta Pek, Goran E. Nilsson and Peter L. Lutz. 1997. Na^+/K^+ ATPase activity in the brain of anoxia tolerant crucian carp and freshwater turtle. Neuroscience Letters. 235: 89-92.

Milton, Sarah; Schulman, Alexis; and Lutz, Peter. 1994. The effects of Hurricane Andrew on sea turtle nesting beaches of South Florida. Bulletin of Marine Science. 54: 974-981.

Journal Publications – submitted, in review: (* student author, † post-doc)

Reiterer*, Melissa and **Milton, Sarah**. Mechanisms of oxidative stress protection in turtle neurons: methionine sulfoxide reductase and *foxo3a*. Comp. Biochem. Physiol. A., submitted by invitation for special issue.

Mahneva, Olena*; Monica G. Risley**; Sarah L. Milton**; Ken Dawson-Scully; William Wei-Hua Ja. In vivo expression of peptidylarginine deiminase in *Drosophila melanogaster*. PLoS I, in revision.

Tezak, Boris*; Sifuentes, Itzel†; **Milton, Sarah**; Wyeneken, Jeanette. 2019. Identifying Sex of Loggerhead Sea Turtle Hatchlings via Small Blood Samples. Scientific Reports. Accepted with revision.

Journal Publications – in preparation

Milton, Sarah and Henaghan*, Christopher**.** Incubation temperature effects on loggerhead sea turtle (*Caretta caretta*) hatchling vigor. J. Exp. Mar. Biol. Ecol.

Sposato, Patricia*, and **Milton, S.** Ecosystem health and environmental influences on innate immune function in the loggerhead (*Caretta caretta*) and green (*Chelonia mydas*) sea turtle. J. Wildl. Dis.

Book Chapters:

Milton, Sarah. 2008. The Physiology and Anatomy of Anoxia Tolerance in the Freshwater Turtle Brain. Pp. 301-344, IN Biology of Turtles. J. Wyneken, M.H. Godfrey, and V. Bels, Eds. CRC Press, Boca Raton, FL

Milton Sarah and P.L. Lutz. Environmental and Physiological Stress. Pp. 163-198. IN: The Biology of Sea Turtles, Volume 2. : Lutz, P. L., J. Musick. and J. Wyneken C.R.C. Press, Boca Raton. 2003.

Milton S.L. and P.L. Lutz. Sea Turtle Taxonomy and Distribution. pp. 9-20 In: Oil Spills and Sea Turtles: Biology, Planning and Response. National Oceanic and Atmospheric Administration, 2003.

Milton S.L. and P.L. Lutz. Life History and Physiology. pp. 21-26 In: Oil Spills and Sea Turtles: Biology, Planning and Response. National Oceanic and Atmospheric Administration, 2003.

Milton S.L. and P.L. Lutz. Natural and Anthropogenic Impacts. pp. 27-34 In: Oil Spills and Sea Turtles: Biology, Planning and Response. National Oceanic and Atmospheric Administration, 2003.

Milton S.L., P.L. Lutz and G. Shigenaka. Oil Toxicity and Impacts on Sea Turtles. pp. 35-48 In: Oil Spills and Sea Turtles: Biology, Planning and Response. National Oceanic and Atmospheric Administration, 2003.

Refereed Presentations at International Meetings: (* student author, † post-doc, ‡ presentation resulted in a publication)

Milton, Sarah and Henaghan*, Christopher**.** Incubation temperature effects on loggerhead sea turtle (*Caretta caretta*) hatchling vigor. International Congress on Comparative Physiology and Biochemistry, Ottawa, August 2019.

Milton, Sarah ‡ and Reiterer*, Melissa**.** Mechanisms of neuroprotection against oxidative stress in the anoxia tolerant turtle. International Congress on Comparative Physiology and Biochemistry, Ottawa, August 2019.

Milton, Sarah; Reiterer, Melissa*; and Sifuentes, Itzel†**.** Molecular manipulations: the power of cell culture for defining mechanisms of hypoxia tolerance. American Physiological Society Intersociety Meeting. New Orleans, LA, October 25-28, 2018.

Milton, **Sarah L**., ‡ Courtney Cocilova*, Gregory Bossart, Leanne Flewelling. Treatment protocols for endangered sea trutles exposed to brevetoxin during harmful algal blooms. 37th Annual International Symposium on Sea Turtle Biology and Conservation (Las Vegas, NV; April, 2017). Oral.

Milton, Sarah‡. Lessons from nature; brain tolerance to hypoxia in vertebrates IN The brain in hypoxia; curiosity, cause and consequence; Physiology 2015, Cardiff, Wales, July 2015. Oral, Invited speaker.

Milton, Sarah‡. Cocilova, Courtney*, Bossart, Gregory; Flewelling, Leanne; and Walsh, Catherine. Brevetoxin metabolism and physiology – a freshwater model of morbidity in endangered sea turtles. 2014 APS Intersociety Meeting: Comparative Approaches to Grand Challenges in Physiology, San Diego, CA. October, 2014 [oral].

Milton, Sarah‡ and Sposato, Patricia*. Ecosystem health and environmental influences on innate immune function in the loggerhead (*Caretta caretta*) and green (*Chelonia mydas*) sea turtle. 2014 APS Intersociety Meeting: Comparative Approaches to Grand Challenges in Physiology, San Diego, CA. October, 2014 [poster]. (‡ **in prep)**

Milton‡, Sarah. Modulation of reactive oxygen species in the anoxia tolerant turtle. Gordon Research Congress: Brain Energy Metabolism and Blood Flow, Colby College, ME (August 2012). [Oral]

Milton, Sarah‡. Adaptations for long term anoxia tolerance reduce oxidative stress in the freshwater turtle. Tenth International Congress of Neuroethology, U. Maryland (August 2012). *Trachemys scripta*. [Oral]

Milton, Sarah. Neuroprotection by cGMP/PKG mechanisms in two anoxia tolerant animal models: fruit fly and freshwater turtle. Society for Experimental Biology 2010, Prague, Czech Republic(July 10). [Oral]

Milton, Sarah; Prentice, Howard P, and Kesaraju, Shailaja. Differential regulation of HIF-1alpha and VEGF in and anoxia tolerant brain. Experimental Biology 2010, Anaheim, CA (April 10). [Poster]

Milton, Sarah‡. Neuroprotective pathways are modulated by adenosine in the evolutionarily adapted anoxia tolerant neuron. International Stroke Conference, 2008, New Orleans, LA (Feb 08) [Poster]

Milton, Sarah‡ Suppression of reactive oxygen species production in the anoxia-tolerant turtle

Trachemys scripta. Experimental Biology 2007, Washington, D.C. (May 07). [Oral]

Milton, Sarah. The turtle brain in anoxia. Society for Experimental Biology 2006, Canterbury, England (April 06) [Oral]

Milton, Sarah. "Recent advances in anoxia tolerance and recovery". FAU Memorial Symposium for Dr. Peter Lutz, 2005, Boca Raton, FL. [Oral]

Prentice, Howard, and Sarah **Milton.** Strategies to survive brain anoxia. Society for Experimental Biology 2005, Barcelona, Spain. [Oral - Prentice]

Milton, Sarah‡ and Howard Prentice. Molecular mechanisms of ROS defense in the turtle *Trachemys scripta*. Society for Experimental Biology 2005, Barcelona, Spain. [Oral]

Milton, Sarah‡ and Howard M Prentice. Differential upregulation of heat shock proteins in the anoxic turtle brain. Society for Experimental Biology 2004, Edinburgh, Scotland. [Oral]

Milton, Sarah L; Howard M. Prentice, and Peter L. Lutz. 2004. Differential upregulation of heat shock proteins in the anoxic turtle brain. Society for Experimental Biology Annual meeting, Washington, D.C. April 17-21, 2004. [Oral].

Prentice, Howard‡ M., **Milton** Sarah L., Scheurle Danielle; and Lutz Peter L. 2003. Gene transcription of brain voltage-gated potassium channels is reversibly regulated by oxygen supply. Society for Experimental Biologists, San Diego April 11 - 15. 2003. [Poster, by Prentice]

Milton, Sarah‡ and Peter L. Lutz**.** "Activation of K_{ATP} channels depresses dopamine release in the turtle striatum". Experimental Biology 2001, Orlando, FL [Poster]

Milton, Sarah ATP-sensitive potassium channels modulate dopamine release in the anoxic turtle striatum. The 29th Meeting of the Society for Neuroscience (1999), Miami Beach, FL. [Poster]

Milton, Sarah‡, and Lutz, Peter L. Low extracellular dopamine levels are maintained in the anoxic turtle (*Trachemys scripta*) brain. The 27th Meeting of the Society for Neuroscience (1997), New Orleans, LA. [Poster]

Milton, Sarah, and Lutz, Peter L. "Effect of anoxia on adenosine and amino acid release in muscle and liver of the freshwater turtle". The 1993 International Congress of Physiological Sciences (1993), Glasgow, Scotland. [Poster]

Milton, Sarah‡, Alfaro, Alexis., and Lutz, Peter L. "Isoflurane: A safe and effective anesthetic for marine and freshwater turtles". The 1992 International Wildlife Rehabilitation Council Conference, Naples, FL. [Oral]

Refereed Presentations at National Meetings

Milton‡, Sarah. Insights into Aging from Turtles, Animals that Show Extremely Slow Aging. The Gerontological Society of America's 68th Annual Scientific Meeting, November 2015, Orlando, FL. Oral. **Invited speaker, Symposium chair**.

Milton, Sarah. Oxidative Stress Resistance in an Animal Model of Aging without Senescence. Gerentological Society of America Annual Meeting 2011, Boston, MA. [Oral]

Milton, Sarah. Methionine sulfoxide reductase A and resistance to oxidative damage in an animal model of aging without senescence. American Federation of Aging Research, Santa Barbara, CA (Sept. 09). [Poster]

Milton‡, Sarah, Alafaro, Alexis; and Lutz, Peter L. "The effect of beach nourishment with aragonite versus silicate sand on beach temperature and loggerhead sea turtle nesting

success". The 1995 National Conference on Beach Preservation Technology, St. Petersburg, FL. [Oral]

Milton‡, Sarah; Alafaro, Alexis; Leone-Kabler, Sandra; and Lutz, Peter L. "The effects of Hurricane Andrew on the sea turtle nesting beaches of South Florida". The XIV Annual NOAA Workshop on Sea Turtle Conservation and Biology (1994), Hilton Head, SC. [Oral]

Leone-Kabler, Sandra, **Sarah Milton**, and Peter Lutz. "The effect of Hurricane Andrew on a monitored *Caretta caretta* nesting beach. The XIII Annual NOAA Workshop on Sea Turtle Conservation and Biology (1993), Jekyll Island, GA. [Oral – Leone-Kabler]

Shaw, Sarah L; Alfaro, Alexis**;** and Lutz, Peter L. "A safe and effective anesthetic for marine and freshwater turtles". The XII Annual NOAA Workshop on Sea Turtle Conservation and Biology (1992), Jekyll Island, GA [Oral]

Shaw‡, Sarah L., Alexis Schulman, and Peter L. Lutz. 1992. The suitability of aragonite as a nesting substrate for sea turtles. Twelfth Annual Workshop on Sea Turtle Biology and Conservation. Jekyll Island, GA, February, 1992. [Oral]

Scientific Presentations at Local/Regional Meetings

Milton, Sarah; Patricia Keating, and Patricia Sposato*. Ecosystem Health and Environmental Influences on Innate Immune Function in the Green Sea Turtle (*Chelonia mydas*). Indian River Lagoon Symposium 2017. Poster.

Milton, Sarah; Courtney Cocilova*, Gregory Bossart, Leanne Flewelling. Treatment protocols for endangered sea turtles exposed to brevetoxin during harmful algal blooms. Florida Keys Sea Turtle Workshop, Dec. 2016. Oral

Milton, **Sarah‡**; Courtney Cocilova*, Gregory Bossart, Leanne Flewelling. Brevetoxin metabolism and physiology – a freshwater model of morbidity in endangered sea turtles. Florida Keys Sea Turtle Workshop, Dec. 2015. Oral

Shaw, Sarah L., Ross Witham, Peter Lutz, and Gregory Bossart. 1989. Possible effects of artificial foods on sea turtle health. Ninth Annual Workshop on Sea Turtle Biology and Conservation. Jekyll Island, GA, February 1992. [Oral]

Alfaro, Alexis, Gregory Bossart, Thomas. Jackson, Peter Lutz, and **Sarah Shaw**. 1990. Physiological and morphological measurements on a leatherback turtle. Tenth Annual Workshop on Sea Turtle Biology and Conservation [Oral, by Alfarro]

Invited talks:

2018 American Physiological Society Intersociety Meeting. New Orleans, LA, October 25-28, 2018. Molecular manipulations: the power of cell culture for defining mechanisms of hypoxia tolerance.

2018 Florida Sea Turtle Permit Holders Meeting, St. Augustine, FL, February 3, 2018. Incubation temperature effects on sea turtle hatchling vigor.

2015 Physiology 2015‡, Cardiff, Wales, July 2015. Lessons from nature; brain tolerance to hypoxia in vertebrates.

2015 The Gerontological Society of America's 68th Annual Scientific Meeting, November

2015, Orlando, FL. Insights into Aging from Turtles, Animals that Show Extremely Slow Aging.

2013 Univ. of Miami RSMAS: Coming Full Circle: Sea turtles to stroke research and back again.

2012 Gordon Research Congress: Brain Energy Metabolism and Blood Flow, Colby College, ME (August 2012). Modulation of reactive oxygen species in the anoxia tolerant turtle.

2012 Tenth International Congress of Neuroethology, University of Maryland, MD. Adaptations for long term anoxia tolerance reduce oxidative stress in the freshwater turtle *Trachemys scripta*.

2012 Neuroscience seminar series, FAU. To Anoxia and Beyond: Living without oxygen and surviving afterwards

2011 Eco-Watch Lecture Series, Gumbo Limbo Nature Center, Boca Raton, FL, October 2011. "Rumors about tumors".

2011 Florida Sea Turtle Permit Holders Meeting, Jensen Beach, FL. Quantifying the energetic cost of disorientation in loggerhead (*Caretta caretta*) and green (*Chelonia mydas*) hatchlings.

2008 Frontiers in Science, FAU. "Stayin' Alive: Mechanisms of survival in the brain without oxygen."

2008 Neuroscience seminar series, FAU. "If you hold your breath, can you live forever? Turtles, anoxia, and aging."

2008 Toronto Zoo Turtle Stewardship and Management Workshop. "Extreme survivor: The physiology of living through the winter without oxygen."

2007 Francis Silliman Endowed Lecture, Bridgewater College, VA. "Stayin' Alive: an animal model of neuronal survival without oxygen".

Student Presentations at International Meetings (* student author, † post-doc, ‡ presentation resulted in a publication)

⋆Shlepr, K.R., **S.L. Milton**, and D.E. Gawlik. 2020. Risk of hyperthermia during an acute stress response varies with body size and condition in the altricial young of a subtropical bird species. Waterbird Society annual meeting. Virtual talk. *Student Paper Award winner

Garefino, Victoria, and **Milton, Sarah.** Influence of UV light on vitamin D and immune function in green (*Chelonia mydas*) sea turtles with fibropapilomatosis. 2019 International Sea Turtle Symposium, February 2019, Charleston, SC. Oral.

Henaghan, Chris* and **Milton, Sarah**. Incubation temperature effects on loggerhead (*Caretta caretta*) sea turtle hatchling vigor. 2019 International Sea Turtle Symposium, February 2019, Charleston, SC. Oral.

Tezak, Boris*‡, Itzel Sifuentes-Romero†, **Sarah Milton**, and Jeanette Wyneken. Using blood samples to identify the sex of hatchling loggerhead sea turtle hatchlings. 2019 International Sea Turtle Symposium, February 2019, Charleston, SC Oral. ** **Winner:** best student oral presentation.

Grell, Kaitlin**, and **Sarah L. Milton**. The Effect of High Nest Temperatures on the Growth Rates of Loggerhead Sea Turtle (*Caretta caretta*) Embryos and Hatchlings. 2019 International Sea Turtle Symposium, Charleston, SC, February 2019. Poster (also was selected to be backup oral presenter). ** Undergraduate student

Sifuentes, Itzel†‡; Tezak, Boris*; **Milton, Sarah**; Wyeneken, Jeanette. Hydric environment in a turtle nest: how does it affect sex determination? Eight International Symposium on Vertebrate Sex Determination, April 16-20, 2018. Kona, Hawaii. Poster.

Reiterer, Melissa* and **Milton, Sarah**. Mechanisms of neuroprotection against oxidative stress in the anoxia tolerant turtle *Trachemys scripta*. Experimental Biology 2018, April 21-25, 2018, San Diego, CA. Oral

Reiterer, Melissa* and **Milton, Sarah**. Mechanisms of neuroprotection against oxidative stress in the anoxia tolerant turtle *Trachemys scripta*. Experimental Biology 2018, April 21-25, 2018, San Diego, CA. Poster.

Sifuentes, Itzel†; Tezak, Boris; **Milton, Sarah**; Wyeneken, Jeanette. The hydric environment in a sea turtle nest: effects on sex determination. 38th International Sea Turtle Symposium. February 18th-23rd, 2018. Kobe, Japan. Oral.

Sifuentes, Itzel†; Tezak, Boris*; **Milton, Sarah**; Wyeneken, Jeanette. Hydric environment in a turtle nest: how does it affect sex determination? Society for Integrative and Comparative Biology, Annual Meeting 2018. January 3-7, 2018 San Francisco, CA. Poster

Reiterer, Melissa* and **Milton, Sarah**. Methionine sulfoxide reductase as a neuroprotective mechanism in a model of anoxia tolerance: *Trachemys scripta*. Experimental Biology, April 2017, Chicago, IL. Oral.

Reiterer, Melissa* and **Milton, Sarah**. Methionine sulfoxide reductase as a neuroprotective mechanism in a model of anoxia tolerance: *Trachemys scripta*. Experimental Biology, April 2017, Chicago, IL. Poster.

Rachel A. Bladow*, Tiffany Roberts Briggs, and **Sarah L. Milton**. Beach dynamics, human use, and climate change: interactions that impact sea turtle nesting beaches. 37th Annual Symposium on Sea Turtle Biology and Conversation (Las Vegas, NV; April, 2017) Oral.

Sifuentes, Itzel†‡; Tezak, Boris*; Wyeneken, Jeanette; **Milton, Sarah**. The hydric environment inside a turtle nest: How does moisture affect development? 37th Annual Symposium on Sea Turtle Biology and Conversation (Las Vegas, NV; April, 2017) Oral.

Tezak, Boris*; Sifuentes, Itzel†; **Milton, Sarah;** Wyeneken, Jeanette. Estimating the sex ratio of sea turtle hatchlings vis blood samples. 37th Annual International Symposium on Sea Turtle Biology and Conversation (Las Vegas, NV; April, 2017) . Poster.

Cocilova, Courtney* and **Milton, Sarah**. The effects of red tide toxins in turtles – developing treatment protocols for endangered sea turtles. Society for Integrative and Comparative Biology 2017, New Orleans, LA

Riggs, Claire*‡; Dowd, Wesley; Lefevre, Sjannie; **Milton, Sarah**; Nilsson, Goran; Warren, Daniel; and Podrabsky, Jason. Extreme vertebrate anoxia tolerance and small RNA expression. Society for Integrative and Comparative Biology 2017, New Orleans, LA.

Cocilova, Courtney* and **Milton, Sarah**. The effects of red tide toxins in turtles – developing treatment protocols for endangered sea turtles. International Association for Aquatic Animal Medicine **(**IAAAM**)** annual meeting in Virginia Beach, VA (May 2016; oral),

Cocilova, Courtney* and **Milton, Sarah**. The effects of red tide toxins in turtles – developing treatment protocols for endangered sea turtles. 17th International Conference for Harmful Algae (October, 2016) in Florianopolis, Brazil. Oral. Supported by an ICHA Travel award.

Sifuentes, Itzel†; Tezak, Boris*; **Milton, Sarah**; Wyeneken, Jeanette. Hydric environment in a turtle nest: how does it affect sex determination? Society for Developmental Biology, 75th Annual Meeting – International Society of Differentiation, 19th International Conference. August 4-8, 2016. Boston, MA. Poster

Pankaew, Karen*‡, and **Milton, S**. Running for Their Lives: Physiological effects of disorientation in loggerhead (*Caretta caretta*) and green (*Chelonia mydas*) sea turtle hatchlings. 36th Annual International Symposium on Sea Turtle Biology and Conservation, 29 February - 04 March 2016 in Lima, Peru. **Archie Carr award winner** for best student oral presentation.

Sifuentes, Itzel†; Tezak, Boris*; Wyneken, Jeanette; and **Milton, Sarah L**. Effect of incubation conditions on DNA methylation in turtles with environmental dependent sex determination. Society for Integrative and Comparative Biology, Portland, OR, 2016.

Sifuentes, Itzel†; Tezak, Boris; Wyneken, Jeanette; **Milton, Sarah L**. Effect of incubation conditions on DNA methylation in turtles with environmental dependent sex determination. 36th Annual International Symposium on Sea Turtle Biology and Conservation, 29 February - 04 March 2016 in Lima, Peru.

Reis, Andrea*, and **Milton, Sarah**. Sex identification in sea turtle hatchlings by HPLC assay of plasma steroid hormones. Society for Integrative and Comparative Biology. Palm Beach, FL January 2015 [Poster].

Pankaew, Karen*, and **Milton**, Sarah. Physiological effects of disorientation in loggerhead (*Caretta caretta*) and green (*Chelonia mydas*) sea turtle hatchlings. Society for Integrative and Comparative Biology,, Palm Beach, FL January 2015 [Poster].

Cocilova, Courtney*‡, Bossart, Gregory; Flewelling, Leanne; Walsh, Catherine; and **Milton,** Sarah. Brevetoxin metabolism and physiology – a freshwater model of morbidity in endangered sea turtles. 16th International Conference on Harmful Algae (ICHA) Wellington, New Zealand 27–31 October 2014 [Oral].

Reiterer, Melissa* and **Milton**, Sarah L. MsrA as an Important Neuroprotective Mechanism in the Anoxia Tolerant Model: *Trachemys scripta elegans*. 2014 American Physiological Society Intersociety Meeting: Comparative Approaches to Grand Challenges in Physiology, San Diego, CA. October, 2014 [poster].

Olena Makhnyeva*, Ken Dawson-Scully and Sarah L. **Milton.** Activation of cGMP-dependent protein kinase reduces *Drosophila* S2 cell injury caused by anoxia and oxidative stress. 2014 APS Intersociety Meeting: Comparative Approaches to Grand Challenges in Physiology, San Diego, CA. October, 2014 [poster].

Cocilova, Courtney*, Bossart, Gregory; Flewelling, Leanne; Walsh, Catherine; and **Milton**, Sarah. Brevetoxin metabolism and physiology – a freshwater model of morbidity in endangered sea turtles. Thirty-Fourth Annual International Symposium on Sea Turtle Biology, April 2014, New Orleans, LA. [Oral].

Sposato, Patricia*, and **Milton**, S. Ecosystem health and environmental influences on innate

immune function in the loggerhead (*Caretta caretta*) and green (*Chelonia mydas*) sea turtle. Thirty-Fourth Annual International Symposium on Sea Turtle Biology, April 2014, New Orleans, LA. [Oral].

Makhnyeva, Olena*, Dawson-Scully, Ken; and **Milton,** Sarah L. Effects of cGMP-dependent protein kinase signaling in Drosophila S2 cells subjected to anoxia and oxidative stress, Cell Symposia: Genes, Circuits and Behavior, Toronto ON 2013 [Poster]

Makhnyeva, Olena*; Dawson-Scully, Ken; and **Milton,** Sarah L. Effects of cGMP-dependent protein kinase signaling in Drosophila S2 cells subjected to anoxia and oxidative stress. Cell Symposia: Genes, Circuits and Behavior, Toronto ON 2013 [Oral]

Homer-Drummond, Sharon* and **Milton, Sarah**. Quantitative structure-activity relationships between native reproductive hormones, gonadal receptors and endocrine-disruptors in *Tursiops truncatus* (Atlantic bottlenose dolphins). 41st Annual International Association for Aquatic Animal Medicine Conference, May, 2010, Vancouver, B.C. Canada. [Oral].

Homer-Drummond, Sharon* and **Milton, Sarah**. Parameters impacting the reproductive success of *Tursiops truncatus* (Atlantic bottlenose dolphins): interactions between native endocrinology and endocrine-disruptors. Southeast Atlantic Marine Mammal Symposium (SEAMAMMS), March 26-28, 2010, Virginia Beach Aquarium and Marine Science Center, Virginia Beach, VA. 2010 [Oral].

Couturier, Christine S‡; Ellefsen, Stian; Sandvik, Guro K, Stenoslokken, KareOlav, Stecyk, Jonathon A; Fagernes, Cathrine E; **Milton, Sarah L**; Prentice, Howard M; and Nilsson, Goran E. Gene expression in anoxic turtle brain, the inhibitory pathway. Society for Experimental Biology Main Meeting, Anaheim CA 2010. [Poster].

Deming, Alissa*. and **Milton, Sarah L**. Stress and anti-apoptotic protein expression in green turtle (*Chelonia mydas*) fibropapillomatosis. International Association for Aquatic Animal Medicine, 2008 Rome, IT. [Oral]

Gauri Hari Nayak*‡, **Sarah L Milton**, and Howard M Prentice. Neuroglobin is upregulated by hypoxia and anoxia in the brain of the anoxia-tolerant turtle *Trachemys scripta*. Experimental Biology 2007, Washington, D.C. (May 07). [Oral]

Deming, Alissa*. and **Milton, SL**. Stress and anti-apoptotic protein expression in green turtle (*Chelonia mydas*) fibropapillomatosis. Twenty-eighth Annual International Symposium on Sea Turtle Biology and Conservation. Mexico. 2008. [Oral]

Bruce, Lynsey*, Prentice, Howard P, and **Milton, Sarah L**. The role of Methionine Sulfoxide Reductase A in the anoxia-tolerant turtle (*Trachemys scripta*). Experimental Biology 2010, Anaheim CA (April 10). [Poster]

Kesaraju, Shailaja*‡; Prentice, Howard P; and **Sarah L Milton**. Heat shock protein 72 stabilizes the mitochondrial membrane potential in the anoxia tolerant turtle (*Trachemys scripta*) neuron. Experimental Biology 2009, New Orleans, LA (April 09). [Poster]

Kesaraju, Shailaja*‡; Howard Prentice; and **Sarah L. Milton**. Hsp72 is critical to neuronal survival in an in vitro model of anoxia tolerance. International Stroke Conference, 2008, New Orleans, LA (Feb 08) [Poster]

Nayak, Gauri*‡; **Sarah L. Milton**, and Howard Prentice. The anti-apoptotic regulator Bcl-2 decreases cell death in the brain of the anoxia tolerant turtle. International Stroke

Conference, 2008, New Orleans, LA (Feb 08) [Poster]

Kowalski, Amy*; Peter L. Lutz, and **Sarah L. Milton**. Specific dynamic action in hatchling green (*Chelonia mydas*) and loggerhead (*Caretta caretta*) sea turtles. The Joint Meeting of Ichthyologists and Herpetologists, Tampa, FL 2005. [Poster]

Botterill, Brooke E*; Steven M. Blair, and **Sarah L. Milton**. Identification of steroid hormones in the allantoic fluid and plasma of loggerhead hatchlings. Joint Meeting of Ichthyologists and Herpetologists, Tampa, FL 2005. [Poster]

McGarrity, Monica E*; **Sarah L. Milton** and Peter L. Lutz. Heat shock protein expression and fibropapillomatosis: novel use of molecular techniques to evaluate health and stress levels in marine turtles. Twenty-fifth Annual International Symposium on Sea Turtle Biology and Conservation. Charleston, SC, 2005. [Poster]

Botterill, Brooke E*; Steven M. Blair, and **Sarah L. Milton.** Identification of steroid hormones in the allantoic fluid and plasma of loggerhead hatchlings. Twenty-fifth Annual International Symposium on Sea Turtle Biology and Conservation. Charleston, SC, 2005. [Poster]

Student Presentations at National Meetings

Courtemanche*, Ali ; **Sarah L. Milton**. 2020. Embryonic mortality of loggerhead (*Caretta caretta*) sea turtle nests by inundation events and frequency. Southeast Regional Sea Turtle Meeting. Corpus Christi, TX, February 2020. Poster.

Seaman, Heather*; **Sarah L. Milton**. 2020. The impacts of nest microenvironment on leatherback (*Dermochelys coriacea*) hatchling performance and their responses to thermal stress. Southeast Regional Sea Turtle Meeting. Corpus Christi, TX, February 2020. Poster.

Serra, Ivana*, **Sarah L. Milton**. 2020. Assessing the Effect of Incubation Temperature on the Cognitive Ability of Loggerhead Sea Turtle, *Caretta caretta*, Hatchlings. Southeast Regional Sea Turtle Meeting. Corpus Christi, TX, February 2020. Oral. Runner up: Best Student Oral Presentation.

Garefino*, Victoria, **Sarah L. Milton**. 2020. Influence of uv light on vitamin d and immune function in green (*Chelonia mydas*) sea turtles with fibropapillomatosis. Southeast Regional Sea Turtle Meeting. Corpus Christi, TX, February 2020. Oral.

Cordoba**, Melissa; Seaman, Heather; **Sarah L. Milton**. 2020. The effects of body morphology on performance in green, leatherback, and loggerhead sea turtle hatchlings. Southeast Regional Sea Turtle Meeting. Corpus Christi, TX, February 2020. Poster. ** Undergraduate student presentation.

Serra, Ivana*, **Sarah L. Milton**. 2020. Assessing the Effect of Incubation Temperature on the Cognitive Ability of Loggerhead Sea Turtle, *Caretta caretta*, Hatchlings.FAU Environmental Sciences Annual Symposium. Oral. Winner: Best Student Presentation.

Courtemanche*, Ali; Briggs, Tiffany; and **Milton, Sarah**. Influences of flooding and sediment on loggerhead (*Caretta caretta*) and green (*Chelonia mydas*) sea turtle reproduction success. American Shore and Beach Preservation Association National Coastal Conference, Myrtle Beach, NC, October 22-25, 2019.

Bladow, Rachel* and **Milton, Sarah**. Beach dynamics, human use, and climate change: interactions that impact sea turtle nesting beaches. 2018 Meeting of the Southeast Regional Sea Turtle Network, Feb. 2108, Myrtle Beach, SC. Oral.

Henaghan, Chris* and **Milton, Sarah**. Incubation temperature effects on loggerhead (*Caretta caretta*) and green (*Chelonia mydas*) sea turtle hatchling vigor. 2018 Meeting of the Southeast Regional Sea Turtle Network, Feb. 2108, Myrtle Beach, SC. Oral.

Tezak, Boris*, Itzel Sifuentes-Romero†, **Sarah Milton**, and Jeanette Wyneken. Identifying the sex of sea turtle hatchlings via blood samples. 2018 Meeting of the Southeast Regional Sea Turtle Network, Feb. 2108, Myrtle Beach, SC. Oral. ** **Winner: Boyd Lyon Award** for best student oral presentation.

Makhnyeva, Olena*, Dawson-Scully, Ken; and **Milton, Sarah L**. Effect of cGMP-dependent protein kinase (PKG) signaling on mitochondrial content in Drosophila melanogaster subjected to anoxia and reoxygenation. Mitochondrial Physiology Association, Greenville, NC, August 2015[Poster]

Wood, Lawrence*‡; Brunnick, Barbara; and **Milton, Sarah.** Home range and habitat use of hawksbill turtles in Palm Beach County, Florida. Southeast Regional Sea Turtle Meeting, Jekyll Island, GA Feb 2015 [Oral].

Ahles, Natasha*‡**;** and **Milton, Sarah**. Mid-Incubation Relocation and Embryonic Survival in Loggerhead Sea Turtle Eggs Southeast Regional Sea Turtle Meeting, Jekyll Island, GA Feb 2015 [Oral].

Reis, Andrea*, and **Milton,** Sarah. Sex identification in sea turtle hatchlings by HPLC assay of plasma steroid hormones. Southeast Regional Sea Turtle Meeting, Jekyll Island, GA Feb 2015 [Poster].

Pankaew, Karen*, and **Milton, Sarah**. Physiological effects of disorientation in loggerhead (*Caretta caretta*) and green (*Chelonia mydas*) sea turtle hatchlings. Southeast Regional Sea Turtle Meeting, Jekyll Island, GA Feb 2015 [Poster]. **Winner**: **Boyd Lyon Student Award** for Best Poster.

Cocilova, Courtney*, Bossart, Gregory; Flewelling, Leanne; Walsh, Catherine; and **Milton,** Sarah. Brevetoxin metabolism and physiology – a freshwater model of morbidity in endangered sea turtles. 7th Symposium on Harmful Algae in the US (Sarasota, FL; October 2013). [Poster]

Homer-Drummond, Sharon*; and **Milton, Sarah.** Parameters impacting the reproductive success of *Tursiops truncatus* (Atlantic bottlenose dolphins): interactions between native endocrinology and endocrine-disruptors. Southeast Atlantic Marine Mammal Symposium (SEAMAMMS), March 26-28, 2010, Virginia Beach Aquarium and Marine Science Center, Virginia Beach, VA. Oral.

Student Presentations at Local/Regional Meetings:

Lezcano, Ivana and **Milton, Sarah**. Baked: Does Incubation Temperature Affect Cognitive Ability of Sea Turtle Hatchlings? Environmental Sciences Research Day, FAU. April 8,

2019

Grell, Kaitlin**, and **Sarah L. Milton**. The Effect of High Nest Temperatures on the Growth Rates of Loggerhead Sea Turtle (*Caretta caretta*) Embryos and Hatchlings. ORAL Undergraduate Research Day, 4-19. WINNER: Best oral presentation Environmental, Ecological, and Marine Sciences category, ** Undergraduate student

Esposito, Lisa Anne**; Milton, Connor**; Briggs, Tigffany, and **Sarah Milton.** The effects of inundation and relocation on sea turtle hatching success. **Poster:** Undergraduate Research Day, spring 2019. ** Undergraduate student

Tovar, Victoria**, and **Milton, Sarah.** The effects of rising nest temperatures on the embryonic mortality rates of Loggerhead Sea Turtles (*Caretta caretta*) for the nesting season of 2018. **Poster:** Undergraduate Research Day, spring 2019. ** Undergraduate student

Mahneva, Olena*; Milton, **Sarah L**.; Dawson-Scully, Ken. Effect of *foraging* on mitochondrial content in *Drosophila melanogaster* subjected to anoxia and reoxygenation. Sunposium Feb. 2017. Poster.

Reiterer, Melissa* and **Milton, Sarah**. Role and Regulation of MsrA and FOXO3a during oxidative stress in an anoxia tolerant model: *T. scripta*. Sunposium Feb. 2017. Poster.

Makhnyeva, Olena*, Dawson-Scully, Ken and **Milton**, Sarah L. Activation of cGMP-dependent protein kinase reduces Drosophila S2 cell injury caused by chemical hypoxia and oxidative stress. Sunposium 2016, Jupiter, FL. [Poster]

Cocilova*, Courtney, Bossart, Gregory; Flewelling, Leanne; Walsh, Catherine; and **Milton, Sarah**. Brevetoxin metabolism and physiology – a freshwater model of morbidity in endangered sea turtles. Max Planck Florida Institute Sunposium, 2015 [poster]

Makhnyeva, Olena*, Dawson-Scully, Ken; and **Milton**, Sarah L. cGMP/PKG-mediated survival in a *Drosophila* cell culture model of anoxia and oxidative stress injury. Flies on the Beach, Delray Beach, FL. 2014.

Caplan Stacee*‡; **Milton**, Sarah L; and Dawson-Scully Ken. A cGMP-dependent kinase (PKG) controls synaptic transmission tolerance to acute oxidative stress at the Drosophila larval neuromuscular junction. Center of Excellence in Biomedical and Marine Biotechnology Symposium. 2013 [Oral]

Caplan Stacee*; **Milton**, Sarah L; and Dawson-Scully Ken. A cGMP-dependent kinase (PKG) controls synaptic transmission tolerance to acute oxidative stress at the Drosophila larval neuromuscular junction. Sunposium, Max Planck FL 2013 [Poster]

Sposato, Patricia*, and **Milton**, Sarah. Ecosystem health and environmental influences on innate immune function in sea turtles. Florida Keys Sea Turtle Workshop 2013. [Oral]

Makhnyeva, Olena*, Dawson-Scully, Ken and **Milton,** Sarah L. Effects of cGMP-dependent protein kinase signaling in Drosophila S2 cells subjected to anoxia and oxidative stress, Sunposium, Max Planck FL 2012 [Poster]

Caplan, Stacee*; **Milton,** Sarah; Dawson-Scully Ken. Rapid Neuroprotection from Acute Oxidative Stress. IBRO Max Planck Symposium, FL 2012 [Poster]

Caplan, Stacee; **Milton**, Sarah; Dawson-Scully Ken. Rapid Neuroprotection from Acute Oxidative Stress. South Florida Drosophila Consortium Meeting, Boca Raton, 2012.

[Poster]

Caplan, Stacee*; **Milton,** Sarah; Dawson-Scully, Ken. Rapid Neuroprotection from Acute Oxidative Stress. South Florida *Drosophila* Consortium Meeting. University of Miami. 2010 [Oral].

Nayak, Gauri Hari*, **Sarah L Milton**, and Howard M Prentice. Gene transcription and translation of Neuroglobin is upregulated by hypoxia and anoxia in the brain of the anoxia-tolerant turtle *Trachemys scripta*. Charles E. Schmidt College of Biomedical Science**,** Biomedical Science Research Day, Florida Atlantic University, 2007. **Selected as the best talk and best poster**.

Meeting Organizer:

Southeast Regional Sea Turtle Meeting, Myrtle Beach, SC. February 12-16, 2018.

Symposia Organizer:

Peter L. Lutz Memorial Symposium, Boca Raton, FL, September, 2005. Co-organizer with Dr. Howard Prentice.

Life With and Without Oxygen, Society for Experimental Biology. Canterbury, England, April 2006. Co-organizer with Dr. Goran Nilsson.

Symposium Chair:

Insights into Aging from Turtles, Animals that Show Extremely Slow Aging. The Gerontological Society of America's 68th Annual Scientific Meeting, November 2015, Orlando, FL.

Anatomy, Physiology, and Health. Thirty-Fifth Annual International Symposium on Sea Turtle Biology, April 2015, Istanbul, Turkey

Anatomy, Physiology, and Health. Thirty-Fourth Annual International Symposium on Sea Turtle Biology, April 2014, New Orleans, LA.

Anatomy, Physiology, and Health. Thirty-Third Annual International Symposium on Sea Turtle Biology, Feb 2013, Baltimore, MD.

Invited attendee:

Climate Change and Sea Turtle Workshop, New Smyrna, FL, May 2016

McGraw-Hill Anatomy & Physiology Symposium, Tucson AZ, March 2004

The 2nd Sea Turtle Health Assessment Workshop, Charleston, SC, March 2001

Non-refereed Works

Journal Publications:

Journal of Experimental Biology column – contributing writer:

Milton, Sarah Hydrogen saline a real gas. J. Exp. Biol. 2009 212: v-a

Milton, Sarah Rising to the challenge of diving seals. J. Exp. Biol. 2009 212: v-a

Milton, Sarah DOR-mant brains maintain ion balance. J. Exp. Biol. 2009 212: vi

Milton, Sarah Anoxic goldfish are depressed, not drunk. J. Exp. Biol. 2008 211: vi-a

Milton, Sarah No depth to neuroglobin**.** J. Exp. Biol. 2008 211: v-a
Milton, Sarah Thawing no problem for supercool turtles**.** J. Exp. Biol. 2008 211: v-a
Milton, Sarah More Neuroglobin makes good sense. J. Exp. Biol. 2007 210: v-a
Milton, Sarah ROS stress in mice: Not just a guy thing. J. Exp. Biol. 2007 210: v
Milton, Sarah Hibernating hamsters really disconnect. J. Exp. Biol. 2007. 210(7): vii
Milton, Sarah Hypoxic brain cells lose their inhibitions. J. Exp. Biol. 2007 210(1): vii.
Milton, Sarah Resetting the oxygen-sensing set point. J. Exp. Biol. 2006. 209: v-a
Milton, Sarah Mitochondria at the heart of cardiac preconditioning. J. Exp. Biol. 2006 209: vi.
Milton, Sarah Aroused hamsters scavenge reactive oxygen species**.** J. Exp. Biol. 2006 209: viii.
Milton, Sarah Fetal llamas give hypoxia the cold shoulder. J. Exp. Biol v. 209: iv.
Milton, Sarah Arctic ground squirrels handle stress with finesse**.** J. Exp. Biol. 2005 208: v
Milton, Sarah Diving seals don't get the shivers. J. Exp. Biol. 2005 208: v-a.
Milton, Sarah A whale of a case of the bends. J. Exp. Biol., 208(7): v, 2005.
Milton, Sarah Anoxia not a real heartbreaker. J. Exp. Biol. 208: v, 2004.
Milton, Sarah Cool squirrels turn down their Akt. J. Exp. Biol., 207(21): v, 2004.
Milton, Sarah Divers' detergents are different! J. Exp. Biol., 207(9): iv, 2004.
Milton, Sarah Go ahead! Vent your spleen! J. Exp. Biol., 207(3): 390, 2004.
Milton, Sarah A case for crustacean navigation (Or, there's no place like home…) J. Exp. Biol. 206:1432, 2003.
Milton, Sarah Don't mind the gap! J. Exp. Biol. 206(15): 2529 – 2530, 2003.
Milton, Sarah Man can conserve O too! J. Exp. Biol. 206(3): 427-428, 2003.

Other Publications:

Nelson, D.A., S. M. Blair, R. Cheeks, P.L. Lutz, **S.L. Milton**, and T.S. Gross. Evaluation of alternative beach nourishment sands as loggerhead sea turtle nesting substrates. US Army Corps of Engineers Technical Report, 1996.

Shaw (Milton) SL, S. Leone-Kabler, P.L. Lutz, and A. Schulman. Isoflurane: A safe and effective anesthetic for marine and freshwater turtles. Pp. 112-119 IN Proceedings of the 1992 International Wildlife Rehabilitation Council Conference. Omnipress, Madison, WI, 1992.

Abstracts: († post-doc author, * graduate student author, ** undergraduate student author)

International:

Reiterer*, Melissa; **Sarah L Milton**. 2017. Methionine sulfoxide reductase as a neuroprotective mechanism in a model of anoxia tolerance: *Trachemys scripta*. The FASEB Journal 31 (1supplement), 1075.4-1075.4

Sifuentes, Itzel†; Boris Tezak*, **Sarah L Milton**, Jeanette Wyneken. 2017. Sex determination in turtles: is moisture playing a role? Integrative and Comparative Biology 57, E154-

E154.

Claire L. Riggs*, Amanda Summers, Daniel E. Warren, Göran E. Nilsson, Sjannie Lefevre, W. Wesley Dowd, **Sarah Milton**, Jason E. Podrabsky. 2017. Extreme Vertebrate Anoxia Tolerance and Small RNA Expression. Integrative and Comparative Biology 57, E387-E387.

Cocilova*, Courtney; **Sarah L Milton**, Leanne J Flewelling, Gregory D Bossart, Catherine J Walsh. 2017. The Effects of Red Tide Toxins in Turtles-Developing Treatment Protocols for Endangered Sea Turtles. Integrative and Comparative Biology 57, E227-E227.

Sifuentes, Itzel†; Boris Tezak*, **Sarah L Milton**, Jeanette Wyneken. 2016. Effect of incubation conditions on DNA methylation in turtles with environmental dependent sex determination. Integrative and Comparative Biology 56, E370-E370.

Milton, Sarah. 2015. Insights into aging from turtles, animals that show extremely slow aging. Gerontologist 55, 383-383.

Reis*, Andrea L; **Sarah L Milton.** 2015**.** Sex Identification in Sea Turtle Hatchlings by HPLC Assay of Plasma Steroid Hormones, Integrative and Comparative Biology 55, E319.

Milton, Sarah; Melissa Reiterer*, Lynsey Bruce*, Howard Prentice. 2011. Oxidative stress resistance in a novel animal model of aging without senescence. Gerontologist 51, 506-506.

Lynsey Bruce*, **Milton, Sarah**. 2010**.** The role of Methionine sulfoxide reductase A (MsrA) in the anoxia-tolerant turtle (*Trachemys scripta*). The FASEB Journal 24 (1_supplement), 1022.2-1022.2

Milton, Sara L and Ken Dawson-Scully. 2010 Neuroprotection by cGMP/PKG mechanisms in two anoxia tolerant animal models: fruit fly and freshwater turtle. Proceedings of the Society for Experimental Biology Main Meeting, 2010.

Milton, Sarah; Shailaja Kesaraju, K Ayyanathan, Howard Prentice. 2010. Differential regulation of HIF-1 alpha and VEGF in an anoxia tolerant brain. The FASEB Journal 24 (1 supplement), 1022.1-1022.1

Couturier, Christine S; Ellefsen, Stian; Sandvik, Guro K; Stenoslokken, Kare-Olav; Stecyk, Jonathon A; Fagernes, Cathrine E; **Milton, Sarah L**; Prentice, Howard M; and Nilsson, Goran E. 2010. Gene expression in anoxic turtle brain, the inhibitory pathway. Proceedings of the Society for Experimental Biology Main Meeting, 2010.

Milton, Sarah and Kesaraju, Shailaja*. 2009. Heat shock protein 72 stabilizes the mitochondrial membrane potential in the anoxia tolerant turtle (Trachemys scripta) neuron. Federation of American Societies for Experimental Biology Journal 23: LB129

Nayak, Gauri*; **Sarah L Milton**, Howard M Prentice. 2008. The anti-apoptotic regulator bcl-2 decreases cell death in the brain of the anoxia tolerant turtle. STROKE 39 (2), 674-675.

Milton, Sarah L., Dirk*, Linda J., Kara**, Laurie F., and Prentice, Howard M. 2008. Neuroprotective pathways are modulated by adenosine in the evolutionarily adapted anoxia tolerant neuron. Stroke.

Kesaraju, Shailaja*, Schmidt-Kastner, Rainald, Boatright, Jeffrey**, Prentice, Howard M., and **Milton**, Sarah L. 2008. Hsp72 Is Critical To Neuronal Survival In An In Vitro Model Of Anoxia Tolerance. Stroke.

Milton, Sarah L., Howard Prentice, Gauri Nayak*, Laurie Kara**, and Shailaja Kesaraju*.

2007. Suppression of reactive oxygen species production in the anoxia-tolerant turtle *Trachemys scripta*. Federation of American Societies for Experimental Biology Journal. 21: 966.2

Nayak, Gauri Hari*, Sarah L **Milton**, and Howard M Prentice. 2007. Neuroglobin is upregulated by hypoxia and anoxia in the brain of the anoxia-tolerant turtle *Trachemys scripta.* Federation of American Societies for Experimental Biology Journal 21: 762.15

Shailaja Kesaraju*, Howard M. Prentice, and Sarah L. **Milton**. 2007. Hsp72 is neuroprotective in the the anoxia tolerant turtle, *Trachemys scripta elegans.* Federation of American Societies for Experimental Biology Journal. 21: 917.7

Milton, Sarah; Howard Prentice. 2006. Anoxic and reoxygenation survival in the turtle brain. Comparative Biochemistry and Physiology A-Molecular & Integrative Physiology Volume143, Issue 4: S104-S104

Milton, Sarah L, Howard M. Prentice and Peter L. Lutz, Molecular mechanisms of ROS defense in the turtle *Trachemys scripta.* IN Proceedings of the Society of Experimental Biologists meeting (July 05).

Milton, Sarah L, Peter L. Lutz, and Howard M. Prentice. Strategies to survive brain anoxia. IN Proceedings of the Society of Experimental Biologists meeting (July 05).

Milton Sarah L, and Howard M. Prentice. Anoxic and reoxygenation survival in the turtle brain. IN Proceedings of the Society of Experimental Biologists meeting (April 06).

Prentice, Howard M, and Sarah L. **Milton**. Molecular aspects of the anoxic turtle IN Proceedings of the Society of Experimental Biologists meeting (April 06).

Kowalski*, Amy, Peter L. Lutz, and Sarah L. **Milton**. Specific dynamic action in hatchling green (*Chelonia mydas*) and loggerhead (*Caretta caretta*) sea turtles. IN Proceedings of The Joint Meeting of Ichthyologists and Herpetologists, 2005

Botterill*, Brooke E., Stephen M. Blair, and Sarah L. **Milton.** Identification of steroid hormones in the allantoic fluid and plasma of loggerhead hatchlings. . IN Proceedings of The Joint Meeting of Ichthyologists and Herpetologists, 2005

Milton, Sarah L.; Howard M. Prentice, and Peter L. Lutz. Differential upregulation of heat shock proteins in the anoxic turtle brain IN Proceedings of the Society for Experimental Biology, 2004.

Prentice, Howard M., **Milton** Sarah L., Scheurle Danielle; and Lutz Peter L. Gene transcription of brain voltage-gated potassium channels is reversibly regulated by oxygen supply. IN Proceedings of the Society for Experimental Biologists, 2003.

Milton, Sarah; John W Thompson*, Peter L Lutz. 2002. COMPLEX FUNCTION OF THE CENTRAL NERVOUS SYSTEM, SLEEP AND LOCOMOTION-Mechanisms for maintaining extracellular glutamate levels in the anoxic turtle striatum. American Journal of Physiology-Regulatory Integrative and Comparative Physiology. 5195): R1317.

Milton, Sarah L. and Peter L. Lutz. Activation of K_{ATP} channels depresses dopamine release in the turtle striatum. IN Proceedings of the Federation of the American Society of Experimental Biologists, 2001.

Milton, Sarah L. and Peter L. Lutz. ATP-sensitive potassium channels modulate dopamine release in the anoxic turtle striatum. IN Proceedings of the 29th Meeting of the Society for Neuroscience, 1999.

Milton, Sarah L. and Peter L. Lutz. 1993. Effect of anoxia on adenosine and amino acid release in muscle and liver of the freshwater turtle. Abstract. Proceedings of the International Union for Physiological Science XVIII: 26.

National:

Deming*, Alissa. and **Milton**, Sarah L. 2008. Stress and anti-apoptotic protein expression in green turtle (*Chelonia mydas*) fibropapillomatosis. IN Proceedings of the Twenty-eigth Annual Workshop on Sea Turtle Biology and Conservation. NOAA Technical Memorandum.

McGarrity*, Monica E., Sarah L. **Milton** and Peter L. Lutz. 2005. Heat shock protein expression and fibropapillomatosis: novel use of molecular techniques to evaluate health and stress levels in marine turtles. IN Proceedings of the Twenty-fifth Annual Symposium on Sea Turtle Biology and Conservation. NOAA Technical Memorandum.

Botterill*, Brooke E., Stephen M. Blair, and Sarah L. **Milton**. 2005. Identification of steroid hormones in the allantoic fluid and plasma of loggerhead hatchlings. IN Proceedings of the Twenty-fifth Annual Symposium on Sea Turtle Biology and Conservation. NOAA Technical Memorandum.

Shaw, Sarah L., Alexis Schulman, and Peter L. Lutz. 1993. The effect of Hurricane Andrew on a monitored Caretta caretta nesting beach. IN Proceedings of the Thirteenth Annual Symposium on Sea Turtle Biology and Conservation. NOAA Technical Memorandum. NOAA-SEFC-341.

Shaw, Sarah L., Alexis Schulman, and Peter L. Lutz. 1992. The suitability of aragonite as a nesting substrate for sea turtles. Abstract. IN Proceedings of the Twelfth Annual Workshop on Sea Turtle Biology and Conservation. NOAA Technical Memorandum, NMFS-SEFC-361.

Shaw (Milton), Sarah; Peter L Lutz, Alexis A Schulman. 1992. The suitability of aragonite sand as a nesting substrate for loggerhead sea turtles (*Caretta caretta*). Florida Shore & Beach Preservation Assoc., Tallahassee, Fl(USA)., 179-180.

Shaw, Sarah L., Ross Witham, Peter Lutz, and Gregory Bossart. 1989. Possible effects of artificial foods on sea turtle health. Abstract. IN Proceedings of the Ninth Annual Workshop on Sea Turtle Biology and Conservation. NOAA Technical Memorandum NMFS-SEFC-232.

Alfaro, Alexis, Gregory Bossart, Thomas. Jackson, Peter Lutz, and **Sarah Shaw**. 1990. Physiological and morphological measurements on a leatherback turtle. Abstract. IN Proceedings of the Tenth Annual Workshop on Sea Turtle Biology and Conservation. NOAA Technical Memorandum NMFS SEFC-278.

Patents and Technology Transfer

Dawson-Scully K, **Milton SL** (2010). NEUROPROTECTION FROM ANOXIA AND REPERFUSION INJURY COMPOSITIONS OF PKG PATHWAY ACTIVATORS AND METHOD OF USE THEREOF. Patent Pending Jun 9th 2010. ***United States Patent Office,* Serial number 61/353,033**.

Grants and Awards:

Active, external:

Florida Sea Turtle License Plate Grant. Tracking movements of juvenile green turtles in Lake Worth Lagoon. Role: Co-PI (Dr. A. Karjian, PI, HBOI). ($22,840)

Friends of Gumbo Limbo: Boosting immune function in GTFP turtles in rehabilitation through light therapy. Sarah L. Milton, Ph.D. (PI) March 2018 – December 2020. $10,472 (3% Foundation OH)

Friends of Gumbo Limbo: Looking for clues in human lymphatic failure to help explain fibropapillomatosis in sea turtles: a preliminary comparative pathology study. Heather Hettrick, Nova Southeastern University (PI). Co-PIs: Derek Burkholder, Nova Southeastern University; Sarah Milton, FAU ($6250, funded to NSU)

Active, internal:

FAU McGinty Scholar Award in Marine Biology. 7-1-18 – 6-30-20. $30K/year to support marine research.

Submitted 2020, not funded:

NSF: CNH-L: Beach Evolution and Adaptability to Coupled Human and Environmental Stressors (BEACHES): Linking beach responses to multi-objective coastal management strategies. Co-PI, $1.4 million

Previous

Florida Sea Turtle License Plate Grant. Incubation temperature effects on sea turtle hatchling fitness. Role: PI. $14,931, awarded. 5-1-17 – 11-31-18, 5% OH

FAU Undergraduate Research (OURI) award
Spring 2019, $600.00

FAU Summer Undergraduate Research Fellowship (SURF) award
Evaluating Morphodynamic Influences on Sea Turtle Nest Inundation
Sarah L. Milton, Ph.D. (PI) & Tiffany Roberts Briggs, Ph.D. (co-PI)
6-1-18 – 12-31-18
$5000

National Save The Sea Turtle Foundation: Beach dynamics, human use, and climate change: interactions that impact sea turtle nesting beaches. Role: PI (funded) $4500, 3% Foundation OH

FAU McGinty Scholar Award in Marine Biology. 7-1-16– 6-30-18. $40K/year to support research in marine biology.

NSF: Collaborator on Doctoral Dissertation Improvement Grant proposal (titled: Small RNA regulation and the evolution of extreme anoxia tolerance) $6K to Jason Podrabsky and Claire Riggs, Portland State U.

Walter and Lalita Janke Sustainability Science Research Fund Proposal 2016
Determining the relationship between beach morphology, flooding, and sea turtle nesting: Implications of the impact of sea-level rise on the coastal environment Role: Co-PI (funded) 5K

National Save The Sea Turtle Foundation: Beach dynamics, human use, and climate change: interactions that impact sea turtle nesting beaches. Role: PI (funded) $4500 (3% Foundation OH)

National Oceanic and Atmospheric Administration Milton (PI) 9/1/11 – 8-31/16
ECOHAB: Brevetoxin metabolism and physiology - a freshwater model of morbidity in endangered sea turtles. $643,000

American Federation of Aging Research Milton (PI) 7/1/08 – 12/31/10

Methionine sulfoxide reductase A and resistance to oxidative damage in an animal model of aging without senescence
$60,000

FAU Seed Grant – Research priority Area Dawson-Scully, PI, Milton, co-PI
1/1/12 – 12/31/13
Activating the PKG pathway as a means of neural protection from stroke-like injury
$19,724

Neuroscience Research Priority Grant award Milton (PI) 8-17-12 – 12-31-13
Neuronal Protection against oxidative stress via upregulation of MsrA.
$8500

NIH – NIA Milton (PI) 8/01/09-7/31/11
Project No. 1R15AG033374 - 01
Molecular mechanisms of oxidative stress resistance in an animal model of aging without senescence
$213,413

Caribbean Conservation Corp Milton (PI) 6/1/10 – 5/31/11
Project No. 10-007R
Quantifying the energetic cost of disorientation in loggerhead (*Caretta caretta*) and green (*Chelonia mydas*) hatchlings
$15,957

Morris Animal Foundation Milton (PI) 12/1/10 – 11/30/12
Determination of Innate Immune Function in the Loggerhead (*Caretta caretta*) and Green (*Chelonia mydas*) Sea Turtle by Flow Cytometry
$25,202

Funding Source/Agency: FAU Research Priority Area
FAU climate change initiative priority theme: research, engineering, and adaptation to a changing climate
Dates: 08/10 – 07/12
Amount: $500,000 Role: Collaborating Investigator/Team Member

Funding Source/Agency: FAU Research Priority Area
Brain function, damage and repair
Dates: 08/10 – 07/12
Amount: $500,000 Role: Collaborating Investigator/Team Member

Funding Source/Agency: FAU Foundation
Anemia induced cardiac hypertrophy in rainbow trout and the red-eared slider.

Dates: 2/1/08 – 12/31/11
Amount: $20,000 Role: PI

Caribbean Conservation Corp Milton (PI) 7/1/06 – 8/31/07
Stress Protein Expression as a Marker of Physiological Stress: Associations with Green Turtle Fibropapillomatosis
Role: PI
$21,519

FAU Travel Grant Milton 5/07
$893.00

NIH AREA Grant Milton (PI) 7/1/04 – 8/30/06
ROS defense mechanisms in brain reoxygenation.
Role: PI
$139,000 over 24 months

American Heart Association Grant-in-Aid Milton (PI) 7/01/04 – 12/31/06
Role of adenosine pathways in brain anoxic tolerance and reoxygenation survival.
Role: PI
$120,000 over 24 months

South Florida Water Management District contract Milton (PI) 10/1/04 – 8/30/06
Evaluation of physiological stress indicators in fishes to determination restoration success in the Kissimmee River.
Role: PI
$38,078 over 12 months

Florida Fish & Wildlife Conservation Comm. Milton (PI) 7/1/03 – 6/30/04
An improved non-invasive method to determine hatchling sex using estrogen:testosterone profiles in allantoic fluid and blood.
Role: PI
$16,816 for 1 yr.

American Heart Association Grant-in-Aid Lutz (PI) 7/01/02 – 6/30/04
Mechanisms of brain anoxia tolerance and the determination of molecular targets for stroke therapy. Role: Co-Investigator
$120,000 over 24 months.

Maytag Predoctoral Fellowship (U.M.) 1988 - 1991 (3 years support + stipend)
Rosenstiel Fellowship 1992 (RSMAS) (1 yr support + stipend)
Sigma-Xi Student Grant in Aid of Research 1993 $500

Instruction:

Courses Taught at FAU: (*New course or redeveloped after several years of not being offered due to loss of previous instructor)

Course	Institution	Dates	Approximate Enrollment
Integrative Biology I	Florida Atlantic University	2016-2018	20
Environmental * Physiology (graduate)	Florida Atlantic University	2005-present	11
Physiology of Marine* Animals (graduate)	Florida Atlantic University	2010-present	10
Comparative Animal Physiology	Florida Atlantic University	2003- present	45-130
Comparative Animal Physiology Lab	Florida Atlantic University	2003-present	30-100
Biology of Sea Turtles (graduate)	Harbor Branch Oceanographic Institute, Ft. Pierce, FL	2002-present	8
Seminar in Marine* Research (graduate)	Florida Atlantic University	2011 (fall)	25
Neuroscience Seminar (graduate seminar)	Florida Atlantic University	2008	15
Living Without Oxygen* (graduate seminar)	Florida Atlantic University	2006, 08	15
Respiratory Physiology unit (2^{nd} year medical school)	Schmidt College of Medicine Florida Atlantic University	2005-2009	50
Renal Physiology Unit (2^{nd} year medical school)	Schmidt College of Medicine Florida Atlantic University	2005-2009	50
Anatomy and Physiology I and II	Florida Atlantic University	1995-2016	220/semester
Directed Independent Study	Florida Atlantic University	1996-present	2-4/semester
Undergraduate Honors Thesis	Florida Atlantic University	ongoing	1-2/semester
Masters Thesis Supervision	Florida Atlantic University	ongoing	2-4
Ph.D. Dissertation Supervision	Florida Atlantic University	ongoing	2-4

Graduate Students Chaired (Masters):

Rebecca Cheeks M.S. '04 The effect of imported sand on the nest environment of sea turtles

Brooke Botterill M.S. '05. Sex Determination of Loggerheads (*Caretta caretta*) via Hormonal Analysis by High Performance Liquid Chromatography.

Monica McGarrity M.S. '05 Stress Protein Expression And Marine Turtle Fibropapillomatosis

Amy Kowalski M.S. '05 Specific Dynamic Action in Hatchling and Post-Hatchling Green (*Chelonia mydas*) and Loggerhead (*Caretta caretta*) Sea Turtles

Lynda Dirk M.S. '06 Markers of Hypoxic Stress in Fish in the Kissimmee River, Florida

Alissa Deming M.S. '08 Stress protein and anti-apoptotic protein expression in green turtle (*Chelonia mydas)* fibropapillomatosis

Awards: Travel Award, FAU Graduate Student Association, 2008
Travel Award, International Sea Turtle Symposium, 2008
Travel Award, International Association for Aquatic Animal Medicine, 2008

Angela Bancalari M.S. '09 Vascular endothelial growth factor (VEGF), Bcl-2, and Bax expression in fibropapilloma tumor tissue and skin tissue of sea turtles

Natasha Jensen M.S. '09 Effects of mid-incubation egg movement on loggerhead (*Caretta caretta)* turtle hatch success and embryo development on Singer Island, Palm Beach County, Florida

Lynsey Bruce M.S. '10 Methionine sulfoxide reductase A in an animal model of aging without senescence

Awards: Best poster presented by a first year student, FAU COS Research Day 2009

Sean Williams M.S. 2012 Quantifying the energetic cost of disorientation in sea turtle hatchlings

Rachelle Shaw M.S. 2012 non-Thesis

Heather Chada M.S. 2013 non-Thesis

Patricia Sposato-Ploski, M.S. 2014
Ecosystem Health and Environmental Influences on Innate Immune Function in the Loggerhead (*Caretta caretta*) and Green (*Chelonia mydas*) Sea Turtle

Awards: Friends of Gumbo Limbo Graduate Scholarship 2010

Andrea Reis M.S. 2015
Determination of sex in sea turtle hatchlings by High Performance Liquid Chromatography

Awards: National Save the Sea Turtle Foundation Scholarship

Karen Pankaew M.S. 2015
Quantifying the energetic cost of disorientation in sea turtle hatchlings

Awards: Friends of Gumbo Limbo Graduate Scholarship, 2014
Boyd Lyon Student Award for Best Poster. Southeast Regional Sea Turtle Meeting, 2015.
Archie Carr award winner for best student oral presentation, Biology. 36th Annual International Symposium on Sea Turtle Biology and Conservation, 2016, Lima, Peru.

Rachel Bladow MS, 2017
Beach dynamics, human use, and climate change: interactions that impact sea turtle nesting beaches

Awards: FAU Excellence in Scholarship 2016
3MT heat winner and People's Choice award 2017

Ryan Bruellman MS, 2017 Non-Thesis

Christopher Henaghan (MS, start 2016)

Awards: National Save the Sea Turtle Foundation Scholarship 2017

Victoria Garefino (MS, 2020)

Awards: Friends of Gumbo Limbo Graduate Scholarship 2018

Heather Seaman (MS, Marine Sci, 2020)

Ivana Lezcano Serra (MS, Envir Sci, start 2020)

Awards: Best Student Presentation Award, Gopher Tortoise Council Annual Meeting (Fall 2018)
FAU Provost Fellowship Recipient (Fall 2018)
Charles E. Roberts Environmental Science Research Award
2020 3MT Preliminary heat 1st place winner

Ali Courtmanche (MS 2020)
Alyssa Dorfman (MS, Marine Sci, start spring 2019)
Abigail Chaney (MS, start fall 2020)
Lisa Anne Esposito (MS, start fall 2020)

Graduate Students Chaired (Doctoral):

Shailaja Kesarju, Ph.D. 2009 Molecular mechanisms of neuroprotection in the anoxia tolerant freshwater turtle

Awards: Lifelong Learning and Aging Fellowship for Doctoral Students FAU COS 2008
Lifelong Learning Society Graduate Fellowship, FAU 2008
Vincent Saurino Fellowship for graduate students in Biological Science, Dept. Biological Sciences, FAU, 20007
Young Investigator Award, Society for Experimental Biology and Medicine, 2007
Comparative and Evolutionary Physiology Section Travel Award, Experimental Biology, 2007.
Best Poster Award, CESCOS Research Day, FAU 2007
Graduate Fellowship for Academic Excellence, FAU 2006
Phi Kappa Phi student scholarship, FAU 2005
Newell Doctoral Fellowship, FAU, 2004

Gauri Nayak, Ph.D. 2009 (with H. Prentice) Determining future targets and neuroprotective cascades in anoxia and oxidative stress in *Trachemys scripta elegans*

Awards:
2009 Delores A. Auzenne Fellowship sponsored by the State University System**.**
2008 Dr. Vincent Saurino Scholarship, Biology Department, FAU
2008 Lifelong Learning Society Graduate Fellowship, FAU
2008 Foundation Fellowship, Florida Atlantic University
2008 Delores A. Auzenne Fellowship sponsored by the State University System
2008 Selected as a promising young researcher and a recipient of Sigma Xi Grant in- Aid of Research
2008 Travel Award, International Stroke conference, New Orleans.
2007 Best poster Award, Biomedical Science Research Day, FAU

2007 Delores A. Auzenne Fellowship sponsored by the State University System
2006 FAU Graduate Fellowship for Academic Excellence
2006 Delores A. Auzenne Fellowship sponsored by the State University System

Sharon Homer-Drummond Ph.D. 2012 Parameters Impacting the Reproductive Fitness of *Tursiops truncatus* (Atlantic bottlenose dolphins): Interactions Between Native Endocrinology and Endocrine-Disrupters

Awards:
FAU Student Government Travel Grant, 2006:
FAU Gustin Scholarship, 2008:
FAU Graduate Diversity Fellowship, 2008
FAU Memorial Scholarship, 2008 –2010
Student Government Scholarship, 2008 –2009
FAU, Private Donor Scholarships, Captain Nathan Award, 2009
FAU National Alumni Association, Alumni Scholarship, 2010
FAU Student Government Travel Grant, 2010:
FAU College of Science Travel Grant, 2010
FAU, inter-departmental scholarship. Biological Sciences, Charles E. Schmidt College of Science, 2011
Todd Auster Memorial Fellowship. Florida Atlantic University National Alumni Association, 2011

Lawrence Wood Ph.D. 2014 Origins, Movements, and Foraging Behavior of Hawksbill Sea Turtles (*Eretmochelys imbricata*) in Palm Beach County Waters, Florida, USA

Awards:
Florida Sea Turtle License Plate Program 2011
National Save the Sea Turtle Foundation 2010, 2011, 2012, 2013, 2014
Bay and Paul Foundations Award, 2009 - 2011

Stacee Caplan, Ph.D. (with K. Dawson-Scully) 2015 Identifying discrete cellular mechanisms of anoxia tolerance

Courtney Cocilova Ph.D. 2017
Brevetoxin metabolism and physiology - a freshwater model of Morbidity in endangered sea turtles

Awards:
Friends of Gumbo Limbo Graduate Fellowship, 2014
Travel Award: 16th International Conference on Harmful Algae (ICHA) Wellington, New Zealand 2014

Travel Award, International Sea Turtle Symposium, 2014
Graduate and Professional Student Association Research Day, 2015 Poster (1st place winner in "Marine Biology" category).
College of Science Research Day, Boca Raton, FL 03/2015, Poster (3rd place winner)
Travel Award: 17th International Conference on Harmful Algae (ICHA) Florianopolis, Brazil, 2016
FAU Excellence in Scholarship 2016
Travel Award: Society for Comparative and Integrative Biology, New Orleans, LA, 2017

Olena Makhnyeva 2018
The PKG pathway for neuroprotection in the ischemic brain

Awards:
Newell Doctoral Fellowship, FAU, 2013
Newell Doctoral Fellowship, FAU, 2014
2014 FAU Dissertation Award
GPSA Research Day 2015, Boca Raton, FL, [Poster] (1st place winner in "Interdisciplinary").

Melissa Reiterer 2018
Methionine sulfoxide reductase and oxidative stress in the anoxia tolerant turtle

Awards:
Graduate Diversity Fellowship 2012
Vincent Saurino Fellowship 2012
FAU Memorial Scholarship 2012
Dissertation year award fall 2012
Newell Doctoral Fellowship 2012
Newell Doctoral Fellowship, FAU, 2013
FAU Memorial Scholarship 2013
GRIP grant, FAU 2015
FASEB Mentored Presenter, Experimental Biology 2017 (mentoring plus travel reimbursement)

Cody Mott start fall 2019

Heather Seaman start fall 2020

<u>Post-doctoral fellows</u>

Itzel Sifuentes Fullbright post-doctoral fellow: August 2015- October 2016
McGinty post-doctoral scholar October 2016 - 2019

Graduate Student Committees (Masters):
J. William Thompson (Lutz)
Deborah Knickerbocker (Lutz)
T. Todd Jones (Lutz)
Erin Redfearn (Wyneken)
Elizabeth Orcutt
Andrew Foster
Robert Delaney (not completed)
Scott Gesualdi
Aleksandr Gerasimov (not completed)
Victor Dea
Natasha Bower (not completed)
Grace Kwong (Wyneken)
Zack Rickaway (Prentice)
Carrie Kemmerer
Kimberly Blair (Wyneken)
Brandi Pridemore (MST)
Zach Rickaway
Odette Simpson
Miranda Hoover (MA)
Carrie Kemmerer (MA)
Connor Irwin (Koch)
Cody Mott (Salmon)
Jessica Bruso (MA)
Carlos Gonzalez (MST)
Ashley Campbell (Maples)
Emmanuel McDonald (Ayanathan)
Emily Weston (Wyneken)
Zachary Anderson (Wyneken)
Jennifer Chastant (Gawlik)
Raquel Benasayag (Dawson-Scully)
Veronica Runge (Herzing)
Eloise Cave (MS, Kajiura)
Jessica Huffman (MS, Frazier)
Gibran Casas (MS, Owens)
Adam Matulik (MS, Theissen)
Nirthieca Suthakaran (MS, Binninger)
Christie Gonzalez (MA, McCarthy)
Kimberly McFarlane (Koch, MST)
Jessica Noble (MS, Baldwin)
Caitlin Shea-Vantine (MS, Kajiura)
Heather Smith (MS, Salmon/Perrault)
Grace Dodillet (MS, Karjian)

Jessica Gravelle (MS, Wyneken)
Trevor Davis (MS, Wyneken)
Jacqueline Evans (MS, Gawlik)

Graduate Student Committees (Doctoral):
Garth Herring (Gawlik)
Ian Moench (Prentice)
Tricia Meredith (Kajiura) 2011
Justin Perrault (Wyneken) 2013
Gabrielle Bortot (McCarthy) 2015
Chandana Buddhala (Wu) 2012
Adam Matulik (Theissen) not completed
Janet Menzie (Wu) 2016
Jennifer Chastant (Gawlik) 2016
Jennifer Krill (Dawson-Scully) 2018
Kyle Newton (Kajiura) 2017
Boris Tezak (PhD, Wyneken) 2019
Alexandra Lolavar (PhD, Wyneken) ongoing
Katherine Galloway (Porter, PhD) ongoing
Shannon Dougherty (PhD, Binninger) ongoing
Mary Elizabeth Bowers (Ph.D., Kajiura) ongoing

Graduate Student Committees (Doctoral Supervisory Committees):
As Associate Director of the PhD program in integrative Biology, I sat on the initial Supervisory committee for all new PhD students. This was to ensure that all students are making adequate progress their first year and that they and their supervisors understand the various regulations of the IB program; this requires approximately 1h meeting for each student in their first year, for 17 students in 2018-2019.

External reviewer for PhD defense:
Srinivasan (Sri) Narayanan, U. Miami School of Medicine 2015
(Doctoral Supervisor: M. Perez-Pinzon)
Kevin Koronowski, Ph.D. defense, U. Miami Neuroscience Program, 8-25-17
(Doctoral Supervisor: M. Perez-Pinzon)

Directed Independent Studies/ Honor's Thesis (undergraduate/graduate)
>150 to date since 2002

2020

2019:

Kaitlin Grell (Awardee –Undergraduate Research Fellowship)
LisaAnne Esposito
Carly Scarbrough
Rose Ferron
Melissa Cordoba
Karina Atienza
Taylor Snyder
Ferlanda Fortune

2018:
John Pearl (undergraduate volunteer)
Kaitlin Grell (Awardee – Summer Undergraduate Research Fellowship)
Sydney Renstrom (Awardee – HBOI Kelly Foundation Research Fellowship)
LisaAnne Esposito
Kimberly McFarlane (Graduate DIS, summer 2018)
Carly Scarbrough

2017:
Morgayne Leech
Paul Nagib
Kaitlin Grell
Xavier Jaques
Samantha Berner
Madeline Rubio
Connor Milton

2016:
Morgayne Leech
Diego Manuel (High School)
Austin Cavallo (High School)

2015:
Jean, Christina (Honors) Karlis Justis (PhD. Lab rotation)
Picado, Janisse

2014:
Caldas, Ricardo
Jean, Christina (Honors) - **Investigating the Expression of Uncoupling Protein 2 in The *Trachemys scripta* Brain.**
Allgood, Hillary E.
Menashe, Megan
Richar, Jenifer M.

Vaskovic, Christine
Dinnerstein, Joseph S.
Thornburg, Matthew P. (High School)
Thornburg, Thomas S. (High School)

2013:
Christina Jean (Honors)
Ricardo Caldas (Honors 2014)
Ashwin Kalyandurg
Polina Ivko

2012:
Jonatha Carr **Graduate DIS**: Mickey Gaffney
Raissa Macintosh (Honor's)
Olven Campos (URM)
Polina Ivko

2011:
Rusheena Bartlett (URM)
Olven Campos (URM)
Raissa Macintosh (Honors)
Jonatha Carr
Mickey Gaffney
Veronica Runge
Courtney Cocilova
Kevin Tootle

2010:
Nicholas Joissant **Graduate DIS**
Young Le Shivanie Saith
Elizabeth Hodges
Rusheena Bartlett
Jonatha Carr
Mickey Gaffney

2009:
Douglas Ferraz **Graduate DIS**
DJ Thomas Carlos Gonzalez
Anila Quesreshi
Erica Danaee
Nicholas Joissant

Young Le
Rusheena Bartlett

2008:

Lynsey Bruce	**Graduate DIS**
Nabila Quadira	Jeffrey Boatright
Sandra Lexine	Stacee Caplan
Vanessa Watts	Gabrielle Bortot

2007:
Valmire Valcine
Jeffrey Boatright
Monica Meija
Jonathon Campbell
Analisa Edell
Valentina Schneeberger
Bobbie-Gaye Dunn
Sharrell Cooper
Joy Barcomb
Laura Martinez
Indira Perez
Catherine Gonzalez
Lynsey Bruce

2006:
Jeffrey Boatright
Jonathon Campbell
Bobbie Dunn
Catherine Gonzalez
Sharrell Cooper
Deonne Thomas
Laurie Kara

2005:
Vanessa Ramos
Luz Bonahora
Sana Ahmed
Jordan Homen
Valerie Warmuth
Ruth Chery
Smadar Shlomovitz
Lindsey Frier
Ashley King
Christina Macon

Bernard Renner
Jordan Homen
2004:
Judith Formul
Samuel Boyd
Chris Sitler
Allison Hall

Prior to 2004:
Bridget Miller
Kellane Howell
Karon Royal
Denise Jordan
Dawn Nosel
Patricia Sposato
Louis Jean Sanon
Wendy Lester
Vitra Mitchell
Ann Jeyarajah
Elizabeth Zoch
Barbara Green
Aleksander Gerasimov
Angela Hoffman
Bernard Renner
Robert Delaney

Service and Professional Development:

Departmental Service:

Associate Director of the Integrative Biology PhD Program 7/1/16 – 7/19
Departmental Assessment of Education Committee 2007-2017
Personnel Committee, Dept. Biological Sciences 2007- present
Search Committee Chair: Behavioral Ecologist, FAU, Spring 2014 – recruited Dr. Rindy Anderson
MS Admissions Committee, 2016-2017
Panel speaker – "Balancing family and a research career" URM/Honor's class, fall 2011
Search Committee: Evolutionary Biologist, FAU, 2013-14 – recruited Dr. Colin Hughes
Guest lectures: IB seminar, fall 2011 – research overview, 2012, 2103 – Scientific teaching

College Service:

Faculty Advisor: Association of Biological and Biomedical Students at FAU (ABBS) 2015-present
Co-director: Program for Master of Science in Marine and Coastal Science, 2015-present
Developed MS Program in Marine and Coastal Science 2015-2017
With P. McCarthy, awarded 2 Provost Fellowships ($2K/year for two years each) plus $5K recruitment grant
IB Program Committee (Chair), 2016-present
IB Admissions Committee (Chair), 2016- present
CES College of Science Graduate Program Committee, 2017-present
CES College of Science Executive Committee, 2017 - present
Student Poster Judge, Indian River Lagoon Symposium 2017
Reviewer: HBOI Specialty License Plate Grants 2016
Reviewer: Brain Institute Seed Grant program 2017
Dean's Planning Committee 2012
Neuroscience Curriculum Committee, College of Science 2007-2009
Research Priorities Steering Committee: Brain Damage and Repair 2010

Lectures:

Current Issues in Biomedicine (FAU undergrad class): Survival without oxygen in the freshwater turtle *Trachemys scripta*. Annual presentation: 2012-2018
Neuroscience seminar series, FAU. To Anoxia and Beyond: Living without oxygen and surviving afterwards 2012
URM/Honors class, spring 2011 – research overview
FAU Pre-professional class , fall 2011 - research overview

University Service:

Service on the Comparative medicine Advisory Board 2019
Chair of Eminent Scholar Review Committee for Dr. Scott Kelso (2017-2018)

Environmental Science Graduate Program Committee 2009-present
Organized Marine Biology at FAU Table for 2016 High School Expo (10/16)
Search Committee: Dean, College of Science 2014-2016 – recruited Dean Ata Sarajedini
FAU Institutional Animal Care and Use Committee 2006 - 2015
Search Committee: HBOI Veterinarian, 2013-2015 – recruited Dr. Anne Paige-Karjian
Departmental representative to FAU graduation ceremonies – 2015, 2107, 2018, 2019
Search Committee: Senior Neuroscientist, FAU-Max Planck, spring 2012
Harbor Branch Program Review Board 2009-2010
Environmental Science Graduate Admission Committee 2008-2009

Professional Activities and Memberships:

Service to the Discipline:

President and Meeting Organizer: Southeast Regional Sea Turtle Network 2018 Meeting. Organized and ran the biannual meeting of over 350 sea turtle biologists, volunteers, and conservations from around the United State, Puerto Rico, and the US Virgin Islands. Feb 12-16, 2018, Myrtle Beach, SC. Currently serving as Vice-President until 2020.

External Reviewer:
Manuscripts (most multiple times): Journal of Coastal Research, Polar Biology, Functional Ecology, European Journal of Biochemistry (FEBS), Marine Biology, Brain Research Bulletin, Journal of Neurophysiology, Restoration Ecology, Comparative Biochemistry and Physiology, Journal of Cerebral Blood Flow and Metabolism, Molecular and Cellular Biochemistry, Tissue and Cell, American Journal of Physiology, South American Biology, South American Journal of Herpetology, Cellular Molecular Life Sciences, Experimental Brain Research, Journal of Biomedical Science, Journal of Experimental Biology, Journal of the Marine Biological Association UK, Mutation Research, Genetic Toxicology and Environmental Mutagenesis, Polar Biology, BMC Genomics, PLoS I, Neuroscience, Endangered Species Research, Journal of Thermal Biology, Marine Pollution Bulletin, International Journal of Molecular Medicine , Science of the Total Environment, Biology Letters, Journal of Wildlife Management, Oncology Letters, Marine Environmental Research , Biochimica and Biophysica Acta, Free Radical Research, Steroid Biochemistry, Australian Journal of Zoology, Journal of Experimental Marine Biology and Ecology, Frontiers in Physiology

Textbooks: John Wiley and Sons, Inc., Sinauer Associates, McGraw Hill; Campbell Publishing

Grant Reviewer: National Oceanographic and Atmospheric Association; Austrian Science Fund; the Biotechnology and Biological Sciences Research Council (BBSRC, United Kingdom); National Science Foundation; Florida Fish and Wildlife Commission, Society for the Study of Amphibians and Reptiles' Roger Conant Grants in Herpetology; National Institute of Health, **NSF pre-proposal review panel**: Integrative Ecological Physiology. April 2016, Washington DC.

Meetings*:* International Symposium on Cerebral Blood Flow, Metabolism, and Function: Abstract Reviewer 2006 - 2013

Contributing Writer: Journal of Experimental Biology 2003 – 2009

Service to the Community/Public:

Career Days: Marine Biology – La Salle High School, Miami, FL 2000

Career Days: Marine Biology – Belen Jesuit Preparatory School, Miami FL 2002, 2003
Guest lecture: Biology of Diving – Marine Science Camp, Jupiter, FL 2003
Classroom presentations on sea turtle biology: St. Philips School, Miami, 2005, 2006(2), 2007(2)
Science Olympiad: Herpetology (Sr. High), Reptiles and Amphibians (Middle School) – FAU: 2008, 2009
Classroom presentations on sea turtle biology: Morikami Elementary School, Boca Raton, FL, 2011.
Invited speaker Eco-Watch Lecture Series, Gumbo Limbo Nature Center, Boca Raton, FL, October 2011.
Classroom presentation (x2) on sea turtle biology and anoxia tolerance: Palmer Trinity High School, Miami, FL March, 2014
Classroom presentation on research and on being a woman scientist: RISE program, Florence Fuller Childhood Development Center, Boca Raton, Feb 2015.
Taught Boy Scout merit badge: Marine Science. Troop 76, Coral Gables, FL 2015
Organized Marine Biology at FAU Table for 2016 High School Expo (10/16)
Sea Turtle Awareness month: presented FAU research on sea turtles and beach habitats, climate change, Gumbo Limbo Nature Center, 3-25-17
Museum of Discovery and Science, Ft. Lauderdale, presented information table on our sea turtle research for World Ocean's Day (6/2/17)
Riptide Music Festival, Ft. Lauderdale , presented information table on our sea turtle research Dec. 3, 2017
Sea Turtle Day: presented FAU research on sea turtles and beach habitats, climate change, Gumbo Limbo Nature Center, 2-24-18. Organized FAU sea turtle graduate students for FAU Gallery interactions with the public.

Professional Development:

Memberships
American Physiological Society
Sigma Xi: The Scientific Research Society
Society for Experimental Biology
American Society of Ichthyologists and Herpetologists
American Gerentological Society

Honors and Awards
National Academies Education Fellow in the Life Sciences 2008-2009
Research Associate Professor of the Year (2012) CES College of Science, FAU

Press
Ft. Lauderdale Sun-Sentinel, August 31, 2009, By William E. Gibson: Turtles, Sea Snails and Stimulus Cash
South Florida TV2: The Morning Show. September, 2009. Interview on Stimulus funding and

FAU research.
Huffington Post, July 2, 2010, By Dan Froomkin: Gulf Oil Spill: The Plight of the Sea Turtles.

Miami Herald, June 10, 2011, By Todd Wright: BP Oil Spill Plan Consults Miami Dead Man (interviewed for article)
Ft. Lauderdale Sun-Sentinel, December 28, 2011 Boca Raton Forum: On the Spot: Sea Turtles and Red Tide Research at FAU
FAU Main Home Page Story – December 2011: Florida's Red Tide Effect On Sea Turtles: FAU Professor Receives NOAA Grant to Study Endangered Species
Various press releases associated with NOAA grant, November – December 2011, including Sofpedia, The Ana Maria Islander, Global Adventures
Health & Medicine Week. Dec 9, 2016, 4200. Studies from Florida Atlantic University Have Provided New Information about Experimental Physiology (Lessons from nature: signaling cascades associated with vertebrate brain anoxic survival)
Commentator for New Scientist story on JEB paper (May 2016)
Wrote NOAA Harmful Algae website: Impacts of HAB's on turtles http://www.whoi.edu/redtide/page.do?pid=153356
Featured in German public radio science program Leonardo, station WDR5 (August 2016)
http://podcast-ww.wdr.de/medp/fsk0/118/1186123/wdr5leonardohintergrund_2016-08-15_extremetierehungernalsueberlebensmotto_wdr5.mp3
Featured on conservation website Mongabay (June 2017)

Popular press: Cocilova, Courtney* and Sarah Milton. Unraveling the Mysteries of Red Tides. Outreach magazine Vol 9(2), Pp 6-8, 2017.

2017/2018
Press release on in press paper in Journal of Experimental Biology picked up by **~150 TV, national, and international press, popular science magazine websites and blogs, and social media (December 2017 and January 2018**). TV stations that aired segment on the evening news included ABC news in San Francisco, Fox news in Washington DC, NY, Atlanta, Chicago, Orlando, Dallas, Miami, Houston, Austin, Phoenix, Palm Beach, Boca Raton, and Charlotte

Other news outlets included Newsweek, the Miami Herald, USA Today

International press included sites in the UK, Australia, South Africa, and Germany

Science magazine outlets (online) included National Geographic, Smithsonian, forthcoming print commentary in National Geographic and Nat Geo Kids.

Popular blogs/websites included iflScience, atlasobscura, sciencedaily

2019
Featured 4X in German public radio science program dealing with maritime issues "Mare"
https://www.radiobremen.de/bremenzwei/sendungen/mare-radio/mare-schildkroeten102-popup.html

2020
Interviewed for Miami Herald article on seizure of hawksbill turtle shells in Miami by US Customs. (6/13/2020)
https://www.miamiherald.com/news/local/environment/article244900152.html

Affiliations:
2016 – **present** Member, FAU Brain Institute
2016 – **present** Member, FAU pillar: Healthy Aging
2016 – **present** Member, FAU pillar: Marine and Environmental Science (Harbor Branch)
2008 – present Member, FAU Center for Molecular Biology and Biotechnology (CMBB)
2005- 2011 Joint appointment, Assistant Professor, Dept of Biomedical Science, Florida Atlantic University

BIOGRAPHICAL SKETCH

Provide the following information for the Senior/key personnel and other significant contributors.
Follow this format for each person. **DO NOT EXCEED FIVE PAGES.**

NAME: Murphey, Rodney

eRA COMMONS USER NAME (credential, e.g., agency login): RMURPHEY

POSITION TITLE: Professor

EDUCATION/TRAINING:

INSTITUTION AND LOCATION	DEGREE *(if applicable)*	Completion Date MM/YYYY	FIELD OF STUDY
University of Minnesota	B.S.	1965	Zoology
University of Minnesota	M.S.	1967	Zoology
University of Oregon	Ph.D.	1970	Biology

A. Personal Statement

I have considerable administrative and training experience in academic and federal institutions that are relevant to the proposed training program and am committed to supporting trainees gaining the skills, credentials and experiences needed to successfully transition into careers in the biomedical research workforce. I have a long history of training, including 20 PhD students and 10 postdoctoral fellows and their careers are representative of the career trajectories of the present population of students including positions in the following areas; standard academic tracks, work in the biotech industry, science administration and the law. I am presently the Associate Vice President of Academic Affairs for the MacArthur campus of FAU in Jupiter Florida. Until 2019, I was Chairman of Biological Sciences at FAU, the largest department in the institution and Director of the Integrative Biology PhD Program. Six years ago, I founded a neuroscience group on the FAU Jupiter campus in order to develop collaborative programs with Scripps Institute (TSRI) and Max Planck Florida Institute (MPFI). My most recent relevant training efforts have been to help assemble a joint PhD program with Max Planck Florida where we collaborate to recruit and train students in the neurosciences. This program has now expanded to include the International Max Planck Research School that is a joint program between Max Planck and FAU, the only such program outside of Germany. I serve as one of four “Speakers” for the IMPRS program one each from; FAU, Max Planck Florida, University of Bonn, and the Max Planck in Bonn known as CAESAR. Some of my experience that is relevant to the present proposal was my service as PI (Evelyn Frazier as co-PI) for an NSF Undergraduate Mentoring and Research Program (2009-2013) to serve underrepresented students and place them in research labs here at FAU and we have kept the program running through 2020. I also served as Program Director for two successive HHMI Undergraduate Initiative grants during my tenure at the University of Massachusetts Amherst: from 1992-1997 and 1994-2000. I served as Program Director for Developmental Neuroscience at NSF (1987-1989) and on NIH Study Section MDCN1 (1999-2004).

B. Positions and Honors

Positions and Employment

1971-1974 Assistant Professor, Department of, Zoology University of Iowa, Iowa City, Iowa
1975-1983 Associate Professor, Department of Biology State University of New York Albany, New York
1983-1987 Professor Department of Biology, State University of New York Albany, New York
1985-1989 Director, Neurobiology Research Center, State University of New York Albany, New York
1987-1989 Program Director, Developmental Neuroscience National Science Foundation, Washington, D.C
1989-1994 Director, Neuroscience and Behavior Program University of Massachusetts, Amherst Mass
1994-2005 Director, Molecular and Cellular Biology Program, University of Massachusetts, Amherst, Mass

2006-2019 Chairman, Department of Biological Sciences, Florida Atlantic University, Boca Raton FL
2008-2019 Director of the Integrative Biology PhD Program
2013-2019 Director Life Science Initiative, FAU Jupiter, FL
2006- Professor, Dept of Biological Sciences, FAU
2019- Associate Vice President for Academic Affairs

Other Experience and Professional Memberships

1986-1993 NIH Javits Neuroscience Investigator
1996 Faculty Fellowship for Outstanding Research, UMass
1987 The President's Award for Excellence in Research, SUNY at Albany
1986 Grass Traveling Scientist
1968-1970 NIH Predoctoral Fellow

C. Contributions to Science

Development and degeneration of synapses. The primary focus of my lab is the development and degeneration of synapses in the central nervous system. Our goal is to understand synaptic plasticity and we combine molecular genetics, cellular neurophysiology and confocal microscopy to study these issues in model genetic systems. The tools we use include, lasers to ablate single neurons in living animals, genetics to manipulate neuronal circuits and a variety of electrophysiological methods to test synaptic function. Our focus in recent years has been to look at the function of axon guidance molecules and their new-found roles as synaptogenic molecules in Drosophila. One on-going project looks at netrin and its receptor frazzled and their roles in synaptogenesis.

a. Orr, BO, Borgen, MA, Caruccio, P, Murphey, RK. (2014) Netrin and frazzled regulate presynaptic gap junctions at a Drosophila giant synapse. J Neurosci **34**(16):5416-5430.
b. Godenschwege TA, Murphey RK. Genetic interaction of neuroglian and Semaphorin1a during guidance and synapse formation. (2009) J Neurogenet. **23**:147-155
c. Godenschwege, TA, Hu, H, Shan, X, Goodman, CS and Murphey, RK. (2002). Bi-directional signaling by semaphorin1a during central synapse formation in Drosophila. Nature Neuroscience **5**: 1294-1301.
d. Godenschwege, TA, Simpson, JH, Shan, X, Bashaw, GJ, Goodman, CS and Murphey, RK. (2002), Ectopic expression in the giant fiber system of Drosophila reveals distinct roles for Robo, Robo2 and Robo3 in dendritic guidance and synaptic connectivity. J Neurosci **22**: 3117-3129.

A second series of experiments examines the regulation of these processes by protein modification such as ubiquitination.

a. Borgen MA, KD Rowland, BN Lloyd A Khan and RK Murphey (2017) "Axon termination, pruning, and synaptogenesis in the giant fiber system of *Drosophila melanogaster* is promoted by Highwire." Genetics (on line January 18, 2017). Selected for cover photo.
b. Grill B, Murphey RK, Borgen MA. The PHR proteins: intracellular signaling hubs in neuronal development and axon degeneration. Neural Dev. 2016 Mar 23;11:8
c. Uthaman, SB, Godenschwege, TA, Murphey, RK. (2008) The Drosophila ubiquitin conjugase Bendless: a developmental switch required for synaptic growth and maturation. J Neurosci 28:8615-8623.
d. Murphey, RK and Godenschwege, TA. (2002). New roles for ubiquitin in the assembly and function of neuronal circuits. Neuron 36: 5-8.

D. Additional Information: Research Support and/or Scholastic Performance

Ongoing Research Support

Max Planck 12/26/2020-05/07/2021
Integrative Biology and Neuroscience (IBNS); a Joint Graduate Program between the Max Planck Florida Institute and Florida Atlantic University
Role: PI

NIH 1T34GM136486 04/01/2020-03/31/2025

U-RISE at Florida Atlantic University

The central goal of this program is to expand the pool of students from Florida Atlantic University (FAU) who enter PhD, MD/PhD, or related programs in biomedical science.

Role: MPI

CV
PERAMBUR S. NEELAKANTA

ABRIDGED TO REFLECT:
Biomedical/Biocomplex/Bioinformatics/Neural Complex/ANN Areas

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PERAMBUR S. NEELAKANTA, PH. D., C. ENG., FELLOW IET (UK)
Professor (Electrical & Bioengineering Program)
Department of Computer and Electrical Engineering and Computer Science
Florida Atlantic University, Boca Raton, FL 33431, USA
neelakan@fau.edu

ACADEMIC QUALIFICATIONS

Ph. D. Electrical Engineering, Indian Institute of Technology, Madras, India 1975
M. Eng. Electrical Communication Engineering, Indian Institute of Science, Bangalore, India, 1968 (Distinction/First Rank)
B. Eng. Electronics and Communication Engineering, CEG/University of Madras, India, 1966

PROFESSIONAL AFFILIATIONS

- Fellow of IET (UK)
- Chartered Engineer/IEE (UK)

APPOINTMENTS

August 1991-Present	Professor (Tenured), FAU
July 1991-August 1991	Associate Professor (Tenured), FAU
July 1988-July 1991	Associate Professor (Tenure-track), FAU
Sept. 1987-June 1988	Associate Professor (Tenure-track), Dept. of Electrical Engineering, University of South Alabama, Mobile,
Sept. 1984-August 1987	Director of Electronics Program, RIT Research Corporation (a wholly-owned subsidiary of Rochester Institute of Technology), Rochester, New York 14623, USA).
June 1981-Sept. 1984	Senior Lecturer, National University of Singapore,
June 1978-May 1981	Associate Professor and Program Chairman, Electronics and Computer Science and Technology, University of Science, Penang, Malaysia.
June 1970-May 1978	Lecturer, Department of Electrical Engineering, Indian Institute of Technology, Madras, India
August 1968-May 1970	Lecturer, Department of Aeronautical and Aerospace Engineering, Indian Institute of Science, Bangalore, India

ACADEMIC PRODUCTS/ACCOMPLISHMENTS

(A) Publications In Refereed Journals: Total 160 +
(B) Conference Presentations/Proceeding Publications: Total 60 +
(C) Books: 10 Published + 1Under Contract

(D)	Ph. D. Dissertation/Thesis Supervised (Advisor):	20
(E)	MS/ME/M Tech Thesis Supervised (Advisor):	About 30+

Some Assorted (Exemplar) Publications: Chronological ... Related to Bioinformatics and Biomedical Engineering

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Book

Perambur S. Neelakanta: A Textbook of Bioinformatics: Information-theoretic Perspectives of Bioengineering and Biological Complexes. World Scientific, (Singapore/New-Jersey, USA): 2020

ISBN: 978-981-121-288-8 (hardcover)

Neural Complex/ANN/Biomed/Bioinformatics Related Dissertations/Theses

DISSERTATIONS

B. Sharma: de Novo Applications of Exploring mm-Wave Band and THz-spectrum Electromagnetics in Biomedical, Material science and Communications (Fall 2014).

S. Chatterjee: Bioinformatic Analysis of Viral Genomic Sequences and Concepts of Genome-specific Vaccine Design, (Spring 2013)

T. Arredondo: Studies on Information-Theoretics Based Data-sequence Pattern-discriminant algorithms: Applications in Bioinformatic Data Mining (December 2003)

D. De Groff: Stochastical Aspects of Neuronal Activity, Neural Network and Communication (Spring 1993).

THESES

S. Sharma: Cytogenetic Bioinformatics of Chromosomal Synteny Assessment between Two Species: Human versus Mouse, Human versus Medaka and Medaka versus Zebrafish (Fall 2015)

K. Jagdeshwari: Cytogenetic Bioinformatics of Chromosomal Aberrations and Genetic Disorders: Data-mining of Relevant Biostatistical Features (Fall 2012)

D. Pappusetty: Bioinformatics-inspired Binary image Correlation: Application to Bio-/Medical-images, Microarrays, Finger-prints and Signature Classifications (Fall 2011)

N. DuPont: Risk-evaluation in Clinical Diagnostic Studies: Ascertaining Statistical Bounds *via* Logistic Regression of Medical Informatics Data (Fall 2011)

S. Shankar: Noninvasive blood Glucose Monitoring: A Microwave-based Biosensor Development (Summer 2008)

M. Leesirinkul: A Study on Glucose Metabolism: Computer Simulation and Modeling (Summer 2005)

S. B. Pandya: Binary Representation of DNA Sequences towards Developing Useful Algorithms in Bioinformatics (Fall 2003)

Refereed Journal and Peer-reviewed Conference Publications: Biomedical/Biocomplex/Bioinformatics/Neural Complex/ANN etc.

P. S. Neelakanta, Iman Ahmed and D. De Groff: Estimation of purine/pyrimidine estimation at splice junctions in human biosequences: Relevant biomarker-based metric for cancer diagnostics, *European Journal of Bioinformatics*, 2020, vol. 5, 15-27.

M. Pavlovich, S. Chatterjee, A. Kats and P. Neelakantaswamy: Parvovirus B19 and autoantibodies reactive with ssDNA in lupus disease: Bioinformatics analysis and hypothesis. *MOJ Autoimmune Diseases*, 2017, vol. 2(1), 1-6.

D. De Groff and P. S. Neelakanta: Faster Convergence Artificial Neural Networks. International Journal of Computers and Technology, 2018, vol.17(1), 7126-7132

D. De Groff and P. S. Neelakanta: Predicting Hurricane Intensity via A Fast Convergent Artificial Neural Network. American Journal of Engineering Research., 2018, vol.7(7), 219-227

D. De Groff, R. Melendez and P. S. Neelakanta: Electric Power System Supporting a Smart-grid: ANN-Based Prediction of a Representative Load-Curve to Assess Power Consumption and Tariff . American Journal of Energy and Power Engineering, 2018, vol.5(3), 20-29

P.S. Neelakanta and S. Sharma: Estimating Maximum Plausible Conserved Synteny between Orthologous Genomes of a Species Pair Compared in an Exhaustive Search-space. *European Journal of Bioinformatics*. vol. 3, 2016, 01-09.

S. Chatterjee, P. S. Neelakanta and M. Pavlovic, A cohesive analysis of DNA/RNA sequences via entropy, energetics and spectral-domain methods to assess genomic features across single viral diversity, *International Journal of Bioinformatics Research and Applications*, vol. 11(4), 2015, 281-307

P. S. Neelakanta: Biohazard *incognito*: Potential health hazards due to proliferating usage of nonionizing radiation in the submillimeter wave though THz spectral range, Proceedings of National Conference on Recent Trends and Developments in Radiation Dosimetry, 09-10 October 2014, Chennai, India, pp. 1-2 (Invited paper)

P. S. Neelakanta and S. Pandya, T. V. Arredondo and D. De Groff: Heuristics of AI-based Search Engines for Massive Bioinformatic Data-Mining: An Example of Codon/Noncodon Delineation in a Binary DNA Sequence, Presented in 1st Indian International Conference on Artificial Intelligence, (IICAI-03), (December 18-20, 2003, Hyderabad, India)

P. S. Neelakanta and B. Sharma B. *de Novo* radio frequency ablation therapy: Application of unexplored electromagnetic spectral resources of mm-Wave/THz band in clinical ablation procedures- A review. *British Journal of Medicine & Medical Research*. 2013; vol. 3(4):1701-1730

K. Ramakrishnan and P. S. Neelakanta DNA Microarray Data Classification *via* Haralick Parameters, International Journal of Advance in Medical Science, vol.1(2) May 2013, 19-28

P. S. Neelakanta and B. Sharma, "Conceiving THz Endometrial Ablation: Feasibility, Requirements and Technical Challenges," IEEE *Transactions on Terahertz Science and Technology,* vol. 3, no. 4, 402-408, July 2013.

P. S. Neelakanta and B. Sharma, "Conceiving THz Endometrial Ablation: Feasibility,

Requirements and Technical Challenges," *IEEE Journal of Biomedical and Health Informatics*, vol. 17, no. 4, 813-819, July 2013.

P. S. Neelakanta and D. Pappusetty, Bioinformatics-inspired algorithms for 2D-image analysis-application to synthetic and medical images. Part I: Images in rectangular format, *International Journal of Biomedical & Clinical Engineering,* vol. 1(1), 2012, 14-38

P. S. Neelakanta, E. M. Bertot and D. Pappusetty, Bioinformatics- inspired algorithms for 2D-image analysis- application to synthetic and medical images. Part II: Images in rectangular format, *International Journal of Biomedical & Clinical Engineering*, vol. 1(1), 2012, 49-58.

P. S. Neelakanta, S. Chatterjee, D. Pappusetty, M. Pavlovic and A. Pandya: Information-theoretic Algorithms in Bioinformatics and Bio-/Medical-imaging: A Review. *Proc. IEEE International Conference on Recent trends in Information Technology*, (IEEE ICRTIT 2011), Chennai, India, pp. 183–188, 31 (June 3-5, 2011).

P.S. Neelakanta, M. Pavlovic and H. Zhuang: Editorial: Special Issue on Viral DNA Analysis and Rational Vaccine Design, *International J. Bioinformatics and Applications,* vol. *7(*3), 2011, 217-219

P. S. Neelakanta, S. Chatterjee, G. A. Thengum-Pallil: Computation of entropy and energetics profiles of a single-stranded viral DNA, *International J. Bioinformatics and Applications,* vol. *7*(3), 2011,239-261

P.S. Neelakanta, S. Chatterjee, M. Pavlovic, A. Pandya and D. De Groff: Fuzzy Splicing in Precursor-mRNA Sequences: Prediction of Aberrant Splice-junctions in Viral DNA Context, *Journal of Biomedical Science and Engineering*, vol. 4, 2011, 270-279

T. V. Arredondo, P. S. Neelakanta and D. De Groff: Fuzzy Attributes of a DNA Complex: Development of a Fuzzy Inference Engine for Codon-"Junk" Codon Delineation", *Artificial Intelligence in Medicine*, vol.35, 2005, 87-105

P. S. Neelakanta, T. V. Arredondo and D. De Groff: Redundancy Attributes of a Complex System: Application to Bioinformatics. *Complex Systems* (USA), vol. 14, 2003, 215-233

P. S. Neelakanta, M. Leesirikul Z. Roth and S. Morgera: A Complex System Model of Glucose Regulatory Metabolism, *Complex Systems*, vol.16, 2006, 343-367

P. S. Neelakanta, S. Pandya and T. V. Arredondo, Binary Representation of DNA Sequences Towards Developing Useful Algorithms in Bioinformatics The7th World Multi Conference on Systemics, Cybernetics and Informatics (SCI 2003), (July 27-30, 2003, Orlando, FL, USA), Vol. VIII, 195-197

P.S. Neelakanta, J.C. Park, and D. De Groff: Fuzzy Nonlinear Activity and Dynamics of Fuzzy Uncertainty, *Neurocomputing* (The Netherlands), vol.20, 1998, 123-153

P.S. Neelakanta, J.C. Park, and D. De Groff: Complexity Parameter vis-a-vis Interaction Systems: Application to Neurocybenetics, *Cybernetica* (Belgium), vol. XL (4), 1997, 243-253

P.S. Neelakanta, S. Abusalah, D. De Groff, R. Sudhakar and J.C. Park: Logistic Model of Nonlinear Activity in the Neural Complex: Representation via Riccati Differential Equation. *Cybenetica* (Belgium), 1996, vol. 39, No. 1, pp. 15-30.

D. De Groff, P.S. Neelakanta, R. Sudhakar and F. Medina: Collective Properties of Neuronal Activity: Momentum Flow and Particle Dynamics Representation, *Cybernetica*, (Belgium), vol. XXXVI (2), 1993, 105-119.

P.S. Neelakanta, and J. C. Park: Information-Theoretic Aspects of Neural Stochastic Resonance, *Complex Systems* (USA), vol.10 (1996), 55-71.

P.S. Neelakanta, S. Abusalah, D. De Groff, R. Sudhakar and J.C. Park: Csiszár's Generalized Error-Metrics for Gradient Descent Based Optimizations in Neural Networks Using Backpropagation Algorithm, *Connection Science* (UK), 1996, vol.8, No. 1, pp.79-114.

P.S. Neelakanta, S. Abusalah, R. Sudhakar, D. De Groff, V. Aalo and J. C. Park: Dynamic Properties of Neural Learning in the Information-Theoretic Plane, *Complex Systems* (USA), vol.9, (1995), 349-374.

J.C. Park, P.S. Neelakanta, S. Abusalah, D. De Groff and R. Sudhakar: Information-Theoretics Based Error-Metrics for Gradient Descent Learning in Neural Networks, *Complex Systems* (USA), vol.9, (1995), 287-304.

D. De Groff, P.S. Neelakanta, R. Sudhakar and F. Medina: Liquid-crystal Model of Neural Networks, *Complex Systems* (USA), Vol. 7(1), February 1993, 43-57

P.S. Neelakanta, D. De Groff and F. Medina: Representation of Hopfield's Biological Neural Network via Particle Dynamics Considerations. Presented in: International Joint Conf. on Neural Networks - IJCNN '93 (October 25-29, 1993, Nagoya, Japan).
.
D. De Groff, P.S. Neelakanta, R. Sudhakar, V. Aalo: Stochastical Aspects of Neuronal Dynamics: Fokker-Planck Approach, Biological Cybernetics, Vol. 69(2), June 1993, 155-164.

P.S. Neelakanta, R. Sudhakar and D. De Groff: Langevin Machine: A Neural Network Based on Stochastically Justifiable Sigmoidal Function. *Biological Cybernetics* (Germany), vol. 65-1991, 331-338.

M. Mobin, P.S. Neelakanta, K.L. Pilgreen and L.D. Aldes: Comparison of Linearly PredictedMultichannel EMG Signals: Amplitude and Phase Dissimilarities. Presented in: 1989 IEEE Engineering in Medicine and Biology Society 10th Annual International Conference. (November 4-7, 1988, New Orleans, LA). (Proceedings pp. 1728-1729).

P.S. Neelakantaswamy, K.F. Aspar, A. Rajaratnam and N.P. Das: A Simple Conductivity Meter for Applications in Clinical Chemistry, *Analytical Instrumentation* (USA), vol. 13(1), 1984, 69-78.

P.S. Neelakantaswamy, K.F. Aspar, A. Rajaratnam and N.P. Das: A Conductimetric Experiment to Assay Hemoglobin in Blood, *Med. and Biol. Eng. and Comput.* (UK), vol. 22, July 1984, 367-370.

P.S. Neelakantaswamy, K.F. Aspar, N.P. Das and A. Rajaratnam: Conductimetric Method of Determining the Hematocrit Value of the Blood, *Rev. Sci. Instrum.* (USA), vol. 54-(9), September 1983, 1186-1190.

P.S. Neelakantaswamy, K.F. Aspar, N.P. Das and A. Rajaratnam: A Dielectric Model of the Human Blood, *Biomed. Technik* (Germany), vol. 28(1-2), February 1983, 19-22.

P.S. Neelakantaswamy and F. Ah Meng: Bioassay Approach to Prescribe Safe-limits of Exposure to Non-ionizing Radiations in Electromagnetic Ecosystems, *Biometrical J.* (Germany), vol. 24(1), January 1982, 69-86.

P.S. Neelakantaswamy: Analysis of Arterial Blood-flow in a Primate Subject Exposed to Microwave Radiations, *J. Singapore Natl. Acad. Sci*. (Singapore), vol. 9 (1980), 81-84 (Published in 1982).

P.S. Neelakantaswamy, F. Ah Meng and Abu Hassan Mohd. Isa: Microprocessor-based Instrumentation to Monitor Microwave-interactions with the Physiological Activities in a Primate Subject, *Biomed Tech*. (Germany), vol. 26(6), June 1981, 140-146

P.S. Neelakantaswamy and K.P. Ramakrishnan: Microwave Interference with the Function of an Implanted Cardiac Pacemaker, *IEEE Trans. Elect. Mag. Compat*., vol. EMC-21-(3), August 1979, 276-276.

F.F. Papa, P.S. Neelakantaswamy and R. Sethuraman: Propagation of Light through Human-eye: A Model for the Retinal Spectral Response Characteristics, *Zeitschrift für Elek. Inform-u Energietechnik* (Germany), vol. 9(3), March 1979, 199-208.

P.S. Neelakantaswamy, K.K. Gupta and K. Basavaraju: A Non-invasive Partial-body Exposure Method for Measuring the Complex Permittivity of Biological Substances at Microwave Frequencies, *Med. and Biol. Eng. and Comput.* (UK), vol. 16(7), July 1978, 419-424.

P.S. Neelakantaswamy: Microwave-induced Injurious Effects on the Human-embryo in Utero, *Biomed. Tech*. (Germany), vol. 23(11), November 1978, 263-269.

P.S. Neelakantaswamy and K.P. Ramakrishnan: Microwave-induced Hazardous Thermal Stresses in the Ocular Lens of the Human-eye, *Biomed Tech*. (Germany), vol. 23(5), May 1978, 190-213.

P.S. Neelakantaswamy, V.C.V. Pratapa Reddy and N.S. Ramaswamy: Measurement of Respiration Using a Microwave Technique, *Electro-Tech.* (India), vol. XX, June 1976, 45-47.

V. Blazek, P.S. Neelakantaswamy and V.C.V.P. Reddy: Generation of Complex Waveforms for Biomedical Applications, *IEEE Trans. Biomed. Engineering,* vol. BME-22(11), November 1975, 535-536.

SYNERGISTIC ACTIVITIES

1. Associate Editor: International Journal of Biomedical & Clinical Engineering
2. Editorial Board Member: Electronic Science & Technology Application Journal
3. Reviewer: Journals like IEEE Trans., Electronics Letts. Etc.
4. Ph D. External Thesis Examiner: Several Universities in Common Wealth Countries including India (for Institutions like IITs and IISc)

CURRICULUM VITAE

Andrew V. Oleinikov

Institutional Affiliation
Professor, Department of Biomedical Science, Charles E. Schmidt College of Medicine, Florida Atlantic University

Email: aoleinikov@health.fau.edu

SHORT SUMMARY
Dr. Andrew V. Oleinikov, Ph.D., is a Professor of Biomedical Science at the Charles E. Schmidt College of Medicine, Florida Atlantic University. He got his M.S. in Engineering Physics from St. Petersburg Polytechnic University and his Ph.D. in Biology from Moscow State University. Dr. Oleinikov current research interests include functions of surface proteins of human parasite *Plasmodium falciparum* and mechanisms of parasite-host interactions, malaria vaccine candidates, molecular mechanisms of low birth weight in placental malaria, anti-adhesion and apoptosis-inducing drugs. In addition, he works on development of tools and technologies for single cell analysis and high throughput approaches, as well as functional role of a giant endocytic and signaling receptor megalin in various tissues. His research is being supported by numerous grants from National Institutes of Health and other sources.

EDUCATION

Ph.D. (1989) (1985-1988)	**Biology (Biochemistry/Molecular Biology)** Moscow State University, Moscow, Russia
M.S. (1977-1983) (HONORS)	**Engineering Physics** (specialization in **Biophysics and Molecular Biology**) St. Petersburg Polytechnical University, Physical-Mechanical Faculty, Department of Biophysics, St. Petersburg, Russia

EMPLOYMENT

2019 – present	**Professor,** Department of Biomedical Science, College of Medicine, Florida Atlantic University, Boca Raton, FL
2013 - 2019	**Associate Professor,** Department of Biomedical Science, College of Medicine, Florida Atlantic University, Boca Raton, FL
2004 - 2013	**Principal Scientist/Independent Lab,** Seattle Biomedical Research Institute, Seattle, WA
2000 - 2003	**Principal Scientist and Group Leader**, CombiMatrix Corp., Mukilteo, WA
1997 - 2000	**Research Assistant Professor**, Department of Pediatrics, Division of Nephrology School of Medicine, University of California, Davis
1995 - 1996	**Postdoctoral Fellow with Prof. S.P. Makker**, Department of Pediatrics, Division of Nephrology, School of Medicine, University of California, Davis
1991 - 1995	**Postdoctoral Fellow with Prof. R.R. Traut**, Department of Biological Chemistry, School of Medicine, University of California, Davis
1988 – 1991	**Research Scientist**, Protein Chemistry Lab, Institute of Protein Research, Russian Academy of Science, Pushchino, Russia.
1985 - 1988	**Graduate PhD Student with Prof. Yu.B. Alakhov (PhD Dissertation defended at Moscow State University in 1989),** Protein Chemistry Lab, Institute of Protein Research, Russian Academy of Science, Pushchino, Russia.
1983 - 1985	**Research Associate,** Protein Chemistry Lab, Institute of Protein Research, Russian Academy of Science, Pushchino, Russia.

PATENTS: Seven issued US Patents

EXTRAMURAL GRANTS

Short summary. Dr. Oleinikov has a substantial history of funding by various external agencies for the **total of more than 30 million dollars**. He was awarded more than **2.5 million dollars in *direct cost*** on external grants from NIH which he obtained as the ***sole principal investigator***. In addition, he was a collaborator on two consortium grants from Bill and Melinda Gates Foundation, on which he has also served as the PI at the Seattle Biomedical Research Institute in 2011 – 2013 for the total amount of more than **28 million dollars**.

External grants during last 5 years at FAU

ONGOING Research Support

NIH R21AI137721-01 (Oleinikov and Nefzi, MPIs) 05/18/2018 – 04/30/2020 (NCE till 04/30/2021)
NIH/NIAID Direct cost $275,000; **Total cost: $476,438**
High throughput screening for anti-adhesion drugs against placental and cerebral malaria
Role: PI

COMPLETED Research Support

1R21AI105506-01A1 (Oleinikov, PI) 02/01/2016 – 01/31/2019 (NCE till 01/31/2019)
NIH/NIAID Direct cost $275,000; **Total cost: $411,125**
Mechanisms of placental dysfunction in pregnancy malaria
Role: PI

1R21HD092779-01 (Du and Oleinikov, MPIs) 07/01/2017 – 06/30/2019
NIH/NICHD Direct cost $275,000; **Total cost: $400,154**
Placenta-on-a-Chip Sensing Platform to Study Placental Malaria
Role: MPI

1R41AI129130-01A1 (Oleinikov, PI) 08/01/2017 – 06/30/2018
NIH/NIAID Direct cost $125,000; **Total cost: $150,000**
Highly sensitive isothermal method and instrument for field diagnostics to facilitate malaria eradication
Role: PI

R01HD058005 (Oleinikov, PI) 12/18/2008 – 11/30/2014
NIH/NICHD Total cost $2,334,148
Pathways of Maternal Anemia
Role: PI

R01AI092120-01 (Oleinikov, PI) 03/01/2011 – 02/28/2016
NIH/NIAID Total cost $1,629,560
Identification of vaccine candidates against severe malaria
Role: PI

R21AI064503-01 (Oleinikov, PI) 09/21/07-08/31/09
NIH/NIAID Direct cost $275,000
High throughput analysis of malaria antigens
Role: PI

1364 (Duffy, PI) 07/31/2005-12/31/2012
FNIH/Grand Challenges in Global Health Direct cost $17,830,000
Protective immunity against severe malaria in young children (Consortium grant)
Role: Collaborator (PI at SBRI 2/1/2011 – 12/31/2012)

47029 (Duffy, PI) 10/01/2007-10/01/2012
Bill and Melinda Gates Foundation Total cost $8,998,623

Malaria Antigen Discovery Program - Pregnancy Malaria Initiative (Consortium grant)
Role: Collaborator (PI at SBRI 2/1/2011 – 12/31/2012)

R56AI083668 (Oleinikov, PI) 09/24/2010-02/29/2012
NIH/NIAID Direct cost $250,000
High throughput screening for anti-adhesion drugs to treat severe malaria
Role: PI

1R43-HG02461 (Oleinikov, PI) 2002
NIH/NIAID Direct cost: $100,000
Self-assembling Protein Microchips
Role: PI

PUBLICATIONS (46 Journal articles and 3 chapters) **Hirsch index = 21**

Total number of citations of 46 journal publications (excluding 3 book chapters) > 1325
Average citation for all papers including recently published = 30.7/publication

Publications include journals like Nature, PNAS USA, PLoS Pathogens, Nucleic Acid Research, Journal of American Society of Nephrology, Journal of Biological Chemistry, Biosensors and Bioelectronics, Scientific Reports, Journal of Pathology, Journal of Infectious Diseases, etc.

Curriculum Vitae

RAMIN PASHAIE, PhD,
Phone: (267) 984-1671,
E-mail: rpashaie@fau.edu.

Positions:

Associate Professor, Electrical and Computer Engineering Department, Florida Atlantic University, Started at Aug. 2020,
Associate Professor, Electrical and Computer Engineering Department, University of Wisconsin-Milwaukee, Period – Sep. 2015 to Aug. 2020,
Assistant Professor, Electrical and Computer Engineering Department, University of Wisconsin-Milwaukee, Period – Sep. 2009 to Aug 2015,

Postdoctoral Appointment

Stanford University, California, USA.
Advisor - **Karl Deisseroth**, MD, PhD,
Period - 2007 to 2009,

Education

PhD, Electrical and Systems Engineering,
University of Pennsylvania, Philadelphia,
Major – Electrical and Systems Engineering,
Thesis title: *Modeling and optoelectronic realization of an artificial cortex,*
Advisor - **Nabil Farhat**, PhD
Graduation - 2007,

MS, Electrical Engineering, Fields and Waves, Electromagnetic Optics,
Khajeh Nasir Toosi University of Technology (KNTU), Tehran, Iran,
Major – Electrical Engineering, Fields and Waves, Electromagnetic, Microwave, Optics,
Thesis title: *Analysis and simulation of the fabrication process and electromagnetic guiding properties of Ion-Exchange integrated optical waveguides*,
Advisor - **N. Geranpayeh**, PhD
Graduation - 2001.

BS, Electrical Engineering, Microelectronics,
Melli University, Tehran, Iran,
Major – Electrical Engineering, Microelectronics, Circuit design,
Advisor - **M. Eshghi**, PhD
Graduation - 1998.

Journal Publications

1. **Ramin Pashaie,** "Fourier Decomposition Analysis of Anisotropic Inhomogeneous Dielectric Waveguide Structures," IEEE Transaction on Microwave Theory and Techniques, Vol. 55, No. 8, pp. 1689-1696, Aug. 2007.
2. **Ramin Pashaie**, and Nabil H. Farhat, "Self-Organization in a Parametrically Coupled Logistic Map Network: A Model for Information Processing in the Visual Cortex," IEEE Transaction on Neural Networks, Vol. 20, No. 4, pp. 597-608, April 2009.

3. **Ramin Pashaie**, and Nabil H. Farhat, "Dynamics of electron-trapping materials under blue light and near infrared exposure: an improved model," Journal of the Optical Society of America B, Vol. 24, No. 8, pp. 1927-1941, Aug. 2007.
4. **Ramin Pashaie**, and Nabil H. Farhat, "An Analytical Model for the Dynamics of the Electron Trapping Materials with Applications in Nonlinear Optical Signal Processing," Journal of the Optical Society of America B, Vol. 25, No. 1, pp. 15-21, Jan. 2008.
5. **Ramin Pashaie**, and Nabil H. Farhat, "Realization of Receptive Fields with Excitatory and inhibitory Responses in Equilibrium-State Luminescence of Electron Trapping Materials," Optics Letters, Vol. 32, No. 11, pp. 1501-1503, June 2007.
6. **Ramin Pashaie**, and Nabil H. Farhat, "Optical Realization of Bio-inspired Spiking Neurons in Electron Trapping Material Thin Films," Applied Optics, Vol. 46, No. 34, pp. 8411-8418, Dec. 2007.
7. Diester I, Kaufman MT, Mogri M, **Pashaie Ramin**, Goo W, Yizhar O, Ramakrishnan C, Deisseroth Karl, Shenoy KV, "An optogenetic toolbox designed for primates," **Nature Neuroscience**, Vol. 14, No. 3, pp. 387-397, March 2011.
8. **Ramin Pashaie**, Ryan Falk, "Single Optical Fiber Probe for Fluorescence Detection and Optogenetic Stimulation," IEEE Transaction Biomedical Engineering, Vol. 60, No. 2, p. 268-280, Feb. 2013.
9. **Ramin Pashaie**, Ryan Falk, "Spectral Analysis of Whisking Output via Optogenetic Modulation of Vibrissa Cortex in Rat," Biomedical Optics Express, Vol. 4, No.1, pp. 122-133, Jan. 2013.
10. **Ramin Pashaie**, " Associative Memory in a Volume Holographic Medium: A New Approach Based on Operator Theory," Journal of Optics, Vol. 16, 075701, 2014.
11. **Ramin Pashaie**, "Distributed Light Delivery and Detection via Single Optical Fiber and Tilted Grating," Journal of Modern Optics, Vol. 16, No. 6, 518-529, 2014.
12. Mehdi Azimipour, **Ramin Pashaie**, "Nonlinear Optical Signal Processing on Multiwavelength Sensitive Materials," Optics Letters, Vol. 38, No. 2, pp. 4324-4326, Nov. 2013.
13. **Ramin Pashaie**, Polina Anikeeva, Jin Hyung Lee, Rohit Prakash, Ofer Yizhar, Matthias Prigge, Divya Chander, Thomas Richner, Justin Williams, "Optogenetic Brain Interfaces," IEEE J. RBME, Vol. 7, pp. 3-30, 2014. **(IEEE Journal Cover, 2014).**
14. Thomas J Richner, Sanitta Thongpang, Sarah K Brodnick, Amelia A Schendel, Ryan W Falk, Lisa A Krugner-Higby, **Ramin Pashaie**, and Justin C Williams, "Optogenetic micro-electrocorticography for modulating and localizing cerebral cortex activity," Journal of Neural Engineering, 11, 016010 (12pp), Jan. 2014.
15. Thomas J. Richner, Ryan Baumgartner, Sarah K. Brodnick, Kevin W. Eliceiri, Justin C. Williams, and **Ramin Pashaie,** " Patterned optogenetic modulation of neurovascular and metabolic signals," **Nature** Publishing Group- Journal of Cerebral Blood Flow and Metabolism, vol. 35, pp. 140-147, 2015.
16. Farid Atry, Seth Frye, Thomas J. Richner, Sarah K. Brodnick, Alana Soehartono, Justin Williams, **Ramin Pashaie**, "Monitoring Cerebral Hemodynamics Following Optogenetic Stimulation via Optical Coherence Tomography," IEEE Transaction on Biomedical Engineering, vol. 62, no. 2, pp. 766-773, 2015.
17. Amelia A. Schendel, Michael W. Nonte, Corinne Vokoun, Thomas J. Richner, Sarah K. Brodnick, Farid Atry, Seth Frye, Paige Bostrom, **Ramin Pashaie**, Sanitta Thongpang, Kevin W. Eliceiri, and Justin C. Williams, "The effect of micro-ECoG substrate footprint on the meningeal tissue response," Journal of Neural Engineering, Vol. 11, No. 4, Aug. 2014.
18. Amelia A. Schendel, Dong-Wook Park, Solomon Mikael, Thomas J. Richner, Sarah K. Brodnick, Farid Atry, Seth Frye, **Ramin Pashaie**, Sanitta Thongpang, Justin C. Williams and Zhenqiang Ma, "Carbon Layered Electrode Array (CLEAR) technology for neural imaging and optogenetic applications," **Nature Communications**, vol. 5, no. 5258, pp. 1-11, 2014.

19. Mehdi Azimipour, Ryan Baumgartner, Yuming Liu, Steven Jacques, Kevin Eliceiri, **Ramin Pashaie**, "Extraction of Optical Properties and Prediction of Light Distribution in Rat Brain Tissue," Journal of Biomedical Optics, Vol. 19, No. 7, 075001, July, 2014.

20. **Ramin Pashaie**, Thomas Richner, Ryan Baumgartner, Sarah Brodnick, Mehdi Azimipour, Kevin Eliceiri, Justin Williams "Closed-loop Optogenetic Brain Interface," IEEE Transaction on Biomedical Engineering, Vol. 62, No. 10, pp. 2327-2337 , 2015. **(IEEE Journal Cover, Featured story, Oct 2015)**.

21. Mehdi Azimipour, Farid Atry, **Ramin Pashaie**, "Effect of Blood Vessels on Light Distribution in Optogenetic Stimulation of Cortex," Vol. 40, Issue 10, pp-2173-2176, Optics Letters, 2015.

22. Mehdi Azimipour, Farid Atry, **Ramin Pashaie**, "Effect of Blood Vessels on Light Distribution in Optogenetic Stimulation of Cortex," Vol. 40, Issue 10, pp-2173-2176, Optics Letters, 2015.

23. Christopher Pawela, Edgar DeYoe, **Ramin Pashaie**, "Intracranial Injection of an Optogenetics Viral Vector Followed by Optical Cannula Implantation for Neural Stimulation in Rat Brain Cortex," To Appear in Methods in Molecular Biology, Springer, 2015.

24. Yuming Liu, Steven Jacques, Mehdi Azimipour, Jeremy Rogers, **Ramin Pashaie**, Kevin Eliceiri, "OptogenSIM: a 3D Monte Carlo simulation platform for light delivery design in optogenetics," Biomedical Optics Express, Vol. 6, No. 12, pp. 4859-4870, Dec. 2015.

25. Farid Atry, **Ramin Pashaie**, "Analysis of Intermediary Scan-Lens and Tube-lens Mechanisms for Optical Coherence Tomography," Applied Optics, Vol. 5, No. 4, pp. 646-653, 2016.

26. Dong-Wook Park, Sarah Brodnick, Jared Ness, Farid Atry, Lisa Krugner-Higby, Amelia Sandberg, Solomon Mikael, Thomas Richner, Joseph Novello, Hyungsoo Kim, Dong-Hyun Baek, Jihye Bong, Cuong Nguyen, Seth Frye, Sanitta Thongpang, Kyle Swanson, Wendell Lake, **Ramin Pashaie**, Justin Williams, and Zhenqiang Ma, "Fabrication and utility of a transparent graphene neural electrode array for electrophysiology, in vivo imaging, and optogenetics," **Nature Protocols**, doi:10.1038/nprot.2016.127, Oct. 2016.

27. Mehdi Azimipour, Farid Atry, **Ramin Pashaie**, "Calibration of Digital Optical Phase Conjugation Setups Based on Zernike Decomposition Analysis," Applied Optics, Vol. 55, No. 11, pp. 2873-2880, 2016.

28. Mehdi Azimipour, Mahya Sheikhzadeh, Ryan Baumgartner, Patrick K. Cullen, Fred J. Helmstetter, Woo-Jin Chang, and **Ramin Pashaie**, " Fluorescence laminar optical tomography for brain imaging: system implementation and performance evaluation, " J. Biomedical Optics, Vol. 22. N0. 1, 016003, Jan. 2017.

29. Dong-Wook Park, Jared P. Ness, Sarah K. Brodnick, Corinne Esquibel, Joseph Novello, Farid Atry, Dong-Hyun Baek, Hyungsoo Kim, Jihye Bong, Kyle I Swanson, Aaron J. Suminski, Kevin J. Otto, **Ramin Pashaie**, Justin C. Williams, and Zhenqiang Ma, "Electrical neural stimulation and simultaneous in vivo monitoring with transparent graphene electrode arrays implanted in GCaMP6f mice," ACS Nano, Vol. 12, No. 1, pages 148-157, 2018.

30. Israel De La Rosa, Mehdi Azimipour, Patrick Cullen, Fred Helmstetter, and **Ramin Pashaie**, "Angularly resolved deep brain fluorescence imaging using a single optical fiber," **International Journal of Optics** Article ID 8903413, 10 pages, Vol. 2018.

31. Farid Atry, Israel De La Rosa, Kevin Rarick, **Ramin Pashaie**, "Design and implementation guidelines for a modular spectral-domain optical coherence tomography scanner," **International Journal of Optics**, Vol. 2018, Article ID 3726207, 22pages.

32. Farid Atry, Rex Chen, J. Pisaniello, S. Brodnik, A. Suminski, J. Novello, J. Ness, J. Willimas and **Ramin Pashaie**, "Optogenetic interrogation and manipulation of vascular blood flow in cortex," **Journal of Neural Engineering**, Vol. 15, 056033, 2018.

33. Morgan E. Stevenson, Jacob J.M. Kaya, Farid Atry, Alexander T. Wickstrom, Josephine R. Kruegera, **Ramin Pashaie**, Rodney A. Swain, "Wheel running for 26 weeks is associated with sustained vascular plasticity in the rat motor cortex," Behavioral Brain Research, Vol. 380, Feb. 2020, 112447.

34. **Ramin Pashaie**, "Optogenetics: Novel Brain Interface Technology That Originates in Bioprospecting," Springer's special edition on Neuroengineering, published 2020.

35. **Ramin Pashaie**, "Double Diversity Optical Coherence Tomography," **Journal of Modern Optics**, Vol. 67, No. 10, pp. 857-868, 2020.
36. Rex Chin-Hao Chen, Farid Atry, Thomas Richner, Sarah Brodnick, Jane Pisaniello, Jared Ness, Aaron J. Suminski, Justin Williams, **Ramin Pashaie**, "A System Identification Analysis of Optogenetically Evoked Electrocorticography and Cerebral Blood Flow Responses," **Journal of Neural Engineering**, 17(5):056049. doi: 10.1088/1741-2552/ab89fc, Oct. 2020.

Honors and Awards

- Rank#1 student in Master Program, 2001.
- Rank#1 in PhD qualification exam in the field of electrophysics, University of Pennsylvania, July 2003.
- Stanford University prestigious postdoctoral fellowship award, June 2008.
- Brain and Behavior Research Foundation (NARSAD) Young Investigator Award, 2013.
- Brain and Behavior Research Foundation (NARSAD) Young Investigator Award, 2015.
- National Science Foundation (NSF) Career Award, July 2015.
- Excellence in Research Award, University of Wisconsin, Oct. 2016.

Funding

- **Active:**
    - **National Science Foundation (NSF) Career Award**, title: Study of Neurovascular coupling and role of Astrocytes in Functional Hyperemia, **Role: PI**, ~$506k, 07/01/15-08/30/2022, grant#1454300.
    - **National Science Foundation (NSF),** title: Optical and System Engineering Interrogation of Vascular Amyloid in Alzheimer's Disease, **Role: PI**, ~$300k, 05/31/2018-05/31/2021, grant# 1830145.
    - **Army Research Office (ARO),** title: Brain Functional Imaging via Optical Coherence Tomography, **Role: PI**, ~$265k, 07/01/2018-06/30/2021, grant#W911NF1810323.
    - **National Institute of Health (NIH),** title: Metabolism of Alzheimer's Disease: systems and cellular networks, **Role. Co-I**, Pashaie's budget share $430k, 7/15/2020-7/14/2025, grant# 1 R01 AG 67330-01.
- **Completed**
    - **Defense Advanced Research Projects Agency (DARPA),** Title: "Multi-scale bidirectional neural interfaces for comprehensive central nervous system interface reliability improvement," $360k, 3/16/12-8/15/15, 144PRJ59XI, Award ID: MIL105760.
    - **Brain and Behavior Research Foundation (NARSAD), Young Investigator Award # 1,** Title: "Transparent micro fabricated electrode array & micro-projection/imaging system for closed-loop optogenetic investigation of cortical dynamics," $60k, Jan. 2013 - Jan 2015, Role: PI, grant# 20610.
    - **Brain and Behavior Research Foundation (NARSAD), Young Investigator Award # 2,** Title: "Multi-Modal Brain Interface System Investigating Neurovascular Coupling," $70k, Jan. 2015 - Jan 2017, Role: PI, grant#23620.
    - **Army Research Office (ARO), STTR grant,** " Multi-Modal Brain Interface System for the Study of Neurovascular Coupling," $50k, July 2016-May 2017.
    - **Rockwell Foundation Catalyst Grant,** Title: "Implementation of Photonic Processor Optimized for Parallel Nonlinear Information Processing," March 2011, ~$60k, role: PI, 3/1/11-8/31/12, 133PRJ46TY, Award ID: MIL105039.

- **John and Jeanne Byrnes foundation,** Title: "Establishing a Cellular Basis for fMRI Brain Mapping and Visual/Motor Prostheses through Optogenetic Brain Stimulation," ~$100k, role: Co-PI, 4/1/12-10/1/13, 144PRJ64JD, Award ID: MIL106128.
- **UW Research Growth Initiative,** Title: "Optical Programming of brain Activities via Optogenetics," ~$167.6k, role: PI, Award # 101X172, July/02/2010-12/31/2011.
- **UW Research Growth Initiative,** Title: "Optogenetic Visual Neuroprosthetics," May 2011, ~$183.33k, role: PI, 101X213, 07/02/2011-12/31/2012.
- **UW Research Growth Initiative,** Title: "Interrogation of Large-scale Neural Circuits with Optogenetic-fMRI," ~$139.8K, role: PI, Award # 101X254, 7/02/12-12/31/13.
- **UW Research Growth Initiative,** Title: "Interrogation of Cortical Dynamics via Optogenetic-μElectroCorticoGraphy," 07/02/213-07/01/2015, ~$222.7k, role: PI, Award # 101X288.
- **University of Wisconsin Intercampus grant**, Title:"SOS-CNS: Software for optical Stimulation of Central Nervous System," $50k, July 2012-Dec. 2013, role: PI.
- **National Institute of Health (NIH),** title: Systems and molecular mechanisms of retrieval-dependent memory destabilization **Role: Co-I**, PI: Fred Helmstetter (Neuroscience, UW-Milwaukee), 09/16/2016-06/30/2019, Pashaie's share ~$45k, grant# 1R01MH112141-01.
- **University of Wisconsin,** title: Functional Imaging in The Central Nervous System via Optical Coherence Tomography, **Role: PI**, 07/01/2018-12/30/2020, ~$183k, grant# 101X378.

Student Supervision

1. PhD Students

- **Farid Atry:** PhD Student, Thesis title: Hemodynamic Response of Cortical Tissue to Optogenetic Stimulation in Transgenic Mice, Defense: Aug. 2017. Currently postdoc at UW-Madison Bioengineering.
- **Mehdi Azimipour:** PhD Student, Thesis title: Extraction of optical properties and prediction of light distribution in rat brain tissue, Defense: May 2016. Currently postdoc at UC-Davis.
- **Rex Chen:** PhD Student, Defense: expected Dec. 2020
- **Yuber Samir Sanchez Rosas:** PhD Student, Defense: expected 2022.
- **Mahshad Javidan:** Started in Fall 2019.
- **Hadi Esfandi:** Started in Fall 2019.

2. Master Dissertations

- **Ryan Falk:** Master Student, Thesis title: Development of Optoelectronic Probes for Optical Interrogation of Neural Circuits, Defense: May 2012.
- **Alana Sohartono:** Master Student, Thesis tile: Angiography and Monitoring of Hemodynamic Signals in the Brain via Optical Coherence Tomography, Defense: Dec. 2013.
- **Ryan Bamgaurtner:** Master Student, Thesis title: Optogenetic Brain-Machine Interface for Investigating Neural Circuitry, Defense: Nov 24, 2014.
- **Seth Frye:** Master Student, Thesis title: Monitoring Changes in Hemodynamics following Optogenetic Stimulation, Defense: May 2014.
- **Rex Cheng:** Master Student, Thesis title: Laser Speckle Imaging for Monitoring Hemodynamic Signals Following Optogenetic Stimulation, Defense: Dec. 2015.
- **Mayha Sheikhzadeh:** Master Student, Thesis title: Design and implementation of fluorescence laminar optical tomography for brain imaging, Defense: May 2016.

3. Postdoctoral Supervision

- **Amy Kaczmarowski:** Postdoctoral Scholar (Oct. 2012-Feb. 2014), Currently a Postdoc in Medical College of Wisconsin.
- **Mohammad Habibi:** Postdoctoral Scholar (Sep. 2010-Sep. 2011), Currently Assistant Professor, Minnesota State University-Mankato.
- **Aurel Strat:** Postdoctoral Scholar (Sep. 2011-Sep. 2012).

Connie K. Porcaro (Keintz)

Work Address

Department of Communication Sciences & Disorders
777 Glades Road, PO Box 3091
Boca Raton, FL 33431-0991
Email: cporcaro@fau.edu

Education

Dec 2004	Ph.D. Speech, Language, and Hearing Sciences, University of Arizona *Dissertation: Influence of visual information on the intelligibility of dysarthric speech*
May 1989	M.A. Speech Pathology, University of Northern Colorado
May 1987	B.A. Communication Disorders, University of South Dakota

Employment

2011-present	Associate Professor Department of Communication Sciences and Disorders Florida Atlantic University
2005–2011	Assistant Professor Department of Communication Sciences and Disorders Florida Atlantic University
2008-2018	Speech-Language Pathologist (part-time) Manor Care Skilled Nursing Facility, Boca Raton, FL
2004-2005	Speech-Language Pathologist(part-time) Northwest Medical Center, Tucson, AZ
1999 - 2005	Instructor (part-time)/Graduate Teaching Assistant Department of Speech and Hearing Sciences, University of Arizona
1997–1999	Clinic Director/Practicum Coordinator Department of Speech Pathology and Audiology, University of Wyoming
1994 - 1997	Clinical Supervisor Department of Speech Pathology and Audiology, University of Wyoming
1993-1997	Speech-Language Pathologist High Country Home Health Care, Laramie, Wyoming
1989-1992	Speech-Language Pathologist Area Education Agency Seven Cedar Falls, Iowa

Honors and Awards

2018	Selected as a Master Teacher from the College of Education in the FAU Master Teacher Program
2018	Elected by faculty in the Department of Communication Sciences and Disorders to serve as a member of the College of Education's Thought Leaders committee formed by the Provost
2015	Awarded funding for and selected to attend the 2015 Council of Academic Programs in Communication Sciences and Disorders Leadership Academy, competitive application process, programed aim to train future leaders in academic settings in the fields of Speech Pathology or Audiology
2014	Nominated for and selected to attend the Essentials of Academic Leadership Training Sessions held at FAU
2013-2018	Selected into the College of Education Dean's Leadership Explorers, a faculty group designed to facilitate leadership skills within the college
2010	Nominated for Distinguished Teacher of the Year by the student body of Florida Atlantic University College of Education
2005	Awarded the American Speech-Language-Hearing Association Convention Registration Award for Recent Graduates
2003	Awarded the Douglas G. Stuart Predoctoral Fellowship in Neuroscience, University of Arizona
2002	Received a Graduate Student Scholarship from the American Speech-Language-Hearing Foundation
2002	Awarded a Predoctoral Traineeship through the National Center for Neurogenic Communication Disorders, University of Arizona
2002	Offered a Predoctoral Teaching Assistantship in the Human Neuroscience course, College of Medicine, University of Arizona (declined)
2001	Awarded a competitive grant to attend the Graduate Research Ethics Education workshop held at the University of Indiana
2000–2002	Awarded a Predoctoral Traineeship through Motor Control Neurobiology Training Grant funded by the National Institutes of Health
1999- 2001 & 2002-2003	Awarded a Predoctoral Teaching Assistantship by the Speech and Hearing Sciences Department, University of Arizona (declined 2002-2003)
1999	Chosen by University of Wyoming National Student Speech-Language-Hearing group as Faculty Member of the Year
1996, 1998 2009	Received awards for continuing education (ACE) from the American Speech-Language-Hearing Association (ASHA) in recognition of continued

	professional study
1989	Awarded the Graduate Dean's Citation for Excellence by the University of Northern Colorado

Professional Memberships

1999–2003	Arizona Speech-Language-Hearing Association
1994–1999	Wyoming Speech-Language-Hearing Association
1990 - present	American Speech-Language-Hearing Association Certificate of Clinical Competence - 1990

Scholarship, Research and/or Other Creative Activity

Refereed Works

Journal Publications

Porcaro, C.K., Singer, C., Djokic, B., Danesh, A, J., Tappen, R., Engstrom, G. (In press). Perceived voice disorders in the elderly and impact on social interaction. *Perspectives of the ASHA Special Interest Group*s, SIG 15.

Porcaro, C.K., Howery, S., Suhandron, A., & Gollery, T. (2019). Impact of vocal hygiene training for teachers on willingness to change vocal behaviors. Journal of Voice DOI: https://doi.org/10.1016/j.jvoice.2019.11.011

Porcaro, C.K., Alavi, E., Gollery, T., & Danesh, A.A. (2019). Misophonia: Awareness and responsiveness in academics. *Journal of Postsecondary Education and Disability 32 (2)*107-118.

Porcaro, C.K., Evitts, P., Smyth, N., Hood, C., Campbell, E., White, L., & Veraguas, J. (2019). Effect of listener strategies on speech intelligibility of dysphonic speakers. *Journal of Voice,* online publication (April 25, 2019) DOI: https://doi.org/10.1016/j.jvoice.2019.03.013

Grama, R., Coppens, P., Greenwald, M., & **Keintz, C.K.** (2016). Collaborative methods for training research and evidence-based practice: The TRIAD Model. *Contemporary Issues in Communication Sciences and Disorders, 43* 139-153.

Naharci, I., Engstrom, G., **Keintz, C.K.** , Danesh, A., Tappen, R., & Ouslander, J. (2016). Association between self-reported hearing loss and frailty in four ethnic groups. *West Indian Medical Journal 68 (1)* 29-34, **DOI: 10.7727/wimj.2016.174**

Keintz, C.K. (2011). Utilization of visual information and listener strategies in intelligibility Improvement related to bilateral facial paralysis. *International Journal of Speech-Language Pathology,* 13, (6), 510-517.

Danesh, A., Buemi, M., & **Keintz, C.K.** (2010). Neurofibromatosis: Audiologic and genetic manifestations. *Medical Data Review 2*, (3).

Boliek, C., **Keintz, C.K.**, Norrix, L.W., & Obrzut, J. (2010). Auditory-visual perception of speech

in children with learning disabilities: The McGurk Effect. *Canadian Journal of Speech-Language Pathology and Audiology, 34 (6),* 124-131.

Bunton, K. & **Keintz, C.K**. (2008). Effects of a concurrent motor task on speech intelligibility in speakers with Parkinson disease. *Journal of Medical Speech-Language Pathology, 16 (3)* 141-155.

Keintz, C.K., Bunton, K., & Hoit, J.D. (2007). Influence of visual information on the intelligibility of dysarthric speech. *American Journal of Speech-Language Pathology, 6*, 222-234.

Books

O'Connor-Wells, B. & **Porcaro, C.K** (Eds). (In Press) A caregiver's guide to communication and related disorders after brain injury or disease. Johns Hopkins University Press, Baltimore, MD.

Authored Chapters:
Porcaro, C.K. Chapter 2: Communication is a two-way street: The path to understanding unclear speech.

Porcaro, C.K. Chapter 3: The owner's guide for your voice**.**

Book Chapters

Keintz, C. K. & Williams, D. F. (2011). Swallowing Disorders. In Williams, D.F. *Communication sciences and disorders: An introduction to the professions*. Taylor & Francis, New York, NY.

Scholarly Activities in Progress

Porcaro, C.K. (author contract with Plural Publishers). Improving speech intelligibility in adults: Clinical application of evidence-based strategies

Porcaro, C.K., Singer, C., Newman, D., Danesh, A, Engstrom, E., Ouslander, J., Tappen, R. (all data collected/analyzed, manuscript in preparation for submission to the *International Journal of Language and Communication Disorders*). Dysphagia, Fatigue, and Quality of Life: Self-Perceptions in Healthy Aging Individuals.

Refereed Presentations

Evitts, P., Porcaro, C.K., Getejanc, C., & Scott, J. (November, 2020). The relationship between cepstral-based acoustic measures and speech intelligibility with low proficiency speakers. Poster session accepted for presentation at the American Speech-Language-hearing Association Annual Convention, San Diego, CA (conference canceled).

Evitts, P., Yinger, S., & **Porcaro, C.K.** (November, 2019). Does providing listeners perceptual strategies improve dysphonic speech intelligibility in the presence of background noise? Poster session presented at the American Speech-Language-Hearing Association Annual Convention, Orlando, FL.

Howery, S., Suhandron, A., **Porcaro, C.K**., & Gollery, T. (November, 2019). Impact of vocal hygiene training on teachers' willingness to change vocal behaviors. Poster session presented at the American Speech-Language-Hearing Association Annual Convention, Orlando, FL.

Danesh, A.A & **Porcaro, C.** (July, 2019). Reasonable adjustments (accommodations) for decreased sound tolerance disorders in academic settings. Presented at the Fourth International Conference on Hyperacusis/Mini seminar on Misophonia: Causes, Evaluation, Diagnosis and Treatment, London, UK.

Dressler, D., Blanchet, P., & **Porcaro, C.K.** (November, 2018). Motor speech disorders: Bringing the clinic to the classroom. One-hour technical session presented at the American Speech-Language-Hearing Association Convention, Boston, MA.

Evitts, P., **Porcaro, C.K**., & Simons, B. (November, 2018). Acoustic predictors of cognitive workload using LTAS in speakers with phonotraumatic hoarseness. Poster session presented at the American Speech-Language-Hearing Association Convention, Boston, MA.

Porcaro, C.K., Alavi, E., Gollery, T., & Danesh, A.A. (November, 2017). Faculty awareness of misophonia and receptivity to provide classroom accommodations. Technical session presented at the American Speech-Language-Hearing Association Convention, Los Angeles, CA

Evitts, P., **Porcaro, C.K**., Smyth, N., Hood, C., Campbell, E., White, L., & Veraguas, J. (November, 2017). Effect of listener strategies on speech intelligibility of dysphonic speakers. Poster session presented at the American Speech-Language-Hearing Association Convention, Los Angeles, CA

Danesh, A.A., **Porcaro, C.K**., & Alavi, E. (May, 2017). Tinnitus and misophonia: A tale of two cities. Technical session presented at the 12th International Tinnitus Seminar and 1st World Tinnitus Congress, Warsaw, Poland.

Naharci, M., Danesh**,** A.A., **Keintz, C.,** Engstrom, G. Tappen, R. & Ouslander, J. (April, 2016). Correlations between self-reported hearing loss and frailty in four ethnic groups. Poster session presented at the Annual Convention of the American Academy of Audiology, Phoenix, AZ

Keintz, C.K., Singer, C., Newman, D., Danesh, A, Engstrom, E., Ouslander, J., Tappen, R. (November, 2015). Dysphagia & fatigue: Self-perceptions in healthy aging individuals. Poster session presented at the American Speech-Language-Hearing Association Convention, Denver, CO.

Singer, C.,Danesh, A, **Keintz, C.K**., Engstrom, E., Ouslander, J., Tappen, R. (November, 2014). Perceived swallowing disorders in healthy aging individuals: Impact on quality of life. Poster session presented at the American Speech-Language-Hearing Association Convention, Orlando, FL.

Danesh, A., **Keintz, C.,** Singer, C., Lieberman, M., Ouslander, J. & Tappen, R. (March, 2014). The effects of social engagement and self-awareness on communication. Poster presented at the Annual Convention of the American Academy of Audiology (AAA), Orlando, FL.

Keintz, C.K., Danesh, A, Singer, C., Ouslander, J., Tappen, R. (November, 2013). Perceived voice disorders in the elderly and impact on social interaction. Poster session presented at the American Speech-

Language-Hearing Association Convention, Chicago, IL.

Greenwald, M, **Keintz, C.K.,** Coppens, P., Grama, R. (November, 2011). Collaborative methods for training research and evidence-based practice: The TRIAD model. Technical session presented at the American Speech-Language-Hearing Association Convention, San Diego, CA.

Keintz, C.K. (May, 2011). Intersection of recreation therapy and speech therapy: Speech, language, and swallowing disorders: How to assist. Ninety minute presentation for the 3rd Annual South Florida Recreational Therapy Conference (Working Together) Ft. Lauderdale, FL.

Keintz, C.K. (July, 2010). Communicating with cognitively impaired individuals. Ninety minute presentation for the 2nd Annual South Florida Recreational Therapy Conference (Innovation Through Education), Ft. Lauderdale, FL.

Keintz, C.K., Barrero, N., and Van Leiu, K. (November, 2010). University student preferences in voice characteristics. Poster session presented at the American Speech-Language-Hearing Association Convention, Philadelphia, PA.

Keintz, C.K. (November, 2008). Application of situational leadership to the clinical supervision process. Poster session presented at the American Speech-Language-Hearing Association Convention, Chicago, IL.

Keintz, C.K. (November, 2007). Influence of visual information on the intelligibility of speech in bilateral facial paralysis. Technical session presented at the American Speech-Language-Hearing Association Convention, Boston, MA.

Keintz, C.K, Hustad, K., Garcia, J., & Klasner, E. (November, 2006). Speech intelligibility: Clinical treatment approaches for children and adults. Two-hour technical session presented at the American Speech- Language-Hearing Association Annual Convention, Miami, FL.

Bunton, K. & **Keintz, C.K.** (March, 2006). Effects of a concurrent motor task on speech intelligibility for speakers with Parkinson disease. Session presented at the Conference on Motor Speech, Austin, TX.

Keintz, C.K. & Bunton, K. (November, 2005). Influence of visual information on the intelligibility of dysarthric speech. Technical session presented at the American Speech-Language-Hearing Association Convention, San Diego, CA.

Clinical Consultation, Workshops, and Presentations

Porcaro, C.K. (May, 2020). Professional supervision in speech-language pathology. Two-hour online training constructed for Professional Development Resources offered nationally for continuing education for speech-language pathologists.

Porcaro, C.K. (June, 2019). Professional supervision in speech-language pathology. Two-hour keynote presentation for the 10th Annual Online Supervisor's Conference for Nova Southeastern University.

Porcaro, C.K. (June, 2019). Ethical considerations in speech-language pathology. One-hour keynote

presentation for the 10th Annual Online Supervisor's Conference for Nova Southeastern University.

Porcaro, C.K. (April, 2018). Speech intelligibility: Clinical approaches based on current research. Three-hour presentation for the Speech-Language-Hearing Association of Maryland, Annapolis, MD.

Porcaro, C.K. (April, 2018). Professional supervision in speech-language pathology. Three-hour presentation for the Speech-Language-Hearing Association of Maryland, Annapolis, MD.

Keintz, C.K. (March, 2014). Speech intelligibility: Clinical approaches based on current research. Three-hour presentation for the Speech-Language-Hearing Association of Ohio, Columbus, OH.

Keintz, C.K. (March, 2014). Professional supervision in speech-language pathology. Two-hour presentation for the Speech-Language-Hearing Association of Ohio, Columbus, OH.

Keintz, C.K. (March, 2012). Speech intelligibility: Clinical approaches based on current research. Four-hour presentation for the Speech-Language-Hearing Association of Virginia Convention, Tyson's Corner, VA.

Keintz, C.K. (March, 2012). Professional supervision in speech-language pathology. Two-hour presentation for the Speech-Language-Hearing Association of Virginia Convention, Tyson's Corner, VA.

Keintz, C.K. (March, 2011). Speech intelligibility: Clinical approaches based on current research. Four-hour presentation for the West Virginia State Speech-Language-Hearing Association Convention, Sutton, WV.

Keintz, C.K. (March, 2011). Professional supervision in speech-language pathology. Two-hour presentation for the West Virginia Speech-Language-Hearing Association Convention, Sutton, WV.

Keintz, C.K. (April, 2010). Speech intelligibility: Clinical approaches based on current research. Three-hour presentation for the Arizona State Speech-Language-Hearing Association Convention, Tempe, AZ.

Keintz, C.K. (April, 2010). Professional supervision in speech-language pathology. Ninety-minute presentation for the Arizona Speech-Language-Hearing Association Convention, Tempe, AZ.

Keintz, C.K. (March, 2009). Speech intelligibility: Clinical approaches based on current research. Three-hour presentation for the Nevada Speech-Language-Hearing Association Convention, Reno, NV.

Keintz, C.K. (March, 2009). Professional supervision in speech-language pathology. Ninety-minute presentation for the Nevada Speech-Language-Hearing Association Convention, Reno, NV.

Keintz, C.K. (February, 2009). Speech intelligibility: Clinical approaches based on current research. Three-hour presentation for the Kentucky Speech-Language-Hearing Association Convention, Louisville, KY.

Keintz, C.K. (February, 2009). Professional supervision in speech-language pathology. Ninety-minute presentation for the Kentucky Speech-Language-Hearing Association Convention, Louisville, KY.

Keintz, C.K. (October, 2008). Speech intelligibility: Clinical approaches based on current research. Three-hour presentation for the Eastern North Carolina Fall Speech, Language, Hearing Symposium,

Greenville, NC.

Keintz, C.K. (February, 2008). Speech intelligibility: Clinical approaches based on current research. Three-hour presentation for the 50th Annual South Carolina State Speech-Language-Hearing Association Convention, Charleston, SC.

Keintz, C.K. (February, 2008). Professional supervision in speech-language pathology. Ninety minute presentation for the 50th Annual South Carolina State Speech-Language-Hearing Association Convention, Charleston, SC.

Funding or Grants Received

2020 — Parkinson Voice Project, Phase III Grant for training SPEAK OUT!® /The LOUD Crowd® was submitted and funded in 2020. This project provided training for 50 graduate students to provide free of cost speech/voice treatment for patients with Parkinson Disease. In addition, the grant covered marketing and therapy materials and a stipend for group expenses. The total potential amount of this grant (based on number of students) was greater than $6.000. Grant Awardees were Connie Porcaro and Kelly Steele.

2019 — Parkinson Voice Project, Phase I Grant for training SPEAK OUT!® /The LOUD Crowd® was submitted and funded in 2019. This project provided training for supervisors and students to provide free of cost speech/voice treatment for patients with Parkinson Disease. Overall, the grant provided training for three supervising speech-language pathologists (1 face to face and 2 online), travel expenses related to training for one supervisor, and online training for the other two supervisors and for as many as 50 graduate students. In addition, the grant covered marketing and therapy materials and a stipend of $1,000 in cash. The total potential amount of this grant (based on number of students) was greater than $13,000. Grant Awardees were Connie Porcaro and Kelly Steele.

2012 — Healthy Aging of Human Communication seed project submitted to Florida Atlantic University's Healthy Aging Research Initiative. This project provided funding for graduate student research in areas involving language and hearing in the healthy aging population. The purpose was to promote further grants and research in these areas following initial inquiry with a large database. Co-PIs were Ali A. Danesh and Connie Keintz, and the Graduate Student Researcher was Clare Singer. This project was funded for the requested amount of $2500.

2012 — Mobile Clinical Technology proposal submitted to Florida Atlantic University's Technology Fee Proposal Committee. This project requested funds for two IPad devices and for speech therapy applications for two

years to be used by student clinicians in the FAU Communication Disorders Clinic, where clients with communication disorders are treated each semester. The project was funded for the requested amount of $2400.

2010 Healthy Aging Research Initiative proposal (Primary Investigators Ouslander, J. and Tappen, R) was awarded and selected as a Research Priority Area for Florida Atlantic University ($150,000, Funded). Connie Keintz serves as a research collaborator on this project.

2008 Teaching grant recipient: Selected through a competitive process to attend the 14th Annual Training the Trainers Survival Skills and Ethics Conference in Snowmass, Colorado, June 8-13, 2008. Funding from the Survival Skills and Ethics Program: University of Pittsburgh, which included all expenses and materials, approximately $5,000.

Grants Submitted or in Preparation

2019 Video Library Collection of Motor Speech Patients proposed to the Spencer Foundation. This project was designed for three PI's Richard Dressler, Paul Blanchet, and Connie Porcaro to coordinate capturing audio and video speech samples from clients with various motor speech disorders. The purpose is to provide a library that will be available through internet resources for instructional purposes during classroom instruction and for practicing speech-language pathologists to use for reference. A component involving simulated cases during courses was included to determine the impact of the use of actual cases with videos in the instruction of different types of motor speech disorders. This application was not funded.

2016 Video Library Collection of Motor Speech Patients proposed to Dystonia Medical Research Foundation. This project was designed for three PI's Richard Dressler, Paul Blanchet, and Connie Porcaro to coordinate capturing audio and video speech samples from clients with various motor speech disorders. The purpose is to provide a library that will be available through internet resources for instructional purposes during classroom instruction and for practicing speech-language pathologists to use for reference. The project was not selected for funding by this foundation.

2015 Cognition, Swallowing, and Balance: Keeping the Aging Adult at Home was proposed by Drs. Ali Danesh, Connie Keintz, and Deena Louise Wener, Dr. Sue Graves, and Dr. Paul Peluso for consideration for a Healthy Aging U54 application process at Florida Atlantic University.

2015 Motor Speech Disorder Video Library proposed to Aegis Rehabilitation (private clinical company). This project was designed for three PI's Richard

Dressler, Paul Blanchet, and Connie Keintz to coordinate capturing audio and video speech samples from clients with various motor speech disorders. The purpose is to provide a library that will be available through internet resources for instructional purposes during classroom instruction and for practicing speech-language pathologists to use for reference. The requested amount for this project was $69,840.00. Only partial funding was received with this award, so the investigators are seeking alternative funding to complete the project.

2010 — The Aging Auditory and Balance Function in a Variety of Clinical Populations, submitted to Florida Atlantic University's Division of Research Priority Area. This proposal was considered initially from a pool of 45 submissions, and 11 proposals were selected for the full proposal stage of funding. This proposal was selected for further consideration. Proposals are being added to this project under my direction to provide feedback to patients with swallowing and voice disorders related to aging, These proposals involve technologically oriented interventions where devices and/or software will be used to assist patients. Clinical studies will be conducted with patents filed to commercialize the resulting procedures and devices. Participants in this grant include researchers from the FAU College of Education, College of Engineering and Computer Science, College of Science, College of Nursing, and international and industrial collaborators. This project was not selected for funding, although the initials studies in my area were completed.

2009-10 — The Influence of Online Student Participation on Student Learning Outcomes in an Introductory Communication Sciences and Disorders Course, submitted to the Florida Atlantic University Faculty Assessment Grant, 2010. This proposal was aimed at using technology in novel ways to improve student comprehension of material and exam performance. The main goals included increasing time spent engaged in active learning on course content (including self-tests and discussion boards), and improved performance on learning outcomes on formal assessment following the use of online learning activities. This project was not selected for funding.

2008 — Severity of Speech Intelligibility and Use of Listener Strategies in Communicating with Speakers with Parkinson's Disease $5000 grant submitted to the Parkinson's and Movement Disorder Foundation in April, 2008. The proposal was based on an extensive research project to examine severity levels of intelligibility impairment due to Parkinson disease and how listeners can better understand these speakers. The project was not selected for funding.

Invited Presentations

Steele, K.B. & **Porcaro, C.K.** (October, 2020). The challenges of swallowing and speech in Parkinson's disease. One-hour keynote presentation for the Parkinson's Foundation Herbert Kay JCC Community Educational Event for the Parkinson's Community.

Porcaro, C.K. & Steele, K. B. (January, 2020). The challenges of swallowing and speech in Parkinson's Disease. One-hour presentation at the Parkinson's Expo hosted by the Parkinson's Foundation, Palm Beach Gardens, FL.

Porcaro, C.K. (October, 2019). Language services related to neurological disease and disorders. One-hour presentation for neurology, medical residents at Boca Raton Regional Medical Center, Boca Raton, FL.

Porcaro, C.K. (October, 2019). Voice, speech, and swallowing services related to neurological disease and disorders. One-hour presentation for neurology, medical residents at Boca Raton Regional Medical Center, Boca Raton, FL.

Porcaro, C.K. (April, 2019). Strategies for aging well: Dealing with changes in communication and memory skills. One-hour presentation for residents/staff at Abbey Delray Florida Life Care Residents Association Meeting, Delray Beach, FL.

Porcaro, C.K. (March, 2019). Professional supervision In educational fields: Application of organizational leadership strategies. One-hour presentation for the Master Teacher Seminar Series, Boca Raton, FL

Keintz, C.K. (January, 2013). Traumatic brain injury: Success strategies in higher education. Thirty minute presentation for the FAU Division of Student Affairs Annual Veteran Forum: Adapting to college life: What we can do to assist the returning veteran, Boca Raton, FL

Keintz, C.K. (May, 2011). Lee Silverman voice therapy: Approaches to big and loud. One-hour presentation for the American Parkinson Disease Association South Florida Chapter Parkinson's Disease Symposium, Boca Raton, FL.

Keintz, C.K. (annually 2010-2013). Communicating with cognitively impaired individuals. One-hour presentation for employees/staff at the Louis and Anne Green Memory and Wellness Center, Florida Atlantic University, Boca Raton, FL

Keintz, C.K. & Schiller, K. (November, 2008). Vocal mechanics and hygiene. One-hour presentation for students in music performance program, Florida Atlantic University, Boca Raton, FL.

Media Publications/Presentations

Porcaro, C.K. One hour interview with Scott Greenberg, Safely down the hatch: Swallowing issues related to age. WSVU 95.5 FM. February 17, 2020. Podcast Available: https://www.podomatic.com/podcasts/omgimgettingolder/episodes/2020-02-18T10_30_10-08_00

Porcaro, C.K. and Steele, K.B. One hour interview with Scott Greenberg, Communication impact of Parkinson Disease. WSVU 95.5 FM. December, 2, 2019. Podcast Available: https://www.podomatic.com/podcasts/omgimgettingolder/episodes/2019-12-03T04_16_28-08_00

Keintz, C.K. (2012). An owner's guide to your voice in Health & Wellness section of the *Parklander Magazine.*

Teaching

Classroom Teaching

Department of Communication Sciences and Disorders, Florida Atlantic University

2011, 2013-19	Instructor	(SPA 4101)	Anatomy/Physiology of Speech and Hearing Mechanism
2007	Instructor	(SLS 1503)	Learning Strategies and Human Development
2007-2020	Instructor	(SPA 4002)	Introduction to Communication Disorders
2006-2020	Instructor	(SPA 6211)	Voice and Velopharyngeal Disorders
2006-2020	Instructor	(SPA 6006)	Professional Practice/Program Organization
2006-2019	Instructor	(SPA 6230)	Motor Speech Disorders
2005-2020	Instructor	(SPA 6565)	Dysphagia
2005-2017	Supervisor	(SPA 6505)	Speech Pathology Clinical Practicum
2014-2019	Instructor	(SPA 5936)	Counseling and Supervision in Speech-Language Pathology

Miller School of Medicine, University of Miami

2008–2010	Instructor	Lecture on Aphasia in the course Neuroscience and Behavior

College of Nursing, Florida Atlantic University

2017	Instructor	Lecture on Evidence Based Practice in Nursing and Research Course

College of Medicine, Florida Atlantic University

2012-2020	Instructor	Lecture on Aphasia in Neuroscience And Behavior Course

Department of Speech, Language, and Communication Disorders, Nova Southeastern University

2009-2019	Adjunct Instructor	Voice Disorders

Department of Speech and Hearing Sciences, University of Arizona

2004 & 2005	Instructor	Clinical Observation and Analysis
2002	Preceptor	Survival Skills and Ethics
2000 & 2001	Co-instructor	Clinical Observation and Analysis

2000	Graduate Teaching Associate	Neuromotor Speech Disorders
1999	Graduate Teaching Associate	Anatomy/Physiology Speech Mechanism
1999	Graduate Teaching Associate	Adult Communication Disorders

University of Arizona School of Medicine

2002 & 2003	Case Discussion Facilitator	Human Neuroscience

Department of Speech-Language Pathology and Audiology, University of Wyoming

2005	Instructor	Motor Speech Disorders–Distance Learning
1999 & 2000	Instructor	Dysphagia
1998	Instructor	Clinical Methods II–Distance Learning
1997 - 1999	Coordinator	Off-Campus Clinical Practicum
1997	Instructor	Clinical Methods I–Distance Learning
1995–1999	Coordinator	Public School Practicum
1995–1999	Co-instructor	Clinical Methods II
1995–1998	Instructor	Clinical Internship
1995–1997	Instructor	Speech-Language Pathology Procedures
1994–1998	Co-instructor	Clinical Methods I
1994–1998	Co-instructor	Clinical Practicum

Student Research Advising

Department of Communication Disorders, Florida Atlantic University

2019-2020 Flechaus, Cassidy - Self-reported voice quality measures pre- and post- SPEAK OUT!® & LOUD Crowd® treatment (Chair of Master's Thesis Project).

2018-2019 Howery, Stephanie and Suhandron, Amanda–Impact of vocal hygiene training for teachers on willingness to change vocal behaviors (Independent Study Project). This project was presented as a poster at the College of Education Student Achievement Council Research Symposium (March, 2019) and was selected as the winning poster at the Graduate & Professional Student Graduate Research Day in the humanities category (April, 2019).

2016-2017 Alavi, Emon–Perceptions of university faculty regarding Misophonia (Independent study project). This project was presented at the Undergraduate Research Symposium (May, 2017).

2016-2017 Garcia, Angelica–Literature review on Misophonia (Independent Study Project)

2012-2013 Heidenreich, Jamie–Effects of visual feedback on developmental stuttering (committee member of Master's Degree Thesis Project).

2009-2010 Williams, Diane–Vocal hygiene for everyday use by teachers (Independent study project completed for course credit, presented for FAU student teachers summer, 2010)

2009-2010 Barrero, Natalia and Van Lieu, Katrina–Vocal preferences in America (Independent study project completed for course credit, selected by peer review for presentation at the American Speech-Language-Hearing Association Annual Convention in November, 2010)

2008-2009 Schiller, Karen–Vocal use and hygiene program (Independent study project completed for course credit, presented for professional voice majors at FAU in Fall, 2008)

2006-2007 Strahan, Gina and Robitaille, Renee–Influence of visual information on intelligibility of speech in bilateral facial paralysis. (Independent study project completed for course credit, presented in April, 2007 at College of Education Student Advisory Council Research Symposium VI)

Department of Speech-Language Pathology and Audiology, University of Wyoming

1999-2000 Steel, Amy–Accuracy of parental report on phonological development of toddlers using a modified version of the language development survey. (thesis committee member)

1999-2000 Sparks, Jennifer–Effects of sample size on accuracy of phonological measures of language-delayed two-year-olds. (thesis committee member)

1999-2000 Martens, Genevieve–Accuracy of a one-time versus a two-time conversational sample in depicting phonological development in language delayed toddlers. (thesis committee member)

1998-1999 Hursta, Anne– Comparisons of five-year-olds identified as language-normal or late-talkers at age two on measures of behavioral difficulties, and social and cognitive development. (thesis committee member)

1997-1998 Huntington, Robert - A comparison of speech naturalness using computerized versus non-computerized fluency therapy. (thesis committee member)

1997-1998 Satake, Kent - An assessment review of the computerized scoring of stuttering severity: Clinical uses and applications. (thesis committee member)

1997-1998 Simundson, Cindy - Consistency of language development in normal and late-talking children through five years of age. (thesis committee member)

1996-1997 Zimmerman, Diana - An examination of computer software for childhood language intervention. (thesis committee member)

Service

Professional Experience/Service

2020	Member	Florida Atlantic University Brain Institute Membership Committee
2018	Member	Program Selection Committee for poster proposals for the 2018 American Speech-Language-Hearing Association Health Care and Private Practice Connect Conference
2016-2017	Member	Scientific Committee, International Academic Geriatrics Congress April, 2017 in Belek/Antalya, Turkey
2016–current	Member	Biostatistics & Research Methodology Faculty Institute for Healthy Aging and Lifespan Studies (I-HEALTH)
2016–current	Member	Florida Atlantic University Brain Institute (I-Brain)
2015- Current	Member	American Speech-Language-Hearing Association Special Interest Group 2 (Neurogenic Communication Disorders) Appointed to 2015 Leadership Team Professional Development Subcommittee–3 year appointment, reappointed for a 2nd term
2012- 2015	Member	American Speech-Language-Hearing Association Division 2 (Neurophysiology and Neurogenic Speech and Language Disorders) Appointed to 2012 Leadership Team Continuing Education Subcommittee–3 year appointment
2010	Mentor	American Speech-Language-Hearing Association Mentoring for Academic-Research Careers (MARC) program
2008-2009	Member	Speech Science Program Committee for 2009 Annual Convention of the American Speech-Language-Hearing Association
2008- 2012	Member	American Speech-Language-Hearing Association Division 2 (Neurophysiology and Neurogenic Speech and Language Disorders) Appointed to 2008 Leadership Team Research Subcommittee–3 year appointment
2006-2007	Member	Program Committee 7th Annual Multidisciplinary Voice, Swallow and Airway Conference

Arizona Speech-Language-Hearing Association (ArSHA)

2000–2002	Chair	Ethical Practice Committee

Wyoming Speech-Language-Hearing Association (WSHA)

1999	Public Awareness Chair and Parliamentarian
1998	Past President
1997	President
1996	President-elect
1995	Conference site coordinator for annual conference
1994 & 1998	Secretary
1994	Regional representative

Council of Supervisors in Speech-Language Pathology and Audiology

1996	Creator and administrator of a supervision listserv
1995 - 1997	SUPERNET Regional Coordinator

Community Service

2010-2012	Annual presentation for staff at the Louis and Anne Green Memory and Wellness Center "Communicating with Cognitively Impaired Patients"
2009	Presentation for members of the American Parkinson's Disease Association, South Florida Chapter "Speech and Swallowing in Parkinson's Disease"
2008-current	FAU Coordinator of Student Volunteers for Camp Superstar (Craniofacial Anomalies Camp for adolescents and their families)

Departmental/College Committee Participation

Florida Atlantic University

2013-current	Member	FAU Honors and Awards Committee
2013-current	Member	FAU Financial Conflict of Interest Committee
2010-2011	Member	FAU Non-Traditional Student Advisory Team
2009-2010	Member	FAU Housing Appeals Committee

College of Education, Florida Atlantic University

2020	Member	College of Education Sabbatical Committee
2018-2020	Director	Assessment for Dept. of Comm. Sciences & Disorders
2020-2021	Dept. Rep.	College of Education Faculty Assembly Steering Committee
2013	Member	College of Education Non-Tenure Track Promotion Committee
2012-2013	Member	College of Education Non-Tenure Track Promotion Task Force
2011-2012	President	College of Education Faculty Assembly Steering Committee
2010 -2011	Vice President	College of Education Faculty Assembly Steering Committee
2010-2012	Fac. Assembly Rep.	College of Education Executive Committee
2010-2011	Fac. Assembly Rep.	College of Education Budget Planning Committee
2009-2010	Archivist	College of Education Faculty Assembly Steering Committee
2008-2013	Dept. Rep.	College of Education Faculty Assembly Steering Committee
2007-2009	Member	Outstanding Dissertation Committee

2007-2010	Member	College of Education Technology Committee

Department of Communication Sciences and Disorders, Florida Atlantic University

2019	Member	Non-Tenure Track Promotion Committee
2019	Member	Tenure and Promotion Committee
2018	Chair	Search Committee
2017	Chair	Search Committee
2016	Chair	Search Committee
2012	Member	Search Committee
2010	Member	Search Committee
2010	Member	Graduate Recruitment Fellowship Program Committee
2009	Member	Search Committee
2005-2017	Member	Petitions Committee
2005–2017	Member	Admissions Committee
2005-06	Chair	Curriculum Review Committee

Department of Speech-Language Pathology and Audiology, University of Wyoming

1999	Member	College of Health Science Dean Search Committee
1998	Member	Administrative Review Committee
1997-1999	Member	Wyoming Rural Interdisciplinary Training Project
1996-1998	Co-Chair	Clinic Committee
1996-1998	Member	Kahn Committee
1996	Chair	Marketing Committee
1994-1995	Chair	Search Committee
1994-1996	Chair	Search Committee

Reviewing

2020	External Reviewer, Promotion/Tenure Process University of South Alabama
2020	Reviewer, International Journal of Research in Health Sciences
2020	Reviewer, Disability and Rehabilitation
2020	Reviewer, Journal of Speech-Language-Hearing Research
2019	Reviewer, Professional Development Resources (training module on supervision)
2019	Reviewer, Journal of Speech-Language-Hearing Research (multiple manuscripts)
2018	Reviewer, Journal of Speech-Language-Hearing Research
2018	Reviewer, Grant submitted to Parkinson's Disease Society of the United Kingdom
2018	Reviewer, Topics in Geriatric Rehabilitation
2018	Reviewer, American Journal of Speech-Language Pathology

2017	Reviewer, abstract submitted to American Speech-Language-Hearing Association Special Interest Group 2, Perspectives Member Publication
2016	Reviewer, Grant submitted to Parkinson's Disease Society of the United Kingdom
2016	Reviewer, ASHA Continuing Education (training module on medical errors)
2015	Reviewer, Journal of Phonetics
2014	Reviewer, Journal of Speech-Language-Hearing Research
2014	Reviewer, Textbook proposal for Jones and Bartlett Learning
2014	Reviewer, Grant submitted to Parkinson's Disease Society of the United Kingdom
2013	Reviewer, Textbook proposal for College Hill Press
2013	Reviewer, Textbook proposal for Jones and Bartlett Learning
2011	Reviewer, International Journal of Speech-Language Pathology
2010	Reviewer, Grant submitted to Parkinson's Disease Society of the United Kingdom
2010	Reviewer, ASHA Continuing Education (training module on medical errors)
2010	Reviewer, International Journal of Speech-Language Pathology
2010	Reviewer, ASHA Continuing Education (training module on intelligibility)
2008	Reviewer, Journal of Speech-Language-Hearing Research
2007-2008	Reviewer, Grant submitted to Parkinson's Disease Society of the United Kingdom
2007-2008	Reviewer, Neurology India Journal
2007-2008	Reviewer, Journal of American Speech-Language Pathology
2006-2007	Reviewer, Journal of Clinical Linguistics and Phonetics

Advising

Department of Communication Sciences and Disorders, Florida Atlantic University

2006-current	Graduate Student Advisor
2009-2016	National Student Speech-Language-Hearing Association Advisor

Department of Speech-Language Pathology and Audiology, University of Wyoming

1998-99	National Student Speech-Language-Hearing Association Advisor

1994 Undergraduate Student Advisor

11/4/2020

CURRICULUM VITAE
Howard M. Prentice, Ph.D.

INSTITUTIONAL ADDRESS

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EDUCATION

Institution	Degree	Field of Study
University of Aberdeen, Scotland: August 1975-June 1980	M.A. Honors 1980	Experimental Psychology
National Medical Research Institute (L'INSERM) Paris, France. Supervisor: Prof. Henry Hecaen August 1980-June 1981	DEA (M.Sc.) 1981	Neurobiology
University of London, Institute of Psychiatry, London, England. August 1983-June 1984	M.Sc. 1984	Neurochemistry
University of London, England Institute of Neurology, Queen's Square London, England. Supervisor: Prof. Frank S. Walsh August 1984-July 1987	Ph.D. 1987	Biochemistry
Stanford University School of Medicine Palo Alto, California Supervisor: Dr. Laurence H. Kedes, M.D.	Post-doctoral 09/87-01/89	Molecular Genetics
University of Southern California School of Medicine Los Angeles, CA. Supervisor: Dr. Laurence H. Kedes, M.D.	Post-doctoral 09/89-01/93	Molecular Genetics

PROFESSIONAL BACKGROUND

July 2017 - present:	Professor with Tenure, Department of Biomedical Science, Charles E. Schmidt College of Medicine, Florida Atlantic University, Boca Raton, FL.
July 2007 - present:	Associate Professor with Tenure, Department of Biomedical Science, Charles E. Schmidt College of Medicine, Florida Atlantic University, Boca Raton, FL.
7/1/13 – 6/30/14	Visiting Associate Professor, Massachusetts General Hospital and Harvard Medical School, Boston, MA.
December 2000 - 2007:	Associate Professor, Biomedical Sciences, Charles E. Schmidt College of Science, Florida Atlantic University, Boca Raton, FL.
June 2007-present	Member of the Center for Complex Systems and Brain Sciences, Florida Atlantic University, Boca Raton, FL.
December 2000-present	Member of the Center for Molecular Biology and Biotechnology (CMBB) , Florida Atlantic University, Boca Raton, FL.
January 2002 - present:	Associate Professor (Secondary Appointment) Department of Biological Sciences, Florida Atlantic University, Boca Raton, FL.
January 2002 - present:	Voluntary Associate Professor, Department of Molecular and Cellular Pharmacology, University of Miami, Miami, FL
July 1997 – Nov. 2000:	Senior Lecturer (equivalent to Associate Professor) with Tenure, Division of Molecular Genetics, Institute of Biomedical and Life Sciences, University of Glasgow, Scotland.
June 1993-July. 1997:	Lecturer (equivalent to Assistant Professor), Division of Molecular Genetics and Department of Medicine and Therapeutics, University of Glasgow, Scotland.

HONORS/FELLOWSHIPS/AWARDS

2016	Nominated as International Faculty for the International Congress on Coronary artery disease (2017 Congress).
2014	Nominated as International Faculty for the International Congress on Coronary artery disease (2015 Congress).
2012	Nominated as International Faculty for the International Congress on Coronary artery disease (2013 Congress).
2010	Nominated as International Faculty for the International Congress on Coronary artery disease (2011 Congress).

2009	Nominated as International Faculty for the International Congress on Coronary artery disease (2009 Congress).
2009	College of Biomedical Science Award for Excellence in Teaching, Florida Atlantic University (College Nominee for University Teacher of the Year Competition).
2007	Dwight W. Warren Award for Excellence in Graduate Teaching, Florida Atlantic University.
1991-92:	Senior Investigatorship of the American Heart Association (Greater Los Angeles Affiliate).
Jan 89 - May 93:	Postdoctoral Fellow, Department of Biochemistry and Institute for Genetic Medicine, University of Southern California Medical Center, Los Angeles, CA 90033. Supervisor: Prof. Laurence H. Kedes M.D.
1988-90:	Postdoctoral fellowship from the Muscular Dystrophy Association (PI: Dr Larry Kedes).
Oct 87 - Jan 89:	Postdoctoral fellow, Stanford University School of Medicine, Palo Alto, CA 94304 U.S.A. The MEDIGEN project (Molecular Genetics). Supervisor: Prof. Laurence H. Kedes M.D.
Aug 87-Sept 87	Research Associate, Institute of Neurology, Queen's Square, London.

TEACHING - Florida Atlantic University (last fifteen years)

Teaching Awards:

1) College of Biomedical Science Award for Excellence in Teaching, Florida Atlantic University (College Nominee for University Teacher of the Year Competition). (2009)

2) Dwight W. Warren Award for Excellence in Graduate Teaching, Florida Atlantic University. (2007).

Courses Taught:

Graduate courses:

Taught in an interdisciplinary course with Department of Education and Nursing School: "Heart of the Matter" 2005.

Spring 4000/6000 level course: Molecular biology of the cardiovascular system and cardiac disease (Coordinator, 45 hrs lectures) 2001-2006.
Fall 6000 level course: Molecular biology of the cardiovascular system and cardiac disease (Coordinator, 45 hrs lectures) 2006-present.
Graduate seminar course. 2004 - 2008.
Advanced Cell Physiology Graduate Course: Lecturer and Coordinator 2006.
Neuroscience Seminar Course 2009.
Advanced Cell Physiology Graduate Instructor 2006-2009.

Medical School Courses:

Medical School First Year Cellular Physiology: lecturer and Coordinator 2004, 2005
Medical School Cardiovascular Module: 2 lectures 2005, 2006
M1 Medical School Lectures: Cell Physiology 2007 – present.
M1 Medical School Lectures: Vascular structure and function 2007-present.
M1 Medical School Lectures: Neuroscience Module: 2014-present.
Problem based learning facilitator: Basic Science 2007-present.
Problem based learning facilitator: Neuroscience module: 2008-present.

Students trained:

Master's students

1) Zach Rickaway – Apoptosis in anoxic neurons. (2004-2006)
2) Rebecca Leon – Role of Taurine in Neuroprotection (2006-2008)
3) Diana Novarro - Antioxidant protection in skin. (2008-2012).
4) Neeta Kumari (2008-2011). Role of GAD in peripheral tissues.

PhD students:

1) Ian Moench – HIF-1 alpha and Anoxia Tolerance (2004-2009)
2) Shailaja Kesaraju – Neurogenesis in anoxia (joint supervision with Dr Milton) (2004-2005)
3) Gauri Nayak – Role of Bcl-2 family members in anoxic neurons (2004-2009)
4) Chun Liu Pan (2007-2012)
5) Michael Marshall (2008-2011)
6) James Sullivan (2014-present).
7) Ganesh Chapagain (2020 – present).

Postdoctoral Fellows:

1) Daniele Scheurle 2000-2002
2) Lina Shehadeh 2003-2005
3) Christopher Dougherty 2004-2006

PhD Thesis Committees:

1) Jangfen Du

2) Shailaja Kesaraju
3) David Brunell
4) Stacee Chapman
5) Matthew Rowan
6) Girish Barot
7) Manas Biswal
8) Ravi Alluri
9) Tyler Smith
10) Mark McCollum
11) Simon Bulley
12) Amber Wilson (University of Miami).
13) Clint Chapman (Griffith University, Australia).
14) Purva Bali
15) Stacee Caplan
16) Jennifer Krill
17) Lauren Purpura
18) Melissa Reiterer

Master's Theses Committees:

1) Ian Meunch (Dr Esiubo)
2) Tracy Cowell-(Marc Kantorow)
3) Yona Ardilis-(Kate Guthrie).
4) Ian Meunch (Dr Esiubo)
5) Angela Belancari (Dr Milton)
6) Monica McGarrity (Dr Milton).
7) Lynda Dirk (Dr Milton)
8) Alissa Deming (Dr Milton)
9) Ping-Ping Jia (Dr Lemanski).
10) Jing Liu (Dr Huang).
11) Lindsay Bruce (Dr. Milton).
12) Melissa Reiterer (Dr. Milton).

Course and Curriculum development:

Planning of Post Baccalaureate Certificate Program (2010-present).
Planning and coordination of cellular physiology course for first year medical students (2004-2007).
Planning new interdisciplinary course with Department of Education and Nursing School: "Heart of the Matter" (2005).
Planning and Coordination of Advanced Cellular Physiology graduate course.(2006-2007)
Coordinator of Mol. Cardiol. Graduate Course.(2001-present)

Directed Independent Study students:

1) Ryan Owens (2004-2005)

2) Judith Formal (2004-2005)
3) Susan Martinez (2004-2005)
4) Brad Greenfield (2005-2006)
5) Sylvia Gamio (2005-2006)
6) Stephanie Petrovitch (2006-2007)
7) Eric Jimenez (2007-2008)
8) Emily Pollack (2008-2009)
9) Jennifer Miller (2008-2009)
10) Diana Navarro (2008-2009)
11) Jasmine Kordbacheh (2009-2010)
12) Melissa Ann Grosso (2009-2010)
13) Shannon O'Brien (2010-2011)
14) One Student (2011-2013)
15) Amrika Maharaj (2012-2013)
16) Shawn Guin (2012-2013)
17) Michelle Hack (2012-2013)
18) Alan Stein (2012-2013)
19) Monica Thacker (2013-2014)
20) Brian Bobosca (2014-2015)
21) Monica Thacker (2014-2015)
22) Kyran Bharath (2015-2016)
23) Carolyn Coles (2015-2016)
24) Carolyn Coles (2016-2017)
25) Eugenia Alvarez (2017-2018)
26) Stefan Basilio (2018-2019)
27) James Torres (2019)
28) Alex Beekharry (2019)
29) Melissa Blake (2019)
30) Belinda Chen (2019-2020)

Undergraduate Research Program:

Summer Undergraduate Research Program (Department of Biological Sciences):
Anthony D'Errico. (2010-2011).
Honors Undergraduate Biology (2015 to present).

TEACHING - University of Glasgow

Courses and sections of courses taught:

Undergraduate Cell Biology: Lectures on Molecular Therapeutics : 1993-2000
Undergraduate Biomedical Sciences: Lectures on Gene regulation: 1993-2000
Honors Molecular and Cell Biology: Lectures and Problem Based learning sessions on Molecular Basis of Gene Regulation. 1995-2000.
Honors Genetics Dissertation supervision 1993-2000
Honors Genetics Tutorials 1993-2000

PhD students:

Andrew Wylie
Jillian Queen
Andrew Dougherty
Obaid Khan

Postdoctoral Fellows:

Yvonne Alexander 1994-1997
Robert Heeley 1997-2000

SERVICE

COMMITTEES AND SERVICE – Florida Atlantic University

University

Chair, University TRAC committee: (2009-2013).
Chair, University Biological Safety Committee: (2001-present)
Vice Chair, Animal Care and Use Committee (May 2015 to present).
Member, Animal Care and Use Committee (January 2014 to May 2015).
Member, University Committee on Entrepreneurship: (2010-2012).
Member, University Senate; Representative on the University Senate for College (2007-2010).
Member, University International Education Committee (2009-present).
Member, University reading committee (2007-2009).
Member, Davimos Endowed Professor recruitment committee: (2003-2004)

College

Member, Medical School Admissions Committee (2011 to present).
Chair, Faculty Assembly-College of Biomedical Science (2007-2009).
Vice-Chair, Faculty Assembly-College of Biomedical Science (2009-2010).
Member, College Promotions and Tenure (2007-2009).
Member, College Promotions and Tenure (current).
Member, FACS candidate recruitment committee (2007-2008).
Member, Curriculum advisory committee FAU: (2003-2009)
Member, Curriculum advisory committee UM/FAU member (2003-2009).
Member, College of Biomedical Science- Planning Committee - (2006)
Member, Clinical Recruitment Committee for Medical School (2003-2004)
Chair, Junior faculty recruitment committee: (2001-2003)
Member, Junior faculty recruitment committee: (2003-2005)

Member, College of Biomedical Science- Planning Committee: (2006)
Member, College research committee: (2007-2009).
Member, M1 promotions: (2007-2010).
Member, M1 interim steering committee: (2007).

Department

Member, CMBB Seminar Organizing committee (2007-2010).
Member, Research Committee Biomedical Sciences: (2003-2007)
Member, Department of Basic Science Chair Search committee (2007).
Member, FACS candidate recruitment committee (2007-2008).
Chair, Junior faculty recruitment committee: (2001-2003)
Member, Junior faculty recruitment committee: (2003-2005)

Other FAU service:

Florida Atlantic University Conference Organizer: The Brain Without Oxygen; A Symposium in Honor of Peter Lutz – A one day international symposium. H. Prentice Organizer; Florida Atlantic University, September 23rd, 2005.

COMMITTEES AND SERVICE - University Of Glasgow

Department of Medicine and Therapeutics: Biological Safety 1993-1998.
Department of Genetics: Safety Committee 1993-2000.
Institute of Biomedical and Life Sciences Biosafety Committee 1995-2000.
Department of Genetics Graduate Committee 1995-2000.
Glasgow Royal Infirmary Biomedical Safety Committee (University of Glasgow, Department of Medical Cardiology) 1994-2000.
Division of Molecular Genetics: Departmental Seminar Organiser 1995-2000.

Ongoing Research Support

1. Title of Research Project: “Therapeutic interventions for stroke targeting mTOR pathway “. Amount of grant: $ 750,000.00; Source of support: James & Esther King Biomedical Program, State of Florida. Period Covered: 03/01/2021-02/28/2024. Role: Co-I (Pending).
2. Title of Research Project: “ Granulocyte colony-stimulating factor (GCSF) therapy for stroke – Clinical study”. Amount of grant: $ 1,500,000.00; Source of support: James & Esther King Biomedical Program, State of Florida. Period Covered: 03/01/2021-02/28/2024. Role: PI. (PI:Pending).

PRIOR GRANTS FUNDED:

Title of Research Project: Small Equipment grant. Amount of award: £10,000. Source of support: Royal Society. Period covered: 1993-1994. Role in the project: Principal Investigator.

Title of Research Project: Hypoxia regulated gene therapy for heart disease. Amount of award: £78,000. Source of support: British Heart Foundation. Period covered: Two Years: 93-95. Role in the project: Principal Investigator.

Title of Research Project: Amount of award: £144,251.Source of support: Project grant from the Medical Research Council. Period covered: Three Years 94-97. Role in the project: Principal Investigator.

Title of Research Project: Regulation of foreign gene expression in the myocardium: applications to gene therapy for heart disease: Amount of award: £131,000. Source of support: British Heart Foundation. Period covered: 95-99 Role in the project: Principal Investigator. (Martin Hicks Co-PI.)

Title of Research Project: Identification of receptors mediating 5 hydroxytryptamine induced vasoconstriction in pulmonary arteries: Amount of award: £121,000. Source of support: The Wellcome Trust. Period covered: 97-99. Role in the project: Co-PI (Mandy MacLean PI).

Title of Research Project: Transcriptional regulation and gene therapy approaches for myocardial ischaemia. Amount of award: £10,000. Source of support: International travel grant from the Wellcome Trust. Period covered: 95-99. Role in the project: Prentice-Principal Investigator. (with Dr. Bishopric and Dr. Webster)

Title of Research Project: Investigation of the effects of skeletal troponin C expression in rabbit myocardium: Amount of award: £127,000. Source of support: Clinical Fellowship for Dr Andrew Docherty from the British Heart Foundation. Period covered: 96-99. Role in the project: Co-Principal Investigator.(PI- Professor S. Cobbe).

Title of Research Project: Molecular strategies to improve nitric oxide/superoxide balance in hypertensive and atherosclerotic vessels. Amount of award: £176,842. Source of support: British Heart Foundation. Period covered: 97-99. Role in the project: Co-Principal Investigator. (PI- Professor A. Dominiczak).

Title of Research Project: Analysis of the role of myotonic dystrophy protein kinase in phosphorylation of phospholamban. Amount of award: £41,301. Source of support: Wellcome trust. Period covered: Oct 98-Sept 99. Role in the project: Prentice Principal Investigator.

Title of Research Project: Development of novel strategies for regulated gene therapy. Amount of award: £30,000. Source of support: Glasgow

Development. Agency/Scottish Enterprise. Period covered: 1998-2000. Role in the project: Principal Investigator.

Title of Research Project: Adenovirus- mediated gene transfer of endothelial nitric oxide synthase (eNOS) in experimental models of left and/or right ventricular dysfunction. Amount of award: £37,360. Source of support: National Heart Research Fund. Period covered: July 99-June 2000. Role in the project: Principal Investigator.

Title of Research Project: Is abnormal sarcoplasmic reticulum function the basis for arrythmogenesis and mechanical dysfunction in heart failure?
Amount of award: £950,012. Source of support: Program grant from the British Heart Foundation. Period covered: July 99-June 2004. Role in the project: Prentice- one of four PIs.

Title of Research Project: Brain Anoxia Tolerance and Targets for Stroke Therapy. Amount of award: $120,000. Source of support: American Heart Association. Period covered: July 2002- June 2004. Role in the project: Co-Principal Investigator 30% effort.(Peter Lutz –PI)

Title of Research Project: Increase in tissue oxygenation for wound healing. Amount of award: $17,500. Source of support: Industrial sponsor: (Corp: Hydron Mitrobubbles). Period covered: 2003-2004. Role in the project: Principal Investigator.

Title of Research Project: A transgenic mouse model with altered cardiac p300 transcription factor: Gene chip analysis for characterization of key regulatory pathways for heart failure. Amount of award: $15,000. Source of support: FAU Research Enhancement Program. Period covered: 2004-2005. Role in the project: Principal Investigator.

Title of Research Project: Harvey cardiovascular project submission. Amount of award: $100K. Source of support: Funded by Quantum. Period covered: 2004. Role in the project: One of four investigators.

Title of Research Project: Mechanisms of protection for hypoxia/ischemia:
Amount of award: $87.5K. Source of support: Grant from Industrial Sponsor: Corp: Vita Biotech., Period covered: 2004-2006. Role in the project: Principal Investigator.

Title of Research Project: Oxidative stress and aging. Amount of award: $180K. Source of support: Florida Center of Excellence. Period covered: 2003-2006. Role in the project: One of Three Joint Principal Investigators.

Title of Research Project: Brain Anoxia Tolerance and Constitutive Preconditioning. Amount of award: $120K. Source of support: American Heart Association. Period covered: 2004-2006. Role in the project: Co-Principal Investigator.(PI-Sarah Milton).

Title of Research Project: ROS Defense Mechanisms in Brain Reoxygenation. Amount of award: $100K. Source of support: NIH-AREA. Period covered: 2004-2006. Role in the project: Collaborator 10% effort. (Sarah Milton Principal Investigator).

Title of Research Project: Mechanisms underlying tissue protection by pulsatile insulin delivery in rodent models of diabetes. Amount of award: $20,000. Source of support: Advanced Diabetes Treatment Centers. Period covered: 2006-2008. Role in the project: Co-PI: H. Prentice (PI-B.K. Tuller).

Title of Research Project: Investigation of a novel insulin delivery system in a rabbit model of diabetes. Amount of award: $9,500. Source of support: Admetsys. (Industrial sponsor). Period covered: 2008-2009. Role in the project: Principal Investigator.

Title of Research Project: Methionine Sulfoxide Reductase –A and Myocardial Ischemic Protection: Amount of award: $120,000. Source of support: American Heart Association. Period covered: 2005-2008. Role in the project: Principal Investigator.

Title of Research Project: "Hypoxia Regulated Gene Therapy for Neovascularization", The goal of this project is to design tissue-specific vectors to stop neovascularization in animal models of diabetic retinopathy and macular degeneration. Amount of award: Total Direct and Indirect Costs: $421,500.
Source of support: National Institutes of Health (National Eye Institute) R03 EYO16119. Period covered: 2005-2009. Role in the project: Co-Principal Investigator. (Principal Investigator, Janet C. Blanks).

Title of Research Project: Purchase of a Fluorescent Activated Cell Sorter. Amount of award: $500,000 Total. Source of support: Equipment Grant: Bankhead Coley- Florida State Equipment Grant on Cancer Related Diseases: Period covered: 2007-2008. Role in the project: Prentice one of six Co-Principal Investigators.(PI- Yoshimi Shibata)

Title of Research Project: Role of IL-10 in preventing neo-vascularization in age related macular degeneration. Amount of award: $212,050. Source of support: National Institutes of Health (NIH-R15EY018947-01). Period covered: 07/01/09-05/30/11. Role in the project: Co-Principle Investigator-5% effort (Kathy Dorey- Principal Investigator).

Title of Research Project: The turtle as a model of ROS tolerance and longevity. Amount of award: $160,000. Source of support: National Institutes of Health. Period covered: 01/01/09 – 12/31/10. Role in the project: Co-Principle Investigator-5% effort (Sarah Milton- Principal Investigator).

Title of Research Project: “Reversal of Oxidative Damage in an In-Vitro Model of Stroke.” The long range goal of this project is to evaluate expression and protective function of hypoxia regulated MsrA gene therapy vectors in ischemic brain in vivo. Amount of award: $43,400 Total. Source of support:

American Heart Association. Period covered: 07/01/08 to 06/30/10. Role in the project: Co-Mentor (Janet Blanks: Mentor).

Title of Research Project: Multidrug therapy for stroke. Amount of award: $748,046 over three years Source of support: Florida Department of Health. Period covered: 01/01/2010-6/30/2013. Role in the project: Co-Principal Investigator-7% effort (John Wu- Principal Investigator).

Title of Research Project: FAU Research Priority Theme: Neuroscience. Amount of Award: $500,000. Source of Support: FAU Research Priority Theme. Period covered: 01/08/2010- 31/07/2013. Prentice –member and investigator. (P.I.: Janet Blanks)

Title of Research Project: FAU Research Priority Theme: Healthy Aging. . Amount of Award: $500,000. Source of Support: FAU Research Priority Theme. Period covered: 01/08/2010- 31/07/2013. Prentice –member and investigator. (P.I.: Joseph Ouslander)

Title: Neuroprotection with novel agents in PC12 cell cultures: $38,000; 06/20/2013-06/19/2014 Role: PI

Title: Transcript targeted MTI and Neuroprotection for stroke. Burroughs Wellcome Travel Grant; Harvard University: $10,000. 2013, 12 months.

Title: Neuroprotection with active fractions of agents in PC12 cell cultures: $50,000; 05/20/2015-05/19/2016 Role: PI

Title: Gene Therapy for Stroke: Federal Agency/Institute: DOH, State of Florida; Grant Mechanism (RO1, PO1, etc.): James and Esther King TTF proposal, Principal Investigator: JANG-YEN WU; Prentice -Co-investigator: Proposal Submission 08/30/2015. Grant Start – End Date: 00/01/2016-12/31/2019. Submission Status (Funded/Not funded/Pending): Funded: Total Funds: $1,213,000

PATENTS AWARDED AND PENDING

Patent awarded on Anti-Angiogenic Gene Therapy (Dr. H. Prentice, Dr. J. Blanks and Dr K. Dorey) (2013).

Patent Awarded-Anti-Angiogenic Gene Therapy-Continuation in part -2017.

Patent awarded on Multidrug therapy for Stroke (Dr. H. Prentice and Dr. J. Wu) (2015).

Pending- Multidrug therapy for Stroke-Submitted 2015 continuation in part.

Pending –Novel treatment of retinal disorders. (DR. H. Prentice, Dr. J. Blanks and Dr. Herbert Weissbach) Submitted 2014.

OTHER EXPERIENCE AND PROFESSIONAL ORGANIZATION MEMBERSHIP

Chair American Heart Association Study Section: Genetics and Epigenetics 2014-Present.
Vice Chair American Heart Association Study Section: Genetics and Epigenetics 2011-2014.
Member of Editorial Board of Frontiers in Physiological Genomics.
Member of Editorial Board of Journal of Vascular Medicine.
American Heart Association Basic Science Council Member.
ARVO Member.

JOURNAL REVIEW

Member of Editorial Board of Frontiers in Physiological Genomics.
Member of Editorial Board of Journal of Vascular Medicine.
Member of Editorial Board of Journal of J. Brain Science.
Member of Editorial Board of Journal of Neuroscience Communications.
Proc. Natl. Acad. Sci. USA.
Journal of Gene Medicine
Journal of Experimental Biology
Circulation Research.
Journal of Biomedical Science.
Journal of comparative Biochemistry and Physiology.
FASEB Journal.

GRANT REVIEW

Chair-American Heart Association-Genetics and Epigenetics – Study section- 2014 to present.

NIH
Academia Sinica Taiwan.
National Heart Research Fund
Trustees to St. Thomas's Hospital, London
British Heart Foundation (1993-2001)
Wellcome Trust
American Heart Association Study Section Member: Florida Affiliate 2002-2007
American Heart Association Study Section Member (National) 2007- 2014 (Currently Chair).
Department of Veterans Affairs

INVITED LECTURES, SEMINARS AND SYMPOSIUM PRESENTATIONS:

American Heart Association 65th Annual Scientific Sessions, November 1992, New Orleans, LA. Speaker.

N + N Meeting (SERC and NIH sponsored) on Cellular Engineering, September 1993, Chester, UK. Invited Speaker.

American Heart Association 66th Annual Scientific Sessions, November 1993, Atlanta, GA. Speaker.

NATO Advanced Research Workshop on Cardiac Growth and Regeneration, June 1994, Vertibo, Italy. Speaker.

Cellular Engineering Conference, San Diego, CA, August 1995 Speaker

American Heart Association 68th Annual Scientific Sessions, November 1995, Anaheim, CA. Speaker.

Annual Workshop On Hypoxia and the Tumour Microenvironment, May 1997, Martha's Vineyard, MA. Invited Speaker.

Miami Nature Biotechnology Winter Symposium, February 1998, Miami, FL. Invited Speaker.

Heart Failure '98 Update-Glasgow. Molecular Biology of Cellular Stress in the Cardiovascular System. 1998. Invited Speaker.

European Society of Cardiology International Symposium 1998, Vienna. Invited Speaker.

British Society for Cardiovascular Research-Molecular Genetics of Cardiovascular Disease 1999, Glasgow. Speaker.

International Symposium on Hypoxia Sensing 1999, Philadelphia. Invited Speaker.

Symposium On Organisms With Slow Aging (SOSA II) 2003, Los Angeles. Invited Speaker.

International Union of Physiological Sciences Conference. Session on Hypoxia: Neuroprotection. 2005, San Diego. Invited speaker.

Society for Experimental Biology; Canterbury, England. Session on Anoxia and Hypoxia. Invited Speaker, March 2006.

International Conference on Coronary Artery Disease. Organizing committee, Invited speaker, Prague October 2009.

International Conference on Coronary Artery Disease. Organizing Committee, Congress of 2011, Venice, Italy.

International Taurine meeting, Morocco, April 2012. Plenary speaker plus two additional lectures.

August 2012 Gordon Conference in Stroke: Session Organizer and Session Chair on – “Tissue stress and oxygen availability”

Invited speaker at International conference on Amino Acids: Galveston, Texas, September 2013.

Invited Seminar At MGH: Boston MA, November 7, 2013, Neuronal survival mechanisms and models of ischemic protection.

Global Summit on Stroke: Stroke-2015, Birmingham, UK. Plenary speaker plus one additional lectures. Organizing committee representative.

Invited Speaker: International Taurine Meeting, 2016; Seoul, Korea.

Poster Presentation ARVO, Hawaii, 2018.

Invited Speaker University of South Florida, February 2019.

Poster presentation ARVO, Vancouver, Canada, May 2019.

CONFERENCE ORGANISATION

Heart Failure ‘98 Update-Glasgow. Local Organizer and Chair for sessions on Molecular Biology of Cellular Stress in the Cardiovascular System and on Gene Therapy for Heart Failure.

International Union of Physiological Sciences Conference. Session on Hypoxia: Neuroprotection. 2005, IUPS: Symposium co-organiser, San Diego 2005.

The Brain Without Oxygen; A Symposium in Honor of Peter Lutz – A one day international symposium. H. Prentice Organizer.
Florida Atlantic University, September 23rd, 2005.

Society for Experimental Biology; Canterbury, England. Session on Anoxia and Hypoxia. Co-organiser; March 2006.

International Conference on Coronary Artery Disease. Organising committee, Chair of session on Signaling. Prague October 2009.

International Taurine Meeting, Florida Atlantic University, Boca Raton, Florida; Local Organizer, 2009.

International Conference on Coronary Artery Disease. Organizing Committee, Congress of 2011.

International Conference on Coronary Artery Disease. Organizing Committee, Congress of 2013.

Global Summit on Stroke: Stroke-2015 Organizing Committee, Birmingham, UK.

PUBLICATIONS IN JOURNALS

1) Modi J, Menzie-Suderam J, Xu H, Trujillo P, Medley K, Marshall ML, Tao R, **Prentice H**, Wu JY. Mode of action of granulocyte-colony stimulating factor (G-CSF) as a novel therapy for stroke in a mouse model. J Biomed Sci. 2020 Jan 6;27(1):19. doi: 10.1186/s12929-019-0597-7. (Prentice, Tao, Wu – corresponding authors).

2) Menzie-Suderam JM, Modi J, Xu H, Bent A, Trujillo P, Medley K, Jimenez E, Shen J, Marshall M, Tao R, Prentice H, Wu JY Granulocyte-colony stimulating factor gene therapy as a novel therapeutics for stroke in a mouse model. .J Biomed Sci. 2020 Oct 30;27(1):99. doi: 10.1186/s12929-020-00692-5. (Prentice, Tao, Wu –corresponding authors).

3) Couturier CS, Stecyk JAW, Ellefsen S, Sandvik GK, Milton SL, **Prentice HM,** Nilsson GE. The expression of genes involved in excitatory and inhibitory neurotransmission in turtle (Trachemys scripta) brain during anoxic submergence at 21 °C and 5 °C reveals the importance of cold as a preparatory cue for anoxia survival. Comp Biochem Physiol Part D Genomics Proteomics. 2019 Jun;30:55-70. doi: 10.1016/j.cbd.2018.12.010.

4) Biswal MR, **Prentice HM**, Smith GW, Zhu P, Tong Y, Dorey CK, Lewin AS, Blanks JC. Cell-specific gene therapy driven by an optimized hypoxia-regulated vector reduces choroidal neovascularization. J Mol Med (Berl). 2018 Oct;96(10):1107-1118.(Prentice – corresponding author).

5) Menzie-Suderam JM, Mohammad-Gharibani P, Modi J, Ma Z, Tao R, **Prentice H**, Wu JY Granulocyte-Colony Stimulating Factor protects against Endoplasmic reticulum stress in an experimental model of stroke. Brain Res. 2018 1682: 1-13 (PMID: 29277709.

6) Chou CC, Modi JP, Wang CY, Hsu PC, Lee YH, Huang KF, Wang AH, Nan C, Huang X, **Prentice H**, Wei J, Wu JY. Activation of Brain L-glutamate Decarboxylase 65 Isoform (GAD65) by Phosphorylation at Threonine 95 (T95). Mol Neurobiol. 2017 Mar;54(2):866-873. doi: 10.1007/s12035-015-9633-0.

7) Prentice H, Pan C, Gharibani PM, Ma Z, Price AL, Giraldo GS, Retz HM, Gupta A, Chen PC, Chiu H, Modi J, Menzie J, Tao R, Wu JY.Analysis of Neuroprotection by Taurine and Taurine Combinations in Primary Neuronal Cultures and in Neuronal Cell Lines Exposed to Glutamate Excitotoxicity and to Hypoxia/Re-oxygenation. Adv Exp Med Biol. 2017;975 Pt 1:207-216.

8) Prentice H, Gharibani PM, Ma Z, Alexandrescu A, Genova R, Chen PC, Modi J, Menzie J, Pan C, Tao R, Wu JY. Neuroprotective Functions Through Inhibition of ER Stress by Taurine or Taurine Combination Treatments in a Rat Stroke Model. Adv Exp Med Biol. 2017;975 Pt 1:193-205. doi: 10.1007/978-94-024-1079-2_17.

9) Nayak G, Prentice HM, Milton SL. Lessons from nature: Signaling cascades associated with vertebrate brain anoxic survival. Exp Physiol. 2016 Mar 17. doi: 10.1113/EP085673. [Epub ahead of print]

10) Ren, J. Q., Chen, I., Chen, P.-C., **Prentice, H.,** Wu, J.-Y. and Liu, P.K. Non-invasive evaluation of brain damage and repair by gene therapy. Gene Ther. 2016; 23(1):1-9. doi: 10.1038/gt.2015.81.

11) Modi, J.P., **Prentice, H**. and Wu, J.-Y. Regulation of GABA synthesis and transport. In "Gamma-Aminobutyric Acid (GABA): Biosynthesis, Medicinal Uses and Health Effects" (Vlainic, J. ed., NOVA publisher). 2015, In Press

12) Modi JP, Prentice H, Wu JY. Regulation of GABA Neurotransmission by Glutamic Acid Decarboxylase (GAD). Curr Pharm Des. 2015; 21(34):4939-42.

13) Modi JP, Gharibani PM, Ma Z, Tao R, Menzie J, **Prentice H**, Wu JY. Protective mechanism of sulindac in an animal model of ischemic stroke. Brain Res. 2014 Aug 12;1576:91-9. (Prentice, Tao, Wu –corresponding authors).

14) Sur A, Kesaraju S, **Prentice H**, Ayyanathan K, Baronas-Lowell D, Zhu D, Hinton DR, Blanks J, Weissbach H. Pharmacological protection of retinal pigmented epithelial cells by sulindac involves PPAR-α. Proc Natl Acad Sci U S A. 2014;111(47):16754-9.

15) Modi JP, **Prentice H**, Wu JY. Sulindac for stroke treatment: neuroprotective mechanism and therapy. Neural Regen Res. 2014;9(23):2023-5. (Prentice and Wu corresponding authors).

16) Gharibani P, Modi J, Menzie J, Alexandrescu A, Ma Z, Tao R, **Prentice H**, Wu JY. Comparison between single and combined post-treatment with S-Methyl-N,N-diethylthiolcarbamate sulfoxide and taurine following transient focal

cerebral ischemia in rat brain. Neuroscience. 2015 Aug 6;300:460-73. (Prentice, Tao and Wu corresponding authors).

17) **H Prentice**, JP Modi, JY Wu. Mechanisms of Neuronal Protection against Excitotoxicity, Endoplasmic Reticulum Stress, and Mitochondrial Dysfunction in Stroke and Neurodegenerative Diseases. Oxid Med Cell Longev. 2015;2015:964518. doi: 10.1155/2015/964518. Epub 2015 Oct 20. (Prentice-Corresponding Author).

18) Mohammad-Gharibani P, Modi J, Menzie J, Genova R, Ma Z, Tao R, **Prentice H**, Wu JY. Mode of action of S-methyl-N, N-diethylthiocarbamate sulfoxide (DETC-MeSO) as a novel therapy for stroke in a rat model. Mol Neurobiol. 2014 Oct;50(2):655-72.

19) Chen, P-C, Pan, C, Gharibani, PM, **Prentice, H**, Wu, J-Y: Taurine exerts robust protection against hypoxia and oxygen/glucose deprivation in human neuroblastoma cell culture., 2013. Advances in Experimental Medicine and Biology, 775:167-75 (2013). (Prentice and Wu corresponding authors).

20) Kesaraju S, Nayak G, **Prentice HM**, Milton SL. Upregulation of Hsp72 mediates anoxia/ reoxygenation neuroprotection in the freshwater turtle via modulation of ROS. Brain Res. 2014;1582: 247-56.

21) Biswal MR, **Prentice HM**, Dorey CK, Blanks JC. A hypoxia-responsive glial cell-specific gene therapy vector for targeting retinal neovascularization. Invest Ophthalmol Vis Sci. 2014;55(12):8044-53.

22) Kumari, N, **Prentice, H** and Wu , JY. Taurine and its neuroprotective role. Advances in Experimental Medicine and Biology, 775:19-28, (2013). (Prentice and Wu corresponding authors).

23) **Prentice H**. Studies on left ventricular hypertrabeculation/ noncompaction: the need for in-depth ultrastructural investigations. Cardiology. 2013;126(4):255-7.

24) Gharibani P, Modi J, Pan C, Ma Z, Menzie J, Chen P-C, Tao R, **Prentice H*** and Wu J-Y* The Mechanism of Taurine Protection against Endoplasmic Reticulum Stress in an Animal Stroke Model of Cerebral Artery Occlusion and Stroke Related conditions in Primary Neuronal Cell Culture In: Taurine 8, Ed. El Idrissi, Vol. 1, Chapter 23, Advances in Experimental Biology and Medicine. Springer, 2013. (*co-corresponding authors).

25) Menzie J, Pan **C, Prentice H**, Wu JY. Taurine and central nervous system disorders. Amino Acids. 2014 Jan;46 (1):31-46.

26) Menzie, J., **Prentice, H.,** and Wu, J.-Y. Neuroprotective mechanisms of taurine against ischemic stroke. In special issue: neuroprotection against ischemic brain injury, Brain Sciences, 3: 877-907, 2013.

27) Ma Z, Rudacille M, **Prentice HM**, Tao R. Characterization of electroencephalographic and biochemical responses at 5-HT promoting drug-induced onset of serotonin syndrome in rats. J Neurochem. 2013 Jun;125(5):774-89.

28) Pan, C, **Prentice, H**, Wu, JY: Multi-faceted Role of Taurine in the Central Nervous System," in press 2013, Adaptive Medicine (Prentice and Wu corresponding authors).

29) Buddhala C, Suarez M, Modi J, **Prentice H**, Ma Z, Tao R, Wu JY. Calpain Cleavage of Brain Glutamic Acid Decarboxylase 65 Is Pathological and Impairs GABA Neurotransmission. PLoS One. 2012;7(3):e33002. Epub 2012 Mar 12.

30) Pan C, **Prentice H,** Price AL, Wu JY. Beneficial effect of taurine on hypoxia- and glutamate-induced endoplasmic reticulum stress pathways in primary neuronal culture. Amino Acids. 2012 Aug;43(2):845-55.

31) Smith GW, Dorey CK, **Prentice H**, Blanks J. The Importance of Hypoxia-Regulated, RPE-Targeted Gene Therapy for Choroidal Neovascularization. Adv Exp Med Biol. 2012;723:269-77.

32) **Prentice HM**, Biswal MR, Dorey CK, Blanks JC. Hypoxia-regulated retinal glial cell-specific promoter for potential gene therapy in disease. Invest Ophthalmol Vis Sci. 2011 Sep 29. [Epub ahead of print].

33) Nan C, Li Y, Jean-Charles PY, Chen G, Kreymerman A, **Prentice H**, Weissbach H, Huang X. Deficiency of methionine sulfoxide reductase A causes cellular dysfunction and mitochondrial damage in cardiac myocytes under physical and oxidative stresses. Biochem Biophys Res Commun. 2010 Nov 26;402(4):608-13.

34) Nayak GH, **Prentice HM,** Milton, SL.:Neuroprotective signaling pathways are modulated by adenosine in the anoxia tolerant turtle. J Cereb Blood Flow Metab. 31, 467-75 (2011).

35) **Prentice HM.** Decreased temperature as a signal for regulation of heat shock protein expression in anoxic brain and heart. Am J Physiol Regul Integr Comp Physiol. 2010 298(6):R1496-8.

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56) **Prentice, H.** and Webster, K.A. Proteomic analysis of heart function: Trends in Cardiovascular Medicine 14 (7) 282-288 (2004).

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60) Dougherty, C., Hernandez, H., **Prentice, H.**, Andreka, P., Bishopric, N.H., and Webster, K.A. Activation of c-Jun N-terminal Kinase Promotes Survival of Redox stressed Cardiac Myocytes. Biochem. J. 362: 561-571 (2002).

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75) Muscat, G.E.O., Perry, S., **Prentice, H M.** and Kedes, L. Three nuclear proteins that bind to the major skeletal a- actin gene enhancer are differentially expressed during myogenesis. Gene Expression 2: 111-126 (1992).

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Education:

Huazhong Univ. of Science & Technology, China	B.A	1985	Bioengineering
University of Tennessee, Memphis, TN	Ph.D	1991	Physiology
Duke University Medical Center, Durham, NC	Postdoctoral	1992	Neuroimmunology
National Institute of Mental Health, MD	Postdoctoral	1998	Neuroimmunology

Personal statement: The focus of my lab is how the nervous system and immune system form a combined neuroimmune supra-system. We are interested in understanding how these two systems communicate with each other to modulate each other's function. We use multiple techniques in molecular biology, neuroscience, and immunology to accomplish this goal. This multidisciplinary approach creates an ideal environment for training students on broad biomedical research subjects. Advanced technologies such as FACS analysis, cloning, in-cell Western, patch-clamping electrophysiology, production of transgenic mouse and targeted transgenesis, and behavioral analysis are employed in my laboratory. Our current research led to the discovery of the euflammatory process which can be used to design vaccine-based induction of immune responses as well as bacterial based cancer therapy. We are also conducting detailed analyses of cell-type specific actions mediated by IL-1R1 using several lines of transgenic animals that we created. This research has led to the identification of specific pathways related to the pathogenesis of various psychopathology caused by CNS inflammation.

A. Positions and Honors.

Positions and Employment

1987-1991	Graduate Research Assistant, Department of Physiology, University of Tennessee, Memphis, TN
1991-1992	Postdoctoral Fellow, Department of Psychiatry, Duke University Medical Center, Durham, NC
1992-1995	Instructor, Department of Psychiatry, Emory University School of Medicine, Atlanta, GA
1995-1998	Intramural Training Fellow, National Institute of Mental Health, Bethesda, MD
1998-2003	Assistant Professor, Oral Biology and Institute for Behavioral Medicine Research, Ohio State University, Columbus, OH
2003-2009	Associate Professor, Oral Biology and Institute for Behavioral Medicine Research, Ohio State University, Columbus, OH

2009-2019 Tenure Professor, Biosciences and Institute of Behavior Medicine, Ohio State University.
2009-2016 Chair, Oral Biology Graduate Program, Ohio State University.
2009-present Guest Professor, Sichuan University, China
2017-present Guest Lead Scientist, Hamilton Biotechnology, Wuhan China.
2019-present Professor, Biomedical Science, Charles E. Schmidt College of Medicine, FAU
2019-present Professor, FAU Brain Institute
20-20-present Director, Program in Neuroimmunology &Glial Biology

B. Honors and Appointments

1998 Tanaguchi Young Investigator
2001 Stazen Award for Junior Research Scientist
2008 Stazen Award for Senior Research Scientist
2004-2008 Study Section Member (NNB, neuro-endocrine, neuro-immunology, and behavior) of an NIH Review Committee.
2010-2017 Ad hoc Study Section (PMDA) Member of NIH Review Committee
2017-2019 Study Section Member of PMDA.
2018-present Member, Board of Directors, PNIRS

C. Invited Lectures

2008 Invited lecture: "Pathophysiology of neuroimmune communication", Pennington Institute, Louisiana
2010 Invited lecture: "Neuroimmune communication pathways", University of Virginia
2011 Invited lecture: "Integrating neuroimmune suprasystem", Indiana University.
2012 Invited lecture: "Integrated neuroimmune system", University of Kansas.
2013 Invited lecture: "To talk or not to talk: that is the question for the neuroimmune suprasystem", Georgia Regents University
2014 Invited lecture: "The neuroimmune system", Wuhan University, China
2015 Invited lecture: "IL-1 and neuroimmune communication", Sept. 18th, at Vanderbilt University.
2016 Invited speaker, International conference of physiological sciences. Sept. 27th, Beijing, China
2016 Invited speaker, Department of Psychiatry and Behavioral Neuroscience, University of Cincinnati. Oct. 6.
2017 Invited speaker, Department of Neuroscience, University of Kentucky. Feb. 17. 2017
2018 Invited speaker, Hamilton Biotechnology Lecture Series, Wuhan, China. July, 10-17. 2018
2018 Invited lecture: "IL-1R1 in the context of neuroimmunology, new discoveries and re-evaluation", Brain Institute, Florida Atlantic University, Oct. 5, 2018.
2018 Invited speaker, Grand Round Series, School of Health and Rehabilitation, the Ohio State University, Oct. 19, 2018.
2019 Invited lecture: "Health and neuroimmune communication", Nantong Medical College, Zhejiang, China, Jan. 7, 2019.
2019 Invited lecture: "Insights from dissecting cell type specific IL-1R1 functions", Animal Sciences, University of Illinois at Urbana-Champaign, Feb. 21, 2019.

Editorial Boards: Journal of Inflammation Research, 2013-present, Editor-in-Chief.

Psychoneuroimmunology Journal, 2019**-**present, founding Editor-in-Chief
Brain, Behavior, and Immunity**.** 2013-present, board member.

Teaching

1998-2001 Molecular Techniques, course director, OSU
1998-2001 Neuroimmunology, Lecturer, OSU
1998-2001 Immunology and Microbiology, lecturer, OSU
2001-2009 Biochemistry, lecturer, OSU
2009-2019 Immunology and microbiology, lecturer, OSU
2001-2019 Biochemistry, course director, OSU
2019-present Neuriscience 1, lecturer, OSU

Research Project Funding

Current Projects

R01 NS116914 (Quan, PI) 4/1/2020-3/31/2025
Neuroinflammation, Neuronal IL-1R1, and Behavior

R01 MH109165 (Quan, PI) 12/1/15-12/1/20
Anxiety, IL-1R1, and Neuroinflammation

R33 MH 82118515 (Quan, Co-I) 8/28/18-8/28/20
The Role of the Intestinal Microbiome in Anxiety and Depression.

R01 NS103785 (Quan, Co-I) 12/15/18-11/30/23
Cell-Specific Actions of IL-1 / IL-1R1 Signaling Following Traumatic Brain Injury

Anonymous Donor (Quan, Co-I) 1/1/2020-12/31/20
Discretionary funds for research costs related to neuroimmune research

Completed Projects

R01 NS04098 (PI) 12/1/2001-11/31/2004
Pathophysiology of Neuroimmune Communication

R01 AI059089 (PI) 12/1/2001-01/31/2007
Stress & Enhancement of Skin Immunity: Molecular Mechanisms

R01 AI059089 (PI) 12/1/04-11/30/09
Neuroimmune Communication at the Blood Brain Barrier.

R01 AI076926 (PI) 12/1/07-11/31/12

IL-1R1 Promoter Complex in the Neuroendocrine, Nervous, and Immune System.

GRT00016597 (PI) 8/13/2010-7/31/2014
IL-1R3 and brain

R01 AI076926 (PI) 12/1/07-11/30/12
IL-1R1 promoter complex in the neuroendocrine, nervous, and immune systems.

R01 DA014610 (Co-I) 1/15/09-11/30/14
Mechanism of Drug Addiction.

R21 MH099482 (PI) 12/15/12-12/15/14 PI
IL-1R1 Restore: Dissecting Cell Type Specific Functions of IL-1R1

R01 MH097243 (Co-I) 6/1/2012-6/1/2017
Brain Region Specific Trafficking of Myeloid Cells in Repeated Social Defeat

GRT00049956 (PI) 1 2/08/17-12/31/18
Anxiety Research (private foundation, SPM)

Graduate and postdoctoral students

San Ching	Postdoctoral fellow	9/2006/-9/2008
Lin Zhu	Postdoctoral fellow	9/2008-9/2009
Jiang Qian,	Postdoctoral fellow	3/2011-8/2012
Andrew Tarr	postdoctoral fellow	9/2012-9/2015
Anping Song	postdoctoral fellow	9/2015-9/2017
Xiaoyu Liu	Postdoctoral fellow	5/2017-present
Emily Ho	Graduate student (Human ecology)	9/1999-9/2002 (Graduated)
Ana Mercado	Graduate student (Oral Biology)	9/1999-9/2002 (Graduated)
Mike Horan	Graduate student (Oral Biology)	9/2000-9/2003 (Graduated)
Hao Zhang	Graduate student（Biosciences）	9/2004-9/2009（Graduated）
Qiming Li	Graduated student（MCDB program）	9/2008-12/2010（Graduated）
Karol Ramirez	Graduate student（Biosciences）	9/2012-12/2015（Graduated）
Ying An,	Graduate student（Biosciences）	9/2008-2016 (Graduated)
Dan Mckim	Graduate student (Neuroscience)	9/2012-2017 (graduated)
Xiaoyu Liu	Graduate student（Biosciences）	9/2011-2017 Graduated
Damon DiSabato	Graduate student（neuroscience）	9/2015-present
Daniel Nemeth	Graduate student（Biosciences）	1/2016-present

Peer-reviewed publications.

1. Quan, N. and Blatteis, C.M. (1989) Microdialysis: A system for localized drug delivery into the brain. Brain Res. Bull. 22:621-625.
2. Quan, N. and Blatteis, C.M. (1989) Intrapreoptically microdialyzed and microinjected norepinephrine evoke different thermal responses. Am. J. Physiol. 257: R816-R821.

3. Blatteis, C.M., Dinarello, C.A., Shibata, M., Llanos-Q., J., Quan, N. and Busija, D.W. (1989) Does circulating interleukin-1 enter the brain? In: Thermal Physiology 1989, J.B. Mercer, ed., Elsevier, Amsterdam, pp. 385-390.
4. Blatteis, C.M., Quan, N., Xin, L. and Ungar, A.L. (1990) Neuromodulation of acute-phase responses to interleukin-6 in guinea pigs. Brain Res. Bull. 25:895-906.
5. Blatteis, C.M., Xin, L. and Quan, N. (1991) Neuromodulation of fever: Apparent involvement of opioids. Brain Res. Bull. 26:191-195.
6. Quan, N., Xin, L. and Blatteis, C.M. (1992) Microdialysis of norepinephrine into the preoptic area of guinea pigs: Characteristics of the hypothermic effect. Am. J. Physiol. 261:R378-R385.
7. Quan, N., Xin, L., Hunter, W.S. and Blatteis, C.M. (1992) Hypothalamic norepinephrine and body temperature control: Another look. In: Pharmacology of Thermoregulation, P. Lomax and E. Schonbaum, eds., Karger, Basel, pp. 46-49.
8. Quan, N., Xin, L., Hunter, W.S. and Blatteis, C.M. (1992) Validation of the hypothermic action or preoptic norepinephrine in guinea pigs. Brain Res. Bull. 28:537-542.
9. Quan, N., Xin, L., Ungar, A.L. and Blatteis, C.M. (1992) The hypothermic effect of norepinephrine in the preoptic area is mediated by 2-adrenoceptors. Am. J. Physiol. 262:R407-R411.
10. Quan, N., Sundar, S.K. and Weiss, J.M. (1994) Induction of interleukin-1 in various brain regions after peripheral and central injections of lipopolysaccharide. J. Neuroimmunology 49:125-134.
11. Weiss, J.M., Stout, J.C., Aaron, M.F., Quan, N., Owens, M.J., Butler, P.D. and Nemeroff, C.B. (1994) Experimental studies of depression and anxiety: Role of locus coeruleus and corticotropin-releasing factor. Brain Res. Bull. 35:561-572.
12. Weiss, J.M., Quan, N. and Sundar, S.K. (1994) Widespread activation and consequences of interleukin-1 in the brain. Annals N.Y. Acad. Sci. 741:338-357.
13. Blatteis, C.M., Xin, L. and Quan, N. (1994) Neuromodulation of fever: A possible role of Substance P. Annals N.Y. Acad. Sci. 741:162-173.
14. Quan, N., Zhang, Z., Emery, M., Bonsall, R. and Weiss, J.M. (1996) Detection of interleukin-1 bioactivity in various brain regions of normal healthy rats. NeuroImmunoModulation. 3:47-55.
15. Quan, N., Zhang, Z., Emery, M., Lai, E., Bonsall, R., Kalyanaraman, V.S. and Weiss, J.M. (1996) In vivo induction of interleukin-1 bioactivity in brain tissue after intracerebral infusion of native gp120 and gp160. NeuroImmunoModulation. 3:56-61.
16. Quan, N., Whiteside, M., Kim, L., and Herkenham, M. (1997) Induction of IkB-alpha mRNA in the central nervous system after peripheral lipopolysaccharide administration: an in situ hybridization histochemistry study in the rat. Proc. Natl. Acad. Sci. 94:10985-10990
17. Quan, N., Whiteside, M., and Herkenham, M. (1998) Time course and patterns of interleukin-1-beta mRNA expression in the central nervous system after peripheral LPS administation. (1998) Neurosci. 83:281-293
18. Quan, N., Mhlanga, J-D., Whiteside, M., McCoy, A.N., and Kristensson, K., and Herkenham, M. Chronic over-expression of pro-inflammatory cytokines and progressive neurodegeneration in the brain of rats infected with Trypanosoma brucei. J. Comp. Neurol.414:114-130, 1999
19. Quan, N., Whiteside, M., and Herkenham, M. Cyclooxygenase 2 mRNA expression in rat brain after peripheral injection of lipopolysaccharide.Brain Res., 802: 189-197, 1998.
20. M. Whiteside, N. Quan.and M. Herkenham, “Induction of pituitary cytokine transcripts by peripheral lipopolysaccharide. J. Neuroendo. 11:115-120, 1999.
21. Quan, N., Stern, E., Whiteside, M., and Herkenham, M. Induction of pro-inflammatory cytokine mRNAs in the brain after peripheral injection of subseptic doses of lipopolysaccharide in the rat. J. Neuroimmunology. 93:72-80, 1999

22. Quan, N., Zhang, Z., Kitson, R.P., Chambers, W.H., Goldfarb, R. H., and Weiss, J.M. Evidence for involvement of B lymphocytes in the surveillance of lung metastasis in the rat. Cancer Res. 59: 1080-1089, 1999.
23. Quan, N., Mhlanga, J-D., Whiteside, M., McCoy, A.N., and Kristensson, K., and Herkenham, M. Chronic sodium salicylate treatment exacerbates brain neurodegeneration in rats infected with Trypanosoma brucei Neurosci. 96:181-194, 2000.
24. Stern, E., N. Quan, M, Proescholdt, and M. Herkenham. Spatiotemporal induction patterns of cytokine and related immune signal molecule mRNAs in response to intrastriatal injection of lipopolysaccharide. J. Neuroimmunology 106:114-129, 2000.
25. Herkenham, M. and Quan, N. Immune-brain interactions involving CNS immune signal molecules. Neurogastroenterology and Motility, 12: 372, 2000.
26. Ning Quan, Lingli He, Wenmin Lai, Tiansheng Shen, and Miles Herkenham. Induction of IκBα mRNA expression in the brain by glucocorticoids: a negative feedback mechanism for immune-to-brain signaling. J. Neuroscience 20: 6473-6477. 2000.
27. Emily Ho, Ning Quan, Weimin Lai and Tammy M. Bray. Dietary Zinc Supplementation Inhibits NFκB Activation and Protects Against Chemically Induced Diabetes in CD1 Mice. Exp. Biol. Med.226:103-111. 2000.
28. Ning Quan, Emily Ho, Wenmin Lai, and Tammy Bray. Administration of NF-kB Decoy prevents the induction of diabetes by alloxan in vivo. Faseb J. 15: 1616-1618. 2001.
29. Ning Quan, Ronit Avitsur, Jennifer Stark, Lingli He, Manisha Shah, Michael Caligiuri, David. A. Padgett, Phillip.T. Marucha, and John F. Sheridan. Social stress increases the susceptibility to endotoxic shock. J Neuroimmunology. 115:36-45. 2001.
30. Staci D. Bilbo, Deborah L. Drazen, Ning Quan, Lingli He, and Randy J. Nelson. Short Day Lengths Attenuate the Symptoms of Infection in Siberian Hamsters. Proc. R. Soc. Lond. B. 269:447-454, 2002
31. Sarmila Majumder, Kalpana Ghoshal, Jharna Datta, Shoumei Bai, XiaoCheng Dong, Ning Quan, Christoph Plass, and Samson T. Jacob. Role of De novo DNA methyltransferases and methyl C-binding proteins in gene silencing in a rat hepatoma. J. Biol. Chem. 277: 16048-16058, 2002.
32. Jane A. Foster, Ning Quan, Edra L. Stern, Krister Kristensson, and Miles Herkenham. . Induced neuronal expression of class I major histocompatibility complex (MHC) mRNA in acute and chronic inflammation models J. Neuroimmunol. 131:83-91, 2002.
33. Ana M. Mercado, Ning Quan, David A. Padgett, John F. Sheridan, and Phillip T. Marucha. Restraint stress alters the expression of interleukin-1 and keratinocyte growth factor at the wound site: an *in situ* hybridization immunohistochemistry study J. Neuroimmunol. 129:74-83, 2002.
34. Li, J. Ning Quan, and Tammy Bray. Supplementation of N-acetylcysteine normalized lipopolysaccharide-induced NF-kB activation and proinflammatory cytokine production in early rehabilitation of protein malnourished mice. Journal of Nutrition 132: 3286-3292, 2002.
35. Ning Quan, Ronit Avitsur, Jennifer Stark, Lingli He, Wenmin Lai, Firdaus Dhabhar, and John Sheridan. Molecular mechanisms of glucocorticoid resistance in splenocytes of socially stressed mice. J. Neuroimmunology 137:51-58. 2003
36. Ning Quan, Lingli He, and Wenmin Lai. Endothelial activation is an intermediate step for peripheral lipopolysaccharide induced activation of paraventricular nuceus. Brain Res. Bull. 59:447-452. 2003.
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3. Quan, N. Cytokines in Alzheimer's disease: Views through a kaleidoscope. In: Focus on Alzheimer's Disease Research, Nova Biomedical Books (Eileen M. Welsh, Editor), New York, pp. 93-114. 2003.
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9. Ning Quan, *Psychoneuroimmunology Journal—Welcome to a New Journal*, Psychoneuroimmunology Journal, 1 (2020), art236080. doi:10.32371/pnij/236080
10. Daniel Nemeth and Ning Quan. Modulation of neural networks by Interleukin-1. Brain Plasticity (accepted)

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Postdoc, Sanford-Burnham Institute for Medical Research, and UCSD Bioengineering, San Diego, CA — *Jan.2008 - Aug.2009*

Ph.D., University of Pennsylvania, Philadelphia, PA, Electrical and Systems Engineering — *Dec. 2007*

M.Sc., KNTU of Technology, Tehran, Iran, Electrical Engineering — *Dec. 2000*

B.Sc., Sharif University of Technology, Tehran, Iran, Electrical Engineering — *May 1998*

Appointments

Associate Professor, CEECS Department, I-Sense and I-Brain Biophotonics Lab Director Florida Atlantic University — *August 2020 – present*

Associate Professor, Electrical Engineering and Computer Science Dept., University of Wisconsin-Milwaukee — *Aug. 2014– August 2020*

Assistant Professor, Electrical Engineering and Computer Science Dept., University of Wisconsin-Milwaukee — *Aug. 2009–July 2014*

Postdoc Scholar, Sanford-Burnham Institute for Medical Research/UCSD, La Jolla, CA — *Jan. 2008 – Aug. 2009*

Graduate Research Assistant, Dept. of Electrical and Systems Engineering, University of Pennsylvania. — *Dec. 2003 – Dec. 2007*

Research Interests

- Biophotonics, Tissue Optics
- Bio-instrumentation, Bio-sensing, Image Cytometry.
- Optics and Electromagnetics.

Journal Publications

J1) S. Gopalakrishnan, F. Foomani, H. Schmitt, P. Summerfelt, A. M. Dubis, B. Abroe, J. Carroll, **M. Ranji,** and J. T. Eells, "Photobiomodulation Attenuates Retinal Degeneration in the P32H Rat: Effect of Different Treatment Intervals," In preparation.

J2) S. Mostaghimi, F. Foomani, S. Mehrvar, A. Camara, J. Narayanan, B. Fish, M. Medhora, and M. Ranji, "Effect of PBI on Vascular Anatomy of the Kidney, Liver, and Lungs in Rats" In preparation.

J3) F. Foomani, S. Mostaghimi, S. Mehrvar, S. Kumar, M. Ranji, "Optical Metabolic Imaging of Mitochondria Dysfunction in Heart and Kidney of Transgenic Mice", In preparation

J4) S. Mehrvar, S. Mostaghimi, A. Camara, F. Foomani, J. Narayanan, B. Fish, M. Medhora, and M. Ranji, "3D Vascular Metabolic Imaging using Inverted Auto-fluorescence" submitted to JBO.

J5) S. Gopalakrishnan, S. Mehrvar, S. Maleki, H. Schmitt, P. Summerfelt, A. M. Dubis, B. Abroe, T. B. Connor, J. Carroll, W. Huddleston, M. Ranji, and J. T. Eells, "Photobiomodulation Preserves Mitochondrial Redox State and is Retinoprotective in a Rodent Model of Retinitis Pigmentosa," Scientific Reports, December 2020.

J6) S. Mehrvar, S. Mostaghimi, F. Foomani, J. Eells, B Abroe, and S. Gopalakrishnan**, M. Ranji,** "670nm Photobiomodulation improves the Mitochondrial Redox State of Diabetic Wounds" QIMS, doi: 10.21037/qims-20-522, July 2020.

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J8) S. Mehrvar, K.T. Rymut, F.H. Foomani, S.Mostaghimi, J.T. Eells, S. Gopalakrishnan, and **M. Ranji**, "*Fluorescence Imaging of Mitochondrial Redox State to Assess Diabetic Wounds,"* IEEE JTEHM, Doi: 10.1109/JTEHM.2019.2945323, October 2019.

J9) S. Mehrvar, M. Funding la Cour, M. Medhora, A. Camara, **M. Ranji** "*Optical Metabolic Imaging for Assessment of Radiation-Induced Injury to Rat Kidney and Mitigation by Lisinopril*," Accepted to Annals of BME, DOI: 10.1007/s10439-019-02255-8, April 2019.

J10) P. Kadamati, J.J. Sugar, B.J. Quirk, S. Mehrvar, G.G. Chelimsky, H.T. Whelan, T.C. Chelimsky, **M. Ranji**, "*Near-infrared spectroscopy muscle oximetry of patients with postural orthostatic tachycardia syndrome*," Journal of Innovative Optical Health Sciences (JIOHS), Vol. 11, No. 6, DOI: 10.1142/S1793545818500268 , September 2018.

J11) Z. Ghanian, G.G. Konduri, S.H. Audi, A.K.S. Camara, **M. Ranji**, "*Time-lapse microscopy of oxidative stress demonstrates metabolic sensitivity of retinal pericytes under high glucose condition.,"* Journal of Biophotonics, Doi: 10.1142/S1793545817500183, 2018, Aug. 2018.

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J33) M. Matsubara, **M. Ranji**, B.G. Leshnower, M. Noma, S.J. Ratcliffe, B. Chance, R.C. Gorman, and J.H. Gorman III, "*In vivo fluorometric assessment of cyclosporine on Mitochondrial Function during Myocardial Ischemia and Reperfusion*," Annals of Thoracic Surgery, No. 89, pp. 1532-7, May 2010.

J34) **M. Ranji**, S. Nioka, H.N. Xu, B. Wu, L.Z. Li, D.L. Jaggard, and B. Chance, "*Fluorescent images of mitochondrial redox states of in situ mouse hypoxic ischemic intestines,"* Journal of Innovative Optical Health Sciences (JIOHS), Vol. 2, No. 4, pp. 365–374, Dec. 2009.

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J36) **M. Ranji**, M. Matsubara, B.G. Leshnower, R.L. Hinmon, D.L. Jaggard, B. Chance, R.C. Gorman, and J.H. Gorman III, "*Quantifying acute myocardial injury using ratiometric fluorometry,"* IEEE Transaction on Biomedical Engineering (TBME), Vol. 56, No. 5, May 2009.

J37) M. Matsubara, **M. Ranji**, B.G. Leshnower, R. Hinmon, B. Chance, R.C. Gorman, J.H. Gorman III, "*Optical Biopsy of Apoptosis in Ischemic Myocardium with Fluorometry"* Journal of Cardiac Failure, Vol. 13, No. 6, pp. S83, 2007.

J38) **M. Ranji**, S. Kanemoto, M. Matsubara, M.A. Grosso, J.H. Gorman III, R.C. Gorman, D.L. Jaggard, and B. Chance, "*Fluorescence spectroscopy and imaging of myocardial apoptosis,"* Journal of Biomedical Optics, Vol. 11, No. 6, Dec. 2006.

J39) **M. Ranji**, D.L. Jaggard, S.V. Apreleva, S. Vinogradov, and B. Chance "*Simultaneous fluorometry and phosphorometry of Langendorff perfused rat heart: ex vivo animal studies,"* Optics Letters, Vol. 31, No. 20, pp. 2995-2997, Oct. 2006.

J40) M. Grosso, **M. Ranji**, S. Kanemoto, M. Matsubara, B. Chance, R. Gorman and J. Gorman, "*Real-Time In Vivo Detection of Myocyte Apoptosis,*" Journal of Cardiac Failure, Vol. 12, No.6, pp. S13-S14, 2006.

J41) **M. Ranji**, D.L. Jaggard, B. Chance, S. Kanemoto, M. Matsubara, M.A. Grosso, R.C. Gorman, J.H. Gorman, "*Intrinsic signals of myocardial apoptosis*," Journal of Molecular and Cellular Cardiology, Vol. 40, No. 6, pp. 895-895, 2006.

Conference Proceedings or Presentations

C1) M. Ranji, F. Foomani, S. Mehrvar, S. Mostaghimi, N. Zheleznova, A. Cowley, "*Optical imaging to assess the early metabolic response of rat kidney to uninephrectomy*," CLEO, May 2020.

C2) S. Mostaghimi, S. Mehrvar, F. Foomani, B. Abroe, J.T. Eells, M. Ranji, and S. Gopalakrishnan, "*The Effect of NIR Light Treatment in Metabolic State of Diabetic Wounds*," BMES Annual Conference, Philadelphia, Oct. 2019.

C3) S. Mehrvar, F. Foomani, S. Mostaghimi, M. Medhora, A. Camara, and M. Ranji, "Radiation-induced Injuries to Rat Kidney Vasculature," BMES Annual Conference, Philadelphia, Oct. 2019.

C4) F. Foomani, S. Mehrvar, S. Mostaghimi, S. Shimada, C. Yang, N. Zheleznova, Allen Cowley, and Mahsa Ranji, "The Early Effects of Uninephrectomy on Rat Kidney Metabolic State Using Optical Imaging," BMES Annual Conference, Philadelphia, Oct. 2019.

C5) S. Mehrvar, K.T. Rymut, J.T. Eells, M. Ranji, and S. Gopalakrishnan, "*Optical imaging for the metabolic redox state assessment of wound healing in diabetic mice*," Biophotonics Congress: Optics in the Life Sciences, Tucson, April 2019.

C6) S. Mehrvar, M. F. la Cour, M. Medhora, A. K. S. Camara, and M. Ranji, "*Optical imaging for assessment of the impact of thoracic irradiation of hearts undergoing ischemia-reperfusion injury*", Engineering in Medicine and Biology Society (EMBC), 40th Annual International Conference of the IEEE, July 2018.

C7) S. Mehrvar, K. T. Rymut, J. T. Eells**,** M. Ranji, and S. Gopalakrishnan, "*Optical imaging for the metabolic redox state assessment of wound healing in diabetic mice*", Symposium on Advanced Wound Care, June 2018.

C8) K. Sannagowdara, M. Malloy, W.L. Chen, B. Quirk, P. Kadamati, J. Sugar, M. Ranji, P. Monrad, J. Brown, and H. Whelan, "*Cerebral oxygen saturation and cytochrome oxidase redox state in children with epilepsy: A pilot study - MULTICHANNEL NIRS for epilepsy seizure detection*," Clinical Neurophysiology, Volume 129, Pages e212-e212, May 2018.

C9) S. Mehrvar, K.T. Rymut, J.T. Eells, M. Ranji, and S. Gopalakrishnan, "When time does not heal wounds: optical imaging of diabetic wounds," three-minute thesis competition (3MT), Milwaukee, April 2018.

C10) S. Mehrvar, M. Medhora, A.K.S. Camara, M. Ranji, "*Optical cryoimaging for assessment of radiation-induced injury to rat kidney metabolic state*," SPIE BIOS, San Francisco, Feb. 2018.

C11) S. Mehrvar, F. Foomani, S. Mostaghimi, M. Medhora, A. Camara, and M. Ranji, "*Optical cryoimaging to assess metabolic state of radiation-induced injury in rat kidney*," SPIE BIOS*,* San Francisco (2018*)*

C12) S. Mehrvar, M. la Cour, J. Kim, A. Martin, M. A. Zimmerman, J. Hong, and M. Ranji, "*Optical imaging for liver transplant application*," 5th Annual Solid Organ Transplantation Research Symposium*,* Milwaukee, Fall 2017.

C13) Z. Ghanian, S. Mehrvar, N. Jamali, N. Sheibani, and M. Ranji, "*A Comparison of retina endothelial cells and pericytes in metabolic sensitivity using time-lapse microscopy*," McPherson Eye Research Institute Poster Session*,* Madison, Fall 2017.

C14) S. Mehrvar, M.F. la Cour, M. Medhora, A.K.S. Camara, and M. Ranji, "Ischemia reperfusion in hearts: optical cryo-imaging," *Milwaukee Engineering Research Conference*, Milwaukee April 2017.

C15) S. Mehrvar, M.F. la Cour, M. Medhora, A.K.S. Camara, and M. Ranji, "*Optical Cryoimaging of Hearts during Ischemia and Reperfusion*," IEEE Larry Hause Student Poster Competition, Milwaukee March 2017.

C16) S. Mehrvar, Z. Ghanian, G. Kondouri, A.K.S. Camara, & M. Ranji, "*Time-lapse microscopy of lung endothelial cells under hypoxia*," In Proc. of SPIE, San Francisco, Feb. 2017.

C17) S. Bolin, G. Chen, M.M. Medhora, A.K.S. Camara, M. Ranji, *"Optical imaging of mitochondrial redox state in irradiated vs. non-irradiated rat hearts during ischemia and reperfusion*," SPIE BIOS, San Francisco, Feb. 2016.

C18) A.W. Cowley Jr, C. Yang, N.N. Zheleznova, A. Staruschenko, T. Kurth, L. Rein, V. Kumar, K. Sadovnikov, A. Dayton, M. Hoffman, R.P. Ryan, M.M. Skelton, F. Salehpour, M. Ranji, A. Geurts, "*Evidence of the importance of Nox4 in production of hypertension in Dahl salt-sensitive rats*", Hypertension, 2016.

C19) Z. Ghanian, G.K. Konduri, and M. Ranji, "*Time lapse fluorescence microscopy of Reactive Oxygen Species (ROS) in vitro demonstrates a major role of complex IV in ROS generation,"* Regional BMES, Raleigh, Oct. 2015.

C20) M. Ranji, JJ. Sugar, E. Weiss, B. Quirk, H. Whelan, "*Near Infrared spectroscopy (NIRS) of Cytochrome Oxidase*," SFN, Chicago, Oct. 2015.

C21) S. Bolin, G. Chen, M. Medhora, A.K.S. Camara, M. Ranji, "*Optical imaging of mitochondrial redox state in irradiated vs. non-irradiated rat hearts during ischemia and reperfusion*," CTSI and Milwaukee Regional Research Forum, Oct. 2015.

C22) Z. Ghanian, A.G. Eis, G.K. Konduri, and M. Ranji, "*Optical studies of oxidative stress in pulmonary artery endothelial cells*", SPIE BIOS, San Francisco, Feb. 2015.

C23) F. Salehpour, C. Yang, T. Kurth, A. W. Cowley Jr, and M. Ranji, "*Optical cryoimaging of rat kidney and the protective effect of p67 in salt-induced hypertension*", SPIE BIOS, San Francisco, Feb. 2015.

C24) G. Konduri, M. Ranji,*"Optical Studies of Oxidative Stress in Persistent Pulmonary Hypertension Cells,"* Optical Molecular Probes, Imaging and Drug Delivery, 2015.

C25) A. W. Cowley Jr., F. Salehpour, C. Yang, T. Kurth, M. Ranji, "*Cryofluorescence 3D imaging shows mutation p67phox improves metabolic function and reduces oxidative stress in the renal medulla of Dahl salt-sensitive rats"*, American Heart Association Conference, High Blood Pressure Research, San Francisco, CA, Sept. 2014.

C26) T. R. Schaid A. H. Abdelhafeez, M. Ranji, R. Love, S. Audi, S. Kaul, F. Bashiri, E. MasoudiMotlagh, F. Salehpoor, E. Jacobs, J. C. Densmore, "*Surface Fluorescence Studies Of Tissue Mitochondrial Redox State In Ex-vivo Lung Perfusion,*" Shock 37th annual Conference, June 2014.

C27) Z. Ghanian, K. Staniszewski, R. Sepehr, C.M. Sorenson, N. Sheibani, and M. Ranji, "*Cytometric classification of retinopathic injury*," SPIE Proceeding of SPIE BIOS, San Francisco, Feb. 2014.

C28) W.W. Linz, G. Michalak, M.M. Motlagh, N. Seo, M. Ranji, "*Blood volume and oxygenation changes in the skeletal muscles of stroke patients measured using non-invasive surface near-infrared spectroscopy*," SPIE Proceeding of SPIE BIOS, San Francisco, Feb. 2014.

C29) M. Ranji, Z. Ghanian, F. Atry, S. Frye, R. Pashaie, S. Audi, *"Optical Instrumentation and the Image Cytometry of Lung and Eye Injuries: Studies in the Rodent Model,"* OSA Biomedical Optics, 2014.

C30) AW Cowley, F Salehpour, C Yang, T Kurth, M Ranji*, "Cryofluorescence 3D Imaging Shows Mutation of p67phox Improves Metabolic Function and Reduces Oxidative Stress in the Renal Medulla of the Dahl Salt-sensitive Rat,"* Hypertension 64 (suppl_1), A665-A665, 2014.

C31) J.T. Eells, S. Gopalakrishnan, H. Schmitt, S. Maleki, A. Dubis, J. Carroll, M.Ranji, "*Photobiomodulation Protects Retinal Mitochondria and Retinal Function in a Rodent Model of Retinitis Pigmentosa*," ARVO Asia 2013, India Oct. 2013.

C32) Z. Ghanian, Mohammad MasoudiMotlagh, S. Maleki, Z. Bolandnazar, F. Assadi-Porter, M. Ranji, "*Optical Redox Imaging of Metabolic Dysfunction in Polycystic Ovary Syndrome,*" BMES Annual conference, Seattle, Sept. 2013.

C33) W. Linz, G. Michalak, M. MasoudiMotlagh, N. Seo, M. Ranji, "*Hand function assessment of stroke patients using non-invasive surface near-infrared spectroscopy*," Great Lake Biomedical Conference, GE Healthcare, Milwaukee, April 2013 (**awarded third place**).

C34) M. MasoudiMotlagh, S. Maleki, F. Assadi-Porter, M. Ranji, "*Optical Redox Imaging to Monitor Metabolic Dysfunction in Polycystic Ovary Syndrome*," 2013 Great Lake Biomedical Conference, GE healthcare, Milwaukee, April 2013.

C35) Z. Ghanian, S. Maleki, C.M. Sorenson, N. Sheibani, M. Ranji, *"Optical Imaging of Cellular Redox State Related to Retinopathy Dysfunction in Endoglin Heterozygous (Eng+/-) Mice,*" UWM CEAS Research Day, April 2013.

C36) Z. Ghanian, S. Maleki, S. Gopalakrishnan, R. Sepehr, J. T. Eells and M. Ranji, "*Optical Imaging of Oxidative Stress in Rodent Model of Retinitis Pigmentosa*," Proceeding of SPIE BIOS, San Francisco, Jan. 2013.

C37) R. Sepehr, K. Staniszewski, E. R. Jacobs, S. Audi, and M. Ranji, "*Fluorometry of ischemia reperfused rat lungs in vivo*," Proceeding of SPIE BIOS, San Francisco, Jan. 2013.

C38) JT Eells, S Gopalakrishnan, S Maleki, M Ranji, B Abroe, H Schmitt, P Summerfelt, A Dubis, J Carroll*, "Photobiomodulation preserves mitochondrial redox state in a rodent model of retinitis pigmentosa,"* Mitochondrion, 2013.

C39) R. Sepehr, S. Maleki, A.L. Eis, G.G. Konduri, M. Ranji, "*Optical Imaging of Hyperoxic Lung Injury*," Photonics Global Conference (PGC), Singapore, Dec. 2012.

C40) Z. Ghanian, S. Maleki, S. Gopalakrishnan, C.R. Sorenson, N. Sheibani and M. Ranji, "*Optical imaging of Oxidative Stress in Diabetic Retinopathy*," BMES Annual Conference, Atlanta, Oct. 2012.

C41) M. Ranji, "*Quantitative Deconvolution and Tracking of Differentiating Stem Cells*" TERMIS, Vienna, September 2012.

C42) K. Staniszewski, R. Sepehr, S. Maleki, C.M. Sorenson, N. Sheibani, and M. Ranji "*Automated Evaluation of Retinopathies Using Image Cytometry*," Proceedings of Data Analysis and Modeling Retina in Health and Disease, Lisbon, Feb. 2012.

C43) R. Sepehr, K. Staniszewski, E. R. Jacobs, S. Audi, and M. Ranji, "*Optical studies of tissue mitochondrial redox in isolated perfused rat lungs*," Proceedings of SPIE 8207D, San Francisco, Jan. 2012.

C44) S. Maleki, R. Sepehr, K. Staniszewski, N. Sheibani, C.M. Sorenson and M. Ranji, "*Optical cryoimaging of kidney mitochondrial redox state in diabetic mice models*," Proceedings of SPIE 8225, San Francisco, Jan. 2012.

C45) K. Staniszewski, R. Sepehr, C. M. Sorenson, N. Sheibani, and M. Ranji, "*Classification of retinopathic injury using image cytometry and vasculature complexity*," Proceedings of SPIE, San Francisco, Jan. 2012.

C46) R. Sepehr, K. Staniszewski, M. Ranji, and S. Maleki, "*Optical Cryoimaging Of Kidney Mitochondrial Redox State And The Effect Of Bcl-2 Family Expression*," Proceeding of BMES annual meeting, Hartford, Oct. 2011.

C47) R. Sepehr, S. Audi, K. Staniszewski, S Maleki, and M. Ranji, *"Fluorescence Spectroscopy and Cryoimaging of Rat Lung Tissue Mitochondrial Redox State*," Proceedings of SPIE 80870, Munich, doi:10.1117/12.890019, June 2011.

C48) M. Ranji, D. Calzolari, R. Augustin, and J.H. Price, "*Is Image Cytometry Possible with Deconvolved Fluorescence Images?," OSA, 2010.*

C49) M. Ranji, D. Calzolari, R. Agustin, and J.H. Price, "*Quantitative analysis of 3D Fluorescence Images*," Cytometry Development Workshop (CDW), Asilomar, Oct. 2009.

C50) M. Ranji, D. Calzolari, N. Prigozhina, K.A. Wei, M. Mercola, J.H. Price, "*Automated Tracking of Migration and Differentiation of Fluorescently Labeled Human Embryonic Stem Cells*," Proceedings of SPIE, Bios, Jan. 2009.

C51) M. Ranji, D. Calzolari, and J.H. Price, "*Quantitative analysis of deconvolution methods for fluorescence microscopy images,"* Invited, Asilomare conference SSC, Oct. 2008.

C52) M. Ranji, M. Matsubara, B.G. Leshnower, R.Hinmon, D.L. Jaggard and B.Chance, R.C. Gorman and J. H. Gorman III, "*Optical Biopsy of Apoptosis in Ischemic Myocardium with Fluorometry,"* Proceedings of AHA (American Heart Association), Nov. 2007.

C53) M. Ranji, M. Matsubara, M. Grosso, D.L. Jaggard and B.Chance, R.C. Gorman and J. H. Gorman III, "*Fluorescence Spectroscopy to Assess Apoptosis in Myocardium,"* Proceedings of SPIE, Vol. 6438, pp. 64380J1- 64380J4, Feb. 2007.

C54) M. Ranji, M. Matsubara, M.A. Grosso, D.L Jaggard, B. Chance, R.C. Gorman, J.H. Gorman III, " *Fluorescence spectroscopy to assess apoptosis in myocardium,"* Proceedings of SPIE 64380J, San Jose, Jan. 2007.

C55) M. Ranji, D.L. Jaggard and B. Chance, "*Fluorescence Spectroscopy of Perfused Rat Heart: a Fluorometer Study,"* Proceedings of the IEEE Bioengineering Conference, pp. 203-204, April 2006.

C56) M. Ranji, L.Z. Li, J. Glickson, and B. Chance "*Optical cryoimaging of tumor metabolism and aggressiveness,"* The Eunice and Irving Leopold Annual Scientific Symposium, March 2006.

C57) M. Ranji, B. Chance, L. Moon, J. Gorman, L. Li, and C. Thompson, "*Apoptosis Gives an Intrinsic Optical Signal,"* OSA Biomedical Optics Proceedings, March 2006.

C58) L. Zhou, M. Ranji, and B. Chance, "*Novel Fluorochromes for Functional Imaging of Cancer,*" OSA Biomedical Optics proceedings, March 2006.

C59) M. Ranji, D.L. Jaggard and B.Chance**,** "*Observation of mitochondrial morphology and biochemistry changes undergoing apoptosis by angularly resolved light scattering and cryoimaging,"* Proceedings of SPIE, Vol. 6087, pp. 60870K1 - 60870K9, Jan. 2006.

C60) L.Z. Li, W. Fahssi, M. Ranji, and B. Chance "*Redox states of yeast, melanoma and myocyte,"* The Eunice and Irving Leopold Annual Scientific Symposium, June 2005.

Patent

- M. Ranji, S. Mehrvar, "Label-free 3D vascular extraction," intellectual property (IP) disclosed, provisional patent, spring 2020.

- J.H. Gorman, R.C. Gorman, M. Ranji, "*In vivo* Measurement of Mitochondrial Function," US patent 8473036, June 2013.

Teaching Experience

Instructor

- Introduction to Biomedical Imaging, EE437 (**U**) *Fall 2009-2019, Spring 2021*
  University of Wisconsin, Milwaukee
  Florida Atlantic University

- Optical Communications, EE565 (**G**) *Spring 2015, 2016*
  University of Wisconsin, Milwaukee

- Introduction to Fourier Optics (New course, **G**) *Spring 2010- 2020*
  University of Wisconsin, Milwaukee

- Intermediate Optics, EE490/890 (New course, **U/G**) *Fall 2011*
  University of Wisconsin, Milwaukee

Graduate Teaching Assistant

- Modern Optics and Image Understanding, ESE511 *Spring 2005, 2006, and 2007*
  University of Pennsylvania
- Photonics for Executive Master's in Technology Management, EMTM620, *Winter 2005*
  University of Pennsylvania
- Electromagnetic and Optical Theory I, ESE510, *Fall 2005*
  University of Pennsylvania

- Waves, Fibers and Antennas for Communications, ESE509, University of Pennsylvania *Fall 2000-2007*
- Semiconductor Device Physics and Techniques, ESE521, University of Pennsylvania. *Spring 2005, 2006*

Future Course Ideas

Bio-instrumentation (UG)

- Theory, design, and application of bioinstrumentation in clinical, and biotechnology settings, Bio-signals such as EEC and EKG signals, Biosensors, and fluorescent-activated cell sorter (FACS), etc.

Tissue Optics (UG)

- Principles of Light and Tissue Interaction, Monte Carlo Simulations of Light Propagation, Imaging and Spectroscopy Techniques, Diagnostic and Therapeutic Applications of Optical Imaging Technologies.

Biomedical Signal and Systems (UG)

- Fundamentals of signal and system analysis, Nature of biomedical signals, Filtering, EKG and EEG signals, complex exponentials and geometrics, Fourier representations, Laplace and Z transforms.

Synergistic Activities

- CLEO conference steering committee member and session chair, 2020, 2021.
- **NIH SBIB-T Panelist**, (regular member, 2017-now).
- **Associate editor**, IEEE Journal of Translational Engineering in Health and Medicine (JTEHM), 2017-present.
- Session Co-Chair and Reviewer, BMES Annual Conference 2012, 2013, and 2014.
- Reviewer, Journal of Cytometry A, Journal of Medical Physics, IEEE Transaction on Biomedical Engineering, Journal of Biomedical Optics, and Journal of Innovative Optical Health Sciences (JIOHS), Biomedical Optics Express Journal, and Annals of Bioengineering.
- NSF Panelist (2013).

University Service

- Hosting summer camp for NSF EnQuest program, an engineering summer program for high school girls, August 2012, 2013, 2014, 2017.
- Executive committee member of the newly established bioengineering program. Responsibilities included department strategic planning, curriculum development, new faculty hiring, education grant development, department budget allocations, and more.
- Committee member of campus APCC (Academic Program & Curriculum Committee). Reviewed and evaluated Bio-Sciences undergraduate program.
- Search committee member for selecting associate dean of research candidates 2018-2019.
- Panelist, UWM Engineering-Industry partnership discussion forum. Discussion includes catalyst grants from industry partners to collaborate with engineering faculties.
- Search committee member for junior faculty recruitment screening and interview for biomedical engineering department.
- Co-host of NSF I-Corps site, to promote innovation and entrepreneurship on campus.

- Milwaukee Engineer faculty co-host to interact with prospective students/scholarship recipients and their families.
- UWM Children's center board member 2018-current.
- Host of the Patent Strategy discussion session with UWM research foundation.
- Coordinator and co-instructor of the jointly held Bioengineering seminar series among three local institutes, University of Wisconsin Milwaukee, Medical College of Wisconsin, and Marquette, 2013-2017.
- PhD qualifying exam coordinator at EE department.
- UWM College of engineering liaison of the local NIH Clinical and Translational Sciences Institute (CTSI).
- Participated in UWM CEAS open house for freshmen and future students.
- Developed new course and laboratory for EE 490/890 (intermediate optics) using additional tuition fund.
- Developed new course EE 765 (Fourier Optics).

Research Support

Ongoing Research Support

NIH NEI, R15 EY031533 **Ranji** (PI) ($444,993) *06/1/2020-5/31/2023*
Title: Implementing a novel multimode 3D retinal imaging system to investigate metabolism and vascular disruptions in diabetic retinopathy

Goal: Optical imaging of Diabetic Retinopathy

UWM RGI (**Ranji** (PI), $155,000), *Optical imaging of diabetes in brain*, 07/1/2018-12/30/2020.

UWM RGI (Gopalakrishnan, **Ranji** (Co-PI), $141,322), *Attenuation of Mitochondrial Dysfunction and Immune Dysregulation by NIR Photobiomodulation in Diabetic Wound Healing*, 07/1/2018-12/30/2020.

Completed Research Support (Total: ~1.3M)

1. **NIH, NHLBI,** (Cowley (PI), Ranji (Co-I)*), Role of Nox4 in kidney function in salt-sensitive hypertension*, 04/1/2015–09/30/2019.
2. **UWM** Research Growth Initiative grant, (Ranji (PI)), *Optical imaging techniques for early detection of radiation-induced lung injury*, 07/01/2013 –06/30/2018.
3. **UWM** Research Growth Initiative grant, (Ranji (PI)), Hirschmugl (Co-PI)), *Fluorescence imaging and mid infrared spectroscopy of diabetic retinopathy*, 07/01/2015 –12/30/2017.
4. **NIH**, NHLBI, (Jacobs, Ranji (Co-I)), *Novel imaging to identify lung mitochondrial injury and predict recovery*, 09/01/2015–12/30/2017.
5. **VA** Merit Review, (Jacobs, Ranji (Co-I)), *Novel Diagnostics to Detect Lung Injury*, 10/1/2014–04/30/2017.
6. **NIH** CTSI K12, (Ranji (PI)), *Mitochondrial Redox Studies by Optical Spectroscopy and Cryoimaging in Cardiopulmonary Oxidative Stress*, 07/01/2011– 06/30/2014.
7. **Clinical and Translation Science Institute** grant, (Ells, Ranji (Co-PI)), *Photobiomodulation for the Treatment of Pressure Ulcers*, 06/01/2013 – 08/31/2014.

8. **UWM-UW Madison Intercampus** grant**,** (Ranji (PI), Sorenson), *Detection of Oxidative Stress in Bronchopulmonary Dysplasia (BPD) by Optical Imaging*, 05/01/2012–04/30/2013.
9. **UWM Research Growth Initiative** grant, (Ranji (PI)), *Poly Cystic Ovary Syndrome: NMR Metabolomics and Optical Redox Imaging*, 07/01/2012– 12/30/2014.
10. **Wisconsin Applied Research** grant**,** (Ranji (PI)), *Optical Biopsy for Medical Diagnostics of Biological Tissue Diseases*, 06/01/2011– 12/30/2012.
11. **UWM Research Growth Initiative** grant, (Ranji (PI)*), Lung Oxygen Toxicity, Optical Biopsy and Imaging Techniques*, 07/01/2011– 12/30/2012.
12. **Clinical and Translation Science Institute** grant, (Ranji (PI), Audi), *Lung Tissue Mitochondrial Redox State in Situ,* 06/01/2011–05/30/2012.
13. **Clinical and Translation Science Institute** grant, (Konduri (PI), Ranji (Co-PI), Jacobs (Co-PI)), *Mitochondrial oxidative stress in acute lung injury from sepsis*, 4/01/2011–06/30/2012*.*
14. **Network for Translational Research in Optical Imaging (NTROI)** grant (graduate student investigator at Penn, Ranji), "*Apoptosis Studies of Ischemic Myocardium with Fluorometry and Redox Imaging*," 1/1/07-1/1/2008*.*
15. **Institute for Medicine and Engineering (IME)** interschool pilot grant (graduate student investigator at Penn, Ranji), "*Optical Biopsy of Apoptosis in Ischemic Myocardium with Fluorometry*," 01/01/2006-01/01/2007.

Member

IEEE (Institute of Electrical and Electronics Engineers)
WIE (Women in Engineering)
BMES (Biomedical Engineering Society)

Advisees

Current

1) Soudeh Mostaghimi, **M.Sc.** student in EE — *January 2019-*
   Expected final defense — *January 2021*
2) Farnaz Ahmadi, **Ph.D.** student in EE — *Sept. 2018-*
   Passed EE PhD qualifying exam — *Sept. 2019*

Alumni

3) Shima Mehrvar*,* **Ph.D.** student in EE — *January 2016-*
   Ranked first in EE PhD qualifying exam — *Sept. 2017*
   Final defense — *April 2020*
4) Parvathi Kadamati, **M.Sc.** student in EE — *May 2015- Dec 2017*
5) Mette F La Cour, **Postdoctoral Scholar** — *August 2015-May 2017*
6) Zahra Ghanian, **Ph.D.** in EE — *August 2011-Jan. 2017*
   Ranked first in the EE PhD qualifying exam — *Sept. 2012*
   Current position: Fellow at FDA
7) Jeffrey Sugar, **M.Sc.** student in EE — *Nov. 2013-May 2016*
   Current position: Engineer at Siemens
8) Michael Shalom, **Undergraduate** Research Assistant in EE — *Dec. 2014-May 2014*

9) Fahimeh Salehpoor, **M.Sc**. in EE *June 2013-May 2014*
10) Cassandra Appleton, **Undergraduate** Research Assistant in EE, *Sept.2014-Dec. 2014*
11) Erfan MasoudiMotlagh, **M.Sc.** in EE *Jan. 2012-August 2014*
Current position: Engineer at Baxter International Inc.
12) Whitney Linz, **M.Sc**. in EE *Nov. 2012-May 2014*
Ranked third in Great Lakes Biomedical Conference *April 2013*
Current position: Engineer at Epic Inc.
13) Reyhaneh Sepehr, **Ph.D.** in EE *Aug. 2010-May 2014*
Ranked first in the EE PhD qualifying exam *Sept. 2011*
Ranked third in the CEAS research day poster competition. *April 2012*
Current position: Algorithm software Engineer at Mortara Instrument
14) Gregory Michalak, **Postdoctoral Scholar** *Oct 2010-March 2013*
Current position: Research staff at Siemens Inc. *March 2013*
15) Sepideh Maleki, **M.Sc.** in EE *June 2010-Aug.2012*
Research staff at Biophotonics lab *Sept 2012- April 2013*
Current position: Bioengineer at Fenwal Inc. *Since March 2013*
16) Kevin Saniszewski, **M.Sc.** in EE *Jan. 2010- May 2012*
CEAS Graduate Student Excellence Award *May 2012*
Researcher at Biophotonics lab *June 2012- April 2013*
Current position: Bioengineer at Prairie Inc. *Since April 2013*
17) Lauren Michelle Bersie, **Undergraduate** Research Assistant *Spring 2012*
18) Matthew Hying, **Undergraduate** Research Assistant *Aug. 2010-Sept.2011*
19) Robert Williams, **Undergraduate** Research Assistant *May 2010-Oct. 2010*

CURRICULUM VITAE

NAME: Janet D. Robishaw, PhD

PRESENT POSITION:
Professor and Chair,
Department of Biomedical Science
Senior Associate Dean for Research
Charles E. Schmidt College of Medicine
Florida Atlantic University
Boca Raton, FL
jrobishaw@health.fau.edu
(561) 297-4399

PREVIOUS POSITIONS:

1975 - 1979
BS Degree, Double Major in Chemistry and Biology
Central Michigan University
Mt. Pleasant, MI
Summa Cum Laude

1979 - 1983
PhD Degree, Major in Physiology
Pennsylvania State University, College of Medicine
Hershey, PA

1983 - 1987
Post-doctoral Fellow and Research Assistant Professor
University of Texas, Southwestern Medical School
Dallas, TX
Supervisor, Dr. Alfred G. Gilman
1994 Nobel Prize in Physiology and Medicine

1987 - 1996
Staff Scientist
Weis Center for Research
Geisinger Clinic
Danville, PA

1996 - 1997
Senior Scientist
Weis Center for Research
Geisinger Clinic
Danville, PA

1997 - 2000
Professor with Tenure
Dept of Cellular and Molecular Physiology
Pennsylvania State University, College of Medicine
Danville, PA

2000 – 2016	Director of Research Education Weis Center for Research Geisinger Clinic Danville, PA
2000 - 2016	Senior Scientist Weis Center for Research Geisinger Clinic Danville, PA
2005 - 2016	Associate Director and Senior Scientist Weis Center for Research Geisinger Clinic Danville, PA 17822-2614
2004-present	President and CEO SignalPlex, Danville, PA
2016 – present	Chair Professor with Tenure Dept of Biomedical Science Charles E Schmidt College of Medicine Florida Atlantic University Boca Raton, FL
2017 – present	Senior Associate Dean for Research Charles E Schmidt College of Medicine Florida Atlantic University Boca Raton, FL

HONORS:

1983-1986	National Research Service Award, National Institute of Health
1988	Selected Speaker, Science Writer's Forum, American Heart Association
1988-89	Regular Member of Biochemistry Study Section, National American Cancer Society
1989	Member of Research Review Group, Pennsylvania Affiliate of the American Heart Association
1990	Member of SCOR Review Committee, National Institutes of Health
1989-1994	Established Investigator Award, National American Heart Association
1990	Delegate for National Institutes of Health US-USSR Symposium on “Cardiovascular and Pulmonary Biology”, Suzdal, USSR
1991-1995	Regular Member of Pharmacology Study Section, National Institutes of Health
1993	Advisory Panel Member, “Future Directions in Neuroscience Research”, National Institutes of Health
1993-1998	Editorial Board Member, Journal of Biological Chemistry

1996 Chairperson for ASPET Symposium on "Role of βγ subunits in G protein-mediated signaling", Experimental Biology '96 Meeting.

1996-2000 Regular Member and Co-Chair of the Molecular Signaling I Study Section, National American Heart Association

199-2002 Regular Member, Pharmacology Study Section, National Institutes of Health

2002-2005 Executive Committee Member, Cardiovascular Division, American Society of Pharmacology and Therapeutics

2009 Reviewer, Glue Grant, National Institutes of Health

2007-2012 Regular Member of Molecular and Integrative Signal Transduction, National Institutes of Health

2013 Ad hoc Member, Vascular Biology, National Institutes of Health

2019 Ad hoc Member, HEAL Initiative, National Institute of Drug Abuse

PROFESSIONAL SOCIETIES:

American Society for Biochemistry and Molecular Biology

American Association for Advancement of Science

International Society for Heart Research

American Society for Pharmacology and Experimental Therapeutics

International Academy of Cardiovascular Sciences

Society for Developmental Biology

AAMC

Association of Professors of Human and Medical Genetics

CREATIVE ACCOMPLISHMENTS:

2002 Filing of US Patent Application 20020106678

2004 Filing of Provisional US Patent Application entitled " Identification of G protein γ subtype as potential drug target for angiogenesis therapy"

LEADERSHIP EXPERIENCE:

In 1997, I was awarded Tenure as a Full Professor, Department of Cellular and Molecular Physiology, Pennsylvania State University, College of Medicine, Hershey, PA. Subsequently, I gave up this position to continue my research as a Senior Scientist (equivalent to Full Professor rank) and to assume a leadership position as Director of Research Education at Geisinger. In my capacity as Director of Research Education, I run a Summer Undergraduate Research Program, offer several K-12 initiatives, provide instruction of medical students, residents, and fellow, and participate in many regional activities (see below). In 2005, I was promoted

to a more senior position as Associate Director of the Weis Center for Research at Geisinger. In this capacity, my major efforts revolve around budget planning, regulatory compliance, faculty development, programmatic initiatives, and community engagement. Perhaps, the most challenging part is in the area of programmatic initiatives. This involves identifying strategic opportunities between the laboratory and clinic and then gaining the support of the major players from both sides of the street to partner together on the programmatic initiative. Due to the strong personalities involved, this often requires equal parts of patience and perseverance and is akin to "herding cats". Subsequently, a "business plan" is written to seduce the Gesinger leadership into providing the financial support needed to get the initiative off the ground along with a reasonable plan to achieve a return on their investment. Over the last few years, this strategy has been successfully used to launch a Neurosciences Initiative (Translational Medicine, Neurology, Neurosurgery, Autism and Developmental Medicine Institute), a Translational and Functional Genomics Initiative (Translational Medicine, Clinical Informatics, Bioinformatics), a Pharmacogenomics Initiative (Translational Medicine, Pain Clinic, Anesthesiology) and most recently, a Cardiogenomics Initiative (Translational Medicine, Radiology, Cardiology).

In 2016, I was hired as Chair and Full Professor with Tenure, Department of Biomedical Science, Florida Atlantic University, Charles E. Schmidt College of Medicine, Boca Raton, FL.

In 2017, I was appointed as Senior Associate Dean for Research, Florida Atlantic University, Charles E. Schmidt College of Medicine, Boca Raton, FL. A key part of this position is to develop and implement as Strategic Vision for Research within the College and the broader University. During my tenure, NIH research funding has nearly doubled in the past 2 years.

Finally, in addition to my institutional leadership experience, I also serve or lead advisory groups and initiatives for several regional and national organizations (see below).

SERVICE TO THE PROFESSION:

1. Institutional and Regional Responsibilities

1987-2005	Organizer, Faculty Talks Committee
1987-1997	Chair, Hazardous Waste Committee
1987-1997	Chair, Recombinant DNA and Biosafety Committee
1988-present	Chair, Selection Committee for James R. Neely Lectureship
1994-1997	Member, Scientific Review Committee
1998-present	Chair, Selection Committee for Balcueva Award
1997- 2016	Chair, Institutional Animal Care and Use Committee
2002-2003	Member, Ventures Committee
2003-present	Director, Research Education and Training
2003-present	Chair, Promotion and Tenure Committee
2005-present	Associate Director, Weis Center for Research
2007	Chair and Organizer, 20th Anniversary Celebration and Scientific Symposium entitled "G Protein Coupled Receptor Signaling: Bench to Bedside"
2007-present	Organizer, Focus Group on "Signaling and Disease Modeling"

2011	Chair, Neuroscience Institute Steering Committee
2012	Chair, Strategic Vision Committee, Weis Center for Research
2013-present	Member, Organizing Committee, Susquehana Valley Undergraduate Research Symposium
2014	Chair, Research Misconduct Committee Responsible for Reporting to the National Institutes of Health
2014-2016	Organizer, “Translational and Functional Genomics” Steering Committee
2014-2016	Head, Translational and Molecular Medicine Division, Weis Center for Research
2015	Geisinger-Regeneron Advisory Panel
2016-2018	Interviewer, Charles E. Schmidt College of Medicine Admissions Committee, Florida Atlantic University
2017	Member, Strategic Vision Panel, Florida Atlantic University
2017	Co-Chair, Strategic Vision Committee, College of Medicine, Florida Atlantic University
2017	Member, CFO Search Committee for the College of Medicine, Florida Atlantic University
2017-present	Member, Research Core Facility Oversight Committee, Florida Atlantic University
2018	Member, Pharmacology Faculty Search Committee, Florida Atlantic University
2019-2020	Member, Search Committee for Chair of the Department of Integrated Medical Science, Florida Atlantic University
2019- present	Member, Search Committee for Director of Surgical Research, Florida Atlantic University
2019-present	Member, Marcus Implementation Committee, Florida Atlantic University
2020	Member, Vivarium Task Force, Division of Research, Florida Atlantic University
2020	Member, Search Committee for Assistant Professor in Bioethics/Medical Ethics, Department of Philosophy, Florida Atlantic University
2020	Co-Chair, Strategic Plan Refresh: Advanced Patient-Centered Research& Discovery, College of Medicine, Florida Atlantic University
2020	EHR Analytics Infrastructure Task Force, Division of Research, Florida Atlantic University
2020-present	Institutional Liaison Committee, Florida Atlantic University
2020-present	Chief Diversity Officer Search Committee, College of Medicine, Florida Atlantic University

2. <u>National Advisory and Review Groups</u>

1989	Member, Peer Review Group, Pennsylvania Affiliate, American Heart Association

1988 Member, Biochemistry Study Section, American Cancer Society

1989 Member, Biochemistry Study Section, American Cancer Society

1990 Ad hoc Member, SCOR Review Committee, National Institutes of Health

1990 Ad hoc Member, Pharmacology Study Section, National Institutes of Health

1989 Delegate for National Institutes of Health US-USSR Symposium on "Cardiovascular and Pulmonary Biology", Suzdal, USSR

1991-95 Regular Member, Pharmacology Study Section, National Institutes of Health

1993 Panel Member, Advisory Committee on "Future Directions in Mental Health Research", National Institute of Mental Health

1996 Ad hoc Member, Cardiovascular Study Section, National Institutes of Health

1996-2000 Co-Chair, Molecular Signaling I Study Section, American Heart Association

1997 Ad hoc Member, SCOR Review Committee, National Institutes of Health

1989-97 Reviewer, Whitaker Foundation

1999-2002 Regular Member, Pharmacology Study Section, National Institutes of Health

2002-2006 Executive Committee Member, Cardiovascular Division, American Society of Pharmacology and Therapeutics

2009 Reviewer, Glue Grant, National Institutes of Health

2007-2012 Regular Member of Molecular and Integrative Signal Transduction, National Institutes of Health

2013 Ad hoc Member, Vascular Biology, National Institutes of Health

2020-2022 Technical Expert Panel (TEP), Pain Management & Opioid Use/Misuse in Older Adults, Agency for Healthcare Research & Quality

3. Editorial Boards.

1993-1996.1 Editorial Board Member, Journal of Biological Chemistry

4. Journal Reviews.

1987- present Referee for following journals: American Journal of Physiology, Biochemistry, Cardiovascular Research, Circulation Research, Trends in Cardiovascular Medicine

TEACHING SERVICE:

1. K-12 Students:

As Director of Research Education and Training, I saw a need for practicing scientists to become more involved in the science education of K-12 students from the six surrounding rural school districts, which lack the resources

typically available to their more urban counterparts. To fulfill this need, I designed and implemented three types of programs: 1) Summer Science Workshops; 2) Field Trips; and 3) Research Internships.

Summer Science Workshops. I developed and obtained funding from Pfizer to run two workshops: "Fun with Science" for students entering 3rd-5th grade; and "Fun with DNA" for students entering 6th-8th grade. These workshops were designed to promote a better understanding of science and its impact on everyday life and health. Located in the Weis Center for Research, children explored science in fun and empowering ways in a real laboratory. Using state-of-the-art techniques and tools, children experienced the discovery process that scientists employ in the real world under the safe supervision of researchers and educators, such as me. For example, the younger students learned about the different types of germs and the common diseases they cause. In the process, they learned about epidemics, how easily they spread, and how to contain them. The older students learned about DNA and heredity. In the process, they used DNA fingerprinting to solve a hypothetical crime; paternity testing to reunite a hypothetical child with her parents; and genetic testing to identify and treat a hypothetical patient with cystic fibrosis. The workshops ran Monday-Friday, from 9 am to 3 pm; and concluded with Parent Participation Day when children became the teachers and explained the week's activities to their parents. These Summer sessions have received overwhelming response from children and parents alike from 2003 to present.

Field Trips. To reach a greater number of students, I also designed and implemented one-day field trips for K-12 grade students to visit the Weis Center for Research. These field trips allow students to form their own impression of scientists and the scientific enterprise. In addition, students can participate in various experiments targeted for their particular age group.

High School Internships. To provide opportunities for motivated high school students to perform hands-on research, I have also established research internships for 12th grade students from the Danville Area High School. Although requiring a tremendous commitment, the potential rewards for both students and mentors are great: 1) for students, the experience has the potential to influence their academic choices, career plans, and goals; and 2) for mentors, the opportunity exists to turn students onto science whether they pursue a career or not. In addition to organizing and implementing this program, I have also supervised the research training of the following talented high school students in my own laboratory:

2002-2004	Cong Luo, Danville Area High School
2004-2005	Alex Zhang, Danville Area High School
2009-2010	Amy Sudol, Danville Area High School
2019	Sophie Gorup, St. Andrews School, Boca Raton, FL
2020-	Marlie Kahan, Pine Crest School, Boca Raton, FL

2. Undergraduate and Graduate Students:

As the Director of Research Education and Training, Weis Center for Research, Geisinger Clinic, I oversee a 10-week, summer research training program designed to expose talented undergraduate students to career opportunities in research, with > 90% of these students going on to pursue medical or graduate degrees in the 25 years since the inception of this program. The primary emphasis of the research training experience has been at the cellular, genetic, and molecular levels. In addition to providing leadership and oversight, I have personally supervised the following students in my own laboratory:

Selected from a List:

Kimberly Rose, Becknell University
Kristen Mowed, University of Pennsylvania
Laurence Beck, Princeton University
Kellie Saxton, Indiana University
Michelle Schley, Indiana University
Kimberly Smyrna, Franklin and Marshall College
Seem Shah, Bryn Mar College

Heidi Martinson, Dickinson College
Janna Pawhuska, Lafayette College
Amy Hoffman, Lycoming College
Erin Crawl, University of Pittsburgh
Renee Uncheck, King's College
Elaine Sunderlin, James Madison University
Angela Sabol, Bloomsburg University
Hilary Hoffman, Pennsylvania State University
Beth Carey, Lehigh University
Lora Waldman, Becknell University
Eric Horstick, Bloomsburg University
Leanne Yearly, Bloomsburg University
Rebecca Wert man, University of North Carolina
Kristin McIntosh, Lock Haven University
Lindsey Yurcaba, University of Pennsylvania
Chase Parsons, Grove City College
Kyle Bartol, Bloomsburg University
Talora Steen, University of Pittsburgh
Mikhail Attoar, Northwestern University
Michelle Stipanovic, Bloomsburg University
Nishikanta Elangbam, University of Wisconsin-Madison
Amy Sudol, Cornell University
Alek Keller, University of Pittsburg
Lilian McKinley, University of Pennsylvania
Laura Sprunt, Case Western
Dillon Warr, Susquehana University
Marc Erdman, Pennsylvania State University
Alexander Gitin, Florida Atlantic University
Maddie Pung, Florida Atlantic University
Sanjana Chandran, Florida Atlantic University
Ty Roachford, Florida Atlantic University
Oliver Pelletier, Florida Atlantic University (PhD candidate)

Previously, I have also mentored and served on the thesis committees for the following graduate students at Bloomsburg University.

1997-1998 Eric Balcueva, Candidate for MS degree, Biology, Bloomsburg University
2001-2002 Soniya Sinhu, Candidate for MS degree, Biology, Bloomsburg University
2003-2004 Amy Mawdry, Candidate for MS degree, Biology, Bloomsburg University

And, most recently, I have initiated an effort to develop a “Health Genomics and Sciences Certification” at Bloomsburg University with Dean Lincoln, Biology and Allied Health (George Davis, Judy Kipe-Nolt, Carl Hansen), Mathematics (John Polhill), Business (Hayden Wimmer). In addition, I have assisted in developing the first clinical internship for “Genetic Counseling” between Bloomsburg University and Geisinger.

3. <u>Medical Students:</u>

During my time as a Tenured Professor at the Penn State College of Medicine, I was involved in teaching graduate and medical students.

1998 Organized and participated in the teaching of a graduate level course entitled “Molecular Basis of Inherited Diseases” that was offered at the Penn State College of Medicine. This course used examples from the literature to highlight conceptual and practical approaches to a) the discovery of genes underlying human diseases; b) the identification and functional characterization of gene products; and c) the possible opportunities for clinical intervention through gene therapy.

1999-2000 Taught case-based learning to medical students.

Since my return to assume a leadership position at Geisinger, I have continued to participate in the teaching of graduate and medical students and serve on several thesis committees at Penn State College of Medicine and continue to hold an appointment as an Adjunct Professor there. I do this on a *voluntary* basis even though traveling to the Hershey campus requires a 3-hour commute.

2003-2006 Served on the thesis committees for the following graduate students at Penn State College of Medicine:

Soniya Sinhu, Candidate for a PhD degree, Genetics Program, Penn State College of Medicine

Meredith Hannan, Candidate for MD/PhD degree, Genetics Program, Penn State College of Medicine

Jasper Humbert, Candidate for a PhD degree, Genetics Program, Penn State College of Medicine.

2004 Taught a graduate level course entitled "Genetic Approaches to Biomedical Problems" offered at the Penn State College of Medicine

2005 Served as facilitator for "Graduate Research Colloquium" at the Penn State College of Medicine

2016-2019 Mentored the following medical students at the Charles E. Schmidt College of Medicine at Florida Atlantic University:

Sarah Palumbo
Bailey Pierce
Jonathan Freeman

4. <u>Post-doctoral Trainees:</u>

1987-1992 Dr. Karen Foster, Recipient of American Heart Association Fellowship

1991-1992 Dr. James Cali

Dr. Karen Proulx

1992-1996 Dr. Mohammed Rahmatullah

1992-1996 Dr. Rownak Rahmatullah, Recipient of American Heart Association Fellowship

1993-1996 Dr. Kausik Ray, Recipient of American Heart Association Fellowship

1995-1996 Dr. Dean Wenham

Dr. Mark Richardson, Recipient of American Heart Association Fellowship

1996-1999 Dr. Qin Wang, Recipient of American Heart Association Grant-in- Aid

1997-1998 Dr. Jeffrey Yu

1997-1999 Dr. Sujata Kanwal

1998-2001 Dr. Tatyana Ivanova-Nikolova, Recipient of American Heart Association Grant-in-Aid

1999-2001 Dr. Ding-Ji Wang

1999-2001 Dr. Charlene McWhinney, Recipient of American Heart Association Grant-in-Aid

2001-2006 Dr. Chonang Li

2001-2008 Dr. Hui Chen

2006-2009 Dr. TinChung Leung

2001-2011 Dr. Bill Schwindinger

2012-2013 Dr. Mike Liu

2014-present Dr. Misha Chernovski

2017-present Dr. Gloria Brunori

2019-present Dr. Yingcai Wang

5. Visiting Scientists:

1988 Dr. Michael Pugh, Assistant Professor of Chemistry, Bloomsburg University

1989 Dr. Andrei Scamrov, US-USSR Scientific Exchange Program

1990 Dr. Igor Rybalkin, US-USSR Scientific Exchange Program

2001-2018 Dr. Carl Hansen, Professor of Biology and Allied Health, Bloomsburg University

6. Clinical Trainees/Collaborations:

As the Director of Research Education and Training, I oversee the research training component of the Internal Medicine Residency Program at the Geisinger Clinic. As part of this responsibility, I developed and wrote a new curriculum for the research training of medical residents as part of their re-accreditation process in 2004. In addition, I supervised and/or collaborated with the following clinical associates:

1993-1996.2 Dr. Robert Klein, Associate, Endocrinology, Geisinger Clinic

2002-present Dr. Mark Stecker, Associate, Neurology, Geisinger Clinic

2003-2005 Dr. Ping Zhang, Associate, Pathology, Geisinger Clinic

2004-2006 Dr. Ayoub Mirza, Associate, Internal Medicine, Geisinger Clinic

2004-2007 Dr. Mark Stecker, Associate, Neurology, Geisinger Clinic

2009-2016 Dr. Joe Boscarino, Invesigator, Center for Health Research, Geisinger Clinic
Dr. Chris Still, Bariatric Surgery, Geisinger Clinic
Dr. Carole Ulloa, Neurology, Geisinger Clinic
Dr. Dan Horwitz, Orthopedics, Geisinger Clinic

7. Geisinger-Regeneron Project Development:

Hypertrophic Cardiomyopathy Project (Geisinger-Regeneron)
Obstructive Sleep Apnea (Geisinger-University of Pennsylvania)
Pharmacogenetics Project (Geisinger-Regeneron, Pennsylvania State University)
IL33 Project (Geisinger-Regeneron)
Prescription Opioid Abuse (Geisinger-University of Pennsylvania)

RESEARCH PROGRAM:

The identification of genetic variants associated with diseases and their successful application to the clinical setting represents a current bottleneck. From the growing number of examples that have successfully managed to bridge this gap, it is clear that research aimed at prioritizing and identifying the functional consequences of such genetic variants is absolutely required for "personalized" medicine to become a reality for most patients. For this reason, a major focus of my laboratory has been to identify and prioritize the genetic variants that have the highest clinical potential. Since our eventual goal is to develop better pharmacologic treatments for complex diseases, we focus on the most "druggable" part of the genome: G-protein coupled receptor signaling pathways that represent the targets of >60% of drugs currently on the market. Moreover, we further focus only on the subset of genes that encode the rate-limiting step in these pathways since their manipulation will offer the most efficacious treatment. Our successful use of this approach is exemplified by our recent identification of *Gng7* encoding the G-γ_7 protein for determining response to dopamine in mice. This result led to the subsequent identification of a genetic variant of *GNG7* significantly associated with prescription opioid abuse in a Geisinger patient cohort.

Another focus of my laboratory has been to move away from a gene-centric to a pathway-centric strategy for treatment of complex diseases. Our successful implementation of this strategy is illustrated by our identification of impaired GABA-ergic neurotransmission as a common feature of human epilepsies of polygenic origin. By recapitulating this defect in mice, we showed that genetically modified mice have no overt seizure phenotype. However, by crossing these mice onto different genetic backgrounds, we identified novel "modifier" genes that exacerbate the GABA-ergic defect, resulting in a severe seizure phenotype. Subsequently, by performing RNA Seq analyses of human epileptic tissues, we revealed that even though the individual genetic variants were unique to each patient, their net effect was an impairment of GABA-ergic neurotransmission. This provides the rationale for designing drugs that target key pathways/networks rather than the individual genes that appear to be unique to each patient, thereby providing the rationale for a planned NIH grant to be submitted in 2013.

Collectively, these two examples represent only a small portion of our research activities as can be seen from the list of active AND pending grants. Moreover, none of these projects would be possible without strong collaborative ties to the clinic and to Regeneron Pharmaceuticals that direct our research questions and provide the rationale and experimental materials to investigate them.

1. <u>Funding History:</u>

I have been funded by the National Institutes of Health (NIH) for 35 years (NIH pre-doctoral training grant, NIH post-doctoral fellowship, and multiple NIH investigator awards). In addition to NIH support, I have received research grants from the American Heart Association, educational program support from Pfizer and various endowments, and business grant support for SignalPlex from Life Sciences Greenhouse and Keystone Innovation Zone.

Altogether, I have successfully competed for more than $15 million in grant funding and have an additional $6 million in pending grants whose fates are being decided at this time. In addition, I am the Geisinger Site Leader for several programmatic grants with other institutions that are under review at this time.

1a. **Completed.** I was the PI on all of the following grants

1988-1993 NIH, R29 Award GM39867 entitled *"G Proteins: Significance of β and γ subunit heterogeneity"*

1993-1997 NIH, R01 Award GM39867 entitled *"G Proteins: Significance of β and γ subunit heterogeneity"*

1989-1994 American Heart Association, National Established Investigator Award entitled *"Structure/Function of G-proteins involved in neurohormonal control of heart"*

1990-1992 American Heart Association, Pennsylvania Grant-In-Aid entitled *"Regulation of expression and function of G-proteins involved in neurohormonal control of heart"*

1993 Eagle Award

1993-1998 NIH, R01 Award HL49278 *entitled "Diversity of α_1-adrenergic signaling pathways in heart"*

1998-2004 NIH, R01 Award GM58191 entitled *"Elucidating G protein signaling systems in vivo"*

1997-2000 American Heart Association, National Grant-In-Aid Award entitled *"Spatial Segregation of G proteins"*

1997-2000 NIH, R01 Award GM39867 entitled *"G Proteins: Significance of β and γ subunit heterogeneity"*

1998-2004 NIH, R01 Award HL49278 entitled *"Diversity of α_1-adrenergic signaling pathways in heart"*

2001-2005 NIH, R01 Award GM39867 entitled *"G Proteins: Significance of β and γ subunit heterogeneity"*

2004-2006 Pennsylvania Life Sciences "Greenhouse" Award entitled *"Functional Genomics of GPCR signaling using zebrafish model"*

2004 Pfizer, K-12 Science Education Award

2005-2012 NIH, R01 Award GM39867 entitled *"G Proteins: Significance of β and γ subunit heterogeneity"*

2004-2009 NIH, R01 Award GM58191 entitled *"Elucidating G protein signaling in vivo"*

2007-2009 Keystone Innovation Zone Business Grant awarded to SignalPlex

2009-2010 NIH, R01 Award GM39867 ARRA Supplement

2010-2012 NIH, R01 Award GM39867 Administrative Supplement

2011-2013 Geisinger Translational Grant Award entitled *"Networks in Neocortical Epilepsy"*

2012-2014 NIH, R03 Award NS080083 entitled "*Gng5 function in neural progenitor cells"*

1b. Active.

2015-2020 NIH, R01 Award GM114665 entitled "*Novel Aspects of G_{olf} Signaling in Brain";* PI, Robishaw J. *This grant revolves around understanding the G_{olf} signaling pathways that normally control locomotion, motivation, and reward. When dysfunctional, these pathways contribute to Parkinson's, Huntington's, and addictive disorders. Our identification of a novel G-αβγ combination acting downstream of the D1 dopamine and A2a adenosine receptors will open the door for more selective treatment of these diseases.*

2015-2020 NIH, R01 GM111913 entitled *"An integrated approach to study GPCR variants associated with complex diseases";* MPI, Robishaw JD and Mirshahi T.
Using genomic information to improve healthcare is an enormous undertaking that will require novel strategies to rapidly separate "the wheat from the chaff". Offering an innovative approach to this problem, this grant application will combine a disease-based filtering algorithm with a functional testing platform to rapidly identify G protein-coupled receptor variants producing functional defects that could contribute to disease pathology or treatment response. Validation of this approach, including details of the workflow and critical factors necessary for success, will pave the way for other institutions to implement similar strategies focused on additional patient cohorts of varying race/ethnicity and other gene families of suspected clinical relevance.

2016-2021 NIH, R01 HL134015 entitled *"Approaches to Genetic Heterogeneity of Obstructive Sleep Apnea";* MPI, Pack A and Robishaw JD.
This grant uses a combination of GWAS, PheWAS, and machine learning to identify the genetic bases of sleep apnea in a community-based population.

2017-2022 NIH, R01 DA044015 entitled *"Clinical and Genetic Study of Prescription Opioid Addiction";* MPI, Troiani V, Berrettini W, Robishaw JD,
This grant uses a combination of GWAS, PheWAS, and machine learning to identify the clinical and genetic predictors of prescription opioid addiction.

1c. Pending.

2019-2024 NIH, RO1, entitled "Functional Genomics of GPR37L1 Receptor in Migraine", MPI, Robishaw JD, Breitwieser GE, Toll L, Pending review

2. <u>Publications</u> (Selected from ~100 peer-reviewed papers, reviews, book chapters):

<u>Sampling of Full length, peer reviewed articles</u>

1. Neely JR, **Robishaw JD** and Vary TC: Control of myocardial levels of CoA and carnitine. *J. Mol. Cell. Cardiol.* 14: 37-42, 1982.

2. **Robishaw JD** and Neely JR: Rate-limiting step and control of CoA synthesis in heart. *J. Biol. Chem.* 257: 10967-10972, 1982.

3. **Robishaw JD** and Neely JR: Pantothenate kinase and control of CoA synthesis in the heart. *Am. J. Physiol.* 246: H532-H541, 1984.

4. Chua B, Giger K, Paine B, **Robishaw JD** and Morgan H: Effect of cysteine availability on protein and coenzyme A synthesis in rat heart. *Am. J. Physiol.* 246: C99-C106, 1984.

5. Sternweis PC and **Robishaw JD**: Isolation of two proteins with high affinity for guanine nucleotides from membranes of bovine brain. *J. Biol. Chem.* 259: 13806-13813, 1984.

6. Hurley JB, Simon MI, Teplow DB, **Robishaw JD** and Gilman AG: Homologies between signal transducing G proteins and ras gene products. *Science* 226: 860-862, 1984.

7. **Robishaw JD** and Neely JR: Coenzyme A metabolism. *Am. J. Physiol*. 248: E1-E9, 1985.

8. Fisher M, **Robishaw JD** and Neely JR: The properties and regulation of pantothenate kinase from rat heart. *J. Biol. Chem.* 260: 15745-15751, 1985.

9. Harris B, **Robishaw JD**, Mumby SM and Gilman AG: Molecular cloning of cDNA for the α subunit of G-protein that stimulates adenylate cyclase. *Science* 229: 1274-1277, 1985.

10. **Robishaw JD**, Russell DW, Harris BA, Smigel MD and Gilman AG: Deduced primary structure of the α subunit of the GTP-binding stimulatory protein of adenylate cyclase. *Proc. Natl. Acad. Sci. USA* 83: 1251-1255, 1986.

11. **Robishaw JD**, Smigel MD and Gilman AG: Molecular basis for two forms of the G-protein that stimulates adenylate cyclase. *J. Biol. Chem.* 261: 9587-9590, 1986.

12. Gao B, Gilman AG and **Robishaw JD**: A second form of the β subunit of signal-transducing G-proteins. *Proc. Natl. Acad. Sci. USA* 84: 6122-6125, 1987.

13. Beinlich CJ, **Robishaw JD** and Neely JR: Metabolism of pantothenic acid in hearts of diabetic rats. *J. Mol. Cell. Cardiol.* 21: 641-649, 1989.

14. **Robishaw JD**, Kalman VK, Moomaw C and Slaughter CA: Existence of two γ subunits of the G proteins in brain. *J. Biol. Chem.* 264: 15758-15761, 1989.

15. **Robishaw JD** and Foster KA: Role of G proteins in the regulation of the cardiovascular system. *Ann. Rev. Physiol.* 51: 229-244, 1989.

16. Levine MA, Feldman AM, **Robishaw JD**, Ladenson PW, Ahn TG, Moroney JF and Smallwood PM: Influence of thyroid hormone status on expression of genes encoding G protein β subunits in the rat heart. *J. Biol. Chem.* 265: 3553-3560, 1990.

17. Foster KA, McDermott PJ and **Robishaw JD**: Expression of G proteins in rat cardiac myocytes: Effect of KCl depolarization. *Am. J. Physiol.* 28: H432-H441, 1990.

18. Maltese WA and **Robishaw JD**: Isoprenylation of C-terminal cysteine in a G-protein γ subunit. *J. Biol. Chem.* 265(30): 18071-18074, 1990.

19. Miller BA, Foster KA, **Robishaw JD**, Whitfield CF, Bell L and Cheung JY: Role of pertussis-toxin sensitive GTP-binding proteins in the response of erythroblasts to erythropoietin. *Blood* 77(3): 486-492, 1991.

20. Foster KA, McDermott PJ and **Robishaw JD**: The effect of culture and membrane potential on $G_{o\alpha}$ expression in rat cardiac myocytes. *Mol. and Cell. Biochem.* 104: 63-72, 1991.

21. Foster KA and **Robishaw JD**: Effect of calcium and cAMP on G_o expression in neonatal rat cardiac myocytes. *Amer. J. Physiol.* 261: 15-20, 1991.

22. Graber S, Figler R, Kalman-Maltese V, **Robishaw JD** and Garrison JC: Expression of functional $\beta\gamma$ dimers of defined subunit composition using a baculovirus expression system. *J. Biol. Chem.* 267: 13123-13126, 1992.

23. **Robishaw JD**, Kalman VK and Proulx, KL: Production, processing and partial purification of functional G protein $\beta\gamma$ subunit complexes in baculovirus-infected insect cells. *Biochem. J.*, 286: 677-680, 1992.

24. Iniguez-Lluhi JA, Simon M, **Robishaw JD** and Gilman AG: G protein $\beta\gamma$ subunits synthesized in Sf9 cells: Functional characterization and the significance of prenylation of . *J. Biol. Chem.*, 267: 23409-23417, 1992.

25. Cali JJ, Balcueva EA, Rybalkin I and **Robishaw JD**: Selective tissue distribution of four different forms of the G protein γ subunits including a new form identified by cDNA cloning. *J. Biol. Chem.*, 267: 24023-24027, 1992.

26. Peng YW, **Robishaw JD**, Levine MA and Yau KW: Retinal rods and cones have distinct β and γ subunits. *Proc. Natl. Acad. Sci. USA*, 89: 10882-10886, 1992.

27. **Robishaw JD** and Balcueva EA: A high temperature transfer procedure for detection of G protein γ subunits. *Anal. Biochem.*, 208: 283-387, 1993.

28. **Robishaw JD** and Hansen, CA: Structure and function of G proteins mediating signal transduction pathways in the heart. *Alcoholism: Clin. Exp. Res.*, 18: 115-120, 1994.

29. Rahmatullah M, and **Robishaw JD**: Direct interaction of the α and γ subunits of the G proteins. *J. Biol. Chem.*, 269: 3574-3580, 1994.

30. Ueda N, Iñiguez-Lluhi JA, Lee E, Smrcka AV, **Robishaw JD**, and Gilman AG: G protein βγ subunits: Simplified purification and properties of novel isoforms. *J. Biol. Chem.,* 269: 4388-4395, 1994.

31. Lederer ED, Jacobs AA, Hoffman JL, Harding GB, **Robishaw JD** and McLeish KR: Role of carboxyl methylation in chemoattractant receptor-G protein interaction. *Biochem. Biophys. Res. Comm.*, 200: 1604-1614, 1994.

32. **Robishaw JD** and Balcueva EA. Preparation, characterization and use of antibodies with specificity for the G protein γ subunits. *Methods in Enzymology*, 237: 498-507, 1994.

33. Hansen CA, Schroering AG, Carey DJ, and **Robishaw JD**: Localization of a heterotrimeric G Protein γ_5 subunit to regions of focal adhesion and associated stress fibers. *J. Cell Biol.*, 126: 811-819, 1994.

34. Ray K, and **Robishaw JD**: Cloning and sequencing of a cDNA encoding a rat heart G protein β subunit related to the human retinal β_3 subunit. *Gene*, 149: 337-340, 1994.

35. Hansen CA, Joseph SK and **Robishaw JD**: Ins 1,4,5-P_3 and calcium signaling in quiescent neonatal cardiac myocytes. *Biochim. Biophys. Acta*, 1224: 517-526, 1994.

36. Hansen CA, Schroering AG, and **Robishaw JD**: Subunit expression of signal transducing G proteins in cardiac tissue: Implications for phospholipase C-β regulation. *J. Mol. Cell. Cardiol.* 27: 471-484, 1995.

37. Rahmatullah M, Ginnan R, and **Robishaw JD**: Specificity of G protein α–γ subunit interactions: N-terminal region of confers specificity. *J. Biol. Chem.,*270: 2946-2951, 1995.

38. Wilcox MD, Dingus J, Balcueva EA, McIntire WE, Mehta ND, Schey KL, **Robishaw JD**, and Hildebrandt JD: Bovine brain Go isoforms have distinct βγ subunit compositions. *J. Biol. Chem.,* 270: 4189-4192, 1995.

39. Iiri T, Homma Y, Ohoka Y, **Robishaw JD**, Katada T, and Bourne HR: Potentiation of G_i-mediated PLC activation by retinoic acid in HL-60 cells, *J. Biol. Chem.*,270:5901-5908,1995.

40. Kalman VK, Erdman R, Maltese WA, and **Robishaw JD**: Regions outside of the CAAX motif influence of the specificity of prenylation of G protein γ subunits, *J. Biol. Chem.,* 270: 14835-14841, 1995.

41. Ray K, Kunsch C, Bonner LM, and **Robishaw JD**: Isolation of cDNA clones encoding eight different human G protein γ subunits, including three novel forms designated the γ_4, γ_{10}, and γ_{11} subunits, *J. Biol. Chem. 270: 21765-21771, 1995.*

42. Miller BA, Bell L, Hansen CA, **Robishaw JD**, and Cheung JY: Role of G protein subunits in erythropoietin signal transduction in human erythroid precursors by microinjection. *J. Clin. Invest.* 98: 1728-1736, 1996.

43. Ray K, Hansen CA, and **Robishaw JD**. Gβγ-mediated signaling in the heart: Implications of β and γ subunit heterogeneity. *Trends in Cardiovascular Medicine* 6: 7-13, 1996.

45. Daaka Y, Pitcher JA, Richardson M, Stoffel RH, **Robishaw JD**, and Lefkowitz RJ: Receptor and Gβγ isoform-specific interactions with G protein-coupled receptor kinases. *Proc. Natl. Acad. Sci. USA* 94: 2180-2185, 1997.

46. Wang Q, Mullah B, Hansen C, Asundi J, and **Robishaw JD**: Ribozyme-mediated suppression of G protein γ_7 subunit suggests a role in hormone regulation of adenylylcyclase. *J. Biol. Chem.* 272: 26040-26048, 1997.

47. Pomerantz KB, Summers P, Lander HM, **Robishaw JD**, Balcueva EB, and Hajjar DP: G protein mediated signaling in cholesterol-enriched arterial smooth muscle cells:Reduced membrane associated G protein content due to diminished isoprenylation of G-γ subunits and p21ras. *Biochemistry* 36: 9523-9531, 1997.

48. Wenham D, Rahmatullah R, Rahmatullah M, Hansen CA, and **Robishaw JD**: Differential coupling of α_1-adrenergic receptor subtypes to phosphatidylinositol turnover and MAP kinase cascades in neonatal rat cardiac myocytes. *Eur. J. Pharm.* 339: 77-86, 1997.

49. Ivanova-Nikolova TT, Nikolov EN, Hansen C, and **Robishaw JD**. Muscarinic K^+ channel in the heart: Modal regulation by G protein $\beta\gamma$ subunits. *J. Gen. Physiol.*, 112: 199-210, 1998.

51. Richardson M, and **Robishaw JD**: The α_{a2A}-adrenergic receptor discriminates between Gi heterotrimers of different $\beta\gamma$ subunit composition in Sf9 cells.*J. Biol. Chem*. 274: 13525-13533, 1999.

52. Wang Q, Mullah BK, and **Robishaw JD**. Ribozyme approach identifies a functional association between the G protein $\beta_1\gamma_7$ subunits in the β-adrenergic receptor signaling pathway. *J. Biol. Chem*. 274: 17365-17371, 1999.

53. McWhinney C, Wenham D, Kanwal S, Kalman V, Hansen C, **Robishaw JD**. Constitutively active mutants of the α_{1a}- and the α_{1b}-adrenergic receptor subtypes reveal coupling to different signaling pathways and physiological responses in rat cardiac myocytes. *J Biol Chem.* 275: 2087-97, 2000.

54. Balcueva EA, Wang Q, Hughes H, Kunsch C, Yu Z, **Robishaw JD**. Human G Protein γ_{11} and γ_{14} Subtypes Define a New Functional Subclass. *Exp Cell Res*. 257: 310-319, 2000.

55. McWhinney CD, Hansen C, **Robishaw JD**. Alpha-1 Adrenergic Signaling in A Cardiac Murine Atrial Myocyte (HL-1) Cell Line. *Mol. Cell. Biochem.* 214: 111-9, 2000.
56. Klein C, Schilling K, Saunders-Pullman, **Robishaw JD**, and Ozelius L. A major locus for myoclonus-dystonia maps to chromosome 7q in eight families. *Amer. J. Hum. Genet*. 67: 1314-9, 2000.

57. **Robishaw JD**, Wang W, and Schwindinger W. Ribozyme mediated suppression of G protein γ subunits. *Methods in Enzymology* 344: 435-451, 2001.

58. Schwindinger W, and **Robishaw JD**. Role of G protein $\beta\gamma$ subunits in proliferation and differentiation. *Oncogene 20*: 1653-1660, 2001.

59. Wang Q, Jolly JP, Surmeier JD, Mullah BK, Lidow MS, Bergson CM, **and Robishaw JD.** Differential dependence of the D_1 and D_5 dopamine receptors on the G protein γ_7 subunit for activation of adenylyl cyclase. *J. Biol. Chem.* 276: 39386-93, 2001.

60. Schwindinger W, Betz KS, Giger KE, Sabol A, Bronson SK, and **Robishaw JD**. Loss of G protein γ_7 alters behavior and reduces striatal αolf level and cAMP production. *J. Biol. Chem*. 278: 6575-9, 2003.

61. **Robishaw JD**, Schwindinger WF, and Hansen CA. Specificity of G protein $\beta\gamma$ dimer signaling. *Handbook of Cellular Signaling* 2: 623-629, 2003.

62. Cheng KC, Levenson R, and **Robishaw JD**. Functional genomic dissection of multimeric protein families in zebrafish. *Developmental Dynamics* 228: 555-567, 2003.

63. **Robishaw JD,** Guo ZP, and Wang Q**.** Ribozymes as Tools for Suppression of G protein γ subunits. *Methods in Molecular Biology* vol. 237: G Protein Signaling: Methods and Protocols, Chapter 15, pages 169-180, Editor, Alan Smrcka, Humana Press, 2004.

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65. Schwindinger WF, Giger KE, Betz KS, Stauffer AM, Sunderlin EM, Sim-Selley LJ, Selley DE, Bronson SK, and **Robishaw JD**. Mice with deficiency of G protein γ_3 are lean and have seizures. *Mol Cell Biol* 24: 7758-68, 2004.

66. Leung T, Chen H, Stauffer AM, Giger KE, Sinha S, Horstick EJ, Humbert JE, Hansen CA, and **Robishaw JD**. Zebrafish G protein γ2 is required for VEGF signaling during angiogenesis. Blood 108(1): 160-6, 2006. (Selected for Cover presentation)

67. Dubeykovskiy A, McWhinney C, and **Robishaw JD**. Runx-dependent regulation of G protein γ3 expression in T-cells. Cell Immunol. 240(2): 86-95, 2006.

68. Chen H, Humbert JE, Leung TC, Sinha S, Giger KE, Stauffer AM, Horstick EJ, Hansen CA, and **Robishaw JD**. Expression of the G protein γT1 subunit during zebrafish development. *Gene Expression Patterns* 7(5): 574-83, 2007.

69. McWhinney C, **Robishaw JD**. Myocyte-specific M-CAT and MEF-1 elements regulate G protein g3 expression in cardiac myocytes. DNA Cell Biol 27: 367-76, 2008.

70. Leung T, Humbert JE, Stauffer AM, Giger KE, Chen H, Tsai HJ, Wang C, Mirshahi T, **Robishaw JD**. The orphan G protein-coupled receptor 161 is required for left-right patterning. Dev. Biol. 323(1): 31-40, 2008.

71. Schwindinger WF, Borrell BM, Waldman LC, and **Robishaw JD**. Mice lacking the G protein γ3 subunit show resistance to opioids and diet induced obesity. Am J Physiol Regul Integr Comp Physiol. 297(5): R1494-502, 2009.

72. Hansen CA, Schwindinger WF, and **Robishaw JD.** Specificity of G protein βγ dimer signaling. Handbook of Cell Signaling 2nd edition, Oxford:Academic Press, pp. 1673-1682, 2009.

73. Schwindinger WF, Mihalcik LJ, Giger KE, Betz KS, Stauffer AM, Linden J, Herve D, Robishaw JD. Adenosine A2a receptor signaling and Golf assembly show a specific requirement for the γ7 subtype in the striatum. J Biol Chem. 285(39):29787-96, 2010.

74. Schwindinger WF, Mirsahi U, Baylor KA, Sheridan KM, Stauffer AM, Usefof S, Stecker MM, Mirshahi T, **Robishaw JD.** Synergistic roles for G-protein γ_3 and γ_7 subtypes in seizure susceptibility as revealed in double knockout mice. *J Biol. Chem*. 287(10):7121-33, 2012.

75. **Robishaw JD**. Preferential assembly of G-proteins by the γ subunits. *Subcell Biochem*. 63: 181-91, 2012.

76. Moon AM, Stauffer AM, Schwindinger WF, Sheridan K, Firment A, **Robishaw JD**. Disruption of G-protein γ5 subtype causes embryonic lethality in mice. PLoS One. 2014;9(3): e90970, 2014. doi:10.1371/journal.pone.0090970

77. Mi W, Lin Q, Childress C, Sudol M, **Robishaw J**, Berlot CH, Shabahang M, Yang W. Geranylgeranylation signals to the Hippo pathway for breast cancer cell proliferation and migration. Oncogene. 2014 Aug 11. doi: 10.1038/onc.2014.251.

78. O'Hare EA, Yang R, Yerges-Armstrong LM, Sreenivasan U, McFarland R, Leitch CC, Wilson MH, Narina S, Gorden A, Ryan KA, Shuldiner AR, Farber SA, Wood GC, Still CD, Gerhard GS, **Robishaw JD**, Sztalryd C,

Zaghloul NA. (2017) TM6SF2 rs58542926 impacts lipid processing in liver and small intestine. Hepatology. 65(5):1526-1542. doi: 10.1002/hep.29021.

79. Pung M, **Robishaw J**, Pfeffer MA, Hennekens CH. Prescription of Statins to Women Poses New Clinical Challenges. Am J Med. 2018:131(10): 1139-40. PMID 29679537

80. **Robishaw J**, Caceres J, Hennenkens CH. (2019) Genomics and Precision Medicine to Combat Opioid Use Disorder. Am J Med . 2019; 132(4): 395-6. PMID 30940352

81. Dershem R., Metpally RPR, Jeffreys K, Krishnamurthy S, Smelser DT, Carey DJ, Hershfinkel M, **Robishaw JD**, Breitwieser GE. Rare variant pathogenicity triage and inclusion of synonymous variants improves analysis of disease associations. J. Biol. Chem. 2019; 294(48): 18109-18121. bioRxiv 272955; doi: https://doi.org/10.1101/272955

82. Keenan, BT, Kirchner, HL, Veatch OJ, Borthwick KM, Davenport, VA, Feemster, JC, Gendy, M, Gossard, TR, Pack, FM, Sirikulvadhana, L, Teigen, LN, Timm, PC, Malow, BA, Morgenthaler, TI, Zee, PC, Pack, AI, **Robishaw, JD**, Derose, SF. (2020) Multi-Site Validation of a Simple Electronic Health Record Algorithm for Identifying Diagnosed Obstructive Sleep Apnea, in press, J Clinical Sleep Med

83. **Robishaw JD**, DeMets DL, Wood SK, Boiselle PM, Hennekens CH. Establishing and Maintaining Research Integrity at Academic Institutions: Challenges and Opportunities. Am J Medicine. 2020;133(3):e87-e90. doi:10.1016/j.amjmed.2019.08.036

84. Palumbo SA, Hennekens CH, **Robishaw, JD**, Levine RS. Temporal Trends and Geographic Variations in Mortality Rates from Prescription Opioids: Lessons from Florida and West Virginia. South Med J. 2020;113(3):140-145. doi:10.14423/SMJ.0000000000001074

Manuscripts in Preparation.

1. Chen H, Leung TC, Humbert J, Stauffer A, Sinha S, Giger K, Hansen CA, and **Robishaw JD**. Critical role for the zebrafish G protein γ_{T1} subunit in melatonin production.

2. Schwindinger WF, Sheridan K, Boscarino J, Erlich P, Gerhard G, and **Robishaw JD**. The G-protein γ_7 is a likely genetic contributor to opioid actions in humans and mice.

3. Veatch, OJ, Rauer, CR, Josyula, N, Mazzotti, DR, Keenan, BT, Bagai, K, Malow, BA, **Robishaw, JD**, Pack, AI, Pendergrass, SA. Characterization of Genetic and Phenotypic Heterogeneity of Obstructive Sleep Apnea Using Electronic Health Records. Under Review.

RECENT CONTINUING EDUCATION:

2001 Intro to Clinical Research

2002 ASPET Short Course, Behavioral Pharmacology for Gene Jockeys and Molecular Biologists, Orlando, Fl

2002 Jackson Laboratory Workshop, Phenotyping New Mouse Models for Heart, Lung, Blood, and Sleep Disorders, Bar Harbor, ME

2001 Jackson Laboratories Workshop, Mouse Colony Management: Principles and Practices, Bar Harbor, ME

2003 Jackson Laboratories Symposium, Mouse Initiatives V: Genomics of Complex Systems in

Biomedical Research, Bar Harbor, ME

2010 Jackson Laboratories Workshop, Genetics of Addiction, Bar Harbor, ME

2011 Jackson Laboratories Workshop, Epilepsy, Bar Harbor, ME

2019 IACUC Re-Certification

2019 IRB Re-Certification

2019 Florida Atlantic University, College of Medicine
Completed CITI Training

2019 University of Colorado, Awarded Certificate for “Implementing Pharmacogenomics in the Clinic”

2019 Advanced Course on “Chronic Pain”, Neuroscience School of Advanced Studies, Venice, Italy

2019 Advances in Integrated Nutrition, Thomas Jefferson University, Philadelphia, PA

2020 AAMC Leadership Conference, Washington, DC

Shaefali Pillai Rodgers
Curriculum Vitae

Assistant Professor
Department of Exercise Science and Health Promotion (ESHP)
Charles E. Schmidt College of Science
Florida Atlantic University | 777 Glades Road, Field House 11, Boca Raton, Florida 33431
rodgerss@fau.edu
work: (561) 297 3510; cell: (504) 261 5728

EDUCATION

Ph.D. in Psychology, Tulane University, LA 2007 – 2009
Advisor: Dr. Jill M. Daniel
Dissertation: Long-term cognitive and neurobiological consequences of transient estradiol exposure during middle age in ovariectomized rats.
M.S. in Psychology, Tulane University, LA 2003 – 2007
Advisor: Dr. Paul J. Colombo
Thesis: Memory-system specificity in mechanisms of spatial learning.
B.S. in Psychology/Minor in Sociology, University of Houston, TX 1999 – 2002
B.S. in Physics/Minor in Computer Science, University of Mumbai, India 1995 – 1998

RESEARCH EXPERIENCE

Assistant Professor, ESHP, Florida Atlantic University, FL 2020 – now
Research Topic 1: The role of physical exercise-hormone interactions in the modulation of neuroplasticity.
Research Topic 2: The mechanisms of exercise-driven repair of the binge alcohol-damaged brain.
Research Topic 3: The role of perineuronal nets in mediating exercise-induced plasticity during adolescence and aging.

Research Assistant Professor, Department of Psychology, University of Houston, TX 2015 – 2020
Independent Research Topic: Physical exercise and estrogen therapy as midlife strategies to buffer against postmenopausal aging-related neurodegeneration and cognitive decline.
Collaborative Research Topic 1: Binge alcohol-induced neurodegeneration as a function of sex and age.
Collaborative Research Topic 2: Exercise as a targeted approach to regulate the neuroimmune response to pediatric cranial radiotherapy.
Collaborative Research Topic 3: The impact of adolescent physical exercise on stress resilience in adulthood.

Postdoctoral Fellow, University of Houston/Baylor College of Medicine, TX 2011 – 2014
PI: Dr. J. Leigh Leasure, Department of Psychology, University of Houston
PI: Dr. M. Waleed Gaber, Department of Pediatrics, Baylor College of Medicine
Research Topic: Therapeutic approaches to mitigate the long-term physiological, neural, and cognitive sequelae of pediatric cranial radiotherapy.

Postdoctoral Fellow, Baylor College of Medicine, TX 2009 – 2011
PI: Dr. Joanna L. Jankowsky, Department of Neuroscience
Research Topic: A novel combination therapy approach to maximize pathological and cognitive recovery in a transgenic mouse model of Alzheimer's disease.

Research Technician, Baylor College of Medicine, TX 2002 – 2003
PI: Dr. Ronald L. Davis, Department of Molecular and Cellular Biology
Role: Develop a novel ethanol delivery system and behavioral assays to study chronic alcoholism in *drosophila melanogaster*.

CURRENT EXTRAMURAL SUPPORT

R01 AA025380-01A1, Leasure (PI) Award amount: $1,721,250 8/18 – 4/23

NIH/National Institute on Alcohol Abuse and Alcoholism

"Alcohol, Exercise & the Female Brain"

Role: Co-I

R21 AG056039-01, Rodgers (PI) Award amount: $401,250 9/17 – 05/21

NIH/National Institute on Aging

"Interactive Effects of Short-Term Estrogen Replacement and Long-Term Exercise on the Aging Brain and Cognition in a Rodent Model of Menopause"

Role: PI

PEER-REVIEWED PROFESSIONAL PUBLICATIONS

West, I., Rodgers, S.P., & Leasure, J.L. (2020). Neural perturbations associated with recurrent binge alcohol in male and female rats. *Alcoholism: Clinical and Experimental Research.*

Cortez, I., Rodgers, S.P., Kosten, T.A., & Leasure, J.L. (2020). Sex and age effects on neurobehavioral toxicity induced by binge alcohol. *Brain Plasticity.* 6(1):5-25.

Bettio, L.E., Thacker, J., **Rodgers, S.P.,** Brocardo, P.S., Christie, B.R., & Gil-Mohapel, J. (2020). Interplay between hormones and exercise on hippocampal plasticity across the lifespan. *BBA Molecular Basis of Disease.* Aug 1866(8):165821.

Gaber, M.W., Rodgers S.P., Tang, T.T., Sabek, O.M., & Zawaski, J.A. (2020). Differentiation of heterogeneous radiation exposure using hematology and blood chemistry. *Radiation Research.* Jan 193(1):24-33.

Perez, E.C., Bravo, D.R., Rodgers S.P., Khan, A.R., & Leasure, J.L. (2019). Shaping the adult brain with exercise during development: Emerging evidence and knowledge gaps. *International Journal of Developmental Neuroscience*. Nov 78:147-155.

Perez, E.C., Rodgers S.P., Inoue, T., Pedersen, S.E., Leasure, J.L., & Gaber, M.W. (2018). Olfactory memory impairment differs by sex in a rodent model of pediatric radiotherapy. *Frontiers in Behavioral Neuroscience*, Aug 12:158.

Sahnoune, I., Inoue, T., Kesler, S.R., Rodgers S.P., Sabek, O.M., Pedersen, S.E., et al. (2018). Exercise ameliorates neurocognitive impairments in a translational model of pediatric radiotherapy. *Neuro-Oncology*, 20(5):695-704.

Rodgers, S.P., Zawaski, J.A., Sahnoune, I., Leasure, J.L., & Gaber, M.W. (2016). Radiation-induced growth retardation and microstructural and metabolite abnormalities in the hippocampus. *Journal of Neural Plasticity*, Vol (2016).

Daniel, J.M., Witty, C.F., & Rodgers, S.P. (2015). Long-term consequences of estrogens administered in midlife on female cognitive aging. *Hormones and Behavior,* Aug 74: 77 85.

Rodgers, S.P., Trevino, M., Zawaski, J.A., Gaber, M.W., & Leasure, J.L. (2013). Neurogenesis, exercise, and cognitive late effects of pediatric radiotherapy. *Journal of Neural Plasticity,* Vol (2013).

Han, H.J., Allen, C.C., Buchovecky, C.M., Yetman, M.J., Born, H.A., Marin, M.A., Rodgers, S.P., et al. (2012). Strain background influences neurotoxicity and behavioral abnormalities in mice expressing the tetracycline transactivator. *Journal of Neuroscience*, 32(31): 10574-10586.

Rodgers, S.P., Born, H., Das, P., & Jankowsky, J.L. (2012). Transgenic APP expression during postnatal development causes persistent locomotor hyperactivity in the adult. *Molecular Neurodegeneration,* Jun 18:7:28.

Winsauer, P.J., Daniel, J.M., Filipeanu, C.M., Leonard, S.T., Hulst, J.L., Rodgers, S.P., Lassen-Greene, C.L., & Sutton, J.L. (2011) Long-term behavioral and pharmacodynamic effects of delta-9-tetrahydrocannabinol in female rats depend on ovarian hormone status. *Addiction Biology*, 16: 64-81.

Rodgers, S.P., Bohacek, J. & Daniel, J.M. (2010). Transient estradiol exposure during middle-age in ovariectomized rats exerts lasting effects on cognitive function and the hippocampus. *Endocrinology*, 151:1194-203.

FELLOWSHIPS AND AWARDS

NIH Biology of Aging Postdoctoral Fellowship, Huffington Center on Aging 2009 – 2011
Baylor College of Medicine, TX

Robert E. Flowerree Award for Summer Research 2004 – 2008
Tulane University, LA

Greater New Orleans Society for Neuroscience Travel Award 2005
17th Annual LSU Neuroscience Center Retreat, LA

INVITED TALKS AND POSTER PRESENTATIONS

Tulane Brain Institute Seminar Series, Neuroscience Program, Tulane University, LA, October 21, 2020: **"**Exercise & Hormones: Contributions to Neurobehavioral Plasticity."

Health Tea Brown Bag, Department of Psychological Sciences, Rice University, TX, February 17, 2020: **"**Midlife Strategies to Promote Cognitive and Emotional Health in Aging Females."

DCBN Colloquium Series, Department of Psychology, University of Houston, TX, March 9, 2018: **"**Midlife Strategies to Promote Healthy Cognitive Aging in Females."

Department of Natural Sciences Colloquium Series, University of Houston-Downtown, TX, September 22, 2016: "Exercise and estrogen replacement effects on the postmenopausal brain and cognition."

Biology of Behavior Institute Retreat, University of Houston, TX, May 7, 2016: "The benefits of exercise and postmenopausal estrogen replacement for the aging brain and cognition."

Bravo, D.R., Rodgers, S.P., Perez, E.C., & Leasure, J.L. (2020). The effects of binge alcohol exposure in male and female rats on the five-choice serial reaction time task. *Gordon Research Conference*.

Gaber, M.W., Rodgers, S.P., Tang, T.T., Sabek, O.M., & Zawaski, J.A. (2019). Differentiation of heterogeneous radiation exposure using hematology and blood chemistry. *Radiation Research*.

Oldridge, E.K., Phu, D., Khan, A.R., Masood, T., Aickareth, J.V., Leasure, J.L., & **Rodgers, S.P.** (2019). Independent and interactive effects of short-term estrogen replacement and long-term physical activity post menopause on brain and behavior. *Society for Behavioral Neuroendocrinology Meeting*.

Rodgers, S.P., Zawaski, J.A., Nelson, K.H., Leasure, J.L., & Gaber, M.W. (2014). Avoiding the pituitary/hypothalamic region and fractionating the dose during cranial radiotherapy mitigates radiation-induced growth retardation. *Society for Neuroscience Meeting*.

Rodgers, S.P., Barsales, M., Gaber, M.W., & Leasure, J.L. (2012). Acute and long-term effects of fractionated and single-dose irradiation in a rodent model of pediatric radiotherapy. *Society for Neuroscience Meeting*.

Rodgers, S.P., Das, P., Golde, T.E., & Jankowsky, J.L. (2010). Maximizing cognitive recovery in a mouse model of Alzheimer's disease: Will arresting Aβ suffice or will plaque clearance be required? *Huffington Center on Aging Research Symposium.*

Rodgers, S.P., Peglar, L.M., Lipinski, R.L., & Daniel, J.M. (2008). Pre-exposure to estradiol replacement in middle-aged ovariectomized rats exerts lasting effects on working memory performance in a radial-arm maze. *Society for Neuroscience Meeting*.

Rodgers, S.P., O'Malley, J., Neeland, M., & Colombo P.J. (2007). Context exposure-related increase in zif268 in area CA3 following fear conditioning. *Society for Neuroscience Meeting*.

Rodgers, S.P., Eil, R., & Colombo, P.J. (2005). Place-learning is correlated with levels of phosphorylated cAMP response element-binding protein in hippocampal pyramidal cell layers one hour after acquisition. *Society for Neuroscience Meeting.*

TEACHING/MENTORING EXPERIENCE

Lecturer, University of Houston, TX 2017 – 2020
Introduction to Psychological Statistics
Introduction to Psychology

Instructor, Tulane University, LA 2004 – 2006
Biological Psychology Lab

Graduate Teaching Assistant, Tulane University, LA 2005 – 2008
Behavioral Neuroendocrinology Lab
Psychopharmacology Lab
Neuroscience Methods Lab

Academic Committees, University of Houston, TX
Dissertation committee member
Rebecca West - Department of Psychology, Ph.D., 2020.
"Neural Effects of Weekly Binge Alcohol: Sex Differences?"
Master's thesis committee member
Emma Perez – Department of Psychology, M.A., 2016.
"Olfactory Deficits in a Rodent Model of Pediatric Radiotherapy."
Diana Bravo – Department of Psychology, expected 2021.
"The Effect of Learning on Dendritic Arborization in the Prefrontal Cortex: Sex Differences?"

Undergraduates Mentored
University of Houston, TX 2018 – 2020
Rhea Neycheril, Justin Aickareth, Delia Gomez, Roman Torres, Daniel Phu, Tayyaba Masood, Ali Khan, Reshma Jose, Raima Siddiqui, Briana Stephen, Uchenna Inoma
Tulane University, LA 2006 – 2009
Robert Eil, Jennifer O'Malley, Rebecca Lipinski, Lindsay Peglar

PROFESSIONAL SERVICE

Pharmacotherapies for Alcohol and Substance Abuse Consortium (PASA), grant reviewer 2018
PLOS One, ad hoc reviewer 2018 – now
Electronic Animal Medical Records System Selection Committee, University of Houston 2016

PROFESSIONAL AFFLIATIONS AND MEMBERSHIPS

Society for Behavioral Neuroendocrinology, Member 2019 – now
DCBN Program, Dept. of Psychology, University of Houston, Affiliate Faculty Member 2018 – now
Society for Neuroscience, Member 2004 – 2018
Baylor College of Medicine Postdoctoral Association, Secretary 2010 – 2011

CURRICULUM VITAE
(Updated Jan 2021)

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Charles E. Schmidt College of Science
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EDUCATION

B.A. in Psychology	*Pontificia Universidad Javeriana* Bogota (Colombia), 1980
M.A. Psychology	Ball State University (Muncie, Indiana, USA), 1982
Ph.D. Biomedical Sciences (Neuropsychology)	National Autonomous University of Mexico. Mexico D.F., Mexico, 1989

PROFESSIONAL EXPERIENCE

Professor of Psychology	Florida Atlantic University August 2007 - present
Associate Professor of Psychology	Florida Atlantic University August 1999 - 2007
Assistant Chair	Department of Psychology Charles E. Schmidt College of Science Florida Atlantic University July 2002 - present
Chair	Department of Psychology College of Liberal Arts Florida Atlantic University August 2000 - June 2002
Assistant Professor of Psychology	Department of Psychology Division of Science College of Liberal Arts

	Florida Atlantic University August 1996 - August 1999
Adjunct Assistant Professor of Neurology	University of Miami/ Jackson Memorial Hospital Miami, 1996 - 2004
Assistant Professor	Miami Institute of Psychology January 1994 -August 1996
Consultant Neuropsychologist	Division of Behavioral Neurology University of Miami\Jackson Memorial Hospital June 1995 - June 1996
Neuropsychologist	Department of Neurology San Juan de Dios Hospital Bogota, Colombia, 1990 - 1993

PROFESSIONAL ACTIVITIES

Vice-President	Colombian Association of Neuropsychology 1983-1985
Secretary	Colombian Association of Neuropsychology 1991-1993
Associate Member	Centre de Recherche du Centro Hospitalier Cote-des-Neiges (Montreal, Canada)
Chair Scientific Program Committee	Latin American Society of Neuropsychology (SLAN), 1995-1997
Secretary	Latin American Association of Neuro- Psychology (ALAN). 1998 to 2003
Secretary and Treasurer	Hispanic Neuropsychological Society 2001-2006
Member	Task Force on Women in Neuropsychology. National Academy of Neuropsychology, 2006-2008
Member	Women in Leadership: National Academy of Neuropsychology, 2008, 2009
Chair, Scientific	Latin American Association of Neuropsychology (ALAN)

Program Committee	2006-2007
President	Latin American Association of Neuropsychology (ALAN) 2006-2008, 2016-2018
Program Committee	38TH Annual Meeting, International Neuropsychological Society, Acapulco, Mexico, February 2010
Chair, Scientific Program	IX Bi-annual Meeting Latin American Association of Neuropsychology (ALAN)- Guadalajara, Mexico, May 2016
Associate Editor	Journal "Neuropsicología, Neuropsiquiatría y Neurociencias" (Neuropsychology, Neuropsychiatry and Neuroscience) 1998 – present
Editorial Board	Child Neuropsychology -2012-present *Estudios de Psicologia/*Psychology Studies -2012- present Psychological Assessment – 2014-2019 *Revista Mexicana de Comunicación, Audiología, Otoneurología Y Foniatría* – 2014-present *National Psychological Journal*- Russian Psychological Society 2016-present
Ad-hoc reviewer	Applied Neuropsychology, Archives of Clinical Neuropsychology, Assessment, Austrian Science Foundation, Brazilian Journal of Neurology, Developmental Neuropsychology, European Journal of Psychological Assessment, Journal of Black Psychology, International Psychogeriatrics, Journal of Clinical and Experimental Neuropsychology, Journal of Psychoneuroendocrinology, Journal of the International Neuropsychological Society, National Science Foundation, Neuropsychology Review, Neuropsychology, Netherland Organization for Scientific Research: Social Sciences, Psychological Reports, Psychological Sciences, The Clinical Neuropsychologist, Appllied Psycholinguistics.

MEMBERSHIPS

ASSOCIATION FOR PSYCHOLOGICAL SCIENCE

HISPANIC NEUROPSYCHOLOGICAL SOCIETY

INTERNATIONAL NEUROPSYCHOLOGICAL SOCIETY

LATIN AMERICAN ASSOCIATION OF NEUROPSYCHOLOGY

NATIONAL ACADEMY OF NEUROPSYCHOLOGY (fellow member)

AWARDS

Fulbright Scholarship, 1980-1982

Neuroscience Research Award (Colombia), 1984

National Researcher (Colombia), 1994

Member of the research team receiving the National Prize of Research in Neurology, (Colombia), 1997

Science Award "Alejandro Angel Escobar" 1997. Given to the Familial Alzheimer Disease Colombian research team. Category: Science

Award for Excellence in Undergraduate Teaching -2000- Florida Atlantic University

Charles E. Schmidt College of Science Nominated Candidate for the FAU Distinguished Teacher of the Year Award- 2006

Clinical Neuropsychology Spanish Consortium: Hispano-American Neuropsychology Award – 2013

INVITED COLLOQUIA

July, 1993	Universidad del Norte (Barraquilla, Colombia)
April, 1995	V Latin American Meeting of Neuropsychology Cartagena (Colombia)
September, 1996	VII National Meeting of the Venezuelan Neurological Society, Caracas (Venezuela)
May, 1998	University of Manizales, Manizales, Colombia
February, 2000	Institute of Neuroscience, Guadalajara, México,

March, 2001	University of Guadalajara, Guadalajara México
April 2001	International Meeting of the Latin American Neuropsychological Society, Cartagena, Colombia
July, 2002	International University of Andalucía, La Rabida, Spain
July 2002	III Iberoamerican Meeting of Psychology, Bogotá, Colombia
August 2002	Colombian Society of Psychology, Bogota, Colombia
October 2002	Department of Psychology, University of Guadalajara, Guadalajara, Mexico
July 2003	Department of Psychology, University of Santiago of Compostela, Spain
July 2003	Department of Psychology, University of Salamanca, Spain
December 2003	Neuroscience Institute, Guadalajara, México
July 2004	Department of Psychology, Complutense University, Madrid, Spain
March 2005	Latin-American Neuropsychological Society, Acapulco, Mexico
December 2005	Department of Psychology, University of Manizales, Colombia.
July 2006	Neuroscience Institute, Mexico
May 2007	Latin-American Neuropsychological Society, Manizales, Colombia
July 2007	Complutense University, Madrid, Spain.
July 2008	Department of Psychology, University of Salamanca, Salamanca, Spain
June 2009	Pontificia Universidad Católica, Santiago de Chile, Chile
July 2009	Complutense University, Madrid, Spain

August 2009	Universidad Central del Ecuador, Quito, Ecuador
November 2009	Universidad de Guadalajara, Guadalajara, Mexico
July 2010, 2011	Universidad de Salamanca
July 2010, 2011	Universidad Católica de Chile, Santiago, Chile
Noviembre 2010	Universidad Autónoma del Paraguay, Asunción, Paraguay
June 2010	Canberra Hospital/The Australian National University/ Canberra, Australia
March 2011	Asociación Mexicana de Neuropsicología Pediátrica- Mazatlán, México
November 2011	International Conference in Pediatric Neuropsychology, Madrid, Spain keynote speaker
December 2011	Neuroscience Institute, Guadalajara México
February 2012	University of Malaga, Malaga, Spain
March 2012	Universidad Católica de Chile, Santiago, Chile
April 2012	Cognitive Neuroscience Division of the Taub Institute for Research on Alzheimer Disease, Columbia University, New York City, NY, USA
May 2012	*Centro de Neurociencias*, La Habana, Cuba
January 2013	Universidad de Chile, Santiago, Chile
July 2013	Belgrade University, Belgrade, Serbia
July 2013	Complutense University, Madrid Spain
October 2013	Fundación de Neuropsicología, Buenos Aires, Argentina
February 2014	*Asociación Latinamericana de Neuropsicología*, Barranquilla, Colombia
March, 2014	Universidad Católica de Chile, Santiago, Chile
June, 2014	St Petersburg State University, Saint Petersburg, Russia

July, 2014	Universidad Complutense, Madrid, Spain
July, 2014	University of Salamanca, Salamanca, Spain
August, 2014	Universidad de Chile, Santiago, Chile
September 2014	Lomonosov State University, Moscow, Russia
April 2015	Pontificia Universidad Católica, Santiago de Chile, Chile
May 2015	Department of Psychology, *Seconda Università degli Studi di Napoli*, Caserta, Italy
July 2015	X Jornada Anual en Neuropsicologia. Salamanca, Spain
October 2015	II Congreso Boliviano de Neuropsicología, Santa Cruz de la Sierra, Bolivia
October 2015	Department of Psychology, *Universidad Autónoma Gabriel René Moreno,* Santa Cruz de la Sierra, Bolivia
October 2015	Department of Speech Pathology, University of Patras, Greece
November 2015	V Congreso Internacional de Neuropsicologia Clínica, Guadalajara, México
April 2016	Invited faculty, Department of Psychology, *Universidad Católica de Chile*, Santiago, Chile
May 2016 & 2017	Visiting faculty, Department of Psychology, Lomonosov Moscow State University, Moscow Russia
May 2016	Keynote Speaker. IX Bi-annual Meeting Latin American Association of Neuropsychology (ALAN)- Guadalajara, Mexico
August 2016	Invited faculty. Neurosciences Program, department of Psychology, University of Los Andes, Bogota, Colombia
September 2016	Visiting faculty Department of Pathology, Neuropsychology Doctorate Program, University of Asuncion, Asuncion, Paraguay
November 2016	Invited faculty, Universidad de Chile, Speech Pathology Program, Santiago, Chile

August 2017	Invited faculty, Universidad de Chile, Speech Pathology Program, Santiago, Chile
November 2017	Department of Psychology, Helsinki University, Helsinki, Finland
November 2017	Keynote speaker, International Conference on Peace, Conflict and Violence, Lahore, Pakistan
January 2018	Chair Workshop, Annual MCI Symposium, Miami Beach, FL
March 2018	Invited faculty, Catholic University of Chile, Santiago
April 2018	Visiting faculty, Department of Psychology, Lomonosov Moscow State University, Moscow Russia
June 2018	Keynote Speaker, Bi-annual meeting Latin American Association of Neuropsychology, Guatemala City, Guatemala
September 2018	Visiting faculty, Department of Neurology University of Cagliari, Sardine, Italy
November, 2018	Keynote speaker- International Seminar on neuropsychological functions in children development. Santiago de Chile, Chile
January 2019	Chair/organizer worshop at Annual MCI meeting, Miami Beach, FL
March 2019	Keynote speaker Spanish Federation of Neuropsychology, Madrid.
April 2019	Invited facuolty Catholic university of Chile, Sabtiago, Chile
May 2019	Invited faculty. Peoples's friedship University of Russia, Moscow, Russia
November 2019	Keynote speaker, International Conference of Neuropsychology, Guadalajara, Mexico

March 2020 Invited speaker via Zoom. Catholic University of Chile, Santiago, Chile

PUBLICATIONS (current or previous student co-author in *bold italics throughout* CV)

Refereed Works

Journal publications:

Rosselli, M., Rosselli, A., Vergara, I., & Ardila, A. (1985). Topography of the hemi-inattention syndrome. *International Journal of Neuroscience*, *27*, 165-172.

Rosselli, D., **Rosselli**, M., Penagos, B., & Ardila, A. (1986). Huntington's disease in Colombia: A neuropsychological analysis. *International Journal of Neuroscience, 32*, 933-942.

Rosselli, M., Lorenzana, P., Rosselli, A., & Vergara, I. (1987). Wilson's disease: A reversible dementia. *Journal of Clinica and Experimental Neuropsychology, 9*, 399-406.

Ardila, A., **Rosselli**, M., & Ardila, O. (1988). Foreign accent: An aphasic epiphenomenon? *Aphasiology, 2*, 493-499.

Ardila, A, & **Rosselli**, M. (1988). Temporal lobe involvement in Capgras syndrome. *International Journal of Neursocience, 43*, 219-224.

Ardila, A., Ardila, O., Bryden, M.P., Ostrosky, F., **Rosselli**., M., & Steenhuis, R. (1989). Effects of cultural background and education on handedness. *Neuropsychologia, 27,* 893-898.

Ardila, A., **Rosselli**, M., & ***Rosas, P***. (1989). Neuropsychological assessment in illiterates: Visuospatial and memory abilities. *Brain and Cognition, 11,*147-166.

Ardila, A., & **Rosselli**, M. (1989). Neuropsychological characteristics of normal aging. *Developmental Neuropsychology, 5*, 307-320.

Rosselli, M., & Ardila, A. (1989). Calculation deficits in patients with right and left hemisphere damage. *Neuropsychologia, 27*, 607-617

Ardila, A., & **Rosselli**, M. (1990). Acalculias. *Behavioral Neurology 3*, 39-48.

Ardila, A., & **Rosselli**, M. (1990). Conduction aphasia and verbal apraxia. *Journal of Neurolinguistics, 5*, 1-14.

Coello, E., Ardila, A., & **Rosselli**, M. (1990). Is there a cognitive marker in major depression? *International Journal of Neuroscience, 50*, 137-145.

Rosselli, M., Ardila, A., ***Florez, A., & Castro, C***. (1990). Normative data on the Boston Diagnostic Aphasia Examination in a Spanish Speaking population. *Journal of Clinical and Experimental Neuropsychology, 12*, 313-322.

Rosselli, M., Ardila, A., & ***Rosas, P.*** (1990). Neuropsychological assessment in illiterates II: Language and praxic abilities. *Brain and Cognition, 12*, 281-296.

Ardila, A., **Rosselli**, M., & ***Strumbasser, S***. (1991). Neuropsychological effects of cocaine abuse. *International Journal of Neuroscience, 57*, 73-79.

Rosselli, M., & Ardila, A. (1991). Effects of age, education and gender on the Rey-Osterrieth Complex Figure *The Clinical Neuropsychologist, 5*, 370-376.

Ardila, A., & **Rosselli**, M. (1992). Repetition in aphasia. *Journal of Neurolinguistics , 7*, 1-11.

Lowenstein, D.A., Ardila, A., **Rosselli**, M., ***Hayden, S***., Duara, R., Berkowitz, N., ***Linn-Fuentes, P.***, Mintzer, J., Norville, M., & Eisdorfer, C. (1992). A comparative analysis of functional status among Spanish and English-speaking patients with dementia. *Journal of Gerontology, 47*, 389-394.

Ardila, A., & **Rosselli**, M. (1993). Language deviations in aphasia: A frequency analysis *Brain and Language, 44*, 165-180.

Ardila, A., & **Rosselli**, M. (1993). Spatial agraphia. *Brain and Cognition, 22*, 75-95.

Rosselli, M. (1993). Neuropsychology of illiteracy. *Behavioral Neurology, 6*, 107-112.

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Ardila., A., & **Rosselli**, M. (1994). Averbia as a selective naming disorder: A single case report. *Journal of Psycholinguistic Research, 23*, 139-148.

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Ardila, A, & **Rosselli**, M. (1994). Spatial acalculia. *International Journal of Neuroscience, 78*, 177-184.

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Ardila, A., **Rosselli**, M. & Ostrosky, F. (1996). Agraphia in Spanish-language. *Aphasiology, 10*, 723-739.

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Ardila, A., & **Rosselli**, M. (1996). Spontaneous language production: Age and educational effects. *International Journal of Neuroscience, 87*, 71-78.

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Lopera, F., Ardila, A., Martinez, Al., Madrigal, L., Arango-Viana, J.C., Lemere, C., Arango-Lasprilla, J.C., Hincapie, L., Arcos, M., Ossa, J.E., Behrens, I.M., Norton, J., Lendon, C., Goates, A., Ruiz-Linares, A., **Rosselli**, M., & Kosik, K.S. (1997). Clinical features of early-onset Alzheimer disease in a large kindred with an E280A presenilin-1 mutation. *JAMA, 277*, 793-799.

Ardila, A., Galeano, L.M. & **Rosselli**, M. (1998). Toward a model of neuropsychological activity, *Neuropsychology Review, 8*, 171-190.

Ostrosky, F., Ardila, A., **Rosselli**, M. López-Arango, G., & Uriel-Mendoza, V. (1998). Neuropsychological test performance in illiterates. *Archives of Clinical Neuropsychology, 13*, 645- 660.

Pineda, D., Ardila, A., **Rosselli**, M., Cadavid, C., Mancheno, S. (1998). Executive dysfunction in attention deficit hyperactivity disorder children. *International Journal of Neuroscience, 96*, 177-196.

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Ardila, A., **Rosselli**, M., Surloff, C. & ***Buttermore, J.*** (1999). Transient paligraphia associated with severe palilalia and stuttering: A single case report *Neurocase, 5*, 435-440.

Ostrosky, F., Ardila, A. & **Rosselli**, M . (1999). "Neuropsi": A brief neuropsychological test battery in Spanish with norms by age and educational level. *Journal of the International Neuropsychological Society, 5*, 413-433.

Ostrosky-Solis, F., Marcos-Ortega, J., Ardila, A., **Rosselli**, M., & Palacios, S. . (1999). Syntactic comprehension in Broca's Spanish-speaking aphasics: Null effect of word-order. *Aphasiology, 13*, 553-571

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Ardila, A., Concha, M. & **Rosselli**, M. (2000). Angular gyrus syndrome revisited: Acalculia, finger agnosia, right-left disorientation, and semantic aphasia. *Aphasiology, 14*, 743-754.

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Ardila, A., Ostrosky-Solis, F., **Rosselli**, M. & Gomez, C. (2000). Age related cognitive decline during normal aging: The complex effect of education. *Archives of Clinical Neuropsychology, 15*, 495-514.

Ardila, A., Pineda, D. & **Rosselli**, M. (2000). Correlation between intelligence test scores

and executive function measures. *Archives of Clinical Neuropsychology, 15*, 31-36.

Ardila, A., **Rosselli**, M., Bateman, J.R. & Guzmán, M. . (2000). Neuropsychological profile of stuttering children. *Journal of Developmental and Physical Disabilities, 12*, 121-130.

Ardila, A., **Rosselli**, M., Ostrosky-Solis, F., Marcos, J., ***Granda, G., & Soto, M. .*** (2000). Syntactic comprehension, verbal memory and calculation abilities in Spanish-English bilinguals. *Applied Neuropsychology, 7*, 3-16.

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Pineda, D., Ardila, A., **Rosselli**, M., Puerta, I.C., Mejia, S., & Toro, M.C. . (2000). Neurobehavioral characteristics of adolescents with behavioral dysregulation disorder. *International Journal of Neuroscience, 101,* 133-155.

Rosselli, M., Ardila, A., ***Araujo, K., Weekes, V.A., Caracciolo, V., Pradilla, M***. & Ostrosky, F. (2000). Verbal fluency and repetition skills in healthy older Spanish-English bilinguals. *Applied Neuropsychology, 7*, 17-24.

Rosselli, M., Ardila, A., Moreno , S., ***Standish, V***., Arango-Lasprilla, J.C., Tirado, V., Ossa, J., Goate, A.M., Kosik, S., & Lopera , F. (2000). Cognitive decline in patients with familial Alzheimer's disease associated with E280A presenilin- 1 mutation: a longitudinal study. *Journal of Clinical and Experimental Neuropsychology, 22,*:483-495

Rosselli, M. & Ardila, A. (2000). *Neuropsicología del déficit atencional con hiperactividad* (neuropsychology of attention déficit hyperactivity disorder) *Neuropsicologia, Neuropsiquiatria y Neurociencias*, 2, 38-45.

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Rosselli, M., Ardila, A., Bateman, J.R. & Guzman. (2001). Neuropsychological test scores, academic performance, and developmental disorders in Spanish-speaking children. *Developmental Neuropsychology, 20*, 355-374.

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Jensen-Campbell, L.A., **Rosselli,** M**.,** ***Wokman, K.A., Santisi, M., Rios, J.D., & Bojan, D.*** (2002). Agreeableness, Conscientiousness, and effortful control process. *Journal of Personality Research, 36*, 476-489.

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Rosselli, M**.**, Ardila, A., ***Santisi, M.N., Arecco, M.R., Salvatierra, J., Conde, A., & Lenis, B***. (2002) Stroop Effect in Spanish-English Bilinguals. *Journal of the International Neuropsychological Society , 8*, 819-827.

Rosselli, M**.** & Ardila, A. (2003) The impact of culture and education on nonverbal neuropsychological measurements: A critical review. *Brain and Cognition, 52,* 326-333

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Rosselli, M**.**, Matute, E., Ardila, A.**,** ***Botero, V., Tangarife, G., Echeverría, S., Arbelaez, C., Mejía, M., Méndez, L., Villa, Ocampo, P.*** (2004). Evaluación neuropsicológica Infantil: una batería para la evaluación de niños entre los 5 y los 16 anos. *Revista de Neurología*, 38, 8, 7-20.

Ardila, A, **Rosselli,** M**.,** Matute, E. & Guajardo, S (2005). The influence of parents' education on the development of their children's executive functions. *Developmental Neuropsychology, 28*, 539-560.

Jett, K., Tappen, R., **Rosselli,** M. (2005). Imposed versus involved: Different strategies to effect driving cessation in cognitively impaired older adults. *Geriatric Nursing, 26 (2),* 1-9.

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Matute, E., Chamorro, Y., Inozemtseva, O., Barrios, O., **Rosselli, M**., & Ardila, A. (2008). Efecto de la edad en una tarea de planificación y organización ('pirámide de México') en escolares. *Revista de Neurologia, 47*, 61-70.

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González Reyes, A.L. Matute, E., Inozemtseva, O., Guajardo Cárdenas, S. & **Rosselli. M**. (2011) Influencia de la Edad en Medidas Usuales Relacionadas con Tareas de Lectura en Escolares Hispanohablantes. *Neuropsicologia, Neuropsiquiatria y Neurociencias (Neuropsychology, Neuropsychiatry and Neuroscience), 11*, 51-65

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Tappen, R. Williams, C., **Rosselli, M**, & ***Keane, F***. (2006) African American and Afro Caribbean older adults' reported health status and acculturation. *Meeting of the Gerontological Society of America*, Dallas, Texas, U.S.A..

Williams, C , Tappen, R. **Rosselli, M**, & ***Keane, F***. (2006). Depression and mood in African American, Afro Caribbean and European American elders: A cross cultural comparison. *Gerontological Society of America*, Dallas, Texas, U.S.A..

Matute, E., Montiel, T., **Rosselli, M**. & Hernández-Ramírez, C. (2007). Phonological awareness and reading skills in Spanish-speaking children. Joint *Mid-Year Meeting of: INI-FSSN-SNP-SEP*. Bilbao, España.

Matute, E., **Rosselli, M**, ***Pinto N***., & Ardila A. (2007) Memory skills in Mexican Children with dyscalculia. *Annual Meeting of the International Neuropsychological Society*. Portland, Oregon, U.S.A.

Zoller, Y., Salvatierra J., **Rosselli, M**., Tappen, R. & Williams C. (2007). The effects of education on different types of verbal fluency tasks among Hispanic elders. *Annual Meeting of the International Neuropsychological Society*. Portland, Oregon, U.S.A.

Rosselli, M (2007). cultural measurement issues related to neuropsychological assessment. *60th annual meeting of the gerontological society of america*. san francisco,

Rosselli, M. & Matute, E. (2007). Desarrollo cognoscitivo y maduración cerebral: una perspectiva neuropsicológica. *VII International Meeting in Reading and Development*. Guadalajara, Mexico, December.

Sanz-Martin, A. Matute, E.**;** Gumá-Díaz, E.**, Rosselli, M.** (2007). influencia del sexo, escuela y escolaridad paterna en la atención y memoria. *V International Meeting Brain and Mind. Manizales, Colombia,* May

Jurado, M.B. & **Rosselli, M.** (2008). Age-related changes in executive function and the influence of processing speed. *National Academy of Neuropsychology 28th Annual Meeting*, New York, NY, October

Rosselli, M. (2008). Cultural measurement issues in minority American elders. *National Academy of Neuropsychology 28th Annual Meeting*, New York, NY, October.

McIntosh, R. & **Rosselli, M.** (2008). Head posture and visual memory span. *National Academy of Neuropsychology 28th Annual Meeting*, New York, NY, October.

Matute, M., **& Rosselli, M.** (2009). Age effect on writing a story in school age Mexican children: a cluster analysis. *37th Annual Meeting of the International Neuropsychological Society*. Atlanta, Georgia, U.S.A.

Tartar, J., ***McIntosh, R***., **Rosselli, M.,** & Nash, A.J. (2009). Emotional Influences on Cognitive Processing in HIV-Infected Women. *Society for Neuroscience*, Chicago, Ill,

Rosselli, M. (2009) Ventajas y desventajas del bilingüismo: Una perspectiva neuropsicológica. *IX International Meeting on Reading*, Institute of Neuroscience/University of Guadalajara, November.

Jurado, M, Monroy, M, Eddinger, K, Serrano, M, **Rosselli, M** (2010). Aging and Executive Function: Behavioral and Cognitive Changes. *Archives of Clinical Neuropsychology*. Abstract accepted . 30th Annual Neuropsychology, Meeting, Vancouver, Canada

McIntosh, R. **Rosselli, M** , Tartar J & Nash, AJ.(2010) Electrophysiological response to emotion and executive functions. *Neuroscience Meeting Planner*. San Diego, CA: Society for Neuroscience

Berent, I., Lennertz, T & **Rosselli, M**. (2011- April 13th). Universal phonological restrictions and language-specific repairs: Evidence from Spanish" has been selected for an ORAL presentation at the 10th International Symposium of Psycholinguistics. Donostia - San Sebastián, Spain,

McIntosh, R. C.. Tartar, J. L **Rosselli, M.** Nash, A. J. (2011). Emotional Dysfunction in Women with HIV: An ERP Analysis. A*nnual meeting International neuropsychological Society*, Boston, MA, February.

Lalwani, L.N., Serrano, M.A., Monroy, M., Lopez, J., Quispe, R., Jurado, M.B., **Rosselli, M. (2011).** The Effects of Age and Gender on Differential Strategy Usage in Addition Problems: Preliminary Results. *Annual Meeting International Neuropsychological Society*, Boston, MA, February.

Jurado, M.B., Serrano, MA, Monroy, M., Lopez, J. & **Rosselli, M.** (2011). The Relationship Between Executive Functions and Processing Speed Across the Adult Lifespan. *Annual Meeting International Neuropsychological Society*, Boston, MA, February.

McIntosh, R.M., **Rosselli, M.R.,** Tartar, J.L (2012) Neuropsychological Correlates of Cognitive Reappraisal in HIV. *Annual Meeting International Neuropsychological Society.* Montreal, February

***Beltrán, B**.,* Matute, E. Ardila, A & **Rosselli, M.** (2012). Language development across the preschool years. *Mid-year Meeting International Neuropsychological Society*. Oslo, Norway.

Lalwani, L.N. & **Rosselli, M** (2012). Bilingual Proficiency and Task Type on Executive Function and Working Memory Performance". *APS Annual Convention*, May, Chicago, IL, USA

McIntosh, R.M., **Rosselli, M.R.,** Tartar, J.L (2012) "Electrophysiological Correlates of Experiential Avoidance in an Emotion Regulation Paradigm" *APS Annual Convention*, May, Chicago, IL, USA

Lalwani, L & **Rosselli, M**. (2012) Effects of Bilingual Proficiency and Task Type on Executive Function and Working Memory Performance. *32nd Annual Neuropsychology of the National Academy of Neuropsychology*, Nashville, Tennessee, November.

***Velez-Uribe, I**.,* & **Rosselli, M.** (2013). Word Retrieval in Confrontation Naming and Verbal Fluency Tasks in Normal Aging. *25th Annual Meeting of the Association for Psychological Science*, Washington, DC, May

***Nishat, T., Perez**, G. &* **Rosselli, M**. (2013). Bilingualism and Arithmetic. *25th Annual Meeting of the Association for Psychological Science*, Washington, DC, May.

Lalwani, L & **Rosselli, M.** (2013). The Effects of BMI on Behavioral Inhibition and Working Memory. *25th Annual Meeting of the Association for Psychological Science*, Washington, DC, May.

***Paz, A*., & Rosselli, M**. (2014). Inhibición y uso compulsivo de alcohol. *Biannual Meeting of the Latinamerican Association of Neuopsychology*. Barranquilla, Colombia, February .

Vanegas S, Bernal, M., **Rosselli, M**., Matute, E (2014) Neuropsychological development of Spanish/English bilingual and Spanish monolingual pre-school children, *26th Annual Meeting of the Association for Psychological Science*, San Francisco, CA, May

Keim, C.A., Paz, AL., Gonzalez, B., Avila, R.R & **Rosselli, M** (2014). Epidemiology of Alcohol Use Among Ethnically Diverse South Florida College Students *26th Annual Meeting of the Association for Psychological Science*, San Francisco, CA, May

Nishat, T., **Rosselli, M.,** ***Perez, G. & Diaz, K***. (2014) Influence of bilingualism on simple arithmetic. . *26th Annual Meeting of the Association for Psychological Science*, San Francisco, CA, May.

Paz, AL., Gonzalez, B., Keim, C.A., Avila, RR **& Rosselli, M** (2014). Associations Between Alcohol and Drug Use Among Collegiate Young Adults: Preliminary Findings. *26th Annual Meeting of the Association for Psychological Science*, San Francisco, CA, May.

Reale, A., Schmit, C & **Rosselli, M.** (2014). Mirror Neurons: Imitation and Emotional Differences Among Males and Females, Preliminary Results. . *26th Annual Meeting of the Association for Psychological Science*, San Francisco, CA, May.

***Peacock, BJ, Perez, G.*, Rosselli, M.**, Tappen, RM., Williams, C. (2014). Daily living complaints in Mild Cognitive Impairment (MCI) and early Alzheimer Disease (AD). . *26th Annual Meeting of the Association for Psychological Science*, San Francisco, CA, May.

Vanegas, S., Bernal, M. **Rosselli, M** & Matute, E. (2014). A Neuropsychological Battery for Pre-School Spanish/English Bilingual Children. 24th meeting National Academy of Neuropsychology, Fajardo, Puerto, November.

Paz, A.L. Conniff, J.W., Gonzalez, B., & **Rosselli, M.** (2015). *Inhibitory Processing in Relation toAge of First Substance Use and Age of First Regular Substance Use.* Abstract for poster presentation, 77th Annual Research College on Problems of Drug Dependence meeting, Phoenix, AR, June

Paz, A.L., Conniff, J.W., Gonzalez, B., & **Rosselli, M.** (2015). *Alcohol Consumption Habits Among Young Adult Marijuana Smokers.* Abstract for poster presentation, 38th Annual Research Society on Alcoholism meeting, San Antonio, TX, June

Paz, A.L., Gonzalez, B., Conniff, J.W., Keim, C.A., Renneinsen, A. & **Rosselli, M**. (2015). *Inhibitory Processing in Relation to Drinking Behaviors: A Negative Impact on Male Drinkers.* Abstract for poster presentation, 38th Annual Research Society on Alcoholism meeting, San Antonio, TX, June

Velez-Uribe, I., & **Rosselli, M.,** (2015, May), Do Bilinguals Evaluate Emotion Laden Words Equally in Both Languages? 27th *Annual Meeting of the Association for Psychological Sciences (APS),* New York.

Gonzalez, K., Velez-Uribe, I., & **Rosselli, M**., (2015, May), A Cross-Linguistic Analysis of Language Effects on Personality Measures in Spanish-English Bilinguals. *27th Annual Meeting of the Association for Psychological Sciences (APS)*, New York.

Peacock, B., Manotas, A., Perez, G., **Rosselli, M.** , Tappen, R. Williams, & Ordoñez, M. (2015, May), A logistic regression analysis of the Mini-Mental State Examination subtests on Mild Cognitive Impairment (MCI) and early Alzheimer's Disease (AD). *27th Annual Meeting of the Association for Psychological Sciences (APS)*, New York

Conniff, J.W. , Paz, A.L., Gonzalez, B., & **Rosselli M.**, (2015 May), Drinking Behavior in Relation to Age of College Students. *27th Annual Meeting of the Association for Psychological Sciences (APS)*, New York.

Lang, M., Torres, V. Ardila, A., **Rosselli, M.,** (2016, May), Language abilities in young Spanish-English bilinguals. *28th Annual Meeting of the Association of Psychological Sciences* (APS), Chicago.

Stebbins, L., Bordt, P., Castro, M., Tappen, R., Williams, C **& Rosselli, M. (2016)** Daily living complaints in Mild Cognitive Impairment (MCI) and early Alzheimer Disease (AD*28th Annual Meeting of the Association of Psychological Sciences* (APS), Chicago.

Torres, V., ***Lang, M.,*** Ardila, A., **Rosselli, M.,** (2016, May), Habilidades de lenguaje de bilingües jóvenes de segunda generación. IX Bi-annual Meeting Latin American Association of Neuropsychology (ALAN)- Guadalajara, Mexico.

***Velez-Uribe, I* & Rosselli, M**. (2016, May). Diferencias en la evaluación de palabras emocionales en bilingües español/inglés. IX Bi-annual Meeting Latin American Association of Neuropsychology (ALAN)- Guadalajara, Mexico

Rosselli, M (2016, May). La plasticidad cerebral en neuropsicología: el bilingüismo como ejemplo (Brain plasticity in neuropsychology: bilingualism as an example). IX Bi-annual Meeting Latin American Association of Neuropsychology (ALAN)- Guadalajara, Mexico

Paz, A.L., Conniff, J.W., Ferrato, D., **Rosselli, M**., & González, R. (2016, June). *Inhibitory processing predicts increases in binge drinking behavior: A six-month longitudinal design.* Poster session presented at 78th Annual Research College on Problems of Drug Dependence meeting, Palm Springs, CA.

Ferrato, D.,. Paz, A.L Conniff J.W., **Rosselli M.,** & Gonzalez. R. (2016). *Alcohol Consumption Habits Among Acculturated Latin Americans.* Abstract for poster presentation, 39th Annual Research Society on Alcoholism meeting, New Orleans LA, June. Published in *Alcoholism-Clinical And Experimental Research* (Vol. 40, pp. 128A-128A).

Conniff, J.W., Paz, A.L, Ferrato, D., **Rosselli, M**., & González, R. (2016). *Alcohol Consumption Habits Among College Students from Different Socio-Economic Groups in South Florida.* Abstract for poster presentation, 39th Annual Research Society on Alcoholism meeting, New Orleans LA, June. Published in *Alcoholism-Clinical and Experimental Research* (Vol. 40, pp. 129A-129A).

Vélez -Uribe, I., Arana, V., Conniff, J., **Rosselli, M**., (2017). Testing a Predictive Model for the Appraisal of Valence of Emotion Words in Spanish-English Bilinguals. Accepted to be presented at the conference of the International Neuropsychological Society, New Orleans, February, 2017.

Torres, V., Lang, M., Vélez -Uribe, I., Christopher, D., Rosselli, M., ***Arruda., F.*** (2017). The Big Five Inventory (BFI) and Emotion Word Valence: Does Personality Influence the Appraisal of Emotion Words in Bilinguals? Accepted to be presented at the conference of the International Neuropsychological Society, New Orleans, February, 2017.

Conniff, J. W., Lang, M., Torres, V., Christopher, D., Vélez-Uribe, I., Sanchez, A., Ardila, A., **Rosselli, M**. . *Eye Movements When Reading in Two Orthographic Systems: English and Spanish*. Annual Meeting of the National Academy of Neuropsychology, Boston, MA., October, 2017.

Torres, V., Arruda, F., Vélez-Uribe, I., Lang, M., Duara, R., Curiel, R., Loewenstein, D. & **Rosselli, M.** *Bilingualism and Memory in Mild Cognitive Impairment (MCI).* Annual Meeting of the National Academy of Neuropsychology, Boston, MA., October, 2017.

Merike, L & **Rosselli, M**. *La depresión en el diagnóstico del deterioro cognitivo leve y la demencia en una muestra multicultural de los Estados Unidos* (Depression in MCI and dementia in a multicultural diverse sample in the US) . **X** bi-Annual meeting Mind and Brain: The Interation. *Bi-Annual Meeting Latin-American Association of Neuropsychology***.** Ciudad de Guatemala, Guatemala., June, 2018

Mendoza, L. , Rodriguez, M., Dahlin, P., Garcia, P., Duara, R, **Rosselli, M.,** Loewenstein, D., Greig-Cusco, & Barker, W. A comprehensive evaluation of acculturation level among cognitively normal and cognitively impaired Hispanic older adults, Annual Meeting of the National Academy of Neuropsychology, New Orleans , LA., October, 2018.

Ahne, E., Velez-Uribe, I., & **Rosselli, M**. Understanding the Effect Length of Exposure to a Second Language has on Personality and Alexithymia in Spanish-English Bilinguals. International Neuropsychology Society, New York City, New York in February 2019.

Montero, C., Ahne, E., Velez-Uribe, I., **Rosselli, M**. Emotion Word Processing in English Monolinguals and Spanish-English Bilinguals: An ERP Study. International Neuropsychology Society, New York City, New York in February 2019.

Torres, V., **Rosselli, M**., Loewenstein, D., Curiel. R.E., ***Vélez-Uribe, I., Lang, M***., ***Arruda, F.,*** Penate, A., Vaillancourt, D., Greig, M.T., Bauer, R., & Duara, R., Types of Errors on a Novel Semantic Interference Task in Mild Cognitive Impairment and Alzheimer's Disease *47th Annual Meeting of the International Neuropsychological Society*, New York, February 2019.

Lang M., **Rosselli, M**., Greig , MT., ***Torres, V., Vélez-Uribe, I., Arruda, F.,*** Barker, WW., Garcia, P., Loewenstein, D.A., Curiel, R.E., Duara, R. Depressive Symptoms in the Diagnosis of MCI and Dementia in a Culturally Diverse Sample of the United States. *47th Annual Meeting of the International Neuropsychological Society,* New York, February 2019.

Conniff, J., Lang, M., Torres, V. L.,Vélez-Uribe, I., Arruda, F., Christopher, D., **Rosselli, M**., & Ardila, A. (2019, February). A comparison in eye movements between two orthographic systems: English and Spanish. Poster presentation at INS 2019, New York City, New York.

Ospina, D., Lang, M., Arca, A., Camero, A., Torres, V., Chirino, C., ***Robayo, C***., Greig, M.T., Barker, W.W., Loewenstein, D.A. Duara, R., & **Rosselli, M**. (April 2019). Influence of Anxiety and Depression on Nonverbal and Verbal Memory Measures in MCI and Dementia. *Latinos and Alzheimer's Disease Symposium: Understanding risk, prevention and care strategies* San Juan, Puerto Rico.

Lang, M., **Rosselli, M**., Greig-Custo, M.T., ***Torres, V.L., Vélez-Uribe, I., Arruda, F.,*** Loewenstein, D.A., Curiel, R.E. Chirinos, C., Barker, W.W. Duara **(April 2019).** Depressive Symptoms Predicting Nonverbal and Verbal Abilities in Normal and Abnormal Aging for a Cross-Cultural Sample. *Latinos and Alzheimer's Disease Symposium: Understanding risk, prevention and care strategies* San Juan, Puerto Rico.

Arruda, F., Torres, V., Velez-Uribe, I., Lang, M., & Greig, M.T., Barker, W.W., Loewenstein, D.A. Duara, R., & **Rosselli, M.** (April 2019). The Assessment of Functional Abilities in the Diagnosis of MCI and Dementia Disease in a Culturally Diverse Sample. *Latinos and Alzheimer's Disease Symposium: Understanding risk, prevention and care strategies* San Juan, Puerto Rico.

Burke, S. L., Barker, W., **Rosselli, M**., Rodriguez, M., ***Robayo, C***., Grudzien, A., Chirinos, C., Behar, R., & Greig-Custo, M. T. Predictors of Attrition in the Multi-Ethnic 1FloridaADRC Clinical Core. Gerontological Society of America, 2019 Annual Scientific Meeting, Austin, TX. November 15, 2019.

Chirinos, C., Garcia, P., Duara, D, Loewenstein, D., ***Robayo, C***., Greig-Custo, M.T. Curiel Cid, R., **Rosselli, M**., & Rodriguez, M . Concordance of Functional and Neuropsychological Performance among Hispanics versus White Non- Hispanics. National Academy of Neuropsychology, Nov 2019, San Diego, California

Morar, U., Martin, H., Izquierdo W., Forouzannezhad, P., Zarafshan, E., Curiel, R. E., **Rosselli, M.,** Loewenstein, D., Duara, R., & Adjouadi, M. A Deep-Learning Approach for the Prediction of Mini-Mental State. The 2020 International Conference on Computational Science and Computational Intelligence (CSCI'20: December 16-18, 2020, Las Vegas, USA

Non-Refereed Works

<u>Neuropsychological tests: Co-Authored</u>.

Ostrosky, F., Ardila, A. & **Rosselli**, M. (1997). *Neuropsi: Un examen neuropsicológico breve en Español* (Neuropsi: A brief neusopsychological test batterty in Spanish). Mexico: Bayer.

Ostrosky, F., Gomez, M.E., Matute, E., **Rosselli, M**., Ardila, A. & Pineda, D. (2003). *Neuropsi Atención y Memoria 6 a 85 años*. Mexico D:F: Mexico: Biblioteca Teletón.

Matute, E., **Rosselli**, M., Ardila, a. & Ostrosky, F. (2007) *Evaluación Neuropsicológica Infantil* (ENI). Manual Moderno/Universidad de Guadalajara: Guadalajara, México.

Matute, E., **Rosselli**, M., Ardila, a. & Ostrosky, F. (2013) *Evaluación Neuropsicológica Infantil* (ENI)-2nd Edition. Manual Moderno/Universidad de Guadalajara: Guadalajara, México

Matute, E., Ostrosky, F., Ardila, **A., Rosselli, M**., López, R., López, M., Ontiveros, J.A., Huidor, C., García, J.A., Mendoza, V. & Ventura, L. (2012). *Modelo de Evaluación Neuropsicológica Estándar para Pacientes Adultos Hospitalizados*. –ENE-A. Guadalajara: Hospital Civil de Guadalajara Dr. Juan I. Menchaca – Instituto de Neurociencias, Universidad de Guadalajara.

Matute, E., **Rosselli, M.,** Ardila, A., López, R., López, M., Ontiveros, J.A., Huidor, C., García, J.A., Mendoza, V. & Ventura, L. (2012). *Modelo de Evaluación Neuropsicológica Estándar para Pacientes Pediátricos Hospitalizados. –ENE-P*. Guadalajara: Hospital Civil de Guadalajara Dr. Juan I. Menchaca – Instituto de Neurociencias, Universidad de Guadalajara.

Grants Awarded

PI: **Rosselli, M.**, (1986). Neuropsychological characteristics of normal aging. Three million Colombian pesos (US$9,000) awarded by Colombian Fund for the Scientific and Technological Development -Colciencias.

PI: **Rosselli, M.** (1991). Neuropsychological development of language, memory, and spatial abilities in five to-12 year old Colombian children. Three million Colombian pesos (US$6,000) awarded by Colombian Fund for the Scientific and Technological Development - Colciencias.

PI: **Rosselli,** M. (1992). Structure of cognitive activity: A neuropsychological perspective. Twelve million Colombian pesos (US$10,000) awarded by Colombian Fund for the Scientific and Technological Development -Colciencias.

PI: **Rosselli,** M., (1993). Specific learning disabilities in Bogota (Colombia). Thirteen million Colombian pesos (US$12,000) awarded by Colombian Fund for the Scientific and Technological Development -Colciencias.

PI: **Rosselli, M**. (1993). Neuropsychological profile of chronic cocaine-abusers. Ten million Colombian pesos (US$10,000) awarded by Colombian Fund for the Scientific and Technological Development -Colciencias.

PI: **Rosselli, M** (1997). Neuropsychological profile as predictor of treatment outcome in chronic cocaine-abusers. $4,800 awarded by FAU Research Initiation Award.

Rosselli, M. (1997). International Travel Award, $700, awarded by Florida Atlantic University,

PI: Tappen, R., Co-PI **Rosselli,** M. (2001-2005 Extended to 2006). Cultural Bias in Testing Expressive Ability in Dementia. RO1-National Institute of Nursing Research. ($767,123).

PI: **Rosselli**, M. Cognitive decline in familial Alzheimer's disease. Presidential Developmental Award Honorable Mention. $2,500. Florida Atlantic University

PI: R. Tappen. Co-PI: **M. Rosselli.** (2002) Driving Cessation in Alzheimer Disease. Florida Department of Transportation (2002). $116,557

PI: R. Tappen. Co-PI: **M. Rosselli.** (2001-2003) Integrating Care Management into Dementia Specific Primary Care. US Department of Health and Human Services, Administration on Aging. $987,000

PI: R. Tappen. Co-Pi: **M. Rosselli**. (2004-2007).Cognitive Rehabilitation in Early Stage Alzheimer Disease. Alzheimer's Association. $240,000

PI; **M. Rosselli.** (2004-2005). Neuropsychological Assessment of Hispanic children in the US. National Academy of Neuropsychology. $10,500.

PIs: Williams C.& **Rosselli, M** (2008-2009). Culture and evaluation in dementia Johnnie Byrd Alzheimer's Center and Research Institute.. $ 49,969

PIs: J. Tartar. Co-PIs M. **Rosselli** & A. Nash**.** (2009-2010). Emotional Influences on Cognitive Processing in HIV-Infected Women, Nova Southeastern University. $10,000

PI: ***R. McIntosh***. Co-PIs **M. Rosselli** & J. Tartar. (2010-2011). Neuropsychological and Electrophysiological Correlates of Emotion Regulation in Women with HIV, Nova Southeastern University. $10,000

PIs: **M. Rosselli** & R. Tappen (2013-2014). Development and Testing of a Functional Scale for Mild Cognitive Impairment. Seed grant program Florida Atlantic University $7,000

PI: T Golden & R Duara; Co-I: **M. Rosselli** (2015-2020). Alzheimer Disease Research

Center. National Institutes of Health/National Institute of Aging. $1.700.000

PI: D Hain. Co-I: **M. Rosselli**. (2019-2021) Cognitive Support Strategies to Improve Medication Adherence in Older Adults Undergoing Hemodialysis. Keryx Pharmaceitics ($176, 300)

PI: **M Rosselli** (2019-2021). Neuro-imaging, and Sensitive Novel Cognitive Measures in Detection of Early Alzheimer's Disease in Bilingual and Monolingual Hispanic Americans Florida Department of Health- Ed and Ethel Moore Alzheimer's Disease Research Program ($236.000).

PI Tappen. Co-I: **M. Rosselli** (2019-2021). Fit2Drive: Development and Testing of a Driver Risk Predictor for Individuals with AD Florida Department of Health- Ed and Ethel Moore Alzheimer's Disease Research Program ($236.000).

PI: M. Amstrong (UF). Co-I **M. Rosselli** (2020 – 2023). Communication of Dementia Diagnoses: Investigating Patient, Family, and Physician Experiences and Developing Best Practices. Florida Department of Health- Ed and Ethel Moore Alzheimer's Disease Research Program ($374,660).

PI: R. Tappen. Co-I: M. **Rosselli** (2020-2025) In-Vehicle Sensors to Detect Cognitive Change in Older Drivers. National institutes of Health. National Institute of Aging ($6,130,807).

PI. T.Golde (UF). Co-I: **M. Rosselli** (2020-2025). 1Florida Alzheimer's Disease Research Center. National institutes of Health. National Institute of Aging ($2,000,000).

PI: **M Rosselli.** Postdoctoral Research Fellowship in Neuropsychology and Brain Biomarkers of Abnormal Aging Florida Department of Health- Ed and Ethel Moore Alzheimer's Disease Research Program ($99,051).

TEACHING

Undergraduate:
Neuropsychology
Developmental Neuropsychology
Research Methods in Psychology
Biological Bases of Behavior
Laboratory in Neuropsychology
Abnormal Psychology

Graduate:
Developmental Neuropsychology

Neuropsychology
Neuropsychological Assessment
Seminars in different topics in Neuropsychology
Neuropsychology of Aging

CURRICULUM VITAE

Wen Shen, Ph.D.

INSTITUTIONAL ADDRESS

Department of Biomedical Science
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Florida Atlantic University
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Boca Raton, FL 33431

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Email: wshen@health.fau.edu

EDUCATION

1983 B.S. in Electrical Engineering, Shanghai University, P.R. China

1998 Ph.D. in Physiology and Biophysics, School of Medicine and Biomedical Science, State University of New York (SUNY) at Buffalo, Buffalo, New York

ACADEMIC APPOINTMENTS

1983-1988 **Engineer,** Research Institute of Environmental Control and Protection, Shanghai Municipal Bureau of Chemical Industry, Shanghai, PR China

1988-1993 **Research Assistant,** Shanghai Institute of Physiology, Chinese Academy of Science, Shanghai, PR China

1993-1998 **Graduate Research Assistant,** Department of Physiology and Biophysics, SUNY at Buffalo, Buffalo, New York.

1998-1999 **Research Associate,** Department of Physiology and Biophysics, SUNY at Buffalo, Buffalo, New York.

1999-2003 **Research Assistant Professor,** Department of Physiology and Biophysics, SUNY at Buffalo, Buffalo, New York.

2003-2007 **Assistant Professor (tenure track)**, College of Biomedical Science, Florida Atlantic University (FAU), Boca Raton, Florida.
Adjunct Assistant Professor, Department of Physiology and Biophysics, University of Miami Miller School of Medicine, Miami, Florida.

2007-present **Associate professor (with tenure)**, College of Medicine (formerly College of Biomedical Science), Florida Atlantic University (FAU), Boca Raton, Florida.

2010-present **Adjunct Associate Professor,** Center for Complex System and Brain Science, FAU

2010-2014 **Summer Visiting Investigator,** Whitman Center, the Marine Biological Laboratory (MBL), Woods Hole, Massachusetts.

2017-present **Adjunct Associate Professor**, FAU Brain Institute

HONORS AND AWARDS

1998 Mark Diamond Research Award

1998 Dean's Award for Outstanding Thesis Dissertation, SUNY at Buffalo Medical School

2000 ARVO-Retinal Research Foundation-Lawrence Fellowship Grant

2001 Postdoctoral research fellowship award, Fight for Sight, Prevent Blindness America

2002 International Congress of Eye Research (ICER) Travel Fellowship, Invited speaker, Geneva, Switzerland

2003 FESAB Summer Conference Travel Fellowship, Vermont

2004 Research Travel Award, Florida Atlantic University

2006 The 6th Congress Federation of Asian and Oceanian Physiology Societies (FAOPS) Travel Award, Plenary speaker, Seoul, Korea

2009 The 17th International Conference of Taurine
Travel Award, Plenary speaker, Miami, Florida

2010-2011 The Best Graduate Mentor award, Charles E Schmidt College of Medicine (finalist)

2010-2011 Researcher of the Year Award, Charles E Schmidt College of Medicine

2010-2011 Researcher of the Year Award, Florida Atlantic University

2011-2012 Teacher of the Year Award, Charles E Schmidt College of Medicine (finalist)

MEMBERSHIPS

2003-present Member of the Society for Neuroscience

1994-present Member of the Association for Research in Vision and Ophthalmology

RESEARCH GRANTS

2017- 2021 National Institute of Health (NIH) R15, Co-Investigator
"Activators of MsrA and MsrB: potential use for diseases of the retina"

2017-2018 FAU Brain Institute Pilot Award, Principle Investigator
"The role of Na-K-2Cl co-transporter in light adaptation"

2017-2019 Collaborative project between FAU and the Sancilio Co., Major Collaborator
"Evaluation of potential role of DHA in slow down of retinitis pigmentosa progression in mouse model

2010-2015 National Science Foundation research grant, IOS-1021646, Principle Investigator
"The function of glycine in modulation of cone visual sensitivity"

2013-2015 Neuroscience Priority Research Award, FAU, Principle Investigator
"Identification and Characterization of a Novel Taurine-Sensitive Receptor"

2002-2008 NIH R01, Principle Investigator
EY14161, National Eye Institute (NEI), NIH
" Function of Interplexiform Cells"

2006-2007 New project development award, Florida Atlantic University, Principle Investigator
"Neuroprotection by Growth Factor in Retina"

2001-2003 Grant-in-Aid, Fight for Sight, Prevent Blindness of America, Principle Investigator
"Neuroprotective effect of TGF-β Superfamily of Growth Factors in Human Retina"

2000-2001 Postdoctoral research fellowship, Fight for Sight, Prevent Blindness of America
Principle Investigator
"Kainate-Preferring Glutamate Receptors in Human Retinal Function and Disease"

INVITED PRESENTATIONS AT INTERNATIONAL CONFERENCES AND SYMPOSIUMS

2001 Paper presentation "Glutamate receptor subtypes in horizontal cells of the human retina" *ARVO Annual Conference, Ft Lauderdale*, May.

2002 Invited Speaker, "GABA-induced synaptic facilitation by reciprocal modulation" *XV International Eye Research Congress, Geneva, Switzerlan,* October.

2002 Paper presentation "Glycinergic interplexiform cells modulates the synapses between photoreceptors and bipolar cells" *ARVO Annual Conference, Ft Lauderdale,* May

2004 Invited Speaker, "Neural modulation by GABA and glycine network feedback" *International Conference on Physiology and Biophysics, Shanghai, China,* November 11th.

2004 Invited Speaker, "A feedback system encoding dim light signals" *Institute of Neurology, Fudan University, Shanghai, China,* November,14th.

2004 Plenary speaker "Positive control of the distal retinal signals by glycine interplexiform cells" *Shanghai International Conference on Physiology and Biophysics, Shanghai, China,* November 12th.

2006 Paper presentation "Enhancing distal synapse by glycinergic interplexiform cells" *ARVO Annual Meeting, Ft Lauderdale, USA,* May 2nd.

2007 Invited Speaker, "Function of glycinergic feedback in distal retinal signaling" *The 6th Congress Federation of Asian and Oceanian Physiology Societies (FAOPS), Seoul, Korea, October 17th*.

2008 Invited Speaker, "The centrifugal feedback neuron enhances visual sensitivity in twilight". *The Basic and Clinic Vision Research Symposium IX, Shanghai, China, September 5th*.

2009 Plenary speaker, "A new role of taurine in retina".
The 17th International Taurine Conference, Miami, USA, December 14th.

2011 Plenary speaker, "The therapeutic value of taurine in protection of cell death from glutamate toxicity" *International Symposium on "Ion Channels, Cardiac arrhythmias, Diabetes and its complications", Nanjing, China, October 29th*.

2011 Plenary speaker, "Glutamate transporter EAATs mediate cone synaptic plasticity in retinal dark and light adaptation" *International Symposium on Brain Function and diseases, Shanghai, China, October 18th*.

2012 Invited speaker, "The function of taurine in the retinal neurons". *XX Biennial Meeting of the International Society for Eye Research* (*ISER) 2012, Berlin, Germany, July 25th*.

2013 Invited speaker, "Metabotropic effect of taurine regulates potassium channels via 5-HT2A serotonin receptors". *The 18th International Taurine Conference, Marrakech, Morocco, April 11th*.

2016 Guest speaker, "Cation-chloride cotransporter in brain health and diseases". University of Miami, Neuroscience Seminar Series, *May 11th*.

2017 Invited speaker, "Regulation of Synaptic Transmission at the Photoreceptor Terminal: A Novel Role for the Cation-Chloride Cotransporter NKCC1", *2017 ISN Satellite Conference, Maintenon, France, August 26th*.

PEER-REVIEWED PUBLICATIONS

1. X.L.Yang, T.X.Fan and **W. Shen** (1994) Effects of prolonged darkness on light responsiveness and spectral sensitivity of cone horizontal cells in carp retina in vivo. *J Neurosci.* 14(10):326-334.

2. J. Zhang, **W. Shen** and M.M. Slaughter (1997) Two metabotropic GABA receptors differentially modulated calcium currents in retinal ganglion cells. *J Gen. Physiol.* 110:45-58.

3. W. Shen and M.M. Slaughter (1998) Metabotropic and ionotropic glutamate receptors regulate calcium channel currents in salamander retinal ganglion cells. *J Physiol.(London),* 510(3): 815-828. ***(****Corresponding Author)*

4. W. Shen and M.M. Slaughter (1999) Metabotropic GABA receptors facilitate L-type and inhibit N-type calcium channels in single salamander retinal neurons. *J Physiol.(London),* 516(3):711-718.

5. W. Shen and M.M. Slaughter (1999) Internal calcium modulates apparent affinity of metabotropic GABA receptors. *J Neurophysiol.* 82:3298-3306.

6. W. Shen and M.M. Slaughter (2001) Multireceptor GABAergic regulation of synaptic communication in amphibian retina. *J Physiol.(London),* 530(1):55-67. *(Corresponding Author)*

7. W. Shen and M.M. Slaughter (2002) A non-excitatory paradigm of glutamate toxicity. *J Neurophysiol.* 87:1629-1634. *(Corresponding Author)*

8. W. Shen and S.G Finnegan, M.M Slaughter (2004) Glutamate receptor subtypes in human retinal horizontal cells. *Vis. Neurosci.* 21(1): 89-95.

9. W. Shen, S.G. Finnegan, P. Lein, S. Sullivan, M.M. Slaughter and D Higgins (2004) Bone morphogenetic proteins regulate ionotropic glutamate receptors. *Europ J Neurosci.* 20:2031-2037.

10. W. Shen (2005) Repetitive light stimulation inducing glycine receptor plasticity in the retinal neurons. *J Neurophysiol.* 94:2231-2238 *(Corresponding Author)*

11. W Shen and Z Jiang (2007) Characterization of glycinergic synapse in vertebrate retina. *J Biomed. Sci.* 14:5-13. (*Corresponding Author*)

12. BQ Li and **W Shen** (2007) Cation Cl^- cotransporters in the dendrites of goldfish bipolar cells. *NeuroReport* 18(7)625-630. (*Corresponding Author*)

13. Z Jiang, BQ Li, F Jursky and **W Shen** (2007) Differential distribution of glycine transporters in Müller cells and neurons in amphibian retinas. *Vis. Neurosci.* 24:157-168. (*Corresponding Author)*

14. BQ Li, KA McKernan and **W Shen** (2008) Spatial and temporal distribution patterns of Na-K-$2Cl^-$ cotransporter in adult and developing mouse retinas. *Vis. Neurosci.*. 25:109-123. (*Corresponding Author*)

15. W Shen, Z Jiang and BQ Li (2008) Glycinergic input induces the synaptic facilitation in amphibian photoreceptors. *J Biomed Sci. 15: 743-754.* *(Corresponding Author)*

16. Z Jiang and **W Shen** (2010) Role of neurotransmitter receptors in mediating light-evoked response of retinal interplexiform cells. *J Neurophysiol. 103:924-933.* PMCID: PMC2822699 *(Corresponding Author)*

17. S Bulley and **W Shen** (2010) Reciprocal regulation between taurine and glutamate response via Ca^{2+} -dependent pathways in retinal third-order neurons. *J Biomed Sci. 17 (Suppl I):55. (special issue).* PMCID: PMC2994392 (*Corresponding Author)*

18. M JM Rowan, H Ripps and **W Shen** (2010) Fast glutamate uptake via EAAT2 shapes the cone-mediated light offset response in bipolar cells. *J Physiol.(London), 588(20): 3943-3956.* PMCID: PMC3000584 *(Corresponding Author)*

19. H Ripps and **W Shen** (2012) Taurine: An exceedingly 'Essential' amino acid. *Mol. Vision. 18:2673-2686.* PMCID:PMC3501277 *(Co-corresponding Author)*

20. Z Jiang, S Bulley, J Guzzone, H Ripps and **W Shen** (2012) The modulatory role of taurine in retinal neurons. Chapter 5 in "Taurine 8" Book. PMID:23392924 *(Corresponding Author)*

21. M JM Rowan, S Bulley, L Purpura, H Ripps and **W Shen** (2012) Taurine regulation of voltage-gated channels in retinal neurons. Chapter 7 in "Taurine 8" Book. PMID:23392926 *(Corresponding Author)*

22. S Bulley, YF Liu, H Ripps, and **W Shen** (2013) Taurine activates delayed rectifier K_V channels via a metabotropic pathway in retinal neurons. *J Physiol. (London),591:123-132.* PMCID: PMC3630776 *(Corresponding Author)*

23. W Shen, LA Purpura, BQ Li, CL Nan, IJ Chang and H Ripps (2013) Regulation of synaptic Transmission at the photoreceptor terminal: A novel role for the cation-chloride cotransporter NKCC1. *J Physiol. (London), 591:133-147.* PMCID: PMC3630777 *(Corresponding Author)*

24. I Anastassov, **W Shen**, H Ripps, RL Chappell (2013) Zinc modulation of calcium activity at the photoreceptor terminal: a calcium imaging study. *Exp Eye Res,* 112:37-44. PMCID: PMC3700670

25. Z Jiang, JN Yang, LA Purpura, YF liu, H Ripps, **W Shen** (2014) Glycinergic feedback enhances synaptic gain in the distal retina. *J Physiol. (London), 592 (7) 1479-1492.* PMCID: PMC3979606. *(Corresponding Author)*

26. J Yang, CL Nan, H Ripps, **W Shen** (2015) Destructive Changes in the Neuronal Structure of the FVB/N Mouse Retina. PLoS ONE 10(6): e0129719.doi:10.1371/journal.pone.0129719. PMCID: PMC4475023. (*Corresponding Author*)

27. Xiaoqin Wang, Zhengyu Zhang, Gang Wu, Changlong Nan, **Wen Shen**, Yimin Hua and Xupei Huang (2016) Green tea extract catechin improves internal cardiac muscle relaxation in RCM mice. J. Biomed. Sci. 23:51, DOI 10.1186/s12929-016-0264-1

28. Liu Xiaoyan., Lei Zhang, Daniel Pacciulli, Jianquan Zhao, Changlong Nan, **Wen Shen**, Junjun Quan, Jie Tian, Xupei Huang (2016) Restricitve cardiomyopathy caused by troponin mutations: application of disease animal models in translational studies. Front. Physiology, 7:629, doi: 10.3389/fphys.2016.00629.

29. Yan Xiaochen, Bo Pan, Tiewei Lv, Lingjuan Liu, Jing Zhu, **Wen Shen**, Xupei Huang, Jie Tian (2017) Inhibition of histone acetylation by curcumin reduces alcohol-induced fetal cardiac apoptosis. J. Biomed. Sci.; 24(1):1. doi: 10.1186/s12929-016-0310-z.

30. Wen Shen, Changlong Nan, Peter T Nelson, Harris Ripps & Malcolm M Slaughter (2017) GABA(B) receptor attenuation of GABA(A) currents in neurons of the mammalian central nervous system. Physiol Reports. 5(6) e13129 DOI: 10.14814/phy2.13129. *(Corresponding Author)*

31. Baoqin Li, Sylvia Grafe, Alcira Munchow, Miguel Lopez-Toledano, Zhuo-Hua Pan, **Wen Shen** (2019) Sex-related differences in the progressive retinal degeneration of the rd10 mouse. Exp Eye Res.; 187: 107773, https://doi.org/10.1016/j.exer.2019.107773. (*Corresponding Author)*

PUBLISHED ABSTRACTS

1. **W. Shen** and M.M. Slaughter (1995) Glutamate receptor regulation of high voltage activated Ca^{2+} currents in amphibian retinal neurons. *ARVO 36:4 1322.*

2. **W. Shen** and M.M. Slaughter (1996) Glutamate modulation of voltage activated Ca^{2+} currents in retinal RGCs. *FASEB Summer Research Conference, ABS: 17.*

3. W. Shen and M.M. Slaughter (1997) Internal Ca release modulates the affinity of metabotropic GABA receptors. *ARVO 38:4 5420.* ***(platform presentation)***

4. W. Shen and M.M. Slaughter (1998) High and low affinity baclofen-sensitive, metabotropic GABA receptors modulate different Ca channels. *ARVO 39:4 3144.* ***(platform presentation)***

5. W. Shen and M.M. Slaughter (1998) Metabotropic GABA receptors regulate two high voltage-activated Ca channels through two transduction pathways. *FASEB Summer Research Conference, ABS:47.*

6. W. Shen and M.M. Slaughter (1999) Ca-permeable Non-NMDA glutamate receptors in retinal RGCs. *ARVO 40:4 4296.*

7. W. Shen and M.M. Slaughter (2000) GABAergic amacrine cell regulation of the bipolar to RGC synapse. *ARVO 41:4 3284.*

8. W. Shen and M.M. Slaughter (2001) Glutamate receptor subtypes in horizontal cells in the human retina. *ARVO 42:4 2745.* ***(platform presentation)***

9. W. Shen and M.M. Slaughter (2002) GABA-induced synaptic facilitation by reciprocal modulation. *XV International Congress of Eye Research, pp.92.* ***(invited speaker)***

10. W. Shen and M.M. Slaughter (2002) Modulations of glutamate receptors by TGF-beta super-family of growth factor in human retinal cells. *FASEB Summer Research Conference, ABS:33.*

11. W. Shen and M.M. Slaughter (2002) The glycinergic interplexiform cell modulates the photoreceptor synapse. *ARVO website 2002:2932.* ***(platform presentation)***

12. W. Shen (2003) Effect of light adaptation on glycine sensitivity in horizontal cells. *ARVO website 2003:2007.* ***(platform presentation)***

13. W. Shen (2004) Positive control of the distal retinal signal by glycine interplexiform cells. *Shanghai International Conference in Physiology and Biophysics.* ***(invited speaker)***

14. W. Shen (2004) Glycine receptor plasticity in light adaptation. *Society for Neuroscience 34th annual meeting.*

15. W. Shen (2004) Glycinergic interplexiform cells regulate spatial sensitivity in the distal retina. *ARVO website 2004:1318.* ***(platform presentation)***

16. Z. Jiang and **W. Shen** (2005) Functional expression of glycine transporter 2 (GlyT2) in amphibian retina. *ARVO website 2005:3453.*

17. B.Q. Li and **W. Shen** (2005) Regulation of glycine response by Na+-K+-2Cl- cotransporter (NKCC) on amphibian rods. *ARVO website 2005:3452.*

18. Z. Jiang, BQ Li and **W Shen** (2006) Differential distribution of glycine transporters in Müller cells and Neurons in amphibian Retinas. *FASEB Summer Research Conferences, Indian Wells. ABS No. 77.*

19. BQ Li and **W Shen** (2006) Developmental expression of chloride transporters in mouse retina. *ARVO, website:5392.*

20. W Shen and BQ Li (2006) Enhancing distal synapses by glycinergic interplexiform cells. *ARVO, website:2309.* ***(platform presentation)***

21. Z Jiang and **W Shen** (2006) Metabotropic effect of glycine on bipolar cells synapse. *ARVO, website:393.* ***(platform presentation)***

22. W Shen (2006) "Function of glycinergic feedback in distal retinal signaling" *FAOPS International Congress, Seoul, Korea. Online Abstract.* ***(invited speaker)***

23. BQ Li and **W Shen** (2007) Preferential distribution of cation Cl^- cotransporters in the dendrites of goldfish bipolar cells, *ARVO, website: 4589.*

24. M. Rowan and **W Shen** (2007) Immunocytochemical study of the properties of On- and Off-Bipolar cells of tiger salamander retinas, *ARVO, website: 4593.*

25. Z Jiang and **W Shen** (2007) Excitatory responses in ganglion cells evoked by glycine input in the distal retina. *ARVO, website:3620.* ***(platform presentation)***

26. S Bulley and **W Shen** (2008) Neuromodulatory role of taurine in glutamate transmission in retina. *ARVO, website: 5790.*

27. Z Jiang and **W Shen** (2008) Excitatory and inhibitory synaptic inputs in interplexiform cells. *ARVO, websit:1514.* ***(platform presentation)***

28. M Rowan and **W Shen** (2009) Glycine feedback enhances cone synapses through regulation of excitatory amino acid transporter, EAAT2. *ARVO, website: 5174.* ***(platform presentation)***

29. Z Jiang and **W Shen** (2009) The function of glycine in regulation of rod-to-Off bipolar cell synapses in amphibian retina, *ARVO. website:4559.*

30. S Bulley and **W Shen** (2009) Taurine regulation of glutamate currents through activation of a new receptors. *ARVO. Website: 1033.*

31. W Shen (2010) A new role of taurine in retina. *17th International Taurine Conference, Miami, FL, USA.* ***(plenary presentation)***

32. M Rowan and W Shan (2010) Transient Light -adaptation Enhances Cone Signaling by Suppression of Excitatory Amino Acid Transporter II (EAAT2). *ARVO* ***(platform presentation)***

33. Matthew JM Rowan and Wen Shen (2011) Light Suppresses the Glutamate Transporter EAAT2 Activation in Cones via a Proton-sensitive Mechanism. *ARVO* ***(platform presentation)***

34. YuFei Lu, Harris Ripps and Wen Shen (2011) Localization of Pannexin-Mediated Electrical Coupling in the Amphibian Retinal Cone Pathway. *ARVO.*

35. Joseph Guzzoni, Harris Ripps and Wen Shen (2011) Glycine Positive Control of the Distal Retinal Signals by a NKCC-Mediated Mechanism. *ARVO*

36. Simon Bulley, Matthew MJ Rowan and Wen Shen (2011) New Function and Action Site of Taurine in Regulation of Potassium Channels in the OFF-Bipolar Cells. *ARVO.*

37. Matthew JM Rowan and Wen Shen (2011) Transient Light -adaptation Enhances Cone Signaling by Suppression of Excitatory Amino Acid Transporter II (EAAT2) in the Retina. *Southeast Neuroscience Conference.* ***(win the First Place Award)***

38. Wen Shen, Laurine A Purpura, Changlong Nan, Irene Chang, Harris Ripps (2012) Regulation of Synaptic Transmission at the Photoreceptor Terminal: A Novel Role for the Cation-Chloride Cotransporter NKCC1. *ARVO.* ***(platform presentation)***

39. Wen Shen (2012) Metabotropic effect of taurine regulation of potassium channels via 5-HT2A serotonin receptors. 18th International Taurine Conference, *Marrakesh, Morocco.* ***(Invited Speaker)***

40. Wen Shen (2012) The Function of metabotropic effects of taurine in the retinal neurons. *ISER 2012, Berlin, Germany.* ***(Invited Speaker)***

41. Lauren A Purpura, Harris Ripps and Wen Shen (2013) Fast Glutamate Uptake by EAAT2 Prevent Glutamate Depletion in Rod Photoreceptors. *ARVO*

42. W Shen, Y Liu, RL Chappell, H Ripps (2014) A Pannexin-mediated purinergic pathway in the vertebrate retina. *ARVO poster.*

43. J Yang, H Ripps, W Shen (2014). Neural remodeling in the FVB/N mouse retina. *ARVO poster.*

44. W Shen (2016) Na-K-2Cl cotransporter deficiency in the retinas affects the visual contrast sensitivity. *ARVO abstract*

45. W Shen (2017) Regulation of Synaptic Transmission at the Photoreceptor Terminal: A Novel Role for the Cation-Chloride Cotransporter NKCC1. *ISN Satellite Conference*.

46. James Sullivan, Malcolm Slaughter, Wen Shen (2019) Evidence for metabotropic glycine receptor regulation of voltage-gated channels in mouse retina. *ARVO abstract*

TEACHING EXPERIENCES

Mentoring Post-Doctoral Fellows

Dr. Baoqin Li (2004-2007)	Research projects: Chloride transporters in retinal function" and "Neuroprotection against glaucoma disease"
Dr. Jinnan Yang (2012-2015)	Research project: Role of NKCC transporter in visual adaptation"
Dr. Chunglong Nan (2010-2016)	Research project: Molecular biological approach towards functional role of taurine in the CNS.
Dr. Desheng Chen (2016-2018)	Research project: Deficiency of the bone morphogenetic protein related retinal degeneration.

Training Ph.D Students

Zheng Jiang (2004 - 2009), Ph.D student , Graduated
Dissertation title: "Function of Glycine in Retina".
Current position: Assistant Professor, Department of Ophthalmology at Baylor College of Medicine

Simon Bulley (2007 – 2010), Ph.D student , Graduated
Dissertation title: "New insights of the potential neuromodulatory role and activation site of taurine in retina"
Current position: Assistant Professor, College of Pharmacy, Western University of Health Science.

Matthew Rowan (2006 - 2011), Ph.D student, Graduated
Dissertation title: "Chemical synapses in retinal adaptation"
Current position: Assistant Professor, Department of Cell Biology, Emory University School of Medicine

Lauren Purpura (2010-2014), Ph.D student, Graduated
Dissertation project: Function of Cl co-transporter in retinal physiology and disease.
Current position: Professor in the Biological Sciences Department at Broward College

James Sullivan (2018- present), Ph.D candidate

Training Medical Students in Research

Irene Chang (M2), 2010
John Rollo (M2), 2010
Lisa Sonnenblick (M1), 2012
Minh Quan le (M1), 2015
Andrew Fahmy (M1), 2019

Training Master's Students

Karie McKernan (2007-2008), graduated with non-Thesis Master's Degree
Paper published "Spatial and temporal distribution patterns of Na-K-2Cl$^-$ cotransporter in adult and developing mouse retinas. *Visual Neuroscience*. 25:109-123.

Joseph Guzzone (2010 –2011), graduated with non-Thesis Master's Degree
Abstract published "Glycine Positive Control of the Distal Retinal Signals by a NKCC-Mediated Mechanism", ARVO, 2011

Yufei Lu (2009- 2011). Graduated with Thesis Master's Degree
Master Thesis "Immunocytochemical study of electrical and chemical synapses in retinal circuitry"

Nick Libian (2019-2020) Graduated with non-Thesis Master's Degree

Matthew Nguyen (2019- present) Master thesis student

Training Undergraduate Students

Heejab Bhatti (2007-2008) FAU
Michael Appelbatt (2008) FAU
Tassia Kostopoulos (2008) FAU
Omar Olyar (Spring- Summer 2009) FAU
Claudia Zapata (2009) FAU
Samuel Drysen (Summer 2011) Princeton University
Miguel Moreno (2015-2016)
Leyla Ali (2016)
Layal Dabbas (2016)
Angie Fontaine (2016)
Brain Nudelman (2017-2019)
Joshua Chatoo, NSF T-LEARN program, FAU, (2017-2018)
Alejandra Mejia, NSF T-LEARN program, FAU, (2017-2018)
John Kit, FAU (2018-2019)
Nicole Nudelman (2020)
Omar Saad (2020)

Ph.D Student Advisory Committee:

Claudia Prada, (2005) Ph.D. Dissertation defense -Department of Physiology and Biophysics, SUNY at Buffalo
Zheng Jiang, (2004-2009), Chair of the Committee, Integrative Biology Ph.D Program
Manas Biswal, (2006-2008), Committee Member, integrative Biology Ph.D Program
Matthew Rowan, (2006-2011), Chair of the Committee, Integrative Biology Ph.D Program
Yujing Li (2006-2011), Committee Member, Integrative Biology Ph.D Program
Simon Bulley, (2007-2010) Chair of the Committee, Integrative Biology Ph.D Program
Pierre Jean-Charles (2007-2012), Committee Member, Integrative Biology Ph.D Program
Chandana Buddhala, (2006-2012), Committee Member, Integrative Biology Ph.D Program
Stacee Caplan,(2009-2014), Committee Member, Integrative Biology Ph.D Program
Lauren Purpura, (2010-2014), Chair of the Committee, Integrative Biology Ph.D Program
Arunodoy Sur, (2011- 2014) Committee Member, Integrative Biology Ph.D Program
Szu-Yu Chen, (2017-2018), Committee Member, University of Miami
Dustin Gerber, (2017 – 2020) Committee Member, Master These
James Sullivan, (2018-present), Chair of the Committee, Brian &Complex System Ph.D

Master Student Advisor Committee:

Matthew Nguyen, Master thesis (2019- present), Biomedical Science Master
Yufei Lu, Master thesis, (2009-2011), Chair of the Committee, Biomedical Science
Joseph Guzzone, (2010-2011), Chair of the Committee, Biomedical Science Master
Karie McKernan, (graduated in 2008), Committee membrane, Biomedical Science
Ying Jin (2004-2005) Master's thesis – College of Biomedical Science
Tracy Cowell (2004) Master's thesis - College of Biomedical Science
Percy Tumbale (2004) Master's degree – College of Biomedical Science

Courses Taught at FAU

Medical Program-

- Lecture for Neuroscience (M1 Medical Students), 2007-present
- Facilitation for a student-centered, problem-based learning (PBL) group in the Fundamental Neuroscience and Behavior module, 2007- present
- Facilitation for PBL in the Cardio-Vascular System and Renal System module, 2011-2013
- Facilitation for PBL in the Digestive System module, 2011- 2014
- Facilitation for M2 medical Students, Inquiry Cases (IQ), 2017 – present

Graduate instruction-

- Advanced Cell Physiology (Course director), 2007 – present
- Biomedical Science Core Technologies (Course co-director), 2018- present
- Biomedical Concepts & translation al applications (instructor), 2018-present
- Physiology of the Heart (Instructor), 2010-2014
- Neuroscience II (Instructor), 2009-2011

- Brain and Complex System Pro-seminar (Instructor), 2013- present

New course development

- Cellular Function and Physiology for M1 medical students
- Neurotransmission in the CNS for M1 medical students
- Visual System for M1 medical students
- Advanced Cell Physiology (graduate course, also registered by undergraduates)
- Neural Function and Degeneration (M1 students)
- Biomedical Science Topic I (course for both graduate and undergraduate)
- Biomedical Science Core Technologies

PROFESSIONAL SERVICE

Journal Reviewer for

Vision Neuroscience
European Journal of Neuroscience
Journal of Physiology
ISRN – Physiology (Editorial Board)
Journal of Neurosignal
JSM Cell (Editorial Board)
Journal of Neuroscience
Journal of Neurophysiology
PLoS One

Grant Reviewer

National Science Foundation (NSF, *ad hoc*)

SERVICE

Committee Service

2005	Member of Annual Review Committee - Department of Biomedical Science
2005-2007	Member of Infrastructure Committee - College of Science
2006	Junior Faculty Search Committee - College of Biomedical Science
2006-2010	Neuroscience Program Seminar Committee - University
2008-2011	Graduate Committee - College of Medicine
2008-2012	University Honor and Award Committee
2010-2012	Promotion &Tenure Committee – Department of Biomedical Science
2011-2012	University Promotion &Tenure Committee
2011-2012	Chair of the College Promotion &Tenure Committee
2011-2013	Advisor for Student Journal Club - College of Medicine
2014- 2018	Research Committee –College of Medicine
2014- present	Horner and Award Committee - University
2017- present	Graduate Committee – College of Medicine

Summer Sheremata, Ph.D.
Assistant Professor
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Education/Employment History:

2015-present Assistant Professor, Psychology Department, Florida Atlantic University
2013-2015 Postdoctoral Researcher, Psychology Department, George Washington University
2010-2013 Postdoctoral Researcher, Vision Science & Neuroscience Programs, UC Berkeley
2009, Ph.D. Psychology, Boston University, Boston, MA
2000, B.A. Psychology, Northwestern University, Evanston, IL

Scholarship/Research/Creative Activity

Publications in print:

Journal Articles:

Byrne, K.N., McDevitt, E.A., Sheremata, S.L., Peters, M.W., Mednick, S.C., Silver, M.A. (2020) Transient cholinergic enhancement does not significantly affect either the magnitude or selectivity of perceptual learning of visual texture discrimination. *Journal of Vision* 20 (6) 5: 1-17.

Sheremata, S.L., Somers, D.C., Shomstein, S. (2018) Visual short-term memory acitivity in parietal cortex reflects cognitive processes beyond attentional selection. *Journal of Neuroscience* 38 (6):1511-1519.

Sheremata, S.L., Shomstein, S. (2017) Task set induces dynamic reallocation of resources in visual short-term memory. *Psychonomic Bulletin and Review* 24 (4): 1113-1120.

Sheremata, S.L., Silver, M.A. (2015) Hemisphere-dependent attentional modulation of human parietal visual field representations. *Journal of Neuroscience* 35 (2): 508-517.

Sheremata, S.L., Shomstein, S. (2014) Hemifield asymmetries differentiate VSTM for single- and multiple-feature objects. *Attention, Perception, & Psychophysics* 76 (6): 1609-1619.

Yoon, J., Sheremata, S.L., Rokem, A., Silver, M.A. (2013) Windows to the soul: Vision science as a tool for studying biological mechanisms of information processing deficits in schizophrenia. *Frontiers in Psychopathology* 4(681).

Somers, D.C., Sheremata, S.L. (2013) Attention maps in the brain *WIREs Cognitive Science: Cognitive Science* 4(4): 327-40.

Kong, L., Michalka, S.W., Rosen, M.L., Sheremata, S.L., Swisher, J.D., Shinn-Cunningham, B.S., Somers, D.C. (2014) Auditory spatial attention representations in the human cerebral cortex *Cerebral Cortex* 24(3): 773-84.

Kosovicheva, A.K., Sheremata, S.L., Rokem, A., Landau, A.N., Silver, M.A. (2012) Cholinergic enhancement reduces orientation-specific surround suppression but not visual crowding *Frontiers in Behavioral Neuroscience* 6(61).

Sheremata, S.L., Bettencourt, K.C., Somers, D.C. (2010) Hemispheric asymmetry in visuotopic posterior parietal cortex emerges with visual short-term memory load *Journal of Neuroscience* 30(38):12581-8.

Sheremata, S.L., Sakagami M. (2006) Increasing distractor strength improves accuracy *Perceptual and Motor Skills* 102(2): 509-516.

Chen, Y., Levy, D.L., Sheremata, S.L., Holzman, P.S. (2006) Bipolar and schizophrenic patients differ in patterns of visual motion discrimination *Schizophrenia Research* 88(1-3):208-216.

Sheremata, S.L., Chen, Y. (2004) Co-administration of atypical antipsychotics and antidepressants disturbs contrast detection in schizophrenia. *Schizophrenia Research* 70(1):81-89.

Chen, Y., Levy, D.L., Sheremata, S.L., Holzman, P.S. (2004) Compromised late-stage motion processing in schizophrenia *Biological Psychiatry* 55(8):834-41.

Chen, Y., Levy, D.L., Sheremata, S.L., Nakayama, K., Matthysse, S., Holzman, P.S. (2003) Effects of typical, atypical, and no antipsychotic drugs on visual contrast detection in schizophrenia. *American Journal of Psychiatry* 160(10): 1795-801.

Book Chapter:

Sheremata S. (2019) Topographic Mapping of Parietal Cortex. In: Neuromethods. Humana Press

Works currently under review

Names in bold denote trainee.

Sheremata, S.L., **Shin, Y.** (under review) Mapping sequences affect reliability of parietal retinotopic map structure.

Sheremata, S.L., Silver, M.A. (under review) Interactions between handedness and the locus of attention on visual representations in topographic parietal cortex.

Shin, Y, Sheremata, S.L. (under review) When remembering less is more: unfiltered items reduce memory fidelity in visual short-term memory.

Sheremata, S.L., **Minore, M., Shin, Y.** (under review) Visual short-term memory is asymmetrically represented across the visual field.

Sheremata, S.L., Malcolm, G.L., Shomstein, S. (under review) Retinotopic hemifield asymmetries characterize VSTM performance.

Refereed Presentations and Proceedings (all International):

Names in bold denote trainee. * Denotes resulted in a manuscript under review. ** Denotes article published in refereed journal

**Byrne, K.N., McDevitt, Sheremata, S.L. Peters, M.W., Mednick, S.C., Silver, M.A. (2019) Transient cholinergic enhancement does not significantly affect either the magnitude or selectivity of perceptual learning of visual texture discrimination. *presented at the Vision Sciences Society annual meeting*

***Shin, Y.S.**, Sheremata, S. (2019) We are not all the same: Different memory limits reveal different memory processes. *presented at the Vision Sciences Society annual meeting*- Currently under review for publication

Annicchiarico, I., Sheremata S.(2018) The role of feature binding in the relationship between visual attention and visual short-term memory *presented at the Vision Sciences Society annual meeting*

*Sheremata, S., **Loftus, S.** (2017) Fidelity of VSTM representations across the visual field reflects right-hemisphere specialization *presented at the Vision Sciences Society annual meeting*- Currently under review for publication

Pytel, P., Sheremata, S. (2017) Longer Memory Delay Reveals Demands for Maintaining Multiple Features *presented at the Vision Sciences Society annual meeting*

*Sheremata, S.L., Silver, M.A. (2016) Handedness-dependent hemispheric asymmetries in parietal spatial attention maps. *presented at the Society for Neuroscience annual meeting.*

**Sheremata, S.L., Carter, B., Somers, D.C., Shomstein, S. (2016) Divergence and convergence of attention network activity in visual attention and short-term memory. *presented at the Vision Sciences Society annual meeting.*-

Sheremata, S.L., Carter, B., Somers, D.C., Shomstein, S. (2014) Divergence and convergence of attention network activity in visual attention and short-term memory. *presented at the Society for Neuroscience annual meeting.*

**Sheremata, S.L., Malcolm, G.L., Shomstein, S. (2014) Hemispheric asymmetries in visual short-term memory occur in a retinotopic, not spatiotopic, coordinate frame. *presented at the Object Perception, visual Attention, and visual Memory annual meeting.*

Sheremata, S.L., Shomstein, S. (2014) Dynamic reallocation of resources in visual short-term memory. *Cognitive Science Association for Interdisciplinary Learning annual meeting.*

Silver, M.A., Sheremata S.L. (2013) Covert attention results in whole field representations in right, but not left, parietal cortex. *Society for Neuroscience annual meeting.*

Sheremata, S.L., Alvarez, B.D., Zertuche, L.E., Silver, M.A., Robertson, L.C. Visuotopic (2013) mapping of the parietal cortex distinguishes areas involved in synesthetic feature binding. *Vision Sciences Society.*

Sheremata, S.L., Silver, M.A. (2012) Spatial attention shifts visual field representations in topographic parietal cortex in the left but not the right hemisphere. *Cognitive Science Association for Interdisciplinary Learning.*

Sheremata, S.L., Somers, D.C., (2006) Attention to features affects visual short-term memory representations. *Society for Neuroscience.*

Sheremata, S., Sakagami, M., Watanabe, T. (2004) Unguarded signals influence motor behavior. *Society for Neuroscience.*

Grants:

External**:**

-Not Funded

2015 Searle Scholars Program

2016 NSF Co-PI The role of scene memory in object recognition (PI Elan Barenholtz)

2017 NSF Co-PI The role of scene memory in peripheral object recognition (PI Elan Barenholtz)

2018 1Florida ADRC The neurological basis of VSTM binding deficits in Alzheimer's Disease.

Internal:

-Funded:

2020	OURI Spring/Summer Research Grant program Manal Imran, Dayna Roth	$1,200
2016-2017	Faculty Research Mentoring Grant Mentor Steven Bressler, Florida Atlantic University	$4,000
2016-2017	OURI Peer Mentor Program	$600

Courses Taught at FAU

Cognition (Fall 2015, Fall 2017, Fall 2018, Fall 2019)
Neuropsychology (Spring 2020)
Neuroimaging in Cognitive Neuroscience
Attention and Consciousness (Spring 2020)

Graduate Advisees:

Youngseon Shin (5th year)
Expected completion: 2021
Dissertation: Neuroimaging comparison of working memory and visual attention representations

Kenton MacDowell (5th year)
Expected completion: 2021
Dissertation: Neuroiaging of audio-visual binding of emotional expression

Joshua Conniff (3rd year)
Expected completion (MAL) 2020
Thesis: Investigations of distractor strength on attentional processing in a mixed block design

Undergraduate advisees:
*Denotes OURI award **Denotes Presentation at an international conference***Denotes Co-Author on Publication

Honors Students:
Hadis, Syntia S.- Honor's Thesis (2017)
Title: Memory Delay Differentially Affects Features and Objects
Lespinace, Loissa- Honor's Thesis (2017)
Title: Visual Memory Processing Beyond Individual Visual Short-Term Memory Capacity
,* Minore, Mary C.- Honor's Thesis (2019)
Title: Hemifield Asymmetries in Precision of VSTM Representations
* Imran, Manal- Honor's Thesis (2020)
Electroencephalography Signals of Distractor Strength
* Roth, Dayna J.- Honor's Thesis (2020)
Title Effects of Randomization on Distractor Inhibition

Directed Independent Study/Research students who did not complete an honors thesis:

Academic Year 2015/2016:
Alvarez, Shainy A.
Contrelli, Michael A.
Dukov, Denis Y.
*Loftus, Sabrina N.
Moyses, Katherine L.
Pineda, Juan C.
**Pytel, Paige J. Completed Master's Degree in Psychology Department

Academic Year 2016/2017:
Durosier, Marthe V.
Peterson, Kacey A.
Wensel Orbik, Julie A.

Academic Year 2017/2018:
Rose, Amber

Rodriguez Cardona, Manuela
Carter, Brooke
Omer, Chelsea L.
Rech, Hailee J.
Rosen, Amber R.
Hernandez, Natalia
Mair, Keitrina

Academic Year 2018/2019:
Cardinale, Michael
Lacroix, Rochelle N.
Osorio, Monica A.
Umar, Hadiza

Academic Year 2019/2020:
Doan, Van
Rohack, Devin
Droira, Joshua
Severin, Zachary A.

Graduate Committees (thesis or dissertation completed only):

2015/2016
Seifert Matthew PhD
Cox Dustin MALW
Kleiman Michael MALW
Schlangen Derrick PhD

2016/2017
Islam Mohammed MALW
Perez Nicole MALW

2017/2018
LaCombe Daniel PhD
Velez Uribe Idaly PhD

2018/2019
Christopher Deven MALW
Cox Dustin PhD
Kelly Roshawn MA
Islam Mohammed PhD
Ray Subhosit MALW

2019/2020
Pytel Paige MA

Torres Valeria MALW
Perez Nichole PhD
Datta Debarshi PhD
Ray Subhosit MALW

Service and Professional Development

Service to the Institution :

Departmental

Website Committee	2015-2018
Cognitive Neuroscience Search Committee, Psychology Department	2015-2016
Cognitive Neuroscience Search Committee, Center for Complex Systems & Brain Sciences	2015-2017
Behavioral Neuroscience Search Committee, Psychology Department	2016-2017
Computational Neuroscience Search Committee, Center for Complex Systems & Brain Sciences	2017-2018
Colloquium Committee	2019-2020
Graduate Recruitment Committee	2019-2020
Social Psychology Search Committee, Psychology Department	2019-2020
Curriculum Committee, Center for Complex Systems and Brain Sciences	2019-2020
Instructor Search Committee	2019-2020

College of Science

Dean's Strategic Planning Committee	2016-2018

University Service

Human Imaging Core Steering (renamed FAU Human and Animal Imaging) Committee	2016-2020
Graduate Research Day Judge	2017-2018

Service to the Discipline/Profession:

NSF adhoc grant reviewer, CogNeuro Section

Reviewer for numerous journals: Journal of Neuroscience, Journal of Cognitive Neuroscience, Neuroimage, Journal of Neurophysiology, Neuroscience, Brain and Behavior, Current Opinion in Psychology, Journal of Experimental Psychology: General, Journal of Experimental Psychology: Human Perception and Performance, Journal of Experimental Psychology: Memory and Learning, Attention Perception and Psychophysics, Psychonomic Bulletin and Review, Cognitive Psychology, Journal of Vision

Review Editorial Board: Frontiers in Neuroscience

Honors and Awards

Louise Hanson Marshall Special Recognition Award, Nominated June 2020, Society for Neuroscience
Description: Honors an individual who has significantly promoted the professional development of women in neuroscience through teaching, organizational leadership, public advocacy, or other efforts that are not neceesarily research-related.

23 February 2021

ROBERT W. STACKMAN, JR. | Dean of the Graduate College

Florida Atlantic University
Location: **Boca Raton, FL**
Email: **rstackma @ fau.edu**
Telephone: 561,297,2313

Work Experience

DEAN, The Graduate College **06/2019 - PRESENT**

Florida Atlantic University, Boca Raton, FL

- Provide high standard of professionalism in leadership and service of the university's graduate educational system; ensure that programs are delivered at high academic standards that seek to celebrate student, staff and faculty achievements.
- Promote efficiency by utilizing data-driven decision making whenever possible; assist leadership with graduate admissions and enrollment management; provide oversight and guidance to graduate degree completion processes.
- Ensure policies and programs of the university's Graduate College adhere to the standards set by the Board of Governors and the State University System; ensure that policies and programs are carried out appropriately by all students, staff and faculty.
- Provide oversight and leadership regarding administration of the financial support package for all graduate assistants; coordinate recruitment practices to align with academic colleges' strategic areas of emphasis.
- Deliver effective professional development workshops and training to graduate students, staff and faculty.
- Assist university's executive leadership to meet strategic goals, state metrics and key performance indicators for institutional advancement and performance-based funding.

ASSOCIATE DEAN of Graduate Studies, College of Science **06/2018 – 06/2019**

Florida Atlantic University, Boca Raton, FL

- Promoted efficiency in the use of the college graduate tuition waiver budget to enable growth in student support within programs in spite of flat budgets.
- Worked directly with department chairs and faculty to ensure that graduate students received high standard of support, guidance, and advising.
- Assisted the Dean of the College of Science to work with all department chairs to develop effective plans, programs and tools to meet or exceed key performance indicator and metrics goals.

INTERIM CHAIR, Department of Psychology, College of Science **07/2016 – 01/2018**

Florida Atlantic University, Boca Raton, FL

- Worked directly with eighteen department faculty, and seven staff to supervise academic degree programs delivery to over 2,000 undergraduate students and 65 graduate students.
- Directed annual faculty review process; carried out supervisory responsibilities in accordance with faculty promotion and tenure process.
- Oversaw departmental budget; employed a democratic process for the distribution of office and laboratory space for faculty and students.
- Responsibilities included interviewing, hiring and training staff, appraising performance, addressing opportunities for advancement, complaints and resolving problems.

EDUCATION

1995	Ph.D. in Psychology (Program in Biopsychology and Behavioral Neuroscience), Rutgers, The State University of New Jersey
1990	M.S. in Psychology (Program in Biopsychology and Behavioral Neuroscience), Rutgers, The State University of New Jersey
1986	B.S. *with honors* in Psychology, Allegheny College

EMPLOYMENT

2019 – present	Dean, The Graduate College, Florida Atlantic University, Boca Raton, FL
2018– 2019	Associate Dean of Graduate Studies, College of Science, Florida Atlantic University, Boca Raton, FL
2016 – 2018	Interim Chair, Department of Psychology, Florida Atlantic University, Boca Raton, FL
2016 – present	Professor, Department of Psychology, Florida Atlantic University, Jupiter, FL
2006 – 2016	Associate Professor *(tenured May 2010),* Florida Atlantic University, Boca Raton, FL
1998 – 2005	Assistant Professor *(non-tenure track)*, Oregon Health & Science University, Portland, OR
1998 – 1998	Visiting Assistant Professor, Department of Psychology, Dartmouth College, Hanover, NH
1995 – 1998	Post-Doctoral Fellow, Dartmouth College Advisor: Jeffrey S. Taube, Ph.D. *In vivo* recording of neuronal representations of spatial information in the rodent limbic brain.
1992-1994	Lecturer, Department of Psychology, Rutgers, the State University of New Jersey
1988 – 1994	Doctoral Researcher, Rutgers, The State University of New Jersey, Piscataway, NJ Advisor: Thomas J. Walsh, Ph.D. Contribution of septohippocampal cholinergic and GABAergic circuits to spatial memory in rats.
1987-1992	Graduate Teaching Assistant, Dept of Psychology, Rutgers, the State University of New Jersey
1987 – 1988	Doctoral Researcher, Rutgers, The State University of New Jersey, Piscataway, NJ Advisor: Larissa Pohorecky, Ph.D. Contribution of beta-endorphin receptors to expression of behaviors in rats after acute or chronic alcohol administration.
1986 – 1987	Research Technician, Medical College of Wisconsin, Milwaukee, WI Supervisor: Liang F. Tseng, M.D., Ph.D. *In vivo* mapping rat brainstem sites mediating the analgesic effects of mu opioid receptor agonists.

HONORS AND AWARDS

2020	Initiated into the Phi Kappa Phi Honor Society, Florida Atlantic University chapter
2011	Distinguished Teacher of the Year award, College of Science, Florida Atlantic University
2010	Researcher of the Year award at the Associate Professor level, Florida Atlantic University
1986	Alden Scholar, Allegheny College

PROFESSIONAL ACTIVITIES

2017-present	Selection Committee Member, Int'l Max Planck Research School (IMPRS) for Brain & Behavior
2016-2019	Co-Director, Neuroscience & Behavior B.S. degree program, Florida Atlantic University
2015-present	Faculty Member, International Max Planck Research School (IMPRS) for Brain & Behavior
2013-2015	Associate Director of Neuroscience, Jupiter Life Science Initiative, Florida Atlantic University
2013-present	Faculty Member, Jupiter Life Science Initiative, Florida Atlantic University
2009-2010	Co-organizer, "FAU Neuroscience Seminar" with Dr. Kenneth Dawson-Scully, Biological Sciences

GRANT SUPPORT

Active

2020-2023 NSF, REU 1852175, *Summer Intensive Neuroscience Experience in Jupiter.* Role: Co-PI (with A. Keene – FAU). Total costs: $387,457

2017-2020 Max Planck Florida Institute for Neuroscience, Subcontract for collaborative project to provide *Behavioral phenotyping of transgenic mouse models*. Role: Co-PI (PI: Ryohei Yasuda – Max Planck Florida Institute).

Completed

2018-2019 FAU, College of Science Seed Grant, *Probing the neural circuitry and molecular mechanisms supporting long-term memory for objects.* Role: PI (with S. Puthanveettil – TSRI (Co-PI)). Total costs: $18,000

2018-2019 FAU, Brain Institute Pilot Award, *Rescuing attention and memory in a mouse model of schizophrenia via manipulation of SK channels.* Role: PI, Total costs: $15,000

2013-2017 NIH, NIMH 1 R15 MH099590, *Role of midline thalamus in arousal, attention and cognition.* Role: Consultant (PI: Vertes)

2009-2016 NIH, NIMH, 1 R01 MH086591, *Memory modulation by SK channels.* Role: PI. Total costs: $1,502,200

2013-2014 FAU, Division of Research Seed Grant, *Selective manipulation of hippocampal PKG activity to modulate memory processes.* Role: PI (with Dawson-Scully (Co-PI). Total costs: $25,000

2012-2013 FAU, Division of Research, Research Priority Grant Parent Award: Blanks and Murphey (PIs), Pilot Project: *Selective manipulation of PKG pathway activity in the hippocampus of C57BL/6J mice to modulate memory processes.* Role: PI (with Dawson-Scully (Co-PI). Total costs: $5,000

2009-2010 NIH, American Recovery and Reinvestment Act (ARRA), Stimulus Supplemental Award to 1 R21 AA014407. Role: PI. Total costs: $6500

2005-2009 NIH, NIAAA, 1 R21 AA014407, *Ethanol's influence on neural mechanisms of navigation.* Role: PI. Total costs: $407,000

2005-2010 NSF, IOS 0630522, *Influence of SK channels on hippocampal memory*, Role: PI. Total costs: $676,123

2004-2008 NIH, NINDS 2 R01 NS038880, *Molecular physiology of SK2 channels in CA1 neurons.* Role: Co-Investigator (PI: Adelman)

2004-2005 NIH, NIMH 1F31 MH070124, *SK channels and hippocampal function.* Role: Sponsor (PI: R.S. Hammond)

1999-2005 NIH, NIAAA T32 AA07468, *Biological bases of alcoholism,* Role: Training Faculty (PI: Cunningham)

1999-2005 NIH, NIDA T32 DA07262, *Biological bases of drug-seeking behavior*, Role: Training Faculty (PI: Neve)

2003-2005 NIH, NIAAA 2 P50 AA10760-09, *Behavioral genomics of alcohol neuroadaptation*. (PI: Crabbe), Pilot Project, *Ethanol and hippocampal function*. Role: Pilot project PI. Total costs: $25,000

2003-2005 Beaufour IPSEN Pharma S.A.S Contractual Agreement, *Effects of ginkgo biloba extract (EGb 761) on hippocampal memory and physiology.* Role: PI. Total costs: $26,490

2003-2004 NIH, NCAM 5 P50 AT000066-04, *Oregon Center for CAM in Neurological Disorders*, PI: Oken. Project Title: *Chronic ginkgo treatment and age-related cognitive impairment in mice,* Role: Project PI. Total costs: $20,000

GRANT SUPPORT (*continued*)

2000-2001 NIH, NIAAA 2 P50 AA10760, *Behavioral genomics of alcohol neuroadaptation*. (PI: Crabbe), Pilot Project, *Ethanol and hippocampal function across inbred strains of mice*. Role: Pilot project PI. Total costs: $25,000

2000-2001 Alzheimer's Research Alliance of Oregon, *Beta-amyloid vaccination in an animal model of Alzheimer's disease*. Role: Co-I (PI: Quinn)

1999-2001 Alzheimer's Research Alliance of Oregon, *Spatial coding by hippocampal neurons: Role of vestibular system*. Role: PI. Total costs: $25,000

1999-2001 Medical Research Foundation of Oregon Seed Grant, *Interaction of the vestibular system and spatial cognition,* Role: PI. Total costs: $25,000

1999-2000 Oregon Health Sciences Foundation, OHSU, *Research Equipment Fund Award,* Role: PI, Total costs: $12,500

1997-2000 NASA, NSBRI, Neurovestibular Team Grant: Visual orientation in unfamiliar gravito-inertial environments. Project title: *Head direction cell activity under microgravity conditions*. Role: Co-I (PI: Oman)

1995-1998 NIH, NIDCD, 1 F32 DC00236-01, *Vestibular influences upon head direction cell activity,* Role: PI. Sponsor: J.S. Taube. Total costs:

PEER-REVIEWED PUBLICATIONS (*in chronological order*)

1. Chrobak JJ, Spates MJ, **Stackman RW** and Walsh TJ (1989) Hemicholinium-3 prevents the working memory impairments and the cholinergic hypofunction induced by ethylcholine aziridinium ion (AF64A). *Brain Research*. **504**, 269-275.
2. Chrobak JJ, **Stackman RW** and Walsh TJ (1989) Intraseptal administration of muscimol produces dose-dependent memory impairments in the rat. *Behavioral and Neural Biology*. **52**, 357-369. ** cover illustration
3. Tseng LF, Tang R, **Stackman RW**, Camara A and Fujimoto JM (1990) Brainstem sites differentially sensitive to ß-endorphin and morphine for analgesia and release of met-enkephalin in anesthetized rats. *Journal of Pharmacology & Experimental Therapeutics*. **253**, 930-937.
4. **Stackman RW** and Walsh TJ (1992) Chlordiazepoxide-induced working memory impairments: Site specificity and reversal by flumazenil (RO15, 1788). *Behavioral and Neural Biology*. **57**, 233-243.
5. Walsh TJ, **Stackman RW**, Emerich DF and Taylor LA (1993) Intraseptal injection of GABA and benzodiazepine receptor ligands alters high-affinity choline transport in the hippocampus. *Brain Research Bulletin*. **31**, 267-271.
6. Opello KD, **Stackman RW**, Ackerman S and Walsh TJ (1993) AF64A (Ethylcholine mustard aziridinium) impairs acquisition and performance of a spatial, but not a cued water maze task: Relation to cholinergic hypofunction. *Physiology and Behavior*. **54**, 1227-1233.
7. Wöertwein G, **Stackman RW** and Walsh TJ (1994) Vitamin E prevents the place learning deficit and the cholinergic hypofunction induced by AF64A. *Experimental Neurology*. **125**, 15-21.
8. **Stackman RW** and Walsh TJ (1994) Baclofen produces dose-related working memory impairments after intraseptal injection. *Behavioral and Neural Biology*. **61**, 181-185.
9. Walsh TJ, Kelly RM and **Stackman RW** (1994) Strategies to limit brain injury and promote recovery of function. *Neurotoxicology*. **15**, 467-476.

PEER-REVIEWED PUBLICATIONS: *continued*

10. Janis LS, Glasier MM, Martin G, **Stackman RW**, Walsh TJ and Stein DG (1995) A single intraseptal injection of nerve growth factor facilitates radial maze performance following damage to the medial septum in rats. *Brain Research*. **679**, 99-109.

11. **Stackman RW** and Walsh TJ (1995) Anatomical specificity and time-dependence of chlordiazepoxide-induced spatial memory impairments. *Behavioral Neuroscience*. **109**, 436-445.

12. **Stackman RW** and Walsh TJ (1995) Distinct profile of working memory impairment induced by either intraseptal chlordiazepoxide or intraventricular ethylcholine aziridinium ion (AF64A). *Neurobiology of Learning and Memory*. **64**, 226-236.

13. Walsh TJ, Kelly RM, Dougherty KD, **Stackman RW**, Wiley RG and Kutscher CL (1995) Behavioral and neurobiological alterations induced by the immunotoxin 192-IgG-saporin: Cholinergic and non-cholinergic effects following i.c.v. injection. *Brain Research*. **702**, 233-245.

14. **Stackman RW**, Brucato F, Walsh TJ and Swartzwelder HS (1996) Medial septal benzodiazepine receptors modulate hippocampal evoked responses and long-term potentiation. *Brain Research*. **717**, 12-21.

15. Walsh TJ, Herzog CD, Gandhi C, **Stackman RW** and Wiley RG (1996) Injection of IgG 192-saporin into the medial septum produces cholinergic hypofunction and dose-dependent working memory deficits. *Brain Research*. **726**, 69-79.

16. Taube JS, Goodridge JP, Golob EJ, Dudchenko PA and **Stackman RW** (1996) Processing the head direction signal: A review and commentary. *Brain Research Bulletin*. **40**, 477-486.

17. Herzog CD, **Stackman RW** and Walsh TJ (1996) Flumazenil enhances, while diazepam binding inhibitor impairs, performance in a working memory task. *Neurobiology of Learning and Memory*. **66**, 341-352.

18. Smith ST, **Stackman RW** and Clark AS (1996) Spatial working memory is preserved in rats treated with anabolic-androgenic steroids. *Brain Research*. **737**, 313-316.

19. **Stackman RW**, Blasberg ME, Langan CL and Clark AS (1997) Stability of spatial working memory across the estrous cycle of Long-Evans rats. *Neurobiology of Learning and Memory*. **67**, 167-171.

20. **Stackman RW** and Taube JS (1997) Firing properties of head direction cells in the rat anterior thalamic nucleus: Dependence upon vestibular input. *Journal of Neuroscience*. **17**, 4349-4358.

21. **Stackman RW**, Bartolomeo AC and Walsh TJ (1997) Vitamin E attenuates the effects of both reversible and irreversible inhibitors of high-affinity choline transport *in vivo*. *Restorative Neurology and Neuroscience*. **11**, 83-89.

22. Walsh TJ, Gandhi C and **Stackman RW** (1998) Amnestic effects following temporary inactivation of the rat medial septum and nucleus basalis: Dissociation of memory and performance. *Behavioral Neuroscience*. **112**, 1114-1124.

23. **Stackman RW** and Taube JS (1998) Firing properties of rat lateral mammillary single units: Head direction, head pitch, and angular head velocity. *Journal of Neuroscience*. **18**, 9020-9037.

24. **Stackman RW**, Tullman ML and Taube JS (2000) Maintenance of rat head direction cell firing during locomotion in the vertical plane. *Journal of Neurophysiology,* **83**, 393-405.

25. Golob EJ, **Stackman RW,** Wong AC and Taube JS (2001) On the behavioral significance of head direction cells. Neural and behavioral dynamics during spatial memory tasks. *Behavioral Neuroscience,* **115**, 285-304.

26. **Stackman RW** and Herbert AM (2002) Rats with lesions of the vestibular system require visual landmark for spatial navigation. *Behavioural Brain Research*, **128**, 27-40.

PEER-REVIEWED PUBLICATIONS: *continued*

27. **Stackman RW**, Clark AS and Taube JS (2002) Hippocampal spatial representations require vestibular input. *Hippocampus*, **12**, 291-303.

28. **Stackman RW**, Hammond RS, Linardatos E, Gerlach A, Maylie J, Adelman J and Tzounopoulos T (2002) Small conductance Ca^{2+}-activated K^+ channels modulate synaptic plasticity and memory encoding. *Journal of Neuroscience*, **22**, 10163-10171.

29. Calton JL, **Stackman RW**, Goodridge JP, Archey WB, Dudchenko PA and Taube JS (2003) Hippocampal place cell instability following lesions of the head direction cell network. *Journal of Neuroscience*, **23**, 9719-9731.

30. **Stackman RW**, Golob EJ, Bassett J and Taube JS (2003) Passive transport disrupts directional path integration by rat head direction cells. *Journal of Neurophysiology*, **90**, 2862-2874.

31. **Stackman RW**, Eckenstein F, Frei B, Kulhanek D, Nowlin J and Quinn JF (2003) Prevention of age-related spatial memory deficits in a transgenic mouse model of Alzheimer's disease by chronic *Gingko biloba* treatment. *Experimental Neurology*, **184**, 510-520.

32. Tzounopoulos T and **Stackman RW** (2003) Enhancing synaptic plasticity and memory: A role for small conductance Ca^{2+}-activated K^+ channels. *The Neuroscientist*, **9**, 434-439.

33. Hammond RS, Tull LE and **Stackman RW** (2004) On the delay-dependent involvement of the hippocampus in object memory. *Neurobiology of Learning and Memory.* **82**, 26-34.

34. Bond CT, Herson PS, Strassmaier T, Hammond RS, **Stackman RW**, Maylie J, Adelman JP (2004) Small conductance Ca^{2+}-activated K^+ channel knock-out mice reveal the identity of calcium-dependent afterhyperpolarization currents. *Journal of Neuroscience*, **24**, 5301-5306.

35. Taube JS, **Stackman RW**, Calton J and Oman CM (2004) Rat head direction cell responses in 0-*G* parabolic flight. *Journal of Neurophysiology.* **92**, 2887-2997.

36. Quinn JF, Kaye J, Montine T and **Stackman RW** (2004) Polyphenolics in Alzheimer's disease: The development of clinical trials. *Pharmaceutical Biology*. **42 (Suppl. 1),** 64-73.

37. Quinn JF, Kulhanek D, Nowlin J, Jones R, Praticò D, Rokach J and **Stackman RW** (2005) Chronic melatonin therapy fails to alter amyloid burden or oxidative damage in old Tg2576 mice: Implications for clinical trials. *Brain Research*. **1037**, 209-213.

38. Hammond RS, Bond CT, Ngo-Anh TJ, Adelman JP, Maylie J and **Stackman RW** (2006) Small-conductance Ca^{2+}-activated K^+ channel 2 (SK2) overexpression impairs hippocampal learning, memory, and synaptic plasticity. *Journal of Neuroscience.* **26(6)**: 1844-1853.

39. Quinn JF, Bussiere JR, Hammond RS, Montine TJ, Henson E, Jones RE and **Stackman RW** (2007) Chronic dietary α-lipoic acid reduces deficits in hippocampal memory of aged Tg2576 mice. *Neurobiology of Aging.* **28(2)**: 213-225.

40. **Stackman RW**, Bond CT and Adelman JP (2008) Contextual memory deficits observed in mice overexpressing small conductance Ca^{2+}-activated K^+ type 2 ($K_{Ca}2.2$, SK2) channels are caused by an encoding deficit. *Learning & Memory*. **15(4)**: 208-213.

41. Yang D, Kim KH, Phimister A, Ward TR, **Stackman RW**, Mervis R, Wisniewski AB, Klein S, Kodavanti PRS, Anderson KA, Wayman G, Pessah IN and Lein PJ (2009) Developmental exposure to polychlorinated biphenyls (PCBs) interferes with experience-dependent dendritic plasticity and ryanodine receptor expression in weanling rats. *Environmental Health Perspectives.* **117(3):** 426-435.

42. Vick KA, Guidi M and **Stackman RW** (2010) *In vivo* pharmacological manipulation of small conductance Ca^{2+}-activated K^+ channels ($K_{Ca}2$, SK) influences motor behavior, object memory and fear conditioning. *Neuropharmacology.* **58(3):** 650-59.

PEER-REVIEWED PUBLICATIONS: *continued*

43. Allen D, Bond CT, Luján R, Ballesteros-Merino C, Lin MT, Wang K, Watanabe M, Shigemoto R, **Stackman RW**, Maylie J and Adelman JP (2011) The SK2-Long isoform directs synaptic localization and function of SK2-containing channels. *Nature Neuroscience.* **14(6):** 744-49.

44. **Stackman RW,** Lora JC and Williams SB (2012) Directional responding of C57BL/6J mice in the Morris water maze is influenced by visual and vestibular cues and is dependent upon the anterior thalamic nuclei. *Journal of Neuroscience.* **32(30):** 10211-10225.

45. Zhang G, Ásgeirsdóttir HN, Cohen SJ, Munchow AH, Barrera MP and **Stackman RW** (2013) Stimulation of serotonin 2A receptors facilitates consolidation and extinction of fear memory in C57BL/6J mice. *Neuropharmacology.* **64:** 403-413. Epub available 09/2012.

46. Cohen SJ, Munchow A, Rios LM, Zhang G, Ásgeirsdóttir HN and **Stackman Jr RW** (2013) The rodent hippocampus is essential for non-spatial object memory. *Current Biology.* **23:** 1685-1690. ******

**** Highlighted in *Current Biology* Dispatch article: Clark RE (2013) Recognition memory: an old idea given new life. *Current Biology* 23, R725-727.**

47. Rabinowitz A, Cohen SJ, Finn DA and **Stackman Jr RW** (2014) The neurosteroid allopregnanolone impairs hippocampal-dependent object memory and contextual fear memory in C57BL/6J mice. *Hormones & Behavior,* **66(2):** 238-246.

48. Cohen SJ and **Stackman Jr RW** (2015) Assessing rodent hippocampal involvement in the novel object recognition task. A review. *Behavioural Brain Research,* **285:** 105-117.

49. Zhang G and **Stackman Jr RW** (2015) The role of serotonin 2A (5-HT2A) receptors in memory and cognition. *Frontiers in Pharmacology, Section Neuropharmacology,* **Oct 6;6:** 225. doi 10.3389/fphar.2015.00225.

50. Wu X, Pang G, Zhang Y-M, Dong L, **Stackman Jr RW** and Zhang G (2015) Activation of serotonin 2C receptor suppresses behavioral sensitization and naloxone-precipitated withdrawal symptoms in heroin-dependent mice. *Neuroscience Letters,* **607:** 23-28.

51. Zhang G, Cinalli Jr D, Cohen SJ, Knapp KD, Rios LM, Martínez-Hernández J, Luján R and **Stackman Jr RW** (2016) Examination of the hippocampal contribution to serotonin 5-HT2A receptor-mediated facilitation of object memory in C57BL/6J mice. *Neuropharmacology,* **109:** 332-340.

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60. Rice-Kuchera C and **Stackman Jr RW** (in preparation). Selective activation of the small conductance calcium-activated potassium channel subunit, SK1 impairs hippocampal-dependent object memory and Pavlovian fear memory in C57BL/6J mice.

61. Cohen SJ, Cinalli Jr, D, Ásgeirsdóttir HN, Barenholtz E and **Stackman Jr RW** (*under revision*) Every picture tells a story: Evidence for picture-object equivalence in mice. *Learning & Memory.*

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1. Electrophysiological Recording Techniques. (2010) (Eds: R.P. Vertes and **R.W. Stackman, Jr.**). Neuromethods Series, Vol. 54. Humana Press, Totowa, NJ.

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INVITED TALKS

1990 Intraseptal infusion of GABA and benzodiazepine agonists and antagonists: Behavioral and neurochemical correlates. *Allegheny Neuroscience Alumni Symposium,* Allegheny College, Meadville, PA.

1994 Medial septal benzodiazepine receptors and spatial memory: Behavioral and electrophysiological determinants. *Dept of Physiology, State Univ. of New York Health Sciences Center,* Brooklyn, NY

1997 Neurophysiological correlates of spatial cognition: Dependence upon vestibular input. Department of Behavioral Neuroscience, Oregon Health Sciences University, Portland, OR

1999 Limbic spatial representations require vestibular input: Evidence from single-unit recording studies. *Portland Citywide Cognitive Neuroscience Group*, Portland, OR

2000 Hippocampal spatial representations require vestibular input. *International Society for Behavioural Neuroscience*, Cannon Beach, OR

2001 Calcium-activated potassium channels and hippocampal-dependent spatial learning. Celebration Symposium *Department of Behavioral Neuroscience, School of Medicine*, *Oregon Health & Science University*, Portland OR.

2002 Distinct influence of vestibular and motor cues on head direction cell activity: *Fondation des Treilles Meeting*, *Brain Basis of Spatial Orientation.* Tourtour, Provence, France

2002 The neurobiology for a sense of direction: An update from on the ground, upside-down, and space-bound. *6th NASA Symposium on the Role of the Vestibular Organs in the Exploration of Space*, Portland, OR

2002 Protective influence of chronic *Ginkgo biloba* extract in a transgenic mouse model of Alzheimer's disease. Beaufour Ipsen Sponsored Symposium: *Ginkgo biloba extract: from traditional medicine to a medicine of the future*. Berlin, Germany

2003 Small conductance calcium-activated K^+ channels constrain hippocampal-dependent memory. *International Society for Behavioural Neuroscience*, Prague, Czech Republic

2004 SK channels: A constraint on hippocampal memory and physiology. Department of Biology, William Paterson University, Wayne, NJ

2005 Neural mechanisms of navigation and their disruption by ethanol. Department of Psychology, Florida Atlantic University, Boca Raton, FL

2005 Ethanol's influence on the neural mechanisms of spatial navigation. Department of Psychology, Arizona State University, Tempe, AZ

2007 Memories of the hippocampus: Influences of S(pecial)K^+ channels. *FAU Neuroscience Seminar Series*

2008 Memories of the hippocampus: The influence of S(pecial)K^+ channels. *"Plastic Brain" Neuroscience Symposium in honor of Dr. Eric Kandel,* Nova Southeastern University, Davie, FL

2009 Was Tolman wrong? Behavioral and brain mechanisms of spatial navigation. *Department of Psychology Seminar Series,* Florida Atlantic University, Boca Raton, FL

2010 Modulating memory encoding by hippocampal SK channels. *FAU/MPFI Neuroscience Symposium*, Boca Raton, FL

2011 SK channels modulate hippocampal physiology. University of Göttingen, Göttingen, Germany

2011 Mixing alcohol with navigation: Lessons from the rodent brain. *Keynote Address: Annual Broward Psychology Association Fair*, Davie, FL

2011 A short story of the long form of the SK2 channel's influence on long-term memory. *25th Anniversary Mini-Symposium of the Center for Complex Systems and Brain Sciences*, Boca Raton, FL

2011 Firing patterns of head direction cells have a well-characterized behavioral correlate. But do these neurons guide navigation? Max Planck Florida Institute, Jupiter, FL

2013 Hippocampal memory: Modulation by SK channels and a map for objects. Department of Psychology, Temple University, Philadelphia, PA

2014 Basic research to discover novel treatments of Alzheimer's disease-related memory deficits. Plenary Lecture at the *2014 Alzheimer's Educational Conference*, West Palm Beach, FL

2014 The mouse hippocampus, it isn't just for space anymore. Department of Psychology, Tulane Univ., New Orleans, LA

2015 Modulation of long-term memory processes by neuronal SK channels. Where to now, SK channels? *Tri-Institutional Neuroscience Seminar Series,* Max Planck Florida Institute, Jupiter, FL

2015 Contribution of mouse hippocampal CA1 region in object-context memory: behavioral and in vivo neurophysiological correlates. *Spring Hippocampal Research Conference*, Taormina, IT

2015 An object memory map in the mouse hippocampus. Department of Biology and the Neuroscience Institute, University of Texas San Antonio, TX

2016 Memory for events: neural circuit and neuronal representations. Department of Psychology, Florida Atlantic University, Boca Raton, FL

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2. Emerich DF, Stackman RW and Walsh TJ (1989) Ganglioside AGF2 promotes behavioral and neurochemical recovery without minimizing the extent of cholinergic cell loss following AF64A. *Conference on Molecular and Cellular Mechanisms of Neuronal Plasticity in Aging and Alzheimer's Disease*, Bethesda, MD.
3. Stackman RW, Emerich DF, Taylor LA, and Walsh TJ (1989) Intraseptal administration of GABA and benzodiazepine agonists and antagonists: Alterations in hippocampal choline uptake and cognitive behavior. *Society for Neuroscience*, Phoenix, AZ.
4. Emerich DF, Stackman RW and Walsh TJ (1989) Comparison of the effects of intradentate versus intraventricular colchicine: Neurobiological and behavioral correlates. *Society for Neuroscience*, Phoenix, AZ.
5. Stackman RW, Wöertwein G and Walsh TJ (1990) A developmental model of cholinergic hypofunction. *New Jersey Neuropsychopharmacology Society*, Princeton, NJ.
6. Wöertwein G, Stackman RW and Walsh TJ (1990) Neuroprotectant effects of Vitamin E in a model of cholinergic hypofunction. *New Jersey Neuropsychopharmacology Society*, Princeton, NJ.
7. Walsh TJ and Stackman RW (1990) Potential site and mechanism of action of benzodiazepine-induced amnesia. *Conference on the Neurobiology of Learning and Memory*, Irvine, CA.
8. Stackman RW and Walsh TJ (1990) Chlordiazepoxide-induced working memory impairment: Site-specificity and antagonism with RO15,1788. *Society for Neuroscience*, St. Louis, MO.
9. Walsh TJ, Stackman RW and Wöertwein G (1990) A developmental model of cholinergic hypofunction. *Society for Neuroscience*, St. Louis, MO.
10. Springer JE, Gwag BJ, Wöertwein G, Stackman R, Rogers R, Opello K and Walsh TJ (1991) Potential involvement of nerve growth factor (NGF) in spatial memory formation. *Society for Neuroscience*, New Orleans, LA.
11. Walsh TJ and Stackman RW (1992) Bi-directional modulation of retention by intraseptal injection of benzodiazepine agonists, antagonists, and endogenous inverse agonists. *Conference on the Neurobiology of Learning and Memory*, Irvine, CA
12. Stackman RW & Walsh TJ (1992) Intraseptal diazepam-binding inhibitor (DBI) and flumazenil enhance retention of a single session spatial water maze task. *Society for Neuroscience*, Anaheim, CA.

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18. Walsh TJ, Stackman RW, Gandhi CC and Wiley RG (1994) Intraseptal 192-saporin produces a dose-related destruction of the cholinergic basal forebrain (CBF). *Society for Neuroscience*, Miami, FL.
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62. Williams SB, Guidi M and Stackman Jr RW (2009) Heading in the right direction: Directional navigation in the Morris water maze is dependent upon the anterodorsal thalamus but not the CA1 of the dorsal hippocampus. *Society for Neuroscience*, Chicago, IL.
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64. Stackman Jr RW, Smith K and Chow S-Y (2010) Acute ethanol and navigation in male C57BL/6J mice: A tale of three spatial tasks. *International Society for Biomedical Research on Alcoholism, 2010 ISBRA World Congress,* Paris, France. Abstract published: *Alcoholism: Clinical & Experimental Research,* 34(8, Suppl), 99A.
65. Rios L, Christakis CR, Guidi M and Stackman Jr RW (2010) The dorsal hippocampus is necessary for non-spatial object memory in male C57BL/6J mice. *Society for Neuroscience*, San Diego, CA. 202.25.
66. Lee and Stackman Jr RW (2010) The influence of the small conductance calcium-activated potassium (SK, K_{Ca2}) channel activator 1-ethyl-2-benzimidazolinone (1-EBIO) on hippocampal single-unit responses in freely moving C57BL/6J mice. *Society for Neuroscience*, San Diego, CA. 341.15.
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68. Ballan M, Stackman Jr RW, Henik A and Fuchs A (2010) Spatiotemporal brain dynamics of a two digit number comparison task. *Society for Neuroscience*, San Diego, CA. 393.17.
69. Zhang G and Stackman Jr RW (2010) Activation of serotonin 2A receptors enhances hippocampal learning and memory. *University of Miami Miller School of Medicine, Neuroscience Research Day*, Dec 5, 2010.
70. Lora J and Stackman Jr RW (2011) The contribution of the prelimbic cortex to the disruptive effects of acute ethanol on spatial navigation in male C57BL/6J mice. *International Behavioral Neuroscience Society Meeting,* May 2011, Steamboat Springs, CO.

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86. Lora, J.C. and Stackman Jr., R.W. (2014) Male C57BL/6J mice rely on relative navigational search strategy for goal location in a novel land-based task. *Society for Neuroscience*, Washington, DC. Program No. 360.18.

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87. Sanguinetti, S.A. and Stackman Jr., R.W. (2014) Small conductance Ca 2+-activated K+ channel blockade in the lateral amygdala alters fear memory. *Society for Neuroscience*, Washington, DC. Program No. 461.01.
88. Cohen, S.J. and Stackman Jr., R.W. (2014) Visual recognition in mice: perceiving the relationship between 2D pictures of objects to their 3D physical form. *Society for Neuroscience*, Washington, DC. Program No. 749.04.
89. Ásgeirsdóttir HN and Stackman Jr RW (2014) Object-specific activity recorded from the hippocampus of male C57BL/6J mice and a novel behavioral paradigm to assess discrimination of moving 3D objects. *Society for Neuroscience*, Washington, DC. Program No. 750.05.
90. Ásgeirsdóttir HN and Stackman Jr RW (2015) Inactivation of the C57BL/6J mouse hippocampus disrupts discrimination and avoidance of objects that are either stationary or moving around the environment. *Society for Neuroscience*, Chicago, IL. Program No. 725.14.
91. Lora JC, Sharvit L and Stackman Jr RW (2015) Small conductance Ca 2+-activated K+ channel blockade in the prelimbic cortex modulate extinction of fear memory in male C57BL/6J mice. *Society for Neuroscience*, Chicago, IL. Program No. 175.17.
92. Cinalli Jr D, Cohen SC and Stackman Jr RW (2015) Hippocampal Arc protein expression in male C57BL/6J mice is exploration dependent in the novel object recognition task. *Society for Neuroscience*, Chicago, IL. Program No. 626.03.
93. Zhang G, Cinalli Jr D, Barrera MP and Stackman Jr RW (2015) Activation of serotonin 5-HT_{2A} receptors delays the retrieval of spatial memory in a Morris water maze task. *Society for Neuroscience*, Chicago, IL. Program No. 535.28.
94. Stackman Jr RW, Zhang G, Cinalli Jr D, Rice-Kuchera C, Huang X, Yuan T-F, Hua R, Zhang Y-M (2016) Fear memory extinction is associated with an increased expression of synaptic small conductance calcium-activated potassium channels, type 2 (SK2) in male C57BL/6J mice. *Society for Neuroscience*, San Diego, CA. Program No. 262.09.
95. Stackman Jr RW and Zhang G (2016). Visually guided hippocampal-dependent spatial navigation by C57BL/6J mice is sensitive to acute serotonin 2A receptor agonism. *Annual Meeting of the American College of Neuropsychopharmacology,* Hollywood, FL.
96. Cinalli Jr D, Cohen SC and Stackman Jr RW (2017) DREADD inactivation of dorsal hippocampus impairs object recognition memory in C57BL/6J mice. *Society for Neuroscience*, Washington, DC.
97. Swarnkar S, Rizzo V, Touzani K, Raveendra BL, Lora JC, Kadakkuzha BM, Liu X-A, Zhang C, Betel D, Stackman Jr RW, Puthanveettil SV (2017) Prelimbic cortex is critical for encoding contextual fear memory storage. *Society for Neuroscience*, Washington, DC.
98. Cinalli Jr D, Cohen SC and Stackman Jr RW (2018) DREADD inactivation inhibits spatial and object memory recall. *Annual meeting of the Florida Consortium on the Neurobiology of Cognition,* Gainesville, FL.
99. Rice-Kuchera C and Stackman Jr RW (2018) Selective activation of SK1 channels impairs hippocampal memory. *Annual meeting of the Florida Consortium on the Neurobiology of Cognition,* Gainesville, FL.
100. Rice-Kuchera C and Stackman Jr RW (2018) Efficacy of selective activators of SK channels to rescue attention and memory in a mouse model of schizophrenia. *Society for Neuroscience*, San Diego, CA.
101. Hindman BL, Baran JV and Stackman Jr RW (2019) Consolidation of long-term object memory in C57BL/6J mice is enhanced by systemic administration of a dopamine D1 agonist or post-training exposure to a novel context. *Society for Neuroscience*, Chicago, IL.
102. Rice-Kuchera C and Stackman Jr RW (2019) Small conductance Ca^{2+}-activated K^+ channels modulate the expression of ketamine-induced cognitive impairments in C57BL/6J mice. *Society for Neuroscience*, Chicago, IL.
103. Cinalli Jr DA, Cohen SJ, Gajewski-Kurdziel P and Stackman Jr RW (2019) Arc mRNA quantification in CA1 and perirhinal/lateral entorhinal cortex during weak and strong object memory consolidation in male C57BL/6J mice. *Society for Neuroscience*, Chicago, IL.

PROFESSIONAL AFFILIATIONS

1988-pres Member, Society for Neuroscience
1990-2000 Member, New York Academy of Sciences
1994-2000 Member, Sigma Xi, The Scientific Research Society
2000-2006 Member, International Society of Behavioural Neuroscience
2006-2012 Member, Research Society on Alcoholism
2008-pres Member, Faculty for Undergraduate Neuroscience
2009-pres Member, International Behavioral Neuroscience Society
2009-pres Member, Molecular and Cellular Cognition Society
2018-*pres* Member, Florida Consortium on the Neurobiology of Cognition

TEACHING

Administration relevant to Teaching:

2018-*present* FAU representative to the Selection Committee and Steering Committee of International Max Planck Research School (IMPRS) for Brain & Behavior, Jupiter FL and Bonn, Germany.

2016-2019 Co-Director (with Alex Keene) Neuroscience & Behavior B.S. degree program, College of Science, Florida Atlantic University

2015-*present* Faculty Member, International Max Planck Research School (IMPRS) for Brain & Behavior, Jupiter FL and Bonn, Germany.

Florida Atlantic University

2019- **Biological Bases of Behavior I**, PSB 3002, 3 credit hrs, Spring, Course Director
2019- **Neuroscience 2**, PSB 6346, 3 credit hrs, Spring, Co-Director with Dr. Carmen Varela
2018- **Neuroscience 1**, PSB 6345, 3 credit hrs, Fall, Course Director
2016 **Discoveries in Neuroscience,** PSY 4930, 3 credit hr, Summer, Course Director
2016-2018 **Neuroscience 2**, PSB 6346, 3 credit hrs, Spring, Co-Director with Dr. Robert Vertes
2015, 2018 **Neurobiology of Learning & Memory**, PSB 4810, 6930, 3 credit hr, Fall, Course Director
2014-2017 **Neuroscience 1**, PSB 6345, 3 credit hrs, Fall, Co-Director with Dr. Robert Vertes
2014-2015 **Biological Bases of Behavior I**, PSB 3002, 3 credit hrs, Fall and Summer, Course Director
2014 **Memory & the Hippocampus,** EXP 6930, 3 credit hrs, Fall, Co-Director with Dr. Alan Kersten
2012-2013 **Advanced Neurophysiology Lab**, BSC 6936, 3 credit hrs, Co-Directors Murphey and Dawson-Scully
2011-2018 **Neuroscience 2**, PSB 6346, 3 credit hrs, Spring, Co-Director with Dr. Janet Blanks
2011 **Neuroscience Seminar**, EXP 6908, 1 credit hr, Fall, Spring, Co-Director with Dr. Dawson-Scully
2010-2013 **Neuroscience 1**, PSB 6345, 3 credit hrs, Fall, Co-Director with Dr. Ken Dawson-Scully
2010-2011 **Research in Psychobiology,** PSY 4930, 3 credit hrs, Fall, Course Director
2010 **Hippocampal Damage & Amnesia,** PSY 6930, 3 credit hrs; Spring, Co-Director with Dr. Kersten
2009-2010 **Neuroscience Seminar**, EXP 6908, 1 credit hr, Fall, Spring, Co-Director with Dr. Dawson-Scully
2009 **Principles of Neuroscience**, PSB 6037, 3 credit hrs, Spring, Course Director
2008 **Current Topics in Neurobiology of Learning & Memory**, PSY 4930, 6930, 3 credit hr, Spring
2007-2010 **Neuroscience 2**, PSB 6346, 3 credit hrs, Spring, Co-Director with Dr. Robert Vertes
2006-2009 **Neuroscience 1**, PSB 6345, 3 credit hrs, Fall, Co-Director with Dr. Robert Vertes
2006-2009 **Biological Bases of Behavior I**, PSB 3002, 3 credit hrs, Fall, Course Director
2006 **Biological Bases of Behavior I**, PSB 3002, 3 credit hrs, Spring, Course Director

Oregon Health & Science University

2001 **Seminar: Issues in Behavioral Neuroscience**, BEHN 607, 1 credit hr, Fall, Co-Director

2000-2004 **Current Topics Neurobiology of Learning & Memory,** BEHN 616, 4 credit hrs, Fall, Co-Director

2000-2004 **Learning and Cognition**, BEHN 615, 4 credit hrs, Winter, Co-Director

2000-2001 **Molecular Strategies in Behavioral Research**, BEHN 619, Winter, Lecturer

1999-2000 **Topics in Neuroscience Research**, NEUS 635, 3 credit hrs, Fall, Lecturer

Dartmouth College

1998 **Physiology of Behavior**, PSY 65, 3 credit hrs, Spring, Course Director

Rutgers, The State University of New Jersey

1992-1993 **Physiological Psychology**, 830:313; 3 credit hrs, Fall, Course Director

1992-1993 **Neuropsychopharmacology**, 830:412; 3 credit hrs, Summer, Course Director

SUPERVISION in the LABORATORY

High School Student Internship

2018 **Lylybell Zhou,** Dreyfoos School of the Arts, West Palm Beach, FL
2018 **Jessica Baran,** Florida Atlantic University HS, Boca Raton, FL
2013 **Jeffrey Herr,** Weinbaum Yeshiva HS, Boca Raton, FL
2012 **Faye Drucker,** Coral Springs Charter School, Coral Springs, FL
2011 **Faye Drucker,** Coral Springs Charter School, Coral Springs, FL
2009 **Joshua Stadlan,** Weinbaum Yeshiva HS, Boca Raton, FL
2003 **Di Fan**, Lake Oswego HS, Lake Oswego, OR
2003 **Laura Dodd**, Benson HS, Portland, OR
2002 **Julia Back**, Cascade Locks HS, Cascade Locks, OR
2001 **Sophie Davis**, Jesuit HS, Beaverton, OR
2000 **Georgina Jackson**, Jefferson HS, Portland, OR

Undergraduate Student Research Supervised

2020-2021 **Camila Barvo,** OURI* research grant recipient, College of Science, Florida Atlantic Univ.
2019-2020 **Camila Barvo,** OURI* research grant recipient, College of Science, Florida Atlantic Univ.
Lea Dalco, College of Science, Florida Atlantic University
Dennis Engelhardt, College of Science, Florida Atlantic University
Alexandra Lyster, College of Science, Florida Atlantic University
Pedro Millan, Wilkes Honors College, Florida Atlantic University
2018-2019 **Mariah Calubag,** OURI* research grant recipient, Wilkes Honors Coll, Florida Atlantic Univ.
Goksu Oz, OURI* research grant recipient, College of Science, Florida Atlantic University
Jessica Baran, OURI* research grant recipient, College of Science, Florida Atlantic Univ.
Isabella Martin, Wilkes Honors College, Florida Atlantic University
Pedro Millan, Wilkes Honors College, Florida Atlantic University
Karah Melvin, Wilkes Honors College, Florida Atlantic University
2017-2018 **Ronithe Senatus,** OURI* research grant recipient, College of Science, Florida Atlantic
Elishama Petion, College of Science, Florida Atlantic University
Maayan Portal, College of Science, Florida Atlantic University
Mariah Calubag, Wilkes Honors College, Florida Atlantic University
2016-2017 **Jonathan Rivera,** College of Science, Florida Atlantic University
Elishama Petion, College of Science, Florida Atlantic University
Danielle Riboul, OURI* research grant recipient, College of Science, Florida Atlantic Univ.
2015-2016 **Jonathan Troiano,** College of Science, Florida Atlantic University
Oscar Rivera, College of Science, Florida Atlantic University
Kristina Knapp, College of Science, Florida Atlantic University
Ryan Hernandez, College of Science, Florida Atlantic University

SUPERVISION in the LABORATORY *continued*

2014-2015	**Kerriann Badal,** OURI* research grant recipient, College of Science, Florida Atlantic Univ.
	Heather Wayman, College of Science, Florida Atlantic University
	Whitney Winslow, College of Science, Florida Atlantic University
2013-2014	**Christina Silvestri,** College of Science, Florida Atlantic University
	Rebecca Avila, College of Science, Florida Atlantic University
	Jeffrey Herr, Wilkes Honors College, Florida Atlantic University
	Amanda Nephew, College of Science, Florida Atlantic University
	Rachel Phillips, College of Science, Florida Atlantic University
2012-2013	**Elisa Velez,** OURI* research grant recipient, College of Science, Florida Atlantic University
	Rochelle Kinssies, College of Science, Florida Atlantic University
	Gary Bisgnano, College of Science, Florida Atlantic University
2011-2012	**Judd Jackson,** College of Science, Florida Atlantic University
	David Cherro, College of Science, Florida Atlantic University
2010-2011	**Simon Valladares,** College of Science, Florida Atlantic University
	Mercy Barrera-Lee, College of Science, Florida Atlantic University
	Herborg Nanna Ásgeirsdóttir, College of Science, Florida Atlantic University
	Stephanie Deltor, Spelman College
	Marisa Vinas, University of Miami
2009-2010	**Jesse Skinner,** College of Science, Florida Atlantic University
	Christina Christakis, College of Science, Florida Atlantic University
	Victoria Sterk, College of Science, Florida Atlantic University
2008-2009	**Shiao-Ying (Nina) Chow,** College of Science, Florida Atlantic University
	Rebecca Taskin, College of Science, Florida Atlantic University
	Alcira H. Munchow, College of Science, Florida Atlantic University
2007-2008	**Diana Daniels,** College of Science, Florida Atlantic University
	Chris Pierami, College of Science, Florida Atlantic University
2006-2007	**Melissa Malka,** College of Science, Florida Atlantic University
	Anthony Pappas, College of Science, Florida Atlantic University
	Kristine Smith, College of Science, Florida Atlantic University
	Robert Freund, College of Science, Florida Atlantic University
2005-2006	**Melissa Malka,** College of Science, Florida Atlantic University
	Michael Guidi, College of Science, Florida Atlantic University
2004-2005	**Sophie Davis,** University of Oregon
2002-2003	**Alexandra Stavrakis,** University of Southern California
2001-2002	**Alexandra Stavrakis,** University of Southern California
2000-2001	**Nikole Ferree**, Reed College

Undergraduate Honors Theses

2019	**Jessica Baran**	Max Planck Honors Program thesis, Department of Psychology, FAU
2018	**Ronithe Senatus**	Honors thesis, Dept of Biological Sciences, Florida Atlantic University
2017	**Elishama Petion**	Honors thesis, Dept of Biological Sciences, Florida Atlantic University
2017	**Jonathon Rivera**	Honors thesis, Dept of Biological Sciences, Florida Atlantic University
2017	**Danielle Riboul**	Honors thesis, Dept of Biological Sciences, Florida Atlantic University
2016	**Rebecca Walsh**	Honors thesis, Wilkes Honors College, Florida Atlantic University
2015	**Cristina Rodriguez**	Honors thesis, Wilkes Honors College, Florida Atlantic University
2012	**Claire Rice-Kuchera**	Honors thesis, Department of Psychology, Florida Atlantic University
2011	**Akiva Rabinowitz**	Honors thesis, Wilkes Honors College, Florida Atlantic University
2011	**Joan C. Lora**	Honors thesis, NSF Undergraduate Research Mentoring program, Department of Biological Sciences, Florida Atlantic University
2007	**Michael Guidi**	Honors thesis, Department of Psychology, Florida Atlantic University

SUPERVISION in the LABORATORY *continued*

Graduate Student Lab Rotation

2019-2020	**Goksu Oz,** Graduate Neuroscience Training Program, Florida Atlantic University
2018-2019	**Gabriel Pena,** Integrative Biology, Florida Atlantic University; Fall semester, *left program*
2016-2017	**Ivylynn Pastor,** Experimental Psych. Ph.D. program, Florida Atlantic Univ., *left program*
2013-2014	**Abbi Rosen,** Biomedical Sciences M.S. program, Florida Atlantic University
2012-2013	**Robert Beck,** Psychology M.A. program, Florida Atlantic University, *left program*
2011-2012	**Christina Clements,** Experimental Psych. Ph.D. program, Florida Atl. Univ., *left program*
2010-2011	**Shweta Singh,** Integrative Biology, Florida Atlantic University
	Jean-Sébastien Roy, Experimental Psych. Ph.D. program, Florida Atl. Univ., *left program*
2007-2008	**Marlene Stemme,** Experimental Psych. Ph.D. program, Florida Atl. Univ., *left program*
2004-2005	**Naomi Yoneyama,** Behavioral Neuroscience Graduate Program, OHSU
	Kristin McCarthy, Behavioral Neuroscience Graduate Program, OHSU
	Laura Villasana, Behavioral Neuroscience Graduate Program, OHSU
2002-2003	**Joseph Bussiere,** Behavioral Neuroscience Graduate Program, OHSU
	Keith Kohout, Behavioral Neuroscience Graduate Program, OHSU
2003-2004	**Kelly Pollak,** MD/PhD Program, School of Medicine, OHSU
2001-2002	**Christa Helms,** Behavioral Neuroscience Graduate Program, OHSU
2000-2001	**Shane Durrant**, Neuroscience Graduate Program, Oregon Health & Science Univ. (OHSU)
	Rebecca Hammond, Behavioral Neuroscience Graduate Program, OHSU

Masters Theses

2008	**Eric Buerger**, M.A. in Psychology, Florida Atlantic University
2009	**Sidney Williams,** M.A. in Psychology, Florida Atlantic University
2009	**Kyle Vick IV**, M.A. in Psychology, Florida Atlantic University
2010	**Rebecca Lee,** M.S. in Biomedical Science, Florida Atlantic University
2011	**Lisa Rios,** M.A. in Psychology, Florida Atlantic University
2013	**H. Nanna Ásgeirsdóttir,** M.A. in Psychology, Florida Atlantic University
2015	**David Cinalli Jr.,** M.A. in Psychology, Florida Atlantic University
2015	**Claire Rice-Kuchera,** M.A. in Psychology, Florida Atlantic University
2015	**Shannon A. Sanguinetti,** M.S. in Biology, Florida Atlantic University
2019	**Brandon Hindman,** M.A. in Psychology, Florida Atlantic University
In progress	**Brittany Crafton,** M.A. in Psychology, Florida Atlantic University

Doctor of Philosophy

2005 **Rebecca S. Hammond**, Ph.D. in Behavioral Neuroscience, Oregon Health Science Univ.
Dissertation title: *"SK2 Channel Regulation of Hippocampal Function*".
Current position: Director, *In vivo* Pharmacology, Sage Therapeutics, Cambridge, MA

2010 **Meltem Ballan**, Ph.D. in Complex Systems & Brain Sciences, Florida Atlantic Univ.
Dissertation title: "*Brain Dynamics and Behavioral Basis of a Higher-Level Cognitive Task: Number Comparison*".
Current position: Data Scientist, Information Technology & Services, Dallas, TX

2016 **Sarah J. Cohen,** Ph.D. in Complex Systems & Brain Sciences, Florida Atlantic Univ.
Dissertation title: "*Of Mice, Men and Memories: The Role of the Rodent Hippocampus in Object Recognition".*
Current position: Postdoctoral fellow, FAU, Jupiter, FL

Doctor of Philosophy *continued*

2017 **Joan C. Lora,** Ph.D. in Integrative Biology & Neuroscience, Florida Atlantic Univ.
Dissertation title: *"Which Way is It? Spatial Navigation and the Genetics of Head Direction Cells".*
Current position: Noldus Information Technologies, Leesburg, VA

2017 **H. Nanna Ásgeirsdóttir,** Ph.D. in Integrative Biology & Neuroscience, Florida Atlantic Univ.
Dissertation title: *"Behavioral and Electrophysiological Evidence for Hippocampal Involvement in Object Motion Processing in C57BL/6J Mice".*
Current position: Frontiers Media SA, Lausanne, Switzerland

2020 **David Cinalli Jr.,** Ph.D. in Experimental Psychology, Florida Atlantic Univ.
Dissertation title: *"Investigating the Neural Circuitry Supporting Object Recognition Memory in C57BL/6J Mice".*
Current position: Assistant Director, ASCEND Neuroscience Outreach

2020 **Claire A. Rice,** Ph.D. in Experimental Psychology, Florida Atlantic Univ.
Dissertation title: *"Selective Modulation of Small Conductance Calcium-Activated Potassium Channels Rescues Ketamine-induced Memory Impairments and Attention Deficits in a C57BL/6J Schizophrenic Mouse Model: A New Therapeutic Approach".*

in progress **Brandon Hindman,** Ph.D. in Experimental Psychology, Florida Atlantic Univ.

Postdoctoral Fellows

2004-2005 **Michael T. Lin** (Ph.D., 2004, Loma Linda Univ.), Co-mentor: John P. Adelman, OHSU. Current position: Associate Professor, Department of Physiology & Cell Biology, College of Medicine, University of South Alabama

2010-12, 17-18 **Gongliang Zhang** (Ph.D., 2010, Florida Atlantic Univ.), Current position: Staff Scientist, Lieber Institute for Brain Development, Johns Hopkins University, Baltimore, MD.

2016-present **Sarah J. Cohen** (Ph.D., 2016, Florida Atlantic Univ.), Current position: Postdoctoral Fellow, Department of Biological Sciences, and Jupiter Life Science Initiative, Florida Atlantic University.

THESIS and DISSERTATION SUPERVISORY COMMITTEES

2001 **William Griesar**, Ph.D. in Behavioral Neuroscience, OHSU, Chair: Barry Oken
2003 **Joseph Bussiere,** M.S. in Behavioral Neuroscience, OHSU, Chair: Jeri Janowsky
2007 **Danielle Reis,** M.A. in Psychology, Florida Atlantic University, Chair: Betty Tuller
2008 **Swapna Krishnamoorthy,** M.S. in Integrative Biology, Florida Atlantic University, Chair: Rui Tao
2009 **Leslie Butler,** M.A. in Psychology, Florida Atlantic University, Chair: Alan Kersten
2010 **Gongliang Zhang,** Ph.D. in Integrative Biology, Florida Atlantic University, Chair: Rui Tao
2010 **Simon Bulley,** Ph.D. in Integrative Biology, Florida Atlantic University, Chair: Wen Shen
2010 **Kayla Causey,** Ph.D. in Experimental Psychology, Florida Atlantic U, Chair: David Bjorklund
2011 **Stephanie Linley,** Ph.D. in Experimental Psychology, Florida Atlantic Univ, Chair: Kathy Hughes
2011 **Maria Corbett,** M.A. in Psychology, Florida Atlantic University, Chair: Nancy Jones
2011 **Cigdem Aydin,** Ph.D. in Integrative Biology, Florida Atlantic University, Chair: Ceylon Isgor
2012 **Joseph Guzzone,** M.S. in Biology, Florida Atlantic University, Chair: Wen Shen
2012 **Roger McIntosh,** Ph.D. in Experimental Psychology, Florida Atlantic Univ., Chair: M. Rosselli

THESIS and DISSERTATION SUPERVISORY COMMITTEES *continued*

2012 **Laxmi Lalwani,** M.A. in Psychology, Florida Atlantic University, Chair: Monica Rosselli
2013 **Ozge Oztan,** Ph.D. in Integrative Biology, Florida Atlantic University, Chair: Ceylon Isgor
2013 **Nick Minar,** M.A. in Psychology, Florida Atlantic University, Chair: David Lewkowicz
2013 **Nikola Lucas,** Ph.D. in Experimental Psychology, Florida Atlantic Univ., Chair: Nancy Jones
2014 **Tracy Romano,** Ph.D. in Complex Systems & Brain Sciences, FAU, Chair: Steve Bressler
2014 **Andres Paz,** M.A. in Psychology, Florida Atlantic University, Chair: Monica Rosselli
2014 **AmberRose Reale,** M.A. in Psychology, Florida Atlantic University, Chair: Monica Rosselli
2015 **Avisa Asemi,** Ph.D. in Complex Systems & Brain Sciences, FAU, Chair: Steve Bressler
2016 **Andres Paz,** Ph.D. in Experimental Psychology, Florida Atlantic Univ., Chair: M. Rosselli
2016 **Janet Menzie,** Ph.D. in Integrative Biology, Florida Atlantic University, Chair: Jang Wu
2016 **Brandon Lloyd,** Ph.D. in Integrative Biology, Florida Atlantic University, Chair: Rod Murphey
2017 **Shweta Singh,** Ph.D. in Integrative Biology, Florida Atlantic University, Chair: K. Dawson-Scully
2017 **Kyle Newton,** Ph.D. in Integrative Biology, Florida Atlantic University, Chair: Steve Kajiura
2017 **Daniel Wilson,** Ph.D. in Integrative Biology & Neuroscience, FAU, Role: Committee Chair, Dissertation Advisor: D. Fitzpatrick
2018 **Keith Murphy,** Ph.D. in Integrative Biology and Neuroscience, FAU, Chair: K. Dawson-Scully
2018 **Britnee McDole,** Ph.D. in Integrative Biology, Florida Atlantic University, Chair: Kate Guthrie
2018 **Tatiana Viena,** Ph.D. in Complex Systems & Brain Sciences, FAU, Chair: Robert Vertes
2019 **Kuo-Sheng Lee,** Ph.D. in Integrative Biology & Neuroscience, FAU, FAU, Role: Committee Chair, Dissertation Advisor: D. Fitzpatrick
2020 **Neymi Mignocchi,** Ph.D. in Integrative Biology & Neuroscience, FAU, Role: Committee Chair, Dissertation Advisor: H. Kwon
2020 **Ori Yarden,** M.A. in Psychology, FAU, Chair: C. Varela
in progress **Tim Holford,** Ph.D. in Integrative Biology & Neuroscience, FAU, Supervisor: M. Bolton
in progress **Ingo Gotthard,** Ph.D. in Integrative Biology & Neuroscience, FAU, Supervisor: M. Bolton
in progress **Clara Tepohl,** Ph.D. in Integrative Biology & Neuroscience, FAU, Supervisor: D. Fitzpatrick
in progress **Zidan Yang,** Ph.D. in Integrative Biology & Neuroscience, FAU, Supervisor: D. Fitzpatrick
in progress **Emily Stark,** Ph.D. in Experimental Psychology, Florida Atlantic Univ., Chair: E. Barenholtz
in progress **Kerriann Badal,** Ph.D. in Integrative Biology & Neuroscience, FAU, Role: Committee Chair, Dissertation Advisor: S. Puthanveettil
in progress **Goksu Oz,** Ph.D. in Integrative Biology & Neuroscience, FAU, Role: Committee Chair, Dissertation Advisor: R. Yasuda

SERVICE

Department of Psychology, FAU

2017-2018 Member, Undergraduate Committee
2017-2018 Chair, Behavioral Neuroscience Faculty Search Committee
2014 Member, Subcommittee on Departmental Policies
2010/11/13 Chair, Behavioral Neuroscience Faculty Search Committee
2008-2011 Member, Graduate Admissions Committee
2008-2010 Member, Undergraduate Committee

Charles E. Schmidt College of Science, FAU

2015 Department of Psychology representative, Search Committee Interim Dean of College of Science

SERVICE *continued*

2013-2016 Associate Director of Neuroscience, Jupiter Life Science Initiative
2013-2015 Co-Chair, Neuroscience Faculty Search Committee, Jupiter Life Science Initiative
2011-2014 Department of Psychology representative, Master Researcher Committee
2011-2012 Member, Faculty Search Committee for Professor of Neuroscience (the Neuro-Star), Jupiter
2011-2019 Member, Admissions Committee, Integrative Biology and Neuroscience (IBNS) Ph.D. program
2010-2016 Member, Steering Committee, Integrative Biology and Neuroscience (IBNS) Ph.D. program
2007-2010 Member, FAU Interdisciplinary Neuroscience Steering Committee
2007-2010 Chair, Interdisciplinary Neuroscience Website Development Committee

2007-2009 Chair, Interdisciplinary Neuroscience Curriculum Subcommittee
2007-2008 Chair, FAU Neuroscience Seminar Subcommittee
2006-2011 Department of Psychology representative, Academic Freedom and Due Process Committee
2006-2007 Department of Psychology representative, FAU Neuroscience Seminar Subcommittee

Florida Atlantic University

2019-2019 Member, Institutional Animal Care and Use Committee, FAU Division of Research
2015-2019 Chair, Institutional Animal Care and Use Committee, FAU Division of Research
2018-2019 Member, Search Committee for Biomedical Research Institute (i-HEALTH) Director, FAU
2017-2018 Member, Steering Committee for Graduate Neuroscience Training Program (R. Blakely, Chair)
2015-2016 Member, Search Committee for Executive Director of Neuroscience, FAU Division of Research
2015 Member, Graduate Research and Inquiry Program (GRIP) Selection Committee, FAU
2014-2015 Vice-Chair, Institutional Animal Care and Use Committee, FAU Division of Research
2012-2016 College of Science representative, University Research Committee, FAU Division of Research
2012-2013 College of Science representative, University Research Counsel, FAU Division of Research
2010-2014 Member, Institutional Animal Care and Use Committee, FAU Division of Research

External Service

2020 External reviewer, Promotion to Professor application by Dr. Isabel Muzzio, Department of Biology, University of Texas – San Antonio
2019 Member, Max Planck Research Group Leader Search Committee, Max Planck Florida Institute
2018-pres Member, Selection Committee for the International Max Planck Research School for Brain & Behavior, Bonn Germany and Jupiter Florida
2014 External reviewer, Tenure and Promotion application by Dr. Ryan Yoder, Department of Psychology, Indiana University-Purdue University Fort Wayne
2014 Member, Organizing Committee for Tri-Institutional (FAU, MPFI and TSRI Florida) Neuroscience Seminar Series (TINSS)
2013-2015 Councilor, Palm Beach Chapter, Society for Neuroscience
2013-2015 Outside Scientist member, Max Planck Florida Inst. Institutional Animal Care & Use Committee
2009 External reviewer, Tenure and Promotion application by Dr. Derek Hamilton, Department of Psychology, University of New Mexico

Scientific Outreach

2018-pres **Middle School Science,** gave presentations designed to teach local Palm Beach County middle school students about brain science. Lake Park Baptist School (2018); Trinity Christian School (2019).

2007 **Science Project Advisor,** provided advice and guidance to Arlene Hoffman, a West Boca Raton High School student regarding the experimental design and analysis of data from a study she conducted of gender differences in memory among adolescents.

2002-2003 **Kids Judge Neuroscience,** Oregon Museum of Science & Industry, Portland, OR. Presented an interactive educational booth entitled, *Plasticity Makes Perfect*, designed to teach local 4th grade students about how brain plasticity enables motor skill learning.

Grant Review

2020 *Ad hoc* Scientific merit review, NSF, Assigned 1 proposal.

2019 *Ad hoc* Scientific merit review, NIH, Center for Scientific Review, Special Emphasis Panel ZRG1 MDCN-C (03) M, Mitochondrial Function and Neurodegeneration, Aug 1, 2019, Assigned 2 proposals.

2019 *Ad hoc* Scientific merit review, NSF, Assigned 1 proposal.

2019 *Ad hoc* Scientific review member, NIH, Center for Scientific Review, Pathophysiology of Mental Disorders and Addiction (PMDA) panel, Feb 6-7, 2019, Assigned 7 proposals.

2018 *Ad hoc* Scientific review member, NIH, Center for Scientific Review, Pathophysiology of Mental Disorders and Addiction (PMDA) panel, Sept 13-14, 2018, Reviewed 8 proposals.

2018 *Ad hoc* Scientific review member, NIH, Center for Scientific Review, Pathophysiology of Mental Disorders and Addiction (PMDA) panel, May 29-30, 2018, Reviewed 8 proposals.

2017 *Ad hoc* Scientific review member, NIH, Center for Scientific Review, Pathophysiology of Mental Disorders and Addiction (PMDA) panel, Sept 29-Sept 30, 2017, Reviewed 10 proposals.

2017 *Ad hoc* Scientific review member, NIH, Center for Scientific Review, Pathophysiology of Mental Disorders and Addiction (PMDA) panel, May 30-June 1, 2017, Reviewed 9 proposals.

2016 *Ad hoc* Scientific review for the Neurological Foundation of New Zealand, May 2016.

2016 *Ad hoc* Scientific review member, NIH, Center for Scientific Review, Fellowships: Learning, Memory, Language, Communication & Related Neurosciences (ZRG1 F01B-B) panel, Mar 3-4, 2016. Reviewed 10 proposals.

2015 *Ad hoc* Scientific review for the Marsden Fund, The Royal Society of New Zealand, July 2015.

2015 *Ad hoc* Scientific review member, NIH, Center for Scientific Review, Fellowships: Learning, Memory, Language, Communication & Related Neurosciences (ZRG1 F01B-B) panel, Mar 12, 2015. Reviewed 8 proposals.

2015 *Ad hoc* Scientific review member, NIH, Center for Scientific Review, Pathophysiology of Mental Disorders and Addiction (PMDA) panel, Feb 11-12, 2015, Reviewed 9 proposals.

2014 *Ad hoc* Scientific review member, NIH, Center for Scientific Review, Pathophysiology of Mental Disorders and Addiction (PMDA) panel, Oct 1-2, 2014, Reviewed 8 proposals.

2014 *Ad hoc* Scientific review member, NSF, Modulation II, Pre-proposal review panel, April 13-15, 2014. Reviewed 17 proposals.

2013 Scientific merit review for the Biotechnology & Biological Sciences Research Council, Swindon, Wiltshire, United Kingdom.

2011 *Ad hoc* Scientific merit review for the Scientific Committee of the France Parkinson Association.

2010 *Ad hoc* Scientific review member, NIH, Center for Scientific Review, Special Emphasis Panel ZRG1 IFCN-H 03 M, Integrative Neuroscience.

2009 *Ad hoc* Scientific review member, NIH, Center for Scientific Review, Special Emphasis Panel ZRG1 ETTN-A (58) R-RFA OD09-003 Challenge Grants # 12.

2008-2013 *Ad hoc* Scientific review member, NIH, Center for Scientific Review, Special Emphasis Panel ZRG1 F02A-J 20L, Fellowships: Behavioral Neuroscience.

2006-2011 Reviewer, Scientific Merit Review Panel for Behavioral Neuroscience, National Science Foundation.

2006 Reviewer, Scientific Review for the Medical Research Council of the United Kingdom.

2005 Reviewer, Scientific Review for the Pilot project program of the NIA funded Oregon Alzheimer's Disease Center, Portland, OR.

Grant Review *continued*

2004, 2009 Reviewer, Scientific Review for the Marsden Fund, The Royal Society of New Zealand.

2004 Reviewer, Scientific Review for the Health Research Council of New Zealand.

2003 Reviewer, Scientific Review for Yale University Pepper Research Center, New Haven, CT.

2003 Reviewer, Scientific Review for Health Research Board, Dublin, Ireland.

2002 Reviewer, Scientific Review for Grant Agency of the Czech Republic.

2001-pres Reviewer, Scientific Review Panel for National Alzheimer's Association, Chicago, IL.

Manuscript Review

2021-present **Editorial Board Member,** *Biology,* MDPI, Inc., Basel, Switzerland, Impact Factor: 3.796

2014-present **Review Board Member,** *Universal Journal of Psychology,* Horizon Research Publication, Inc.

2014-present **Review Editor,** *Frontiers in Neurology*, Frontiers Research Foundation, Lausanne, Switzerland, Impact Factor: 3.552

2010-present **Review Editor,** *Frontiers in Neuro-otology*, Frontiers Research Foundation, Lausanne, Switz., Impact Factor: 2.889

Invited Peer Review (~2 manuscripts/month) for

Alcohol
Alcoholism: Clin. Exp. Res
Behavioral Neuroscience
Behavioural Brain Research
Biological Psychiatry
Brain
Brain Research
Brain Research Bulletin
Brain Structure & Function
Cell Biochem & Biophysics
Current Biology
Env. Science & Pollution Res
Eur. Journal of Neuroscience
Experimental Brain Research
Experimental Cell Physiology
Experimental Gerontology
Frontiers in Behav Neurosci
Hippocampus
Int. J. Neuropsychopharmacol
J. Biomedical Sciences
Journal of Cellular Physiology
J. Comp. & Altern. Medicine
Journal of Neurochemistry
Journal of Neurophysiology
Journal of Neuroscience
J. Neuroscience Methods
J. Neuroscience Research
Journal of Physiology
J. Undergrad Neurosci Edu
J. Visual Experimentation
Learning & Memory
Life Sciences
Nature Communications
Neurobiology of Aging
Neurobiol of Learning Memory
Neuroscience
Neurotoxicology
Pharmacol, Biochem, Behav
Physiology & Behavior
PLoS One
PLoS Biology
Psychoneuroendocrinology
Psychopharmacology
Prog. Neuro-Psychopharm. Biol. Psych.
Quarterly Review of Biology
Scientific Reports
Synapse
Universal Journal of Psychology

Book Review
Oxford University Press *MacMillan Education Press*

CURRICULUM VITAE

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ruitao00@gmail.com

INSTITUTIONAL AFFILIATION

Department of Biomedical Science
Charles E. Schmidt College of Medicine
Florida Atlantic University

EDUCATION

1984	DVM	Anhui Agricultural College, Anhui, China
1987	M.Sc.	Beijing Agricultural University, Beijing, China
2000	Ph. D.	Rutgers University, New Jersey, USA

MASTER THESIS

Place: The Graduate School-Beijing Agricultural University.
Year: 1987
Title: Study of trichophytosis on donkey and their pathogens in mycology" presented in partial fulfillment of the Master's degree requirements (1987),
Committee: Dr Jia-Pu Chang (Chair), Drs Jia-Pu Chian, Bao-Fan Wan, Dai-Ru Wen and Zhen-Sheng Lu.

DORCTORAL DISSERTATION

Place: The Graduate School-New Brunswick, Rutgers, The State University of New Jersey and the Graduate School of Biomedical Sciences, University of Medicine and Dentistry of New Jersey.
Year: 2000
Title: Regulation of Serotonin Release in the Rat CNS by Opioid-Mediated Inhibition of GABAergic and glutamatergic Afferents

Committee: Dr Sidney B. Auerbach (Chair). Dissertation Committee Members: Drs Sidney B. Auerbach, Mark R. Plummer, Larissa A. Pohorecky and Mark O. West.

POSTDOCTORAL TRAINING

1990-1991	Gőtebory University, Gőtebory, Sweden
1991-1995	Rutgers University, New Jersey, USA
2000-2001	Rutgers University, New Jersey, USA
2001-2004	Harvard Medical School, Boston, USA

ACADEMIC APPOINTMENTS

2000-2001	**Research Assistant Professor**, Department of Cell Biology and Neuroscience, Rutgers University, New Jersey
2001-2004	**Instructor** in Psychology, Department of Psychiatry, Harvard Medical School, VAMC, Massachusetts
2004-2008	**Assistant Professor**, Department of Basic Sciences, Florida Atlantic University, Florida
2008-present	**Associate Professor**, Department of Basic Sciences, Florida Atlantic University, Florida
2016-present	**Affiliated Associate Professor**, Brain Research Institute, Florida Atlantic University, Florida

OTHER APPOINTMENTS

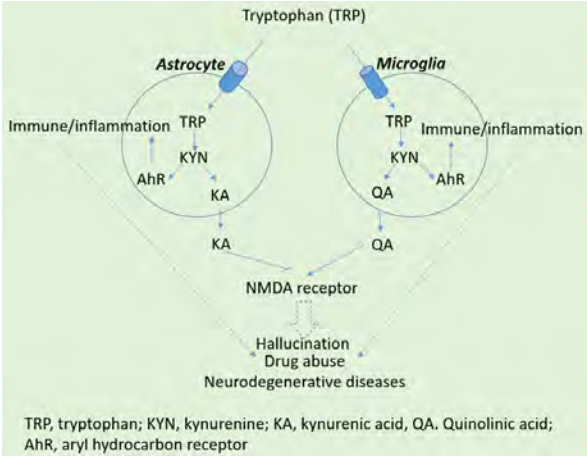
1995-1998	**Graduate Research Assistant,** Department of Cell Biology and Neuroscience, Rutgers University, New Jersey
1998-1999	**Teaching Assistant**, Department of Cell Biology and Neuroscience, Rutgers University, New Jersey
1999-2000	**Research Assistant Professor**, Department of Cell Biology and Neuroscience, Rutgers University, New Jersey
2004-2008	**Affiliated Assistant Professor**, Department of Cell Biology and Anatomy, University of Miami Miller School of Medicine, Florida
2008-2011	**Affiliated Associate Professor**, Department of Cell Biology and Anatomy, University of Miami Miller School of Medicine, Florida

RESEARCH

MAJOR RESEARCH INTERESTS

My research consists of two parts as follows.

Part 1. Present research aims at kynurenine (KYN) pathway of tryptophan (TRP) metabolites in the astrocytes and microglia. We propose to test the hypotheses (see the diagram) as follows.



- Kynurenic acid (KA) in the brain is derived mainly from astrocytes. In other words, KYN pathway in the astrocytes is the major source for brain KA.
- KA, an endogenous NMDA receptor antagonist, is associated with psychotic disorders, such as hallucination. In this regard, KA acts as a "gliotransmitter antagonist" in the tripartite synapse
- Changes in quinolinic acid (QA) likely reflect microglial reactivity.
- Tryptophan (TRP) and kynurenine (KYN) in combination of KA and QA may be used to estimate neuroinflammatory activity in the brain, including drugs of abuse (e.g., methamphetamine, cocaine or MDPV), and neurodegenerative diseases (e.g., Parkinson's, Alzheimer's).

Part 2. I am also interested in excessive 5-HT-related mental health diseases caused by MDMA (ecstasy) abuse or drug interaction between antidepressants. This includes:

- 5-HT syndrome
- MDMA neurotoxicity
- Excessive 5-HT transmission in the mental health
- Environmental effects on 5-HT_{1A} and 5-HT_{2A} receptor activity

Several approaches are explored for testing the hypothesis that excessive 5-HT activates $5HT_{2A}$Rs on the cortical glutamatergic neurons, causing glutamate release and 5-HT syndrome. This effect depends not only on drug doses but also on drug administration environments. The ongoing research will contribute to knowledge concerning MDMA toxicity and prevention of the side effects of antidepressant medications.

RESEARCH SUPPORT

1.ON-GOING SUPPORT

2019-2021: Ross University School of Veterinary Medicine Seed grant
"Synthetic cathinones (Bat Salts)-induced psychosis"
Total cost: $25,000

2.COMPLETED RESEARCH

2017-2019 Ross University School of Veterinary Medicine Seed grant
"Synthetic cathinones (Bat Salts)-induced psychosis"
Total cost: $25,000

2016-2019 Florida Department of Health, Co-**PI (PI: Dr.** Jang-Yen Wu; 6JK-08)
"Granulocyte colony-stimulating factor (G-CSF) gene therapy for stroke"
Total Cost $1,231,336.00
The major goals of this project are to provide an effective and novel multi-drug treatment for stroke

2015-2017 Ross University School of Veterinary Medicine Seed grant
"Molecular pharmacology underlying susceptibility to serotonin poisoning"
Total cost: $25,000

2013-2015 Ross University School of Veterinary Medicine Seed grant
"Mechanisms underlying individual differences in serotonin syndrome"
Total cost: $25,000
Status: acting

2010-2013 NIH/NIDA R15 DA029863, **PI**
"Mechanisms of sudden onset of malignant MDMA toxicity"
Total Cost $289,000 (**Direct** $210,000.00; Indirect $79,000.00)
Goal: The goal of this project is to understand the basic neural mechanisms of 5HT efflux related to MDMA neurotoxicity. A NIH R15 award has been funded to support this project and to provide a research opportunity for undergraduate students to perform a small scale research in the educational institutes. In my lab, recruited students have an opportunity to pursue a hands-on experience on researches involving MDMA neurotoxicity.

2010-2011 Florida Department of Health, Co-**PI (PI: Dr.** Jang-Yen Wu)
"G-CSF, DETC-MeSO and Sulindac as Multi-drug Combination Therapy for TBI and Stroke Treatment"
Total Cost $680,000

The major goals of this project are to provide an effective and novel multi-drug treatment for stroke

2005-2008 Florida Department of Health NIR-06-5194, **Co-PI** (PI: Dr. Ceylan Isgor)
"Role of Cannabinoid Receptor 1 in Novelty-Seeking Phenotype & Treatment of Nicotine Dependence"
Total Cost $450,000.00 (Direct to PI $213,750.00; **Direct to Co-PI** $213,750.00; Indirect $22,500.00)

2003-2008 Synaptic Research Equipment, **PI**
Total Cost $30,000.00 (**Direct** $30,000.00)

2001-2006 NIH/NIDA R01 DA14541-01, **PI**
"Opioids & plasticity in regulation of serotonin release."
Total Cost $815,193.00 (**Direct** $525,000.00; Indirect $290,193.00)

BIBLIOGRAPHY

ARTICLES IN JOURNALS:

1. Gao DY, Li QH and **Tao R**,
1987,
Prevention cure of zoonotic ringworm between man and cats.
Acta Agriculturea Universitatis Pekinensis 13(3).

2. **Tao R**, Yang YM, Guo T and Wan BF,
1990,
Regulation of gastric peristalsis by alpha-2 adrenoceptor using *in vivo* transducer technique within mini-pig stomach.
Chinese Journal of Veterinary Medicine 16: 4-6.

3. Hjorth S and **Tao R**,
1991,
The putative 5-HT-1B receptor agonist CP-93,129 suppresses rat hippocampal 5-HT release in vivo: comparison with RU 24969.
European Journal of Pharmacology 209: 249-252. [Pubmed]u

4. **Tao R** and Hjorth S,
1992,
Alpha-2 adrenoceptor modulation of rat ventral hippocampal 5-hydroxytryptamine release in vivo.
Naunyn-Schmiedeberg`s Arch Pharmacology 345:137-143. [Pubmed]

5. Auerbach SB, Wilkinson LO, **Tao R**, Grauer S and Rutter J,
1992,
Microdialysis measurement of serotonin release in the central nervous system.
Journal of Chemical Neuroanatomy 5: 331-333. [Pubmed]

6. Grauer SM, **Tao R** and Auerbach SB,
1992,
Morphine induces an increase in extracellular serotonin in the rat diencephalon.
Brain Research 599: 277-282. [PubMed]

7. **Tao R** and Hjorth S,
1992,
Differences in the in vitro and in vivo 5-hydroxytryptamine extraction performance among three common microdialysis membranes.
Journal of Neurochemistry 59: 1778-1785. [Pubmed]

8. **Tao R** and Auerbach SB,
1994,
Increased extracellular serotonin in rat brain after systemic or intra-raphe administration of morphine.
Journal of Neurochemistry 63: 517-524. [PubMed]

9. **Tao R** and Auerbach SB,
1994,
Anesthetics block morphine-induced increases in serotonin release in rat CNS.
Synapse 18: 307-314. [PubMed]

10. **Tao R** and Auerbach SB,
1995,
Involvement of dorsal raphe but not median raphe in morphine-induced increases in serotonin release in rat brain.
Neuroscience 68: 553-561. [PubMed]

11. **Tao R** and Auerbach SB,
1996,
Differential effect of NMDA on extracellular serotonin in rat midbrain raphe and forebrain sites.
Journal of Neurochemistry 66: 1067-1075. [PubMed]

12. **Tao R**, Ma Z and Auerbach SB,
    1996,
    Differential regulation of 5-hydroxytryptamine release by $GABA_A$ and $GABA_B$ receptors in midbrain raphe nuclei and forebrain of rats.
    British Journal of Pharmacology 119: 1375-1384. [PubMed]

13. **Tao R**, Ma Z and Auerbach SB,
    1997,
    Influence of AMPA/kainate receptors on extracellular 5-hydroxytryptamine in rat midbrain raphe and forebrain.
    British Journal of Pharmacology 121: 1707-1715. [PubMed]
14. **Tao R**, Ma Z and Auerbach SB,
    1998,
    Alteration in regulation of serotonin release in rat dorsal raphe nucleus after prolonged exposure to morphine.
    *Journal of Pharmacology and Experimental Therapeutic*s 286: 481-488. [PubMed]

15. **Tao R**, Ma Z and Auerbach SB,

    2000,

    Differential effect of local infusion of serotonin reuptake inhibitors in the raphe versus forebrain, and the role of depolarization-induced release in increased extracellular serotonin.

    Journal of Pharmacology and Experimental Therapeutics 294:571-579. [PubMed]

16. **Tao R,** Fray A, Aspley S, Brammer R, Heal D, Auerbach S,

    2002,

    Effects on serotonin in rat hypothalamus of d-fenfluramine, aminorex, phentermine and fluocetine.

    European Journal of Pharmacology 445: 69-81. [PubMed]

17. **Tao R,** Auerbach SB,
    2002,
    Opioid receptor subtypes differentially modulate serotonin efflux in the rat CNS.
    *Journal of Pharmacology and Experimental Therapeutic*s 303:549-556. [PubMed]

18. **Tao R,** Auerbach SB,
2002,
GABAergic and glutamatergic afferents in the dorsal raphe nucleus mediate morphine-induced increase in serotonin efflux in the rat CSN.
*Journal of Pharmacology and Experimental Therapeutic*s 303:704-710. [PubMed]

19. **Tao R,** Auerbach SB,
2003,
Influence of inhibitory and excitatory inputs on serotonin efflux differs in the dorsal and median raphe nuclei.
Brain Research 961:109-120. [PubMed]

20. **Tao R,** Karnik M, Ma Z, Auerbach SB,
2003,
Effect of fentanyl on 5-HT efflux involves both opioid and 5-HT_{1A} receptors.
British Journal of Pharmacology 139:1498-1504. [PubMed]

21. **Tao, R**. and Auerbach, S.B.,
2005,
μ-Opioids disinhibit and κ-opioids inhibit serotonin efflux in the dorsal raphe nucleus.
Brain Research 1049*:* 70-79. [PubMed]

22. Ma Z, Strecker RE, McKenna J T, Thakkar MM, McCarley RW and **Tao R**,
2005,
Effects of nicotine and dimethylphenylpiperazinium on extracellular 5-HT in the dorsal raphe and nucleus accumbens of freely behaving rats.
Neurosicence 135:949-958. [PubMed]

23. Ma Z, Pearson E, Isgor C and **Tao R,**
2006,
Evidence of reuptake inhibition responsible for mecamylamine-evoked increases in extracellular serotonin.
Brain Research 1073/1074: 321-324. [PubMed]

24. **R Tao**, Z Ma, JT. McKenna, MM. Thakkar, S Winston, RE. Strecker and RW. McCarley,
2006,
Differential effect of orexins (hypocretins) on serotonin release in the dorsal and median raphe nuclei of freely behaving rats.
Neuroscience 141:1101-1105. [PubMed]

25. X Gong, **R Tao,** Z Li,

2006,
Quantification of RNA damage by reverse transcription polymerase chain reaction.
Analytical Biochem 357: 58-67 [PubMed]

26. A Bhatti, P Hall, Z Ma, **R Tao**, C Isgor,
2007,
Hippocampus modulates the behaviorally sensitizing effects of nicotine in a rat model of novelty-seeking: Potential role for mossy fibres.
Hippocampus 17: 922-933 [PubMed]

27. **R Tao**, Z Ma, MM Thakkar, RW McCarley and SB Auerbach,
2007,
Nociceptin/Orphanin FQ decreases serotonin efflux in the rat brain but in contrast to a κ-opioid has no antagonistic effect on μ-opioid-induced increases in serotonin efflux.
Neuroscience 147: 106-116. [Pubmed]

28. Z Ma, E Pearson and **R Tao**,
2007,
CART peptides increase 5-hydroxytryptamine in the dorsal raphe and nucleus accumbens of freely behaving rats.
Neurosci lett 417:303-307. [PubMed]

29. Z Ma, G Zhang, C Jenney, S Krishnamoorthy and **R Tao**,
2008,
Characterization of serotonin-toxicity syndrome (toxidrome) elicited by 5-hydroxy-L-tryptophan in clorgyline-pretreated rats.
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30. AS Bhatti, C Aydin, O Oztan, Z Ma, P Hall, **R Tao**, C Isgor,
2009,
Effects of a cannabinoid receptor (CB) 1 antagonist AM251 on behavioral sensitization to nicotine in a rat model of novelty-seeking behavior: correlation with hippocampal 5HT.
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31. G Zhang, S Krishnamoorthy, Z Ma, NP Vukovich, X Huang and **R Tao**,
2009,
Assessment of 5-hydroxytryptamine efflux in rat brain during a mild, moderate and severe serotonin-toxicity syndrome
European Journal of Pharmacology 615: 66-75. [Pubmed]

32. Krishnamoorthy S, Ma Z, Zhang G, Wei J, Auerbach SB, **Tao R**,
2010,
Involvement of 5-HT_{2A} Receptors in the Serotonin (5-HT) Syndrome caused by Excessive 5-HT Efflux in Rat Brain.
Basic Clin Pharmacol Toxicol. 107:830-41. [Pubmed]

33. McCollum M, Ma Z, Cohen E, Keon R, **Tao R**, Wu JY, Maharaj D, Wei J.
2010,
Post-MPTP treatment with granulocyte colony-stimulating factor improves nigrostriatal function in the mouse model of Parkinson's disease.
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2011,

Enhanced responsivity of 5HT2A receptors at warm ambient temperatures is responsible for the augmentation of the 1-(2,5-dimenoxy-4-iodopheny)-2-aminopropane (DOI)-induced hyperthermia.

Neuroscience Letter 490:68-71. [Pubmed]

35. Buddhala C, Suarez M, Modi J, Prentice H, Ma Z, **Tao R**, Wu JY,

2012,

Calpain Cleavage of Brain Glutamic Acid Decarboxylase 65 Is Pathological and Impairs GABA Neurotransmission.

PLoS One. 7:e33002. [Pubmed]

36. **Tao R**, Ma Z.
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Neural circuit in the dorsal raphe nucleus responsible for cannabinoid-mediated increases in 5-HT efflux in the nucleus accumbens of the rat brain.
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37. Ma Z, Rudacille M, Prentice HM. and **Tao R**,
2013,
Characterization of electroencephalographic and biochemical responses at the onset of serotonin syndrome induced by 5-HT promoting drugs in rats.
J Neurochem 125: 774-789. [Pubmed]

39. Gharibani PM, Modi J, Pan C, Menzie J, Ma Z, Chen PC, **Tao R,** Prentice H, Wu JY.
2013,
The mechanism of taurine protection against endoplasmic reticulum stress in an animal stroke model of cerebral artery occlusion and stroke-related conditions in primary neuronal cell culture.
*Adv Exp Med Biol.*776:241-258. [Pubmed]

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2014,
Mode of Action of *S*-Methyl-*N*, *N*-Diethylthiocarbamate Sulfoxide (DETC-MeSO) as a Novel Therapy for Stroke in a Rat Model.
Mol Neurol 50:655-672. [Pubmed]

41. **Tao R**, Mary Rudacille, Gongliang Zhang and Zhiyuan Ma
2014,
Changes in intensity of serotonin syndrome caused by adverse interaction between monoamine oxidase inhibitors and serotonin reuptake blockers.
Neuropsychopharmacology 39:1996-2007. **[Pubmed]**

42. **Tao R**, Shokry IM, Callanan JJ, Adams HD, and Ma Z,
2014,
Mechanisms and environmental factors that underlying the intensification of 3,4-methylenedioxymethamphetamine (MDMA, Ecstasy)-induced serotonin syndrome in rats.
Psychopharmacology 232:1245-1260. **[Pubmed]**

43. Gharibani P, Modi J, Menzie J, Alexandrescu A, Ma Z, **Tao R**, Prentice H, Wu JY
2015,
Comparison between single and combined post-treatment with S-Methyl-N,N-diethylthiolcarbamate sulfoxide and taurine following transient focal cerebral ischemia in rat brain.
Neuroscience 300:460-473. **[Pubmed]**

44. Ibrahim M. Shokry, John J. Callanan, John Sousa, **Tao R**.
2015,
Rapid in situ hybridization using oligonucleotide probes on paraformaldehyde-prefixed brain of rats with serotonin syndrome.
JOVE. 2015: 103 doi: 10.3791/53165. **[Pubmed]**

45. Shokry IM, Callanan JJ, Sousa J, **Tao R**.
2016,
New Insights on Different Response of MDMA-Elicited Serotonin Syndrome to Systemic and Intracranial Administrations in the Rat Brain.
PLoS One. 11:e0155551. **[Pubmed]**

46. **R Tao**, Ibrahim M. Shokry, John J. Callanan, and Zhiyuan Ma,
2017,
Environment Influencing Serotonin Syndrome Induced by Ecstasy Abuse.
Annals of Forensic Research and Analysis 4: 1039. [Pubmed]

47. Menzie-Suderam JM, Mohammad-Gharibani P, Modi J, Ma Z, **Tao R**, Prentice H, Wu JY,
2017,
Granulocyte-Colony Stimulating Factor protects against Endoplasmic reticulum stress in an experimental model of stroke.
Brain Res. 1682:1-13. [Pubmed]

48. Prentice H, Pan C, Gharibani PM, Ma Z, Price AL, Giraldo GS, Retz HM, Gupta A, Chen PC, Chiu H, Modi J, Menzie J, **Tao R**, Wu JY.
2017
Analysis of Neuroprotection by Taurine and Taurine Combinations in Primary Neuronal Cultures and in Neuronal Cell Lines Exposed to Glutamate Excitotoxicity and to Hypoxia/Re-oxygenation.
Adv Exp Med Biol. 975:207-216. [Pubmed]

49. Prentice H, Gharibani PM, Ma Z, Alexandrescu A, Genova RS, Chen PC, Modi J, Menzie J, Pan C, **Tao R**, Wu JY.
2017,
Neuroprotective Functions Through Inhibition of ER Stress by Taurine or Taurine Combination Treatments in a Rat Stroke Model.
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50. Shokry IM, Sinha V, Da Silva G, Park SB, Callanan JJ, **Tao R**
2019
Comparison of electroencephalogram (EEG) response to MDPV versus the hallucinogenic drugs MK-801 and ketamine in rats.
Exp Neurol. 313:26-36. [Pubmed]

51. Ibrahim M. Shokry, Kayla DeSuza1, John J. Callanan, Giselle Shim, Zhiyuan Ma, and **Tao R**,
2019,
Individuals with Hyperthyroidism are More Susceptible to having a Serious Serotonin Syndrome Following MDMA (Ecstasy) Administration in Rats.
Ann Forensic Res Anal 5(1): 1052. [Pubmed]

52. Minnerly C, Bressler SL, Shokry IM, **Tao R**.
2019,
Estimating Mental Health Conditions of Patients with Opioid Use Disorder
J Addict 2019:8586153. [Pubmed]

53. Jigar Modi, Janet Menzie-Suderam, Hongyuan Xu, Paola Trujillo, Kristen Medley, Michael L Marshall, **Tao R**, Howard Prentice, Jang-Yen Wu,

2020,
Mode of Action of Granulocyte-colony Stimulating Factor (G-CSF) as a Novel Therapy for Stroke in a Mouse Model
Journal of Biomedical Science 27:19. doi: 10.1186/s12929-019-0597-7 [Pubmed]

54. Menzie-Suderam JM, Modi J, Xu H, Bent A, Trujillo P, Medley K, Jimenez E, Shen J, Marshall M, Tao R, Prentice H, Wu JY.
2020,
Granulocyte-colony Stimulating Factor gene therapy as a novel therapeutics for stroke in a mouse model
Journal of Biomedical Science 27:99. doi: 10.1186/s12929-020-00692-5 [Pubmed]

REVIEWS & BOOK CHAPTERS:

1. **Tao R**. and Chang JP,
1988,
Study of trichophytosis on donkey and their pathogens in mycology.
In: *Annual Symposia of Graduate Students of 1987*. (BAU Press, Beijing, China)

2. Hjorth S and **Tao R**,

1991,

Microdialysis of 5-HT: comparison of the in vitro and in vivo performance of three common dialysis membranes.

In: *Monitoring Molecules in Neurosciences. Proceedings of the 5th international Conference* on in vivo methods edited by H. Rollema, B. Westerink and W. J. Drijfhout (University Center for Pharmacy, Groningen) pp 242-246.

3. **Tao R** and Auerbach SB,

2000,

Regulation of serotonin release by GABA and excitatory amino acids.

Journal of Psychopharmacology 14: 100-113. [PubMed]

4. **Tao R**, Dent R and S.B. Auerbach,
2001,
Serotonin in rat CNS increases during treadmill exercise.
SFN Press Book 2001

5. **Tao R**, Ma Z.

2011,
How much serotonin in the CNS is too much?
In: *When things go wrong: diseases and disorders of the human brain*. Edited by Theo Mantamadiotis. pp.51-68.

6. Gharibani P, Modi J, Pan C, Ma Z, Menzie J, Chen P-C, **Tao R**, Prentice H and Wu J-Y 2013,
The Mechanism of Taurine Protection against Endoplasmic Reticulum Stress in an Animal Stroke Model of Cerebral Artery Occlusion and Stroke Related conditions in Primary Neuronal Cell Culture
In: *Taurine 8*, Ed. El Idrissi, Vol. 1, Chapter 23, Advances in Experimental Biology and Medicine. Springer, 2013.

INVITED SEMINAR PRESENTATIONS:

1. Jan 17, 2006,
Serotonin syndrome, Florida International University, Florida

2. June 9, 2006,
Neuropathology of serotonin-toxicity syndrome, Anhui Medical University, Anhui, China

3. June 20, 2006,
Neuropathology of serotonin-toxicity syndrome, Chongqing Medical University, Chongqing, China

4. Feb 26, 2003,
Regulation of serotonin release by opioids, Louisiana State University, Baton Rouge, Louisiana

5. April 11, 2001,
How μ-opioids regulate serotonin release in the rat CNS, Harvard Medical School VAMC, Brockton, Massachusetts

ABSTRACTS:

A1.

Tao R, Grauer SM and Auerbach SB,
1992,
Morphine-induced increase in serotonin in rat diencephalon.
Society for Neuroscience Abstracts 18: 1528.

A2.

Hjorth S and **Tao R**,
1992,
Alpha-2_A heteroceptors and 5-HT-1_B autoreceptors mediate the oxymetazoline-induced suppression of rat ventral hippocampal 5-HT release in vivo.
Society for Neuroscience Abstracts 18: 1381

A3.
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1993,
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Society for Neuroscience Abstracts 19: 299.

A4.
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1994,
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Society for Neuroscience Abstracts 20: 291.

A5.
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1996,
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Society for Neuroscience Abstracts 22: 605.

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1997,
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Society for Neuroscience Abstracts 23: 1227.

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1997,
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Society for Neuroscience Abstracts 23: 1225.

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Society for Neuroscience Abstracts 24: 1103.

A11.

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1998,
Characterization of opioid receptor subtypes in the regulation of serotonin release in dorsal raphe nucleus and nucleus accumbens.
Society for Neuroscience Abstracts 24: 1103.

A12.

Tao R, Ma Z and Auerbach SB,
1999,
Do endogenous opioids have a tonic influence on serotonergic neurons in the dorsal raphe nucleus?
Society for Neuroscience Abstracts 25: 176.

A13.

Tao R and Auerbach SB,
2000,
Kappa-opioid-mediated inhibition of serotonin release.
Society for Neuroscience Abstracts 26: 342.8

A14.

Tao R, Aspley S, Heal D and Auerbach SB,
2000,
Phentermine and aminorex like d-fenfluramine act as serotonin-releasing agents.
Serotonin satellite symposium New Orleans 2000 Abstracts: 60

A15.

Tao R, Aspley S, Fray A, Heal D and Auerbach SB,
2000,
Evidence that phentermine and aminorex, like d-fenfluramine act as serotonin releasing agents in vivo and that d-fenfluramine and phentermine have additive effects on hypothalamic serotonin.
NAASO Abstracts.

A16.

Tao R. Dent and Auerbach SB,
2001,
Serotonin in rat CNS increases during treadmill exercise.
Society for Neuroscience Abstracts 27: 701.2

A17.

McKenna JT, Strecker RE, Dauphin LJ, Sinton CM, Stronge A, **Tao R**, McCarley RW,
2002,
Diurnal fluctuations in extracellular adenosine (AD) levels in the rat brain.
Society for Neuroscience Abstracts 28

A18.

Strecker R.E. Haskins WE, Watson CJ, Powell DH, McKenna JT, Dauphin LJ, **Tao R**, McCarley RW, Kennedy RT,
2002,
Capillary LC-MS2 for monitoring and discovering endogenous peptides in microdialysis samples collected during sleep and wakefulness.
Society for Neuroscience Abstracts 28

A19.

Tao R. and Auerbach SB,
2002,
Effect of orphanin FQ on serotonin efflux.
Society for Neuroscience Abstracts 28.

A20.

Auerbach SB, Karnic M, Ma Z, **Tao R**.,
2002,
Effect of fentanyl in the dorsal raphe nucleus on 5-HT efflux involves both opioid and 5-HT_{1A} receptors.
Society for Neuroscience Abstracts 28.

A21.

Tao R, Thakkar MM, Ma Z, Winston S, McKenna JT, Strecker RE, and McCarley RW,
2003,
Orexin-A enhances serotonin release in the dorsal raphe but not the median raphe of freely behaving rats.
Sleep 26: A26

A22.

McKenna JT, Strecker RE, Dauphin LJ, Sinton CM, Stronge A, **Tao R**, McCarley RW,
2003,
Spontaneous diurnal and sleep deprivation-induced fluctuations in adenosine levels in the rat basal forebrain.
*Sleep 26: A*26

A23.

Mahesh M. Thakkar, **Rui Tao**, Zhiyuan Ma, Stuart Winston, Bolortuya Yunren, Robert W. McCarley,
2004,
The extracellular release of GABA is lowest during REM sleep in the mPRF in freely behaving cats.
APSS 18th Annual Meeting Abstracts in Journal of Sleep ID#015

A24.

Chen Z, **Tao R**, Prchal JT and Noguchi C,
2004,
Erythropoietin Facilitates Neural Stem Cell Proliferation and Learning Ability
Society for Neuroscience Abstracts

A25.

Thakkar MM, **Tao R**, Winston S, Yunren B, McCarley RW,
2005,
GABA Release in the Orexinergic Perifornical Hypothalamus Is Highest during nonREM Sleep.
Sleep

A26.
Isgor C, Pearson E, Ma Z and **Tao R**,
2005,
Cannabinoid (CB) 1 receptor antagonist blocks nicotine-induced conditioning place preference in the HR but not LR adolescents
Society for Neuroscience Abstracts

A27.
Tao R, Maharaj S, Hall P, Ma Z, C. Isgor,
2005,
Cannabinoid (CB) 1 receptor antagonist treatment reverses behavioral sensitization to nicotine in adolescent rats with novelty-seeking phenotype.
Society for Neuroscience Abstracts

A28.
G Zhang, Z Ma, **R Tao**,
2006,
Quantitative determination of extracellular serotonin in the CNS of the toxidrome rats.
FAU Research Fair

A29. C Jenney, G Zhang, Z Ma, S Krishnamoorthy, **R Tao**,
2006,
Characterization of serotonin toxidrome in rats.
FAU Research Fair

A30. G Zhang, Z Ma, **R Tao**,
2006,
Determination of toxic serotonin levels in the CNS of the rats with serotonin toxicity and syndrome.
Society for Neuroscience Abstracts

A31. **R Tao**, C Jenney, G Zhang, Z Ma, S Krishnamoorthy, C Isgor,
2006,
Involvement of 5-HT_{2A} but not 5-HT_{1A} receptors in the serotonin toxicity and syndrome.
Society for Neuroscience Abstracts

A32. Krishnamoorthy S, Ma Z and **Tao R,**
2007,
Pulmonary injury in a rat model of serotonin-toxicity syndrome
FAU Biomedical Research Fair

A33. Zhang C, Ma Z and **Tao R**,
2009,
Role of cortical 5-HT_{2A} receptors in the serotonin syndrome induced by antidepressants.
Society for Neuroscience Abstracts

A34. **R Tao**, G Zhang, Ma Z,
2009,
Serotonin Syndromes Associated with Two Components of Excessive 5-HT Effluxes in the Hypothalamus and Prefrontal Cortex of Rat Brain.
Society for Neuroscience Abstracts

A35. **R Tao**, Z Ma,
2010,
Involvement of two distinct mechanisms for MDMA-evoked increases in extracellular 5-HT in the prefrontal cortex of rat brain.
Society for Neuroscience Abstracts

A36. **R. Tao**, Z. Ma, H. Adams, B. D. O'Malley, P. Tran, and J. Wei,
2011,
Effect of MDMA on integrity of serotonergic projections from dorsal raphe nucleus to prefrontal cortex.
Society for Neuroscience Abstracts

A37. PM. Gharibani, J Modi**,** Z Ma, **R Tao**, J Menzie, H Prentice, J-Y Wu,
2011,
Neuroprotective effect of S-methyl-N, N-diethylthiocarbamate sulfoxide on rat stroke model of middle cerebral artery occlusion.
Society for Neuroscience Abstracts

A38. **R. Tao**, Z. Ma and M. Rudacille,
2012,
Activation of corticotropin-releasing factor (CRF)-containing neurons in neurotoxicity induced by MDMA in rats
Society for Neuroscience Abstracts

A39. H. D. Adams, Z Ma, and **R Tao**,
2012,
Effect of MDMA abuse on axonal transportation of serotonergic nervous system in the rat brain.
FAU Undergraduate Research Day 2012.

A41. J. M. Menzie, J. MODI, P. Gharibani Z. Ma, **R. Tao**, H. Prentice, J.-Y. Wu,
2012, Neuroprotective mechanism of granulocyte colony stimulating factor against focal cerebral ischemia.
Society for Neuroscience Abstracts

A42. P. Mohammad Gharibani, J. Modi, J. Menzi, P.-C. Chen, R. Genova, Z. Ma, **R. Tao**, H. Prentice, J. Wu,
2012,
Neuroprotective effect of s-methyl-n, n-diethylthiocarbamate sulfoxide, granulocyte-colony stimulating factor and sulindac on rat middle cerebral artery occlusion stroke model.
Society for Neuroscience Abstracts

A42.
R. Tao,
2012,
Involvement of $5HT_{2A}$ receptors in the adverse interactions between opioids and serotonin-promoting drugs in rats. International conference and exhibition on addiction
Research and therapy at Embassy Suites, Las Vegas, USA

A40. M. Rudacille, R. Tao,
2013,
Attention deficit caused by MDMA ('ecstasy').
FAU Undergraduate Research Day 2013.

A43.
Herbert D. Adams, Zhiyuan Ma, and **Rui Tao**,
2015,
Effect of MDMA abuse on axonal transportation of serotonergic nervous system in the rat brain.
FAU Undergraduate Research Symposium April 8, 2012

A44.
John Sousa, Ibrahim M. Shokry, John J. Callanan and **Tao R**,
2015,
New *in-situ* hybridization method measuring serotonin 2A ($5\text{-}HT_{2A}$) receptor mRNA levels in rats exposed to MDMA.
FAU Undergraduate Research Symposium April 8, 2015.

A45.
Ibrahim M. Shokry, John J. Callanan, John Sousa, **Tao R**,
2015,
Why direct intracerebroventricular (ICV) injection of MDMA (ecstasy) in animal models failed to produce serotonin toxicity and syndrome (toxidrome)?
28th ECNP Congress August 31, 2015

A46.

Carissa Clayton, Alexander Maqueira, Connor Shields, Marni Schlanger, Ibrahim M. Shokry, John J. Callanan, **Tao R**,
2016,
Cathinones ('bath salts') induce an increase in EEG activity of rat brain
FAU College of Medicine graduate research day 2016

A47.
Connor J. Shields, Ibrahim M. Shokry, John J. Callanan and **Tao R**,
2016,
MDPV causes psychosis in the brain through increasing activation levels of cortical glutamatergic neurons
SURF summer seminar 2016

A48.
Marni Schlanger, Connor Shields, Alexander Maqueira, Carissa Clayton, Ibrahim M. Shokry, John J. Callanan, **Tao R**,
2016,
Behavioral sensitization induced by cathinones ('bath salts') in rats
FAU Undergraduate Research Symposium April 4, 2016

A49.
Ibrahim M. Shokry, Alexander Maqueira, John J. Callanan, Connor Shields, Carissa Clayton, **Tao R**,
2015,
Effects of synthetic cathinones ('bath salts') on rat animal behavior.
29th ECNP Congress September, 2016

A50.
Sinha, V., Shokry, I. M, Markatia, N., Callanan, J. J., **Tao R**.
2017,
Effects of Synthetic cathinones (Bath Salts) on EEG in Rats.
COM Research day 2017.

A51.
Kristen Medley, Paola Trujillo, Hongyuan Chou, Jigar Modi, Janet Menzi, **Tao R**, Howard Prentice, and Jang-Yen Wu,
2017,
Neuroprotective Mechanism of Granulocyte Colony Stimulating Factor in a Mouse Model of Global Cerebral Ischemia.
FAU Undergraduate Research Symposium 2017

A52.
Ibrahim M. Shokry, John J. Callanan, Connor Shields, **Tao R**,
2017,
D_1 receptors, but not D_2, mediate the locomotor activity and behavioral sensitization caused by 3,4-methylenedioxypyrovalerone

30th ECNP Congress September, 008

A53.

Paola Trujillo, Kristen Medley, Hongyuan Chou, Janet Menzie, PhD, Howard Prentice, **Tao R**, Jang-Yen Wu ,
2017,
Markers of Cell Death in Models of Stroke Therapy.
FAU Undergraduate Research Symposium 2017.

A54

Javed Khanni and **Tao R**
2018,
Psychostimulants and Post-Synaptic Dopamine Receptors.
Medical student and resident research and scholarship day February 23, 2018

A55

Marcillin Zetrenne. Giselle Shim, Ibrahim M. Shokry, John J. Callanan, **Tao R**.
2018,
Dopamine increases in the prefrontal cortex, but not nucleus accumbens, responsible for EEG activity caused by hallucinogenic drugs MDPV ('bath salts'), MK-801 and ketamine.
Florida Undergraduate Research Conference (FURC) Eastern Florida State College, 3865 North Wickham Rd, Melbourne, FL, 32935, February 23-24, 2018

A56.

Ibrahim M. Shokry, John J. Callanan, **Tao R**,
2019,
Cortical dopamine is essential for the hallucinogenic effect of 3,4-methylenedioxypyrovalerone (MDPV) demonstrated by enhanced EEG activity in rats
31th ECNP Congress, Barcelona 2018

A57.

Giselle Shim, Rama Abdin and **Tao R**,
2019,
Effects of bath salts on activation of cortical neurons associated with excited delirium
The 9th Annual Undergraduate Research Symposium at FAU, April 8, 2019.

A58.

Giselle Shim, Rama Abdin and **Tao R**,
2019,
Effects of MDPV on the activation of glutamatergic and GABAergic neurons associated with delirium.
Life Sciences South Florida (LSSF) STEM Undergraduate Research Symposium at FAU, April 6th, 2019.

A59.

Giselle Shim, Rama Abdin, **Tao R**, Ibrahim Shokry, and John J Callanan
2019,
Effects of MDPV on the Activation of Cortical Neurons Associated with Excited Delirium.
Ninth Annual Student Research Symposium, Davis, FAU, Nov 15, 2019.

A60.
William To, Ibrahim Shokry, John J Callanan, Yoshimi Shibata, **Tao R**,
2019,
Involvement of kynurenince pathway of tryptophan metabolites in phenotypic changes of astrocytes in the CNS.
Ninth Annual Student Research Symposium, Davis, FAU. Nov 15, 2019.

A61.
Giselle Shim, Guilherme Da Silva, William To, Giselle Shim, Rama Abdin, Kimberly Ramgoolam, Mark Lewis, Ibrahim M. Shokry, John J. Callanan, and **Tao R**,
2020,
Effects of methamphetamine on the pro-inflammatory response in different cortical regions. *Virtual Symposium for Undergraduate Research at FAU. April 3-6, 2020.*

A62.
Rama Abdin, Guilherme Da Silva, William To, Giselle Shim, Mark Lewis, Kimberly Ramgoolam, Ibrahim M. Shokry, John J. Callanan, and **Tao R**,
2020,
Gaging the effects of methamphetamine on the kynurenine pathway and its metabolites. *Virtual Symposium for Undergraduate Research at FAU. April 3-6, 2020.*

A63.
Mark Lewis, Guilherme Da Silva, William To, Rama Abdin, Kimberly Ramgoolam, Giselle Shim, Ibrahim M. Shokry, John J. Callanan, and **Tao R**,
2020,
IFN- γ activation of the kynurenine pathway in microglia increases activation of kynurenine pathway. *Virtual Symposium for Undergraduate Research at FAU. April 3-6, 2020.*

A64
Kimberly Ramgoolam, Guilherme Da Silva, William To, Giselle Shim, Rama Abdin, Mark Lewis, Ibrahim M. Shokry, John J. Callanan, and **Tao R**,
2020,
IFN- γ activation of the kynurenine pathway in astrocytes increase in inflammatory activity in the brain. *Virtual Symposium for Undergraduate Research at FAU. April 3-6, 2020.*

TEACHING

SELF-REPORT OF TEACHING

1. ON-GOING COURSES

Medical Courses

A facilitator for Problem-based learning.

2008 Fall – 8 students, 7 weeks
2009 Fall – 8 students, 7 weeks
2011 Fall – 8 students, 6 weeks
2012 Fall – 8 students, 6 weeks
2013 Fall – 8 students, 6 weeks
2014 Fall – 8 students, 6 weeks
2015 Fall – 8 students, 6 weeks
2016 Fall – 8 students, 7 weeks
2016 Spring– 8 students, 6 weeks
2017 Fall – 8 students, 7 weeks
2017 Spring– 8 students, 7 weeks
2018 Spring– 8 students, 7 weeks
2018 Fall-8 students, 7 weeks
2019 Spring-8 students, 7 weeks
2019 Fall-8 students, 7 weeks
2020 Spring-8 students, 7 weeks
2020 Fall-8 students, 7 weeks

An instructor for Temperature Regulation, Drugs of Addiction and Alcohol in "Neuroscience and Behavioral Science".

2005 Spring – 16 students, 3 lectures and 1 review session
2006 Spring – 32 students, 3 lectures and 1 review session
2007 Spring – 34 students, 3 lectures and 1 review session
2008 Spring – 34 students, 1 lectures
2009 Spring – 34 students, 1 lectures
2010 Spring – 34 students, 1 lectures
2011 Spring – 34 students, 1 lectures
2012 Spring – 34 students, 1 lectures
2013 Spring – 34 students, 1 lectures
2014 Spring – 34 students, 1 lectures
2015 Spring – 34 students, 1 lectures
2016 Spring---64 students, 1 lectures
2017 Spring---64 students, 1 lectures
2018 Spring---64 students, 1 lectures

2019 Spring---64 students, 1 lectures
2020 Spring---64 students, 1 lectures

Graduate Courses

An instructor for Biomedical Concepts and Translational Applications
2018 Fall – Instructor, 1 lecture hour
2019 Fall – Instructor, 1 lecture hour

An instructor for Autonomic Function and Diseases, PCB 6933003
2007 Fall – Course Developer & Instructor, 22 students, 75 hours
2014 Fall- Course Developer & Instructor, 22 students, 75 hours
2016 Summer-instructor, 8 students, 75 hours
2017 Summer-instructor, 14 students, 75 hours
2019 Summer-instructor, 12 students, 75 hours
2020 Fall-instructor, 21 students, 75 hours

An instructor for Pharmacology, GM 6513
2018 Summer – Course Developer & Instructor, 12 students
2019 Spring – Course Developer & Instructor, 14 students

An instructor for Advanced Pharmacology,
2020 Summer – Course Developer & Instructor, 14 students

2. COMPLETED COURSES

Medical Courses

An instructor for Pathology Inflammation I, II & III of Pathology section in “Human Structure and Adaptation to Injury”.
2004 Fall – 16 students, 3 lectures and 1 review session
2005 Fall – 32 students, 3 lectures and 1 review session
2006 Fall – 34 students, 3 lectures and 1 review session

An instructor for Autonomic Nervous System of Histology sect-ion in “Human Structure and Adaptation to Injury”.
2004 Fall – 16 students, 1 lectures and 1 review session
2005 Fall – 32 students, 2 lectures and 1 review session
2006 Fall – 34 students, 1 lectures and 1 review session

An instructor for Gut Secretion I & II in “Gastrointestinal Nutritional System”.
2005 Fall – 16 students, 2 lectures and 1 review session

2006 Fall – 32 students, 2 lectures and 1 review session
2007 Spring – 34 students, 3 lectures and 1 review session
2008 Spring – 34 students, 1 lectures
2009 Spring – 34 students, 1 lectures
2010 Spring – 34 students, 1 lectures

Graduate Courses

An instructor for Topics in Biomedical Sciences I, PCB 6933
2004 Fall – Instructor, 3 lecture hours
2005 Fall – Instructor, 3 lecture hours
2006 Fall – Instructor (3 lecture hours) & Coordinator (75 hours), 28 students

An instructor for Molecular Neuropsychopharmacolgy,
2008 Spring-Course Co-developer & Co-instructor, 10 students, 35 hours
2009 Spring-Co-instructor, 14 students, 35 hours
2010 Spring- Co-instructor, 13 students, 35 hours
2011 Spring- Co-instructor, 13 students, 35 hours
2012- Spring- Co-instructor, 13 students, 35 hours
2013- Spring- Co-instructor, 13 students, 35 hours

3. DIRECTED INDEPENENT STUDY (DIS): RESEARCH TRAININGS COURSES

GRADUATE RESEARCH TRAININ

1. CURRENT GRADUATE STUDENTS

1. Chris Minnerly (thesis research);

Starting 2018, his research focus is on EEG analysis of brain activity in patients with drug abuse including opioids, alcohol and methamphetamine. Recently he published a research article entitled “Estimating mental health conditions of patients with opioid use disorder” in Journal of Addiction (PMC6791239; PMID: 31662946; 2019 Sep 26; doi:10.1155/20198586153). He is working on his thesis and prepares for his thesis defense in March 2020.

2. William To (thesis research);

Starting 2019 fall, He joined this lab 3 months ago. He is now actively collecting preliminary data for his thesis, planning to have thesis proposal defense in spring 2021.

3. Guilherme Ga Silva (non-thesis research);

He joined this lab 2-year ago. During that time he participated in a work entitled "Comparison of electroencephalogram (EEG) response to MDPV versus the hallucinogenic drugs MK-801 and ketamine in rats" (doi: 10.1016/j. expneurol.2018.12.001:). He is now in the lab as non-thesis research student.

2. COMPLETED

2006-2010
Gongliang Zhang –
Earned Ph D from the Integrative Biology Doctoral program. He has a unique background of biomedical science (M.D. and M. Sc). In my laboratory he is trained to use in vivo microdialysis for brain neurotransmitter measurement.

2006-2009
Swapna Krishnamoorthy –
Obtained Master degree from biomedical science program. During her graduate period, she received training in my laboratory for understanding neuronal mechanisms involving serotonin-toxicity syndrome.

RESEARCH TRAINING

1. ON-GOING SHORT-TERM RESEARCH TRAINING

2017-
Giselle Shim (gshim2017@fau.edu, College of Science

2018-
Rama Abdin (rabdin2017@fau.edu) College of Science

2019-,
Mark Lewism lewism2013@my.fau.edu, College of Science

2019-,
Kimberly Ramgoolam kramgoolam2016@fau.edu; College of Science

2018-,
Sol-be Park parks2016@fau.edu, Henderson high/ College of Science

2019-,

Montanah Rogers rogersm2015@fau.edu, College of Medicine

2020-

Rudolf Hall rhall2017@fau.edu, College of Sciences

2. COMPLETED RESEARCH TRAINING

1. Nandini Rambahal – undergraduate student in Chemistry & Biochemistry, FAU. Spring & Summer, 2005. Her research resulted in a poster presentation at the Research Fair 2005 at FAU. The title was "Role of Cannabinoids in morphine-induced conditioned place preference"

2. Najwa Ali Al-Jahdhami – undergraduate student in Chemistry & Biochemistry, FAU. Spring & Summer, 2005. She was one of the co-authors for a poster presentation entitled *Role of Cannabinoids in Morphine-Induced Conditioned Place Preference*.

3. Vamini Rambahal - undergraduate student in Molecular Biology, Microbiology & Biotechnology, FAU. Summer, 2005. She was one of the co-authors for a poster presentation entitled *Role of Cannabinoids in Morphine-Induced Conditioned Place Preference* at the Research Fair 2005.

4. Tarren Kristin Feinberg - undergraduate student in Biological Science, FAU. Fall, 2005. The research title for her independent study was "Serotonin Syndrome"

5. Misbba Sultana Khan – undergraduate student in Chemistry & Biochemistry, FAU. Fall, 2005. The research title for her independent study was "Serotonin Toxicity"

6. Christopher Jenney – undergraduate student in PreBiology, FAU. He had been trained in my laboratory as a student for the independent study for three semesters (Spring, Summer & Fall 2006). The data produced from his work was included in a manuscript published in the European Journal of Pharmacology "Characterization of serotonin-toxicity syndrome (toxidrome) elicited by 5-hydroxy-L-tryptophan in clorgyline-pretreated rats" 588: 198-206.

7. Nick Paul Vukovich – undergraduate student in Molecular Biology, Microbiology & Biotechnology, FAU. Summer & Fall 2006 & Spring 2007. He produced the tremendous data as a DIS student in my laboratory. The part of his work was included in a manuscript published in the European Journal of Pharmacology "Assessment of 5-hydroxytryptamine efflux in rat brain during a mild, moderate and severe serotonin-toxicity syndrome" 615: 66-75.

8. Roseline Docteur - undergraduate student in Biological Science, FAU. Fall 2006 & Spring 2007. The project was entitled " the effect of locomotion and temperature on the serotonin syndrome"
9. Asfar Mushtaq - undergraduate student in Molecular Biology, Microbiology & Biotechnology, FAU. Fall 2006

10. Katrina Michelle Maloney – pre-Master student in Biomedical Science, Spring 2007. The project was "serotonin syndrome"

11. Daudrie-Ann Powell – pre-Master student in Biomedical Science, Spring 2007. Her project assignment was " the effect of serotonin toxicity on the kidney and adrenal glands of rats"

12. Herbert "Dan" Adams- An undergraduate student in Biological Science, FAU. 2010 & 2011. His preliminary work was awarded a FAU student grant 2011-2012 "Quantitative study of anterograde axonal transporters impaired by MDMA ('ecstasy')"

13. Kayla DeSuza- undergraduate student in Molecular Biology, Microbiology & Biotechnology, FAU. 2010-2014

14. Gabriel Sotomayer- Anon-thesis Master student in Biomedical Science, Spring 2011. His project assignment was " Role of $5HT_{1A}$Rs in the serotonin toxicity"

15. Brandon D. O'Malley- undergraduate student in Molecular Biology, Microbiology & Biotechnology, FAU. 2011

16. Mary Rudacille -Undergraduate in College of Science. FAU 2011-2013

17. Amanda Nephew-Undergraduate in College of Science. FAU 2014

18. John Sousa-Undergraduate in College of Science. FAU 2014-2015

19. Sabrina Dorfils-Undergraduate in College of Science. FAU 2015-2016

20. Jonathan Troiano-Master student in College of Medicine. FAU 2015-2016

21. Michael Misquith: Undergraduate in College of Science. FAU 2015-2016

22. Marni Schlanger, Undergraduate in College of Science. FAU 2015-2017

23. Connor Shields, Undergraduate in College of Science. FAU 2015-2017

24. Alexander Maqueira, Undergraduate in College of Science. FAU 2015-2016

25. Carissa Clayton, Master student in College of Medicine. FAU 2015-2017

26. Marcillin Zetrnne <mzetrenn@fau.edu> Undergraduate in College of Science. FAU 2017-present

27. Shaun Sorensen ssorensen2015@fau.edu Undergraduate in College of Science. FAU 2017-2019

28. Guilherme Ga Silva dasilvag2013@fau.edu, Undergraduate in College of Science. FAU 2017-201

29. Matthew Tayem, mtayem2015@fau.edu, Undergraduate from College of Education, 2019

SERVICE

Departmental Committee

Fall 2004-Spring 2005	Faculty Search Committee
Fall 2005-2011	Animal User Committee
Fall 2005	Annual Review Committee
2006	Merit Increase Committee

College Committee

Spring 2008-2011	College Research Committee
Fall 2009-2011	College P & T Committee

University Committee

Fall 2008-2011	University Research Committee
Fall 2008-2011	University P & T Study Committee
2011-2014	IACUC committee

CURRENT PROFESSIONAL SERVICES

2016-, mentor for FAU undergraduate research
2016-, reviewer for FAU undergraduate research grant
2016-, Judge for annual FAU undergraduate research symposium

***AD-HOC* REVIEWER,** for instance, the following journals:

1. Neuroscience
2. Brain Research
3. Journal of Neurochemistry
4. Progress in Neuro-Psychopharmacology & Biological Psychiatry
5. Journal of Biomedical Science
6. Neuroscience Letter
7. Neuropsychopharmacology
8. etc, etc

Current Thesis/dissertation committees

1. Chris Minnerly
2. William To
3. Zach Lee

COMPLETED THESIS ADVISORY COMMITTEES

Advisory member

1. Jianfeng Du –

He is a Ph. D. candidate. Dissertation Advisor: Drs. X Huang (Chair), H. Prentice (member) and R Tao (member). A proposal for his dissertation entitled *Effect of troponin I on cardiac function* was presented in 2006.

2. Jing Liu –
She was awarded a degree for the Master of Science in 2006 after fulfilled the Master's degree thesis entitled *Evaluation of cardiac function in cTnI (R192H) transgenic mice and cTnI knockout mice with high-resolution ultrasound imaging and Doppler echocardiography* in the biomedical Master's program, Florida Atlantic University. Dissertation Advisor: Drs. X Huang (Chair), H. Prentice (member) and R Tao (member).

3. Chandana Buddhala-
Ph. D. in Integrated Biology, FAU. January 2006 – 2009

4. Manas Ranjan Biswal –
Ph. D. in Integrated Biology, FAU. January 2006 – 2011

5. Mark H. McCollum-
Ph. D. in Integrated Biology, FAU. His proposal was entitled "Dopaminergic stimulation of adult striatal neurogenesis in a transgenic mouse model of Huntington disease" January 2006 – 2011

6. Rebecca Leon-
Ph. D. in Integrated Biology, FAU. Her thesis will be entitled "The role of BH3-only protein BimEL in the pathogesis of Huntington's disease". January 2006 – 2013

7. Nariman Gobara-
She earned Master degree in 2008 after a thesis defense entitled "Assessment of anatomical structures and hemodynamic function of $cTNI^{193his}$ transgenic mice with micro-echocardiography"

8. Stephanie Brooke Linley-
She earned Ph. D. in 2011 with a thesis entitled "the effects of 3,4-methylenedioxymethaphetamine (MDMA) on mnemonic and executive measures and serotonergic neurotoxicity using interspecies effect scale"

9. Yuejin Li-
She earned Ph D in 2011 with a thesis entitled "Pathogensis of idiopathic restrictive cardiomyopathy"

10. Janet M. Menzie-
Ph. D. in Integrated Biology, FAU. Her thesis will be entitled “the therapeutic potential of Granulocyte-Colony Stimulating factor (G-CSF) in a rat model of ischemic stroke”. January 2016.

11. Jigar Modi-
Ph. D in Complex System, 2017, Mechanism of carbamathione as a therapeutic agent for stroke

PROFESSIONAL ADDRESS
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Emmanuelle Tognoli, PhD
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http://www.ccs.fau.edu/~tognoli
http://scholar.google.com/citations?user=1oQwbxQAAAAJ

EDUCATION

INSTITUTION AND LOCATION	DEGREE *(if applicable)*	YEAR(s)	FIELD OF STUDY
Lycee - Epinal - France	*Baccalaureate*	1992	Mathematics/Physics (C)
University Nancy 2 - France	Master/DEA *(summa cum laude)*	1997/98	Psychology
University Nancy 2 – France	PhD *(summa cum laude)*	2003	Psychology
Center for Complex Systems - FAU - USA	Postdoc	2003-2007	Electrophysiology

POSITIONS AND HONORS

2020	Finalist, Art of Science @ FAU
2020	Affiliate Faculty, Peace, Justice, and Human Rights Initiative (PJHR)
2019	Member, National Academy of Inventors
2019	Research Professor, HBBL, Center for Complex Systems and Brain Sciences
2018-now	Secretary, FAU Chapter of the Association for Women in Science
2016	CESCoS Researcher of the Year, FAU - Boca Raton - Florida
2013-2019	Associate Research Professor, HBBL, Center for Complex Systems and Brain Sciences, FAU - Boca Raton - Florida
2008	Graduate Faculty, Charles E. Schmidt College of Sciences
2007-2013	Research Assistant Professor, HBBL, Center for Complex Systems and Brain Sciences, FAU - Boca Raton - Florida
2006	Recipient of the INNS-Sigcom award – World Conference for Computational Intelligence
2004-now	Supervisor of EEG facility: Center for Complex Systems and Brain Sciences
2003-2007	Postdoctoral Research Scholar, Center for Complex Systems and Brain Sciences - Boca Raton – Florida
2002-2003	Research Assistant, Functional Neuroscience and Pathologies Laboratory - CNRS - Lille - France
1999	Awardee by "fondation CETELEM"
1998-2003	PhD student and teaching assistant, Psychology Laboratory - Nancy - France

CONTRACTS OR GRANTS RECEIVED

Ongoing

2020-2022	The mathematics of relatedness. National Institute on Aging, $657,900 total cost. PIs PIs E. Tognoli; C. Beetle; C. Williams
2020-2021	Alzheimer supplement. Virtual Neuroprosthetic Platform Extended to Investigate Alzheimer's Disease National Institute for Biomedical Imaging and Bioengineering, R01s2, $349,939 total cost. PIs Engeberg, Du, Tognoli, Wei
2019-2021	Diversity supplement for Virtual Neuroprosthesis: Restoring Autonomy to People Suffering from Neurotrauma. National Institute for Biomedical Imaging and Bioengineering, R01s1, $140,656 total cost. PIs Engeberg, Du, Tognoli, Wei
2017-2021	Virtual Neuroprosthesis: Restoring Autonomy to People Suffering from Neurotrauma. National Institute for Biomedical Imaging and Bioengineering, R01, $1,297,577 total cost. PIs Engeberg, Du, Tognoli, Wei and Hutchinson [scored 1st percentile]

Completed

2014-2019 Neuromarkers of Social Coordination: a Dynamical Approach. National Institute for Mental Health, R01, $1,966,784 total cost. PIs Kelso and Tognoli [scored 3rd percentile]

2018-2019 Electrophysiological neuromarkers as signals for neurorobotic control. FAU's Brain Institute pilote grant, 10k$, PIs E. Tognoli, E. Engeberg

2017 Robot Symbiosis with Neuronal Action Potential Sensing Electrodes (ROBO-SYNAPSE): Noninvasive Investigation of Neural Plasticity During Tactile Reinnervation FAU – I-sense Seed Grant, 20k$, PIs Engeberg, Du, Wei and Tognoli

2008-2011 Brain dynamics of coordinated teams. Office of Naval Research, Code 30. 660,000$ total cost. PIs Kelso and Tognoli

2009-2012 Social Coordination Dynamics: Intertwining self with others, NSF-08-508: "Human and Social Dynamics". 747.331$ total cost. PI. de Guzman, Co-PIs Kelso and Tognoli

2008-2013 Neuromarkers of Social Coordination: a Dynamical Approach. National Institute for Mental Health: "Basic and Translational Research Opportunities in the Social Neuroscience of Mental Health". 1.635.000$ total cost. Key personnel

2003-2004 Psychometric properties of BAaM attention-memory inventory for short-carrier pilots. INRS/French Institute of Safety, 80.000F total cost. Lead-investigator

2002-2003 Elaboration of an attention-memory inventory for short-carrier pilots. INRS/French Institute of Safety, 80.000F total cost. Lead-investigator

Other and pending grant submission

2021 NSF Advance: ADAPTATION: Enabling Minorities' Prime Outcomes with Education & Research (EMPOWER) at Florida Atlantic University

2020 NSF Rapid: RAPID: 4D spatiotemporal visualization and modeling of COVID-19 epidemic (E. Tognoli, C. Beetle)

2019 NIH/NIA: Understanding Alzheimer's disease at the interface between neuronal activity and synaptopathy using a microfluidics-based neurochip (PIs. J. Wei, E. Tognoli, E. Du, E. Engeberg)

2019 NIH/NIMH: "Computational and experimental neuromodulation of metastable brain oscillations" (PI: E. Tognoli)

2019 NIH/NIBIB: Alzheimer supplement: "Virtual Neuroprosthesis platform extended to study Alzheimer's Disease" (PIs E. Engeberg, S Du, E Tognoli, J. Wei)

2018 NIH/NIA: "The mathematics of relatedness" (PIs E. Tognoli; C. Beetle)

2018 NIH/NIMH: "Experimental and computational neuromodulation of metastable brain oscillations" (PI: E. Tognoli)

2018 NSF/ERC: "Planning grant for Engineering Research Center for Connected Assured Autonomy (C2A2)." (PI: D. Pados, Co-PIs, E. Tognoli, R. Seker, S. Allen, S. Medeiros)

2016 NSF/NIH, SCH: "SCH: INT: Collaborative Research: Virtual Neuroprosthesis: Restoring Autonomy to People Suffering from Neurotrauma" (PI: E. Engerberg, coPIs: S. Du, E. Tognoli, J. Wei, D. Hutchinson)

2016 NIBIB, R15: "Noninvasive Neuroprosthetic Platform to Investigate Neural Plasticity" (PI: E. Engerberg, coPIs: S. Du, E. Tognoli, J. Wei)

2016 NIA, R24, "University Institute for Healthy Aging and Lifespan Studies (I-HeAL)" (PI: J. Galvin, role: steering committee).

2015 AFSOR, Cyber-Human Systems (CHS) program: "CHS: Small: Virtual Neuroprosthesis Via Microfluidic Chambers" (PI E. Engeberg, coPIs S. Du, E. Tognoli, J. Wei)

2015 NSF, IIS - Cyber-Human Systems (CHS): "CHS: Small: Virtual Neuroprosthesis Via Microfluidic Chambers" (PI E. Engeberg, coPIs S. Du, E. Tognoli, J. Wei)

2015 NSF, Integrative strategies for understanding neural and cognitive systems: "NCS-FO: Collaborative Proposal: Synergizing neural inputs and software systems in human-computer interactions" (PI E. Tognoli, co-PI S. Huang, FAU and D. Garlan, Carnegie Mellon University)

2014 Gordon and Betty Moore Foundation's Data-Driven Discovery program (PI E. Tognoli): Tackling complexity: 5D visualization of big spatiotemporal data

2014 FAU Seed Grant (PIs E. Tognoli, S. Huang): A brain computer interface to track covert attention: a pilot project in support of a collaborative NSF application

2013 Google Faculty Research Award (PIs E. Tognoli, S. Huang): bypassing the behavioral bottleneck of Human Computer Interfaces with brain inputs

2013 The James Mc Donnell Foundation (PI E. Tognoli): Visual tools for spatiotemporal complexity

2011 Human Frontiers Science Program (PIs E. Tognoli, K Kitajo): Toward a mesoscopic dynamic clamp: tickling

nonlinearities of the human brain

2010 NIH New Innovator Director's award (PI E. Tognoli): Tackling Complexity: brains, minds and beyond.

2009 FAU challenge (PI E. Tognoli): Complexity of Brains and Minds.

2008 Merck and Co, West-Point, PA: (PIs E. Tognoli and JAS Kelso): Probing brain areas and their communication: A methodological framework for spatio-temporal EEG recordings

2007 NIH Exceptional, Unconventional Research Enabling Knowledge Acceleration (Eureka) (PIs E. Tognoli and JAS Kelso): Sequencing Dynamic Patterns of the Brain

PUBLICATIONS *(numbers in bracket for chronological order)*

[1] Ibrahim A.K., Zhuang, H., Tognoli E., Erdol, N. Ali, A.M. (submitted). Epileptic Seizure Prediction Based on Multiresolution Convolutional Neural Networks. Biomedical Signal Processing and Control

[2] Pavlov, Y.G., Adamian, N., Appelhoff, S., Arvaneh, M., Benwell, C., Beste, C., Bland, A., Bradford, D.E., Bublatzky, F., Busch, N. and Clayson, P.E., et al., (*submitted*). #eegmanylabs: Investigating the Replicability of Influential EEG Experiments. Cercor

[3] Tognoli, E., Zhang, M., Fuchs, A., Beetle, C., & Kelso, J. A. S. (2020). Coordination Dynamics: A Foundation for Understanding Social Behavior. Frontiers in Human Neuroscience. 14:317.

[4] Dodel, S. M., Tognoli, E., & Kelso, J. A. S. (2020). Degeneracy and complexity in neuro-behavioral correlates of team coordination. Frontiers in Human Neuroscience, 14, 328.

[5] Tognoli, E., & Kelso, J. A. S. (2020). Spectral dissociation of lateralized brain rhythms. Neuroscience research, 156, 141-146.

[6] Zhang, M., Kalies, W. D., Kelso, J. S., & Tognoli, E. (2020). Topological portraits of multiscale coordination dynamics. Journal of Neuroscience Methods, 108672.

[7] Dumas, G., Moreau, Q., Tognoli, E., & Kelso, J. S. (2020). The Human Dynamic Clamp reveals the fronto-parietal network linking real-time social coordination and cognition. Cerebral Cortex, 30(5), 3271-3285.

[8] Tognoli, E. (2019). More than Meets the Mind's Eye? Preliminary Observations Hint at Heterogeneous Alpha Neuromarkers for Visual Attention. Brain sciences, 9(11), 307.

[9] Zhang, M., Beetle, C., Kelso, J. S., & Tognoli, E. (2019). Connecting empirical phenomena and theoretical models of biological coordination across scales. Journal of the Royal Society Interface, 16(157), 20190360.

[10] Tognoli, E., Benites, D., Kelso, J.A.S. (*submitted*). A blueprint for the study of the brain's spatiotemporal patterns.

[11] Tognoli, E., Huang, S. (*submitted*). Emotionally-Informed Decisions: Bringing Gut's Feelings into Self-adaptive and Co-adaptive Software Systems.

[12] Andreou, A.G., Beaudoin, M., Dao, S.K., **Fiore, S.*,** Forsythe, C., Gratch, J., Hall, K.L., Hamilton, D.J., Heintz, I., Hylton, T., Kabbani, N., Khan, M.S., Kiourti, A., **Krichmar, J.*,** Kruse, A.A., Nguyen, B., **Olds, J.*,†,** Schroeder, N., Severa, W., Sukthankar, G., **Tognoli, E.*,** Wagner, C. (2018). The AI Acceleration: Implications for the US Air Force of 2030. Report to the Secretary of the USAF. († Principal Investigator, * Corresponding Author).

[13] Benites, D., Tognoli, E., Kelso, J.A.S. *(in press)*. Dinâmicas de Coordenação e Metaestabilidade. In V.G. Haase & G. Gauer (Eds.), Elementos de Psicologia Cognitiva. Porto Alegre: ARTMED.

[14] Abd, M., Bornstein, M., Tognoli, E., Engeberg, E.D., *(2018)*. Armband with Soft Robotic Actuators and Vibrotactile Stimulators for Bimodal Haptic Feedback from a Dexterous Artificial Hand. IEEE/ASME International Conference on Advanced Intelligent Mechatronics.

[15] Tognoli, E., Zhang, M., Kelso, J.A.S. (*2018*). On the nature of Coordination in Nature. Advances in Cognitive Neurodynamics (VI). Delgado-Garcia (Eds.). Springer.

[16] Zhang, M., Kelso, J.A.S., Tognoli, E. (*2018*). Critical diversity: divided or united states of social coordination. PLoS One. doi: 10.1371/journal.pone.0193843

[17]Nordham, C., Tognoli, E., Fuchs, A., Kelso, J.A.S. (*2018*). How Interpersonal Coordination Affects Individual Behavior (and Vice Versa). Ecological Psychology.

[18]Dumas, G., Lefebvre, A., Zhang, M., Tognoli, E., & Kelso, J.A.S. (2018) The human dynamic clamp: a probe for social coordination dynamics. Complexity and Synergetics: 317-332.

[19]Tognoli, E., Dumas, G., Kelso, J.A.S. (*2018*). A roadmap to Computational Social Neuroscience. Cognitive Neurodynamics. 12(1): 135-140.

[20]Lloyd, E., Huang, S., Tognoli, E. (2017). Improving Human-in-the-Loop Adaptive Systems Using Brain-Computer Interaction. Proceedings of the 12th International Symposium on Software Engineering for Adaptive and Self-Managing Systems (pp. 163-174). IEEE Press.

[21]Kelso, J. A. S., Tognoli, E. (2017). Toward a Complementary Neuroscience: metastable coordination Dynamics of the Brain. Chaos and Complexity Letters, 11(1), 141-162. [reprint]

[22]Zhang M., Dumas, G., Kelso, J.A.S., Tognoli, E. (2016). Enhanced Emotional Responses during Social Coordination with a Virtual Partner. International Journal of Psychophysiology. 104, 33-43.

[23]Tognoli, E., Kelso, J.A.S. (2015). The Coordination Dynamics of Social Neuromarkers. Frontiers in Human Neurosciences. 9:563. doi: 10.3389/fnhum.2015.00563

[24]Kelso, J.A.S., Tognoli, E., Dumas, G. (2014). Coordination Dynamics: Bidirectional Coupling between humans, machines and brains. In 2014 IEEE International Conference on Systems, Man, and Cybernetics (SMC) (pp. 2240-2243). IEEE.

[25]Dumas G., de Guzman G.C., Tognoli, E., Kelso, J.A.S. (2014). The Human Dynamic Clamp as a Paradigm for Social Interaction. Proceedings of the National Academy of Sciences, 111(35), E3726-E3734. [High impact factor, Altmetric 98th percentile, index of public interest]

[26]Tognoli, E., Kelso, J.A.S. (2014). Enlarging the scope: grasping brain complexity. Frontiers in System Neuroscience, 8:122. [Altmetric 97th percentile]

[27]Huang, S., Tognoli, E. (2014). Brainware: synergizing software systems and neural inputs. ICSE Companion, New Ideas and Emerging Results, pp. 444-447.

[28]Tognoli, E., Kelso, J.A.S. (2014). The metastable brain. Neuron, 81(1): 35-48. [Free feature article in January; altmetric 98th percentile, high impact, highly cited]

[29]Dodel, S., Tognoli, E., Kelso, J.A.S. (2013). The Geometry of Behavioral and Brain Dynamics in Team Coordination. In Foundations of Augmented Cognition. Schmorrow, D.D., Fidopiastis, C.M. (eds), Lecture Notes in Computer Science Volume 8027, pp.133-142.

[30]Tognoli, E., Kelso, J.A.S. (*2013*). On the brain's dynamical complexity: coupling and causal influences across spatiotemporal scales. In Advances in Cognitive Neurodynamics (III), ed. Y. Yamaguchi. Dordrecht: Springer Netherlands.

[31]Kelso J.A.S., Dumas G., Tognoli E. (2012). Outline of a General Theory of Behavior and Brain Coordination. Neural Networks, 37: 120-131.

[32]Banerjee, A., Tognoli, E., Kelso, J.A.S., Jirsa, V.K. (2012). Spatiotemporal (re)organization of sensorimotor networks underlying unimanual and bimanual coordination. Neuroimage, 62(3): 1582-1592.

[33]Tognoli, E., Kovacs, A.J., Suutari, B., Afergan, D., Coyne, J., Gibson, G., Stripling, R., Kelso, J.A.S. (2011). Behavioral and brain dynamics of team coordination, Part I: task design. In Hutchison, D.; Kanade, T.; Kittler, J.; Kleinberg, J. M.; Mattern, F.; Mitchell, J. C.; Naor, M.; Nierstrasz, O.; Pandu Rangan, C.; Steffen, B.; Sudan, M.; Terzopoulos, D.; Tygar, D.; Vardi, M. Y.; Weikum, G.; Schmorrow, D. D. & Fidopiastis, C. M. (Eds.). Foundations of Augmented Cognition. Directing the Future of Adaptive Systems, Springer Berlin Heidelberg, 6780: 257-264.

[34]Tognoli, E., Kovacs, A.J., Suutari, B., Afergan, D., Coyne, J., Gibson, G., Stripling, R., Kelso, J.A.S. (2011). Behavioral and brain dynamics of team coordination, Part II: neurobehavioral performance. In Hutchison, D.; Kanade, T.; Kittler, J.; Kleinberg, J. M.; Mattern, F.; Mitchell, J. C.; Naor, M.; Nierstrasz, O.; Pandu Rangan, C.; Steffen, B.; Sudan, M.;

Terzopoulos, D.; Tygar, D.; Vardi, M. Y.; Weikum, G.; Schmorrow, D. D. & Fidopiastis, C. M. (Eds.). Foundations of Augmented Cognition. Directing the Future of Adaptive Systems, Springer Berlin Heidelberg, 6780: 376-382.

[35]Tognoli, E., de Guzman, G. C. & Kelso, J. A. S. (2011). Interacting humans and the dynamics of their social brains. In Wang, R., Gu, F. (eds.), Advances in Cognitive Neurodynamics (II), pp. 139-143, Springer, Heidelberg.

[36]Tognoli E., Kelso J.A.S. (2009). Brain Coordination Dynamics: True and False Faces of Phase Synchrony and Metastability. *Progress in Neurobiology*, 87(1): 31-40. [Cover of the journal, high impact, highly cited]

[37]Kelso, J.A.S., de Guzman G.C., Reveley C., Tognoli, E. (2009). Virtual Partner Interaction (VPI): Exploring Novel Behaviors via Coordination Dynamics. PLoS ONE 4(6) e5749. [Highly cited]

[38]Tognoli, E., (2008). EEG coordination dynamics: neuromarkers of social coordination. In Fuchs A, Jirsa VK (eds.) Coordination: Neural, Behavioral and Social Dynamics. Springer, pp.309-323.

[39]Banerjee, A., Tognoli, E., Assisi, C., Kelso, J.A.S., Jirsa, V.K. (2008). Mode Level Cognitive Subtraction (MLCS) quantifies spatiotemporal reorganization in large-scale brain topographies. *NeuroImage*, 15, 663-674.

[40]Kelso, J.A.S. , Tognoli, E. (2007). Toward a Complementary Neuroscience: Metastable Coordination Dynamics of the Brain. In R. Kozma & L. Perlovsky (Eds.) Neurodynamics of Higher-level Cognition and Consciousness. Springer, Heidelberg. Reprinted in Murphy, N., Ellis, G. F. R., O'Connor, T. (2009). Downward Causation and the Neurobiology of Free Will. Springer, Heidelberg. [Highly cited]

[41]Tognoli, E., Lagarde, J., De Guzman, G.C., Kelso, J.A.S. (2007). From the cover: The phi-complex as a neuromarker of human social coordination. *Proceedings of the National Academy of Sciences*, 104, 8190-8195. [Cover, highly cited]

[42]Bressler S.L., Tognoli, E. (*2006*). Operational principles in neurocognitive networks. *International Journal of Psychophysiology*, 60: 139-148. [Highly cited]

[43]Kelso, J.A.S., Tognoli, E. (2006). Metastability in the brain. Proceedings of the International Joint Conference on Neural Networks, Vancouver, pp.755-760.

[44]Tognoli E., Toniolo, A.M., (2003). L'attention chez l'enfant : mesures capacitaires ou mesures processuelles. *Psychologie et Psychométrie*, 24 : 1-17.

[45]Tognoli, E., Toniolo, A.M., Boucart, M., (2002). Attention visuelle sélective et mémoire de travail. Signification strategique des intrusions dans les séquences RSVP. Rennes, Presses Universitaires de Rennes.

[46]Mietkiewicz, M.C., Blique, S., George M.Y., Tognoli, E., (2000). Le bien-être en maison de retraite : une approche de la conception des résidents. *Pratiques Psychologiques*, 3 : 19-28.

[47]Tognoli, E., Toniolo, A.M., Boucart, M., (2000). Le stimulus, de sa perception a sa représentation : les influences de l'attention sélective. Acte des Journées Internationales des Sciences Cognitives - Orsay, 53-59.

[48]Toniolo, A.M., Tognoli, E., (1998). Entre Biologie et Cognition : une pathologie dynamique : l'Epilepsie. In Alexandre, F., Kant, J.D., Actes des 9emes Journées Neurosciences et Sciences pour l'Ingénieur, 51-64.

PATENTS

1. System and method for analysis of spatio-temporal data – Provisional Application filed on July 9, 2008 -Serial No. 61/134,349 | US utility patent filed on July 8, 2009 - 12/500,187 | PCT filed on July 9, 2009 PCT/US2009/50049 [Patent awarded, Notice of Acceptance August 2013, 22 forward citations]
2. [confidential, preliminary disclosure].

INVITED LECTURES

TBD	An Essay on Extracellular Fields' Contributions to a Globally Conscious Brain – Monte Veritas, Switzerland (Keynote)
2021	Brain Metastability - Brain Space Initiative, online
2020	Computational Social Neuroscience - U Michigan
2019	Interdisciplinary studies of metastable brain oscillations – University of Alabama at Birmingham
2019	Selves, others, and the birth of coupling in neurocomputational models of social interactions – CSAN, Miami Beach
2019	Building neurotechnological complexity from the ground up – Osaka, Japan
2017	Sympathy of the Brains – Shanghai, China

2016 Spatiotemporal metastability – University of Miami, FL
2016 To mine or to mind: a primal view on spatiotemporal dynamics of neural oscillations – Arizona State University, AZ
2015 A roadmap for Computational Social Neuroscience. ICCN 2015 – Sanya, China *(delivered by G. Dumas)*
2015 4-5D visualization tools reveal different degrees of complexity in the spatiotemporal dynamics of natural systems. Nova Southeastern University, FL
2013 A Complexity viewpoint on the concept of sustainability. EURAGRI International Workshop- Sigtuna, Sweden
2013 Enduring questions about mu rhythm's contribution to social behavior. ICCN 2013, Sigtuna, Sweden
2013 Spatiotemporal metastability: natural evidences and theoretical insights. Dynamic Brain Forum, Sigtuna, Sweden
2012 Neuromarkers of Social Coordination: a Dynamical Approach. New-Orleans.
2012 An essay on extracellular fields' contribution to a global conscious brain. Carmona, Spain
2012 Metastable social coalitions: models, humans, fireflies. Sendai, Japan (*postponed)
2012 System and method for analysis of spatiotemporal data. Florida International Univ. FL
2011 Xi rhythm: neuromarker of covert attention and interface between brains and machines. Boca Raton
2011 Spatiotemporal metastability & functional complexity. University of Memphis, TN
2011 A world of coordination: a journey across scales. Mini-symposium in honor of Michael Turvey. Boca Raton
2010 Of Neurons and Humans: Collective Behaviors. University of Cincinnati, OH
2010 Neural flows in space-time: traces of the self-organizing brain. Conference at Sea, Western Caribbean.
2009 Interacting Humans and the Dynamics of their Social Brains. International Conference on Cognitive Neurodynamics, Hangzhou, China.
2009 Neural Mechanisms of Social Coordination: a Continuous EEG Analysis using a Novel 4d Colorimetric Method. Joint Action Meeting, Amsterdam, The Netherlands.
2008 Neuromarkers of Social Behavior: Paving the Way to Electrophysiological Endophenotypes of Autism. Autism Society of America. Orlando, FL
2007 EEG Coordination Dynamics: Neuromarkers of Social Coordination. Conference in Honor of J. A. Scott Kelso's 60th Birthday. Boca Raton, FL
2007 EEG Coordination Dynamics: Self-Organization in the Brain. Merck Laboratories, West Point, PA
2006 The phi complex: a dual-EEG study of effective social coordination. Gerontological Society of America, Dallas, TX
2006 Metastability in the Brain. IEEE World Conference on Computational Intelligence, Vancouver, Canada.

Sample public outreach, press coverage

Scientific American Mind, August 2007. Social Rhythm: Unique patterns of neural activity mark personal interactions. http://www.scientificamerican.com/article.cfm?id=social-rhythm

Director's report to the National Advisory Mental Health Council, September 21, 2007 http://www.nimh.nih.gov/about/advisory-boards-and-groups/namhc/2007/september/directors-report-sept07.pdf

ScienceDaily, May 15, 2007. New Brain Neuromarker May Shed Light On Autism And Schizophrenia. http://www.sciencedaily.com/releases/2007/05/070514150813.htm

Plexus Institute, June 24th, 2009. Virtual Partner Interaction (VPI): A Mind-Machine Breakthrough. http://www.plexusinstitute.org/complexitymatters/?p=51

Boca Raton News, July 6th, 2009. Boca Raton: FAU study offers unique look at human-machine http://www.bocanews.com/local-news/boca-raton/4651-boca-raton-fau-study-offers-unique-look-at-human-machine.html

Physorg, June 16th, 2009: Scientists create hybrid system of human-machine interaction. http://www.physorg.com/news164363618.html

Palm Beach Post, June 21th, 2009. FAU links man and machine, the research could have applications for therapy http://www.palmbeachpost.com/localnews/content/local_news/epaper/2009/06/20/a1b_faumachine_0621.html

Simons Foundation Autism Research Initiative, March 11th, 2009: New EEG analysis captures coordination among brain regions. http://sfari.org/news-and-opinion/news/2009/new-eeg-analysis-captures-coordination-among-brain-regions

Plexus Institute, February 9th, 2009. Observing the Human Brain at Work. http://www.plexusinstitute.org/news-events/show_news.cfm?id=1654

News Wise, January 19th, 2009. Groundbreaking Technique Reveals Modus Operandi of the Intact Living Brain. http://www.newswise.com/articles/view/548194/

Science Daily, January 21st, 2009. Dynamical theory and novel 4-D colorimetric method reveal modus operandi of intact living brain. http://www.sciencedaily.com/releases/2009/01/090121122842.htm

Simons Foundation Autism Research Initiative, March 14th, 2011: Machine-learning tool shows promise for autism diagnosis https://sfari.org/news-and-opinion/news/2011/machine-learning-tool-shows-promise-for-autism-diagnosis

Datanami Big Data, November 19, 2013: Neuroscientists Develop 5D Data Visualization Technique http://www.datanami.com/datanami/2013-11-19/neuroscientists_develop_5d_data_visualization_technique.html

Sciencedaily, November 18, 2013: New 5-D method to understand big data http://www.sciencedaily.com/releases/2013/11/131118132440.htm

Newswise, November 18th, 2013: FAU Neuroscientists Receive Patent for New 5D Method to Understand Big Data http://www.newswise.com/articles/fau-neuroscientists-receive-patent-for-new-5d-method-to-understand-big-data

Inside NIMH, spring 2014: Notable NIMH Grants https://www.nimh.nih.gov/researchpriorities/insidenimh/2014springinsidenimh.shtml

Choratech, June 8th, 2014: The Metastable Brain http://choratech.com/blog/?p=450

Discover Magazine, top stories, July 14th, 2014: Can we grasp the brain's complexity? http://blogs.discovermagazine.com/neuroskeptic/2014/07/14/can-grasp-brains-complexity/

Physorg, August 12th, 2014: Researchers introduce 'Human Dynamic Clamp'—groundbreaking approach to understanding social interaction http://phys.org/news/2014-08-human-dynamic-clampgroundbreaking-approach-social.html

Improbable Research, Research that makes people LAUGH and then THINK, August 19th, 2014: The Human Dynamic Clamp https://www.improbable.com/2014/08/19/the-human-dynamic-clamp/

Analytics Magazine, January-February, 2015: The future of data visualization, by Will Towler http://www.analytics-magazine.org/january-february-2015/1196-data-visualization-the-future-of-data-visualization

SciFeeds, May 17th, 2016 Scientists create an 'emotional' Turing test to learn how it feels to interact with a machine. https://scifeeds.com/news/scientists-create-an-emotional-turing-test-to-learn-how-it-feels-to-interact-with-a-machine/

The Stack, May 20th, 2016, Virtual partner created for 'emotional' Turing test. https://thestack.com/world/2016/05/20/virtual-partner-created-for-emotional-turing-test/

EurekAlert, 2016: FAU Scientists Develop 'Virtual Partner' That Can Elicit Emotional Responses from a Human Partner in Real-time. https://www.eurekalert.org/multimedia/pub/115616.php?from=327852

Physorg, November 14th, 2017: Bioengineered robotic hand with its own nervous system will sense touch https://phys.org/news/2017-11-bioengineered-robotic-nervous.html

Azorobotics, November 15th, 2017: New Bioengineered Robotic Hand Regenerates the Sensation of Touch https://www.azorobotics.com/News.aspx?newsID=9591

Medical Device Daily, November 16th, 2017: FAU, Utah seek to restore touch with robotic hand http://medicaldevicedaily.com/servlet/com.accumedia.web.Dispatcher?next=bioWorldHeadlines_article&forceid=96779

Newswise, December 1st, 2020: FAU Receives NIH Grant to Enhance Social Engagement in Older Adults https://www.newsbreak.com/news/2116118567506/fau-receives-nih-grant-to-enhance-social-engagement-in-older-adults

PROFESSIONAL SERVICE

- Judge for MIT Technology Review, Innovators Under 35, edition Europe (2015; 2017; 2018; 2019)
- Professorial Promotion and award, University of Toronto and Sick Kids (Prof. J. L. Perez Velazquez), Worcester Polytechnic Institute (Asst. Prof. T. Padir), Florida Atlantic University (Assoc. Prof. S. Huang), Fundación Premios Rey Jaime I (Prof. J.M. Delgado-Garcia), Indian Institute of Science Education and Research (Assist. Prof. Suhita Nadkarni)
- Survey Editor and Associate Editor (2017-2019): Cognitive Systems Research
- Grant reviewer for NASA (NASA HERO19 Team Dynamics); National Science Foundation (NSF), Cognitive Neuroscience Program; Perception Action Cognition program; Developmental and Learning Sciences Program.
- Peer Reviewer for journal articles: E-Neuro, Journal of Cognitive Neuroscience, Cerebral Cortex, PLoS Computational Biology, PLoS One, Scientific Reports, Neuroinformatics, Neurocomputing, Journal of Biological Physics, Chaos, Entropy, Solitons & Fractals, Physica A, Neuroscience of Consciousness; Psychopharmacology, Brain Research, NeuroImage, European Journal of Neuroscience, Neurosurgery, Human Brain Mapping, Experimental Brain Research, Schizophrenia Bulletin, Journal of Integrative Biological Science, SCAN, The International Journal of Neuropsychopharmacology, Journal of Neuroscience Methods, Cognitive Neurodynamics, Intellectica, Computational Intelligence and Neuroscience, IEEE Transactions on Neural Systems & Rehabilitation Engineering, Human Movement Science, Journal of Motor Behavior

- Peer reviewer for book proposals: World Scientific Publishing/Imperial University Press, Oxford University Press.
- Secretary, FAU's chapter of the Association for Women in Science, grow online and local membership, collaboratively execute mentorship, networking and leadership opportunities.

Conferences and scientific events

2023 PreProposal Organization of Human Brain Mapping – OHBM, Miami (Uddin, Heller, Laird, Dick, Dykstra, Tognoli, Riera, Denkova, Jha, Nomi, Britton, Losin, McIntosh, Sutherland, Mattfeld, McMakin)
2019 Co-organizer, Social and Affective Neuroscience Satellite, Computational Social Neuroscience, Miami, May 2nd
2018 Proposal Co-organizer, SfN minisymposium, Bridging the gap from neurons to complex social networks
2013 Chair: ICCN2013, special session, social neurodynamics
2011 Co-organizer: A Mini Symposium to celebrate the 25/26th anniversary of the Center for Complex Systems and Brain Sciences, December 8th, 2011
2011 Co-organizer: Minisymposium in honor of Michael Turvey. Boca Raton, FL, May 5th.
2010 Co-organizer, The History of Science Lecture, by James McGuire, professor Emeritus, to Celebrate the 25/26th anniversary of the Center for Complex Systems and Brain Sciences, October 29th, 2010.
2010 Co-organizer and program director: Brain Coordination Dynamics, An International Conference at Sea. http://www.ccs.fau.edu/bcd2010, May 1st-5th, 2010
2008 Co-organizer, Comeallye for Centerites and Center Alumni, 2008, a Society for Neuroscience Social

Host to visitors at FAU:

Danielle Bassett, U. Penn [youngest individual to be awarded a MacArthur fellowship]
Flavio Frohlich, UNC, [NIMH's flagship "Biobehavioral Research Awards for Innovative New Scientists" (BRAIN)]
Robert Levy, Marcus Neuroscience Institute
Read Montague, UCl, Virginia Tech, [Kavli fellow]
William Bialek, Princeton, Pending commitment
Alik Widge, Univ. Minnesota, December 2019

Teaching and Mentoring

Classes taught

At FAU:
Invited lectures (2010, 2011), Electrical Engineering and Bioengineering
Proseminar at Center for Complex Systems and Brain Sciences (2010-now)
Invited EEG demonstration, Psychology, Physics and CCSBS (2005-now): EEG demonstration, Profs. Tuller (Psychology) and Fuchs (Medical Physics, CCSBS)
Internal training in the Center for Complex System and Brain Sciences, FAU (2004-now): Introduction to EEG data acquisition: theory & instrumentation (3 half-day theoretical and hands-on training)

In French, University of Nancy (now University of Lorraine):
Maîtrise, Cognitive Sciences, Nancy 2 University (2000-2002): visual perception, visual selective attention (class development and teaching)
Licence, Cognitive Sciences, Nancy 2 University (1999-2002): introduction to Psychophysics, attentional processes (class development and teaching)
Licence, Psychology, Nancy 2 University (1999-2001): introduction to SPSS (TA)
Licence, Psychology, Nancy 2 University (1999-2000): Psychological assessment of intellectual development, WISC III (TA)
DEUG, Psychology, Nancy 2 University (1998-1999): Methodology in Psychology (TA)

Dissertations

2020-NOW	Tuan Vo, PhD Computer & Electrical Engineering	Dissertation Committee
2020	Melanie Jouaiti, PhD Computer Science, LORIA, France	Dissertation Committee
2018-NOW	Genevieve Liddle, PhD Integrative Biology	Dissertation Committee
2018-2019	Mohammed Alharbi, Master Computer Science	Dissertation Committee
2017-2018	Joe Ignicco, Master Mechanical Engineering	Dissertation Committee
2016-2018	Thomas Colestock, PhD Mechanical Engineering	Dissertation Committee
2016-2020	Aritra Ghosh, PhD Computer Science	Dissertation Committee
2015-2016	Eric Lloyd, Master Computer Science	Dissertation Committee
2015-2019	Ali Ibrahim, Electrical Engineering	Dissertation Committee
2014	Friederike Hohlefeld, Charite, Univ. Medicine, Berlin	Visiting PhD student

2014-NOW	Pedro Miranda, Master Computer Science	Dissertation Committee
2013-2018	Mengsen Zhang, PhD Center for Complex Systems and Brain Sciences	Advisor
2012	Solveig Vieluf, Jacobs Univ. Bremen, Germany	Visiting PhD student
2011-2016	Craig Nordham, PhD Center for Complex Systems and Brain Sciences	Advisor
2011	Yu Chun Chung, National Yang-Ming University, Taiwan	Visiting PhD student
2010-2011	Jack Petersen, Master Computer Sciences	Dissertation Committee
2008-2009	Rodrigo Calderon, Master Computer Sciences	Dissertation Committee
2007-2008	Daniela Benites, Porto Allegre, Brazil	Visiting PhD student

Other research Mentoring, graduate

Basak Kocaoglu, (2018-2019, Master in Philosophy, enrolled In GNTP)
Joshua Childs (2018, FAU, Political Sciences)
Tarah Raldiris (2014, Penn State University, alumni and non-degree seeking student at FAU)
Camille Lewis-Henry (2012, FAU College of Education, volunteer)
Seth Weisberg (2009-2010, Neuroscience Certificate at FAU)
Allison de la Rosiere (2007, Master student, Physics Dept. at FAU)

Research Mentoring, volunteers, undergraduate, high school

Gianna Cannestro (2019-now, Biology)
Hayden Siesel, (2020, Rise scholarship, U Penn)
David Maya (2019, Mechanical Engineering)
Sabrina Forgnone (2018, Psychology)
Nadine Akin (2017-2019, Post Bacc, FAU)
Ananda Chowdhury (2016, Computer Sciences, FAU)
Michael Femenia (2015, Volunteer)
Ricardo Martinez (2014, Electrical Engineering)
Chelsey Hoff (2014, Electrical Engineering, Mathematics)
Randy Ellis (2012, undergraduate FAU Psychobiology), now PhD student Icahn School of Medicine at Mount Sinai and NIDA
Leonardo Rhodes (2012, UF, summer undergraduate volunteer)
Anamaria Alexandrescu (2010, undergraduate Biological Sciences at FAU), PhD, NYU and now instructor at Columbia University
Benjamin Suutari (2009-2011, undergraduate Physics Dept. at FAU), PhD NYU, now with Elucd
Brittany Zelch (2009-2011, high school volunteer assistant, Pine Crest High School), undergraduate NorthWestern and graduate Univ. Chicago
Jennifer Moore (2009, undergraduate Human Factors - George Mason University)
Sara Anastas (2008, Undergraduate Psychology, University of Florida Gainesville), undergrad Massachusetts Eye and Ear Infirmary, Med School at FAU, intern, Univ. New Mexico, currently resident at New York Medical College

Mentoring at post-doctoral level

Maohua Lin (2021, postdoctoral scholar).
Yuhao Qiang (2020, postdoctoral scholar). Now postdoctoral scholar at MIT
Jinzi Deng (2019, postdoctoral scholar). Now Clinical Assistant Professor at Yeshiva University
Kunal Mondal (2018-2019, postdoctoral associate). Staff Scientist at Idaho National Laboratory & Affiliate and Allied Graduate Faculty at Idaho State
Roxana Stefanescu (2015-2018, Senior Research Specialist). Now Bioinformatics Fellow at Palantir Technologies.
Anand Ramamoorthy (2014, Postdoctoral Fellow)
Guillaume Dumas (2012-2014, Postdoctoral Fellow). Now IVADO Assistant Professor of Computational Psychiatry, Univ. Montreal.
Row Hashemiyoon (2011, Research Associate). Chief neurophysiologist at the University Hospital of Cologne
Slava Murzin (2010-2013, Postdoctoral Fellow). Owner, Synerlogics.
Attila Kovacs (2010-2012, Postdoctoral Fellow). Now Assistant Professor University of Wisconsin.
Kaushik Majumdar (2008, Postdoctoral Fellow). Now Full Professor, Indian Statistical Institute.

Data Sharing
Dr. Marco Congedo, Gipsa Lab, Grenoble, France
Dr. Naeem Mohammed, Univ. Ulster

Advising for establishment of dual-EEG laboratories:
Drs. William Kalkhoff (Kent State Univ.), Ed Lawler (Cornell University) and Shane Thye (University of South Carolina)
Dr Kozma, Univ. Memphis, TN
Dr Luca Onnis, Univ. Hawaii, HI
Dr Frezza-Buet, Supelec-Metz, France

Student recommendation to training programs:
Ms Gianna Cannestro for PhD application in Neuroscience at FAU
Ms Akin for multiple applications to medical schools
Mr Eric Lloyd for a PhD application in Computer Science at FAU
Mr Benjamin Suutari, PhD programs, accepted at Univ. Texas at Austin and at New York Univ.
Mr Seth Weisberg, graduate certificate in Medical Science at FAU; PhD programs, accepted at Univ. Texas at Austin
Ms Sara Anastas, for a Position of Research assistant at the Massachusetts Eye and Ear Infirmary, Harvard Medical School; for a position of Research Assistant at Tufts University School of Medicine; for applications to Medical Schools
Ms Anamaria Alexandrescu for Summer Research Programs, accepted at University of Pennsylvania's Summer Undergraduate Research Program
Ms Brittany Zelch, for a position of Research Assistant, Developmental Cognitive Neuroscience Lab, Northwestern Univ.

Student recommendation, jobs, travel grants and awards:

2020 Dr Zhang for TT Position at NIH, U-Michigan,
2019 Dr Zhang for a travel award from SIAM
2019 Dr Kunal Mondal for Faculty positions at U. Minnesota,
2018 Dr Zhang for a position at Stanford University
2017 Ms Zhang for a position In the Santa Fe Complexity Institute
2016 Ms Zhang for fellowships by McDonnell Foundation, Omidyar foundation
2014 Mr Leonardo Rhodes for an internship in Metz, France
2011 Ms Brittany Zelch for talent search award at Siemens Foundation
2012 Dr Daniela Benites, postdoctoral fellow at Univ. Texas at Austin
2011 Ms Daniela Benites for a travel award by the Society for Psychophysiological Research
2010 Ms Daniela Benites for a travel award by IBRO
2008 Ms Reyna Gordon for an award from FAU Graduate Fellowship for Academic Excellence

Recommendations for award professional development of colleagues:
2018 Professor Jose-Maria Delgado-Garcia, for the Royal recognition from Fundación Premios Rey Jaime I in Spain
2016 Dr G. Estrada, for a conversion from Physics to Optical NeuroImaging at Boston University
2015 Associate Professor S. Huang for promotion to Full Professor at FAU's CEECS
2014 Dr Gahangir Hossain, for his transition from the Fedex Institute of Technology to tenure-track at Texas A&M
2014 Dr G. Dumas, recommendation to permanent researcher positions at CNRS and Pasteur Institute,
2013 Professor Perez Velazquez for promotion to the rank of Full Professor, Univ. Toronto
2011 Dr Collins Assisi for faculty position at the Indian Institute of Science Education and Research
2010 Dr Collins Assisi for a staff position at University of California, Riverside

Extramural support for grantmanship

Dr Friederike Hohlefeld, Charite Berlin, DFG Grant from the German Research Foundation and
Dr Ana Teixeira de Melo, European Union's ERC program and Templeton Foundation

Outreach efforts solicited by funding agencies:

Illustrative material for NIMH booth at Society for Neuroscience
Layperson abstract material for justification of NSF research to congress
Graphical and text material for illustration of research on NSF's website front page
Communicated findings through ONR's NRE navigator

And to finish
Citation in Annals of Improbable Research ("Research that makes people laugh and then think"):
https://www.improbable.com/2014/08/19/the-human-dynamic-clamp/

Official blogger "Neuroskeptic" from Discover Magazine covering a publication at the core of brain complexity that generated a storm of media attention (http://blogs.discovermagazine.com/neuroskeptic/2014/07/14/can-grasp-brains-complexity/). Excerpt: "An entertaining paper […] remarkable not just for its content but also for its style. […] I love it […] great question, and Tognoli and Kelso frame it very well.".

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http://scholar.google.com/citations?user=1oQwbxQAAAAJ

EDUCATION

INSTITUTION AND LOCATION	DEGREE *(if applicable)*	YEAR(s)	FIELD OF STUDY
Lycee - Epinal - France	*Baccalaureate*	1992	Mathematics/Physics (C)
University Nancy 2 - France	Master/DEA *(summa cum laude)*	1997/98	Psychology
University Nancy 2 – France	PhD *(summa cum laude)*	2003	Psychology
Center for Complex Systems - FAU - USA	Postdoc	2003-2007	Electrophysiology

POSITIONS AND HONORS

2020	Finalist, Art of Science @ FAU
2020	Affiliate Faculty, Peace, Justice, and Human Rights Initiative (PJHR)
2019	Member, National Academy of Inventors
2019	Research Professor, HBBL, Center for Complex Systems and Brain Sciences
2018-now	Secretary, FAU Chapter of the Association for Women in Science
2016	CESCoS Researcher of the Year, FAU - Boca Raton - Florida
2013-2019	Associate Research Professor, HBBL, Center for Complex Systems and Brain Sciences, FAU - Boca Raton - Florida
2008	Graduate Faculty, Charles E. Schmidt College of Sciences
2007-2013	Research Assistant Professor, HBBL, Center for Complex Systems and Brain Sciences, FAU - Boca Raton - Florida
2006	Recipient of the INNS-Sigcom award – World Conference for Computational Intelligence
2004-now	Supervisor of EEG facility: Center for Complex Systems and Brain Sciences
2003-2007	Postdoctoral Research Scholar, Center for Complex Systems and Brain Sciences - Boca Raton – Florida
2002-2003	Research Assistant, Functional Neuroscience and Pathologies Laboratory - CNRS - Lille - France
1999	Awardee by "fondation CETELEM"
1998-2003	PhD student and teaching assistant, Psychology Laboratory - Nancy - France

CONTRACTS OR GRANTS RECEIVED

Ongoing

2020-2022	The mathematics of relatedness. National Institute on Aging, $657,900 total cost. PIs PIs E. Tognoli; C. Beetle; C. Williams
2020-2021	Alzheimer supplement. Virtual Neuroprosthetic Platform Extended to Investigate Alzheimer's Disease National Institute for Biomedical Imaging and Bioengineering, R01s2, $349,939 total cost. PIs Engeberg, Du, Tognoli, Wei
2019-2021	Diversity supplement for Virtual Neuroprosthesis: Restoring Autonomy to People Suffering from Neurotrauma. National Institute for Biomedical Imaging and Bioengineering, R01s1, $140,656 total cost. PIs Engeberg, Du, Tognoli, Wei
2017-2021	Virtual Neuroprosthesis: Restoring Autonomy to People Suffering from Neurotrauma. National Institute for Biomedical Imaging and Bioengineering, R01, $1,297,577 total cost. PIs Engeberg, Du, Tognoli, Wei and Hutchinson [scored 1st percentile]

Completed

2014-2019 Neuromarkers of Social Coordination: a Dynamical Approach. National Institute for Mental Health, R01, $1,966,784 total cost. PIs Kelso and Tognoli [scored 3rd percentile]

2018-2019 Electrophysiological neuromarkers as signals for neurorobotic control. FAU's Brain Institute pilote grant, 10k$, PIs E. Tognoli, E. Engeberg

2017 Robot Symbiosis with Neuronal Action Potential Sensing Electrodes (ROBO-SYNAPSE): Noninvasive Investigation of Neural Plasticity During Tactile Reinnervation FAU – I-sense Seed Grant, 20k$, PIs Engeberg, Du, Wei and Tognoli

2008-2011 Brain dynamics of coordinated teams. Office of Naval Research, Code 30. 660,000$ total cost. PIs Kelso and Tognoli

2009-2012 Social Coordination Dynamics: Intertwining self with others, NSF-08-508: "Human and Social Dynamics". 747.331$ total cost. PI. de Guzman, Co-PIs Kelso and Tognoli

2008-2013 Neuromarkers of Social Coordination: a Dynamical Approach. National Institute for Mental Health: "Basic and Translational Research Opportunities in the Social Neuroscience of Mental Health". 1.635.000$ total cost. Key personnel

2003-2004 Psychometric properties of BAaM attention-memory inventory for short-carrier pilots. INRS/French Institute of Safety, 80.000F total cost. Lead-investigator

2002-2003 Elaboration of an attention-memory inventory for short-carrier pilots. INRS/French Institute of Safety, 80.000F total cost. Lead-investigator

Other and pending grant submission

2021 NSF Advance: ADAPTATION: Enabling Minorities' Prime Outcomes with Education & Research (EMPOWER) at Florida Atlantic University

2020 NSF Rapid: RAPID: 4D spatiotemporal visualization and modeling of COVID-19 epidemic (E. Tognoli, C. Beetle)

2019 NIH/NIA: Understanding Alzheimer's disease at the interface between neuronal activity and synaptopathy using a microfluidics-based neurochip (PIs. J. Wei, E. Tognoli, E. Du, E. Engeberg)

2019 NIH/NIMH: "Computational and experimental neuromodulation of metastable brain oscillations" (PI: E. Tognoli)

2019 NIH/NIBIB: Alzheimer supplement: "Virtual Neuroprosthesis platform extended to study Alzheimer's Disease" (PIs E. Engeberg, S Du, E Tognoli, J. Wei)

2018 NIH/NIA: "The mathematics of relatedness" (PIs E. Tognoli; C. Beetle)

2018 NIH/NIMH: "Experimental and computational neuromodulation of metastable brain oscillations" (PI: E. Tognoli)

2018 NSF/ERC: "Planning grant for Engineering Research Center for Connected Assured Autonomy (C2A2)." (PI: D. Pados, Co-PIs, E. Tognoli, R. Seker, S. Allen, S. Medeiros)

2016 NSF/NIH, SCH: "SCH: INT: Collaborative Research: Virtual Neuroprosthesis: Restoring Autonomy to People Suffering from Neurotrauma" (PI: E. Engerberg, coPIs: S. Du, E. Tognoli, J. Wei, D. Hutchinson)

2016 NIBIB, R15: "Noninvasive Neuroprosthetic Platform to Investigate Neural Plasticity" (PI: E. Engerberg, coPIs: S. Du, E. Tognoli, J. Wei)

2016 NIA, R24, "University Institute for Healthy Aging and Lifespan Studies (I-HeAL)" (PI: J. Galvin, role: steering committee).

2015 AFSOR, Cyber-Human Systems (CHS) program: "CHS: Small: Virtual Neuroprosthesis Via Microfluidic Chambers" (PI E. Engeberg, coPIs S. Du, E. Tognoli, J. Wei)

2015 NSF, IIS - Cyber-Human Systems (CHS): "CHS: Small: Virtual Neuroprosthesis Via Microfluidic Chambers" (PI E. Engeberg, coPIs S. Du, E. Tognoli, J. Wei)

2015 NSF, Integrative strategies for understanding neural and cognitive systems: "NCS-FO: Collaborative Proposal: Synergizing neural inputs and software systems in human-computer interactions" (PI E. Tognoli, co-PI S. Huang, FAU and D. Garlan, Carnegie Mellon University)

2014 Gordon and Betty Moore Foundation's Data-Driven Discovery program (PI E. Tognoli): Tackling complexity: 5D visualization of big spatiotemporal data

2014 FAU Seed Grant (PIs E. Tognoli, S. Huang): A brain computer interface to track covert attention: a pilot project in support of a collaborative NSF application

2013 Google Faculty Research Award (PIs E. Tognoli, S. Huang): bypassing the behavioral bottleneck of Human Computer Interfaces with brain inputs

2013 The James Mc Donnell Foundation (PI E. Tognoli): Visual tools for spatiotemporal complexity

2011 Human Frontiers Science Program (PIs E. Tognoli, K Kitajo): Toward a mesoscopic dynamic clamp: tickling

nonlinearities of the human brain

2010 NIH New Innovator Director's award (PI E. Tognoli): Tackling Complexity: brains, minds and beyond.

2009 FAU challenge (PI E. Tognoli): Complexity of Brains and Minds.

2008 Merck and Co, West-Point, PA: (PIs E. Tognoli and JAS Kelso): Probing brain areas and their communication: A methodological framework for spatio-temporal EEG recordings

2007 NIH Exceptional, Unconventional Research Enabling Knowledge Acceleration (Eureka) (PIs E. Tognoli and JAS Kelso): Sequencing Dynamic Patterns of the Brain

PUBLICATIONS *(numbers in bracket for chronological order)*

[1] Ibrahim A.K., Zhuang, H., Tognoli E., Erdol, N. Ali, A.M. (submitted). Epileptic Seizure Prediction Based on Multiresolution Convolutional Neural Networks. Biomedical Signal Processing and Control

[2] Pavlov, Y.G., Adamian, N., Appelhoff, S., Arvaneh, M., Benwell, C., Beste, C., Bland, A., Bradford, D.E., Bublatzky, F., Busch, N. and Clayson, P.E., et al., (*submitted*). #eegmanylabs: Investigating the Replicability of Influential EEG Experiments. Cercor

[3] Tognoli, E., Zhang, M., Fuchs, A., Beetle, C., & Kelso, J. A. S. (2020). Coordination Dynamics: A Foundation for Understanding Social Behavior. Frontiers in Human Neuroscience. 14:317.

[4] Dodel, S. M., Tognoli, E., & Kelso, J. A. S. (2020). Degeneracy and complexity in neuro-behavioral correlates of team coordination. Frontiers in Human Neuroscience, 14, 328.

[5] Tognoli, E., & Kelso, J. A. S. (2020). Spectral dissociation of lateralized brain rhythms. Neuroscience research, 156, 141-146.

[6] Zhang, M., Kalies, W. D., Kelso, J. S., & Tognoli, E. (2020). Topological portraits of multiscale coordination dynamics. Journal of Neuroscience Methods, 108672.

[7] Dumas, G., Moreau, Q., Tognoli, E., & Kelso, J. S. (2020). The Human Dynamic Clamp reveals the fronto-parietal network linking real-time social coordination and cognition. Cerebral Cortex, 30(5), 3271-3285.

[8] Tognoli, E. (2019). More than Meets the Mind's Eye? Preliminary Observations Hint at Heterogeneous Alpha Neuromarkers for Visual Attention. Brain sciences, 9(11), 307.

[9] Zhang, M., Beetle, C., Kelso, J. S., & Tognoli, E. (2019). Connecting empirical phenomena and theoretical models of biological coordination across scales. Journal of the Royal Society Interface, 16(157), 20190360.

[10] Tognoli, E., Benites, D., Kelso, J.A.S. (*submitted*). A blueprint for the study of the brain's spatiotemporal patterns.

[11] Tognoli, E., Huang, S. (*submitted*). Emotionally-Informed Decisions: Bringing Gut's Feelings into Self-adaptive and Co-adaptive Software Systems.

[12] Andreou, A.G., Beaudoin, M., Dao, S.K., **Fiore, S.*,** Forsythe, C., Gratch, J., Hall, K.L., Hamilton, D.J., Heintz, I., Hylton, T., Kabbani, N., Khan, M.S., Kiourti, A., **Krichmar, J.*,** Kruse, A.A., Nguyen, B., **Olds, J.*,†,** Schroeder, N., Severa, W., Sukthankar, G., **Tognoli, E.*,** Wagner, C. (2018). The AI Acceleration: Implications for the US Air Force of 2030. Report to the Secretary of the USAF. († Principal Investigator, * Corresponding Author).

[13] Benites, D., Tognoli, E., Kelso, J.A.S. *(in press)*. Dinâmicas de Coordenação e Metaestabilidade. In V.G. Haase & G. Gauer (Eds.), Elementos de Psicologia Cognitiva. Porto Alegre: ARTMED.

[14] Abd, M., Bornstein, M., Tognoli, E., Engeberg, E.D., *(2018)*. Armband with Soft Robotic Actuators and Vibrotactile Stimulators for Bimodal Haptic Feedback from a Dexterous Artificial Hand. IEEE/ASME International Conference on Advanced Intelligent Mechatronics.

[15] Tognoli, E., Zhang, M., Kelso, J.A.S. (*2018*). On the nature of Coordination in Nature. Advances in Cognitive Neurodynamics (VI). Delgado-Garcia (Eds.). Springer.

[16] Zhang, M., Kelso, J.A.S., Tognoli, E. (*2018*). Critical diversity: divided or united states of social coordination. PLoS One. doi: 10.1371/journal.pone.0193843

[17]Nordham, C., Tognoli, E., Fuchs, A., Kelso, J.A.S. (*2018*). How Interpersonal Coordination Affects Individual Behavior (and Vice Versa). Ecological Psychology.

[18]Dumas, G., Lefebvre, A., Zhang, M., Tognoli, E., & Kelso, J.A.S. (2018) The human dynamic clamp: a probe for social coordination dynamics. Complexity and Synergetics: 317-332.

[19]Tognoli, E., Dumas, G., Kelso, J.A.S. (*2018*). A roadmap to Computational Social Neuroscience. Cognitive Neurodynamics. 12(1): 135-140.

[20]Lloyd, E., Huang, S., Tognoli, E. (2017). Improving Human-in-the-Loop Adaptive Systems Using Brain-Computer Interaction. Proceedings of the 12th International Symposium on Software Engineering for Adaptive and Self-Managing Systems (pp. 163-174). IEEE Press.

[21]Kelso, J. A. S., Tognoli, E. (2017). Toward a Complementary Neuroscience: metastable coordination Dynamics of the Brain. Chaos and Complexity Letters, 11(1), 141-162. [reprint]

[22]Zhang M., Dumas, G., Kelso, J.A.S., Tognoli, E. (2016). Enhanced Emotional Responses during Social Coordination with a Virtual Partner. International Journal of Psychophysiology. 104, 33-43.

[23]Tognoli, E., Kelso, J.A.S. (2015). The Coordination Dynamics of Social Neuromarkers. Frontiers in Human Neurosciences. 9:563. doi: 10.3389/fnhum.2015.00563

[24]Kelso, J.A.S., Tognoli, E., Dumas, G. (2014). Coordination Dynamics: Bidirectional Coupling between humans, machines and brains. In 2014 IEEE International Conference on Systems, Man, and Cybernetics (SMC) (pp. 2240-2243). IEEE.

[25]Dumas G., de Guzman G.C., Tognoli, E., Kelso, J.A.S. (2014). The Human Dynamic Clamp as a Paradigm for Social Interaction. Proceedings of the National Academy of Sciences, 111(35), E3726-E3734. [High impact factor, Altmetric 98th percentile, index of public interest]

[26]Tognoli, E., Kelso, J.A.S. (2014). Enlarging the scope: grasping brain complexity. Frontiers in System Neuroscience, 8:122. [Altmetric 97th percentile]

[27]Huang, S., Tognoli, E. (2014). Brainware: synergizing software systems and neural inputs. ICSE Companion, New Ideas and Emerging Results, pp. 444-447.

[28]Tognoli, E., Kelso, J.A.S. (2014). The metastable brain. Neuron, 81(1): 35-48. [Free feature article in January; altmetric 98th percentile, high impact, highly cited]

[29]Dodel, S., Tognoli, E., Kelso, J.A.S. (2013). The Geometry of Behavioral and Brain Dynamics in Team Coordination. In Foundations of Augmented Cognition. Schmorrow, D.D., Fidopiastis, C.M. (eds), Lecture Notes in Computer Science Volume 8027, pp.133-142.

[30]Tognoli, E., Kelso, J.A.S. (*2013*). On the brain's dynamical complexity: coupling and causal influences across spatiotemporal scales. In Advances in Cognitive Neurodynamics (III), ed. Y. Yamaguchi. Dordrecht: Springer Netherlands.

[31]Kelso J.A.S., Dumas G., Tognoli E. (2012). Outline of a General Theory of Behavior and Brain Coordination. Neural Networks, 37: 120-131.

[32]Banerjee, A., Tognoli, E., Kelso, J.A.S., Jirsa, V.K. (2012). Spatiotemporal (re)organization of sensorimotor networks underlying unimanual and bimanual coordination. Neuroimage, 62(3): 1582-1592.

[33]Tognoli, E., Kovacs, A.J., Suutari, B., Afergan, D., Coyne, J., Gibson, G., Stripling, R., Kelso, J.A.S. (2011). Behavioral and brain dynamics of team coordination, Part I: task design. In Hutchison, D.; Kanade, T.; Kittler, J.; Kleinberg, J. M.; Mattern, F.; Mitchell, J. C.; Naor, M.; Nierstrasz, O.; Pandu Rangan, C.; Steffen, B.; Sudan, M.; Terzopoulos, D.; Tygar, D.; Vardi, M. Y.; Weikum, G.; Schmorrow, D. D. & Fidopiastis, C. M. (Eds.). Foundations of Augmented Cognition. Directing the Future of Adaptive Systems, Springer Berlin Heidelberg, 6780: 257-264.

[34]Tognoli, E., Kovacs, A.J., Suutari, B., Afergan, D., Coyne, J., Gibson, G., Stripling, R., Kelso, J.A.S. (2011). Behavioral and brain dynamics of team coordination, Part II: neurobehavioral performance. In Hutchison, D.; Kanade, T.; Kittler, J.; Kleinberg, J. M.; Mattern, F.; Mitchell, J. C.; Naor, M.; Nierstrasz, O.; Pandu Rangan, C.; Steffen, B.; Sudan, M.;

Terzopoulos, D.; Tygar, D.; Vardi, M. Y.; Weikum, G.; Schmorrow, D. D. & Fidopiastis, C. M. (Eds.). Foundations of Augmented Cognition. Directing the Future of Adaptive Systems, Springer Berlin Heidelberg, 6780: 376-382.

[35]Tognoli, E., de Guzman, G. C. & Kelso, J. A. S. (2011). Interacting humans and the dynamics of their social brains. In Wang, R., Gu, F. (eds.), Advances in Cognitive Neurodynamics (II), pp. 139-143, Springer, Heidelberg.

[36]Tognoli E., Kelso J.A.S. (2009). Brain Coordination Dynamics: True and False Faces of Phase Synchrony and Metastability. *Progress in Neurobiology*, 87(1): 31-40. [Cover of the journal, high impact, highly cited]

[37]Kelso, J.A.S., de Guzman G.C., Reveley C., Tognoli, E. (2009). Virtual Partner Interaction (VPI): Exploring Novel Behaviors via Coordination Dynamics. PLoS ONE 4(6) e5749. [Highly cited]

[38]Tognoli, E., (2008). EEG coordination dynamics: neuromarkers of social coordination. In Fuchs A, Jirsa VK (eds.) Coordination: Neural, Behavioral and Social Dynamics. Springer, pp.309-323.

[39]Banerjee, A., Tognoli, E., Assisi, C., Kelso, J.A.S., Jirsa, V.K. (2008). Mode Level Cognitive Subtraction (MLCS) quantifies spatiotemporal reorganization in large-scale brain topographies. *NeuroImage*, 15, 663-674.

[40]Kelso, J.A.S. , Tognoli, E. (2007). Toward a Complementary Neuroscience: Metastable Coordination Dynamics of the Brain. In R. Kozma & L. Perlovsky (Eds.) Neurodynamics of Higher-level Cognition and Consciousness. Springer, Heidelberg. Reprinted in Murphy, N., Ellis, G. F. R., O'Connor, T. (2009). Downward Causation and the Neurobiology of Free Will. Springer, Heidelberg. [Highly cited]

[41]Tognoli, E., Lagarde, J., De Guzman, G.C., Kelso, J.A.S. (2007). From the cover: The phi-complex as a neuromarker of human social coordination. *Proceedings of the National Academy of Sciences*, 104, 8190-8195. [Cover, highly cited]

[42]Bressler S.L., Tognoli, E. (*2006*). Operational principles in neurocognitive networks. *International Journal of Psychophysiology*, 60: 139-148. [Highly cited]

[43]Kelso, J.A.S., Tognoli, E. (2006). Metastability in the brain. Proceedings of the International Joint Conference on Neural Networks, Vancouver, pp.755-760.

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PATENTS

1. System and method for analysis of spatio-temporal data – Provisional Application filed on July 9, 2008 -Serial No. 61/134,349 | US utility patent filed on July 8, 2009 - 12/500,187 | PCT filed on July 9, 2009 PCT/US2009/50049 [Patent awarded, Notice of Acceptance August 2013, 22 forward citations]
2. [confidential, preliminary disclosure].

INVITED LECTURES

TBD	An Essay on Extracellular Fields' Contributions to a Globally Conscious Brain – Monte Veritas, Switzerland (Keynote)
2021	Brain Metastability - Brain Space Initiative, online
2020	Computational Social Neuroscience - U Michigan
2019	Interdisciplinary studies of metastable brain oscillations – University of Alabama at Birmingham
2019	Selves, others, and the birth of coupling in neurocomputational models of social interactions – CSAN, Miami Beach
2019	Building neurotechnological complexity from the ground up – Osaka, Japan
2017	Sympathy of the Brains – Shanghai, China

2016 Spatiotemporal metastability – University of Miami, FL
2016 To mine or to mind: a primal view on spatiotemporal dynamics of neural oscillations – Arizona State University, AZ
2015 A roadmap for Computational Social Neuroscience. ICCN 2015 – Sanya, China *(delivered by G. Dumas)*
2015 4-5D visualization tools reveal different degrees of complexity in the spatiotemporal dynamics of natural systems. Nova Southeastern University, FL
2013 A Complexity viewpoint on the concept of sustainability. EURAGRI International Workshop- Sigtuna, Sweden
2013 Enduring questions about mu rhythm's contribution to social behavior. ICCN 2013, Sigtuna, Sweden
2013 Spatiotemporal metastability: natural evidences and theoretical insights. Dynamic Brain Forum, Sigtuna, Sweden
2012 Neuromarkers of Social Coordination: a Dynamical Approach. New-Orleans.
2012 An essay on extracellular fields' contribution to a global conscious brain. Carmona, Spain
2012 Metastable social coalitions: models, humans, fireflies. Sendai, Japan (*postponed)
2012 System and method for analysis of spatiotemporal data. Florida International Univ. FL
2011 Xi rhythm: neuromarker of covert attention and interface between brains and machines. Boca Raton
2011 Spatiotemporal metastability & functional complexity. University of Memphis, TN
2011 A world of coordination: a journey across scales. Mini-symposium in honor of Michael Turvey. Boca Raton
2010 Of Neurons and Humans: Collective Behaviors. University of Cincinnati, OH
2010 Neural flows in space-time: traces of the self-organizing brain. Conference at Sea, Western Caribbean.
2009 Interacting Humans and the Dynamics of their Social Brains. International Conference on Cognitive Neurodynamics, Hangzhou, China.
2009 Neural Mechanisms of Social Coordination: a Continuous EEG Analysis using a Novel 4d Colorimetric Method. Joint Action Meeting, Amsterdam, The Netherlands.
2008 Neuromarkers of Social Behavior: Paving the Way to Electrophysiological Endophenotypes of Autism. Autism Society of America. Orlando, FL
2007 EEG Coordination Dynamics: Neuromarkers of Social Coordination. Conference in Honor of J. A. Scott Kelso's 60th Birthday. Boca Raton, FL
2007 EEG Coordination Dynamics: Self-Organization in the Brain. Merck Laboratories, West Point, PA
2006 The phi complex: a dual-EEG study of effective social coordination. Gerontological Society of America, Dallas, TX
2006 Metastability in the Brain. IEEE World Conference on Computational Intelligence, Vancouver, Canada.

Sample public outreach, press coverage

Scientific American Mind, August 2007. Social Rhythm: Unique patterns of neural activity mark personal interactions. http://www.scientificamerican.com/article.cfm?id=social-rhythm

Director's report to the National Advisory Mental Health Council, September 21, 2007 http://www.nimh.nih.gov/about/advisory-boards-and-groups/namhc/2007/september/directors-report-sept07.pdf

ScienceDaily, May 15, 2007. New Brain Neuromarker May Shed Light On Autism And Schizophrenia. http://www.sciencedaily.com/releases/2007/05/070514150813.htm

Plexus Institute, June 24th, 2009. Virtual Partner Interaction (VPI): A Mind-Machine Breakthrough. http://www.plexusinstitute.org/complexitymatters/?p=51

Boca Raton News, July 6th, 2009. Boca Raton: FAU study offers unique look at human-machine http://www.bocanews.com/local-news/boca-raton/4651-boca-raton-fau-study-offers-unique-look-at-human-machine.html

Physorg, June 16th, 2009: Scientists create hybrid system of human-machine interaction. http://www.physorg.com/news164363618.html

Palm Beach Post, June 21th, 2009. FAU links man and machine, the research could have applications for therapy http://www.palmbeachpost.com/localnews/content/local_news/epaper/2009/06/20/a1b_faumachine_0621.html

Simons Foundation Autism Research Initiative, March 11th, 2009: New EEG analysis captures coordination among brain regions. http://sfari.org/news-and-opinion/news/2009/new-eeg-analysis-captures-coordination-among-brain-regions

Plexus Institute, February 9th, 2009. Observing the Human Brain at Work. http://www.plexusinstitute.org/news-events/show_news.cfm?id=1654

News Wise, January 19th, 2009. Groundbreaking Technique Reveals Modus Operandi of the Intact Living Brain. http://www.newswise.com/articles/view/548194/

Science Daily, January 21st, 2009. Dynamical theory and novel 4-D colorimetric method reveal modus operandi of intact living brain. http://www.sciencedaily.com/releases/2009/01/090121122842.htm

Simons Foundation Autism Research Initiative, March 14th, 2011: Machine-learning tool shows promise for autism diagnosis https://sfari.org/news-and-opinion/news/2011/machine-learning-tool-shows-promise-for-autism-diagnosis

Datanami Big Data, November 19, 2013: Neuroscientists Develop 5D Data Visualization Technique http://www.datanami.com/datanami/2013-11-19/neuroscientists_develop_5d_data_visualization_technique.html

Sciencedaily, November 18, 2013: New 5-D method to understand big data http://www.sciencedaily.com/releases/2013/11/131118132440.htm

Newswise, November 18th, 2013: FAU Neuroscientists Receive Patent for New 5D Method to Understand Big Data http://www.newswise.com/articles/fau-neuroscientists-receive-patent-for-new-5d-method-to-understand-big-data

Inside NIMH, spring 2014: Notable NIMH Grants https://www.nimh.nih.gov/researchpriorities/insidenimh/2014springinsidenimh.shtml

Choratech, June 8th, 2014: The Metastable Brain http://choratech.com/blog/?p=450

Discover Magazine, top stories, July 14th, 2014: Can we grasp the brain's complexity? http://blogs.discovermagazine.com/neuroskeptic/2014/07/14/can-grasp-brains-complexity/

Physorg, August 12th, 2014: Researchers introduce 'Human Dynamic Clamp'—groundbreaking approach to understanding social interaction http://phys.org/news/2014-08-human-dynamic-clampgroundbreaking-approach-social.html

Improbable Research, Research that makes people LAUGH and then THINK, August 19th, 2014: The Human Dynamic Clamp https://www.improbable.com/2014/08/19/the-human-dynamic-clamp/

Analytics Magazine, January-February, 2015: The future of data visualization, by Will Towler http://www.analytics-magazine.org/january-february-2015/1196-data-visualization-the-future-of-data-visualization

SciFeeds, May 17th, 2016 Scientists create an 'emotional' Turing test to learn how it feels to interact with a machine. https://scifeeds.com/news/scientists-create-an-emotional-turing-test-to-learn-how-it-feels-to-interact-with-a-machine/

The Stack, May 20th, 2016, Virtual partner created for 'emotional' Turing test. https://thestack.com/world/2016/05/20/virtual-partner-created-for-emotional-turing-test/

EurekAlert, 2016: FAU Scientists Develop 'Virtual Partner' That Can Elicit Emotional Responses from a Human Partner in Real-time. https://www.eurekalert.org/multimedia/pub/115616.php?from=327852

Physorg, November 14th, 2017: Bioengineered robotic hand with its own nervous system will sense touch https://phys.org/news/2017-11-bioengineered-robotic-nervous.html

Azorobotics, November 15th, 2017: New Bioengineered Robotic Hand Regenerates the Sensation of Touch https://www.azorobotics.com/News.aspx?newsID=9591

Medical Device Daily, November 16th, 2017: FAU, Utah seek to restore touch with robotic hand http://medicaldevicedaily.com/servlet/com.accumedia.web.Dispatcher?next=bioWorldHeadlines_article&forceid=96779

Newswise, December 1st, 2020: FAU Receives NIH Grant to Enhance Social Engagement in Older Adults https://www.newsbreak.com/news/2116118567506/fau-receives-nih-grant-to-enhance-social-engagement-in-older-adults

PROFESSIONAL SERVICE

- Judge for MIT Technology Review, Innovators Under 35, edition Europe (2015; 2017; 2018; 2019)
- Professorial Promotion and award, University of Toronto and Sick Kids (Prof. J. L. Perez Velazquez), Worcester Polytechnic Institute (Asst. Prof. T. Padir), Florida Atlantic University (Assoc. Prof. S. Huang), Fundación Premios Rey Jaime I (Prof. J.M. Delgado-Garcia), Indian Institute of Science Education and Research (Assist. Prof. Suhita Nadkarni)
- Survey Editor and Associate Editor (2017-2019): Cognitive Systems Research
- Grant reviewer for NASA (NASA HERO19 Team Dynamics); National Science Foundation (NSF), Cognitive Neuroscience Program; Perception Action Cognition program; Developmental and Learning Sciences Program.
- Peer Reviewer for journal articles: E-Neuro, Journal of Cognitive Neuroscience, Cerebral Cortex, PLoS Computational Biology, PLoS One, Scientific Reports, Neuroinformatics, Neurocomputing, Journal of Biological Physics, Chaos, Entropy, Solitons & Fractals, Physica A, Neuroscience of Consciousness; Psychopharmacology, Brain Research, NeuroImage, European Journal of Neuroscience, Neurosurgery, Human Brain Mapping, Experimental Brain Research, Schizophrenia Bulletin, Journal of Integrative Biological Science, SCAN, The International Journal of Neuropsychopharmacology, Journal of Neuroscience Methods, Cognitive Neurodynamics, Intellectica, Computational Intelligence and Neuroscience, IEEE Transactions on Neural Systems & Rehabilitation Engineering, Human Movement Science, Journal of Motor Behavior

- Peer reviewer for book proposals: World Scientific Publishing/Imperial University Press, Oxford University Press.
- Secretary, FAU's chapter of the Association for Women in Science, grow online and local membership, collaboratively execute mentorship, networking and leadership opportunities.

Conferences and scientific events

2023 PreProposal Organization of Human Brain Mapping – OHBM, Miami (Uddin, Heller, Laird, Dick, Dykstra, Tognoli, Riera, Denkova, Jha, Nomi, Britton, Losin, McIntosh, Sutherland, Mattfeld, McMakin)
2019 Co-organizer, Social and Affective Neuroscience Satellite, Computational Social Neuroscience, Miami, May 2nd
2018 Proposal Co-organizer, SfN minisymposium, Bridging the gap from neurons to complex social networks
2013 Chair: ICCN2013, special session, social neurodynamics
2011 Co-organizer: A Mini Symposium to celebrate the 25/26th anniversary of the Center for Complex Systems and Brain Sciences, December 8th, 2011
2011 Co-organizer: Minisymposium in honor of Michael Turvey. Boca Raton, FL, May 5th.
2010 Co-organizer, The History of Science Lecture, by James McGuire, professor Emeritus, to Celebrate the 25/26th anniversary of the Center for Complex Systems and Brain Sciences, October 29th, 2010.
2010 Co-organizer and program director: Brain Coordination Dynamics, An International Conference at Sea. http://www.ccs.fau.edu/bcd2010, May 1st-5th, 2010
2008 Co-organizer, Comeallye for Centerites and Center Alumni, 2008, a Society for Neuroscience Social

Host to visitors at FAU:

Danielle Bassett, U. Penn [youngest individual to be awarded a MacArthur fellowship]
Flavio Frohlich, UNC, [NIMH's flagship "Biobehavioral Research Awards for Innovative New Scientists" (BRAIN)]
Robert Levy, Marcus Neuroscience Institute
Read Montague, UCl, Virginia Tech, [Kavli fellow]
William Bialek, Princeton, Pending commitment
Alik Widge, Univ. Minnesota, December 2019

Teaching and Mentoring

Classes taught

At FAU:
Invited lectures (2010, 2011), Electrical Engineering and Bioengineering
Proseminar at Center for Complex Systems and Brain Sciences (2010-now)
Invited EEG demonstration, Psychology, Physics and CCSBS (2005-now): EEG demonstration, Profs. Tuller (Psychology) and Fuchs (Medical Physics, CCSBS)
Internal training in the Center for Complex System and Brain Sciences, FAU (2004-now): Introduction to EEG data acquisition: theory & instrumentation (3 half-day theoretical and hands-on training)

In French, University of Nancy (now University of Lorraine):
Maîtrise, Cognitive Sciences, Nancy 2 University (2000-2002): visual perception, visual selective attention (class development and teaching)
Licence, Cognitive Sciences, Nancy 2 University (1999-2002): introduction to Psychophysics, attentional processes (class development and teaching)
Licence, Psychology, Nancy 2 University (1999-2001): introduction to SPSS (TA)
Licence, Psychology, Nancy 2 University (1999-2000): Psychological assessment of intellectual development, WISC III (TA)
DEUG, Psychology, Nancy 2 University (1998-1999): Methodology in Psychology (TA)

Dissertations

2020-NOW	Tuan Vo, PhD Computer & Electrical Engineering	Dissertation Committee
2020	Melanie Jouaiti, PhD Computer Science, LORIA, France	Dissertation Committee
2018-NOW	Genevieve Liddle, PhD Integrative Biology	Dissertation Committee
2018-2019	Mohammed Alharbi, Master Computer Science	Dissertation Committee
2017-2018	Joe Ignicco, Master Mechanical Engineering	Dissertation Committee
2016-2018	Thomas Colestock, PhD Mechanical Engineering	Dissertation Committee
2016-2020	Aritra Ghosh, PhD Computer Science	Dissertation Committee
2015-2016	Eric Lloyd, Master Computer Science	Dissertation Committee
2015-2019	Ali Ibrahim, Electrical Engineering	Dissertation Committee
2014	Friederike Hohlefeld, Charite, Univ. Medicine, Berlin	Visiting PhD student

2014-NOW	Pedro Miranda, Master Computer Science	Dissertation Committee
2013-2018	Mengsen Zhang, PhD Center for Complex Systems and Brain Sciences	Advisor
2012	Solveig Vieluf, Jacobs Univ. Bremen, Germany	Visiting PhD student
2011-2016	Craig Nordham, PhD Center for Complex Systems and Brain Sciences	Advisor
2011	Yu Chun Chung, National Yang-Ming University, Taiwan	Visiting PhD student
2010-2011	Jack Petersen, Master Computer Sciences	Dissertation Committee
2008-2009	Rodrigo Calderon, Master Computer Sciences	Dissertation Committee
2007-2008	Daniela Benites, Porto Allegre, Brazil	Visiting PhD student

Other research Mentoring, graduate

Basak Kocaoglu, (2018-2019, Master in Philosophy, enrolled In GNTP)
Joshua Childs (2018, FAU, Political Sciences)
Tarah Raldiris (2014, Penn State University, alumni and non-degree seeking student at FAU)
Camille Lewis-Henry (2012, FAU College of Education, volunteer)
Seth Weisberg (2009-2010, Neuroscience Certificate at FAU)
Allison de la Rosiere (2007, Master student, Physics Dept. at FAU)

Research Mentoring, volunteers, undergraduate, high school

Gianna Cannestro (2019-now, Biology)
Hayden Siesel, (2020, Rise scholarship, U Penn)
David Maya (2019, Mechanical Engineering)
Sabrina Forgnone (2018, Psychology)
Nadine Akin (2017-2019, Post Bacc, FAU)
Ananda Chowdhury (2016, Computer Sciences, FAU)
Michael Femenia (2015, Volunteer)
Ricardo Martinez (2014, Electrical Engineering)
Chelsey Hoff (2014, Electrical Engineering, Mathematics)
Randy Ellis (2012, undergraduate FAU Psychobiology), now PhD student Icahn School of Medicine at Mount Sinai and NIDA
Leonardo Rhodes (2012, UF, summer undergraduate volunteer)
Anamaria Alexandrescu (2010, undergraduate Biological Sciences at FAU), PhD, NYU and now instructor at Columbia University
Benjamin Suutari (2009-2011, undergraduate Physics Dept. at FAU), PhD NYU, now with Elucd
Brittany Zelch (2009-2011, high school volunteer assistant, Pine Crest High School), undergraduate NorthWestern and graduate Univ. Chicago
Jennifer Moore (2009, undergraduate Human Factors - George Mason University)
Sara Anastas (2008, Undergraduate Psychology, University of Florida Gainesville), undergrad Massachusetts Eye and Ear Infirmary, Med School at FAU, intern, Univ. New Mexico, currently resident at New York Medical College

Mentoring at post-doctoral level

Maohua Lin (2021, postdoctoral scholar).
Yuhao Qiang (2020, postdoctoral scholar). Now postdoctoral scholar at MIT
Jinzi Deng (2019, postdoctoral scholar). Now Clinical Assistant Professor at Yeshiva University
Kunal Mondal (2018-2019, postdoctoral associate). Staff Scientist at Idaho National Laboratory & Affiliate and Allied Graduate Faculty at Idaho State
Roxana Stefanescu (2015-2018, Senior Research Specialist). Now Bioinformatics Fellow at Palantir Technologies.
Anand Ramamoorthy (2014, Postdoctoral Fellow)
Guillaume Dumas (2012-2014, Postdoctoral Fellow). Now IVADO Assistant Professor of Computational Psychiatry, Univ. Montreal.
Row Hashemiyoon (2011, Research Associate). Chief neurophysiologist at the University Hospital of Cologne
Slava Murzin (2010-2013, Postdoctoral Fellow). Owner, Synerlogics.
Attila Kovacs (2010-2012, Postdoctoral Fellow). Now Assistant Professor University of Wisconsin.
Kaushik Majumdar (2008, Postdoctoral Fellow). Now Full Professor, Indian Statistical Institute.

Data Sharing
Dr. Marco Congedo, Gipsa Lab, Grenoble, France
Dr. Naeem Mohammed, Univ. Ulster

Advising for establishment of dual-EEG laboratories:
Drs. William Kalkhoff (Kent State Univ.), Ed Lawler (Cornell University) and Shane Thye (University of South Carolina)
Dr Kozma, Univ. Memphis, TN
Dr Luca Onnis, Univ. Hawaii, HI
Dr Frezza-Buet, Supelec-Metz, France

Student recommendation to training programs:
Ms Gianna Cannestro for PhD application in Neuroscience at FAU
Ms Akin for multiple applications to medical schools
Mr Eric Lloyd for a PhD application in Computer Science at FAU
Mr Benjamin Suutari, PhD programs, accepted at Univ. Texas at Austin and at New York Univ.
Mr Seth Weisberg, graduate certificate in Medical Science at FAU; PhD programs, accepted at Univ. Texas at Austin
Ms Sara Anastas, for a Position of Research assistant at the Massachusetts Eye and Ear Infirmary, Harvard Medical School; for a position of Research Assistant at Tufts University School of Medicine; for applications to Medical Schools
Ms Anamaria Alexandrescu for Summer Research Programs, accepted at University of Pennsylvania's Summer Undergraduate Research Program
Ms Brittany Zelch, for a position of Research Assistant, Developmental Cognitive Neuroscience Lab, Northwestern Univ.

Student recommendation, jobs, travel grants and awards:

2020 Dr Zhang for TT Position at NIH, U-Michigan,
2019 Dr Zhang for a travel award from SIAM
2019 Dr Kunal Mondal for Faculty positions at U. Minnesota,
2018 Dr Zhang for a position at Stanford University
2017 Ms Zhang for a position In the Santa Fe Complexity Institute
2016 Ms Zhang for fellowships by McDonnell Foundation, Omidyar foundation
2014 Mr Leonardo Rhodes for an internship in Metz, France
2011 Ms Brittany Zelch for talent search award at Siemens Foundation
2012 Dr Daniela Benites, postdoctoral fellow at Univ. Texas at Austin
2011 Ms Daniela Benites for a travel award by the Society for Psychophysiological Research
2010 Ms Daniela Benites for a travel award by IBRO
2008 Ms Reyna Gordon for an award from FAU Graduate Fellowship for Academic Excellence

Recommendations for award professional development of colleagues:
2018 Professor Jose-Maria Delgado-Garcia, for the Royal recognition from Fundación Premios Rey Jaime I in Spain
2016 Dr G. Estrada, for a conversion from Physics to Optical NeuroImaging at Boston University
2015 Associate Professor S. Huang for promotion to Full Professor at FAU's CEECS
2014 Dr Gahangir Hossain, for his transition from the Fedex Institute of Technology to tenure-track at Texas A&M
2014 Dr G. Dumas, recommendation to permanent researcher positions at CNRS and Pasteur Institute,
2013 Professor Perez Velazquez for promotion to the rank of Full Professor, Univ. Toronto
2011 Dr Collins Assisi for faculty position at the Indian Institute of Science Education and Research
2010 Dr Collins Assisi for a staff position at University of California, Riverside

Extramural support for grantmanship

Dr Friederike Hohlefeld, Charite Berlin, DFG Grant from the German Research Foundation and
Dr Ana Teixeira de Melo, European Union's ERC program and Templeton Foundation

Outreach efforts solicited by funding agencies:

Illustrative material for NIMH booth at Society for Neuroscience
Layperson abstract material for justification of NSF research to congress
Graphical and text material for illustration of research on NSF's website front page
Communicated findings through ONR's NRE navigator

And to finish
Citation in Annals of Improbable Research ("Research that makes people laugh and then think"):
https://www.improbable.com/2014/08/19/the-human-dynamic-clamp/

Official blogger "Neuroskeptic" from Discover Magazine covering a publication at the core of brain complexity that generated a storm of media attention (http://blogs.discovermagazine.com/neuroskeptic/2014/07/14/can-grasp-brains-complexity/). Excerpt: "An entertaining paper […] remarkable not just for its content but also for its style. […] I love it […] great question, and Tognoli and Kelso frame it very well.".

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Education/Employment History

12/73: B.A. in Chemistry, University of California San Diego

4/78: Ph.D. in Biological Chemistry, UCLA. Thesis advisor Dr. Bruce Howard

1/73-9/74: Laboratory assistant for Dr. Russell Doolittle, Department of Chemistry, UCSD.

5/78-8/79: Postdoctoral Fellow for Dr. Bruce Howard, Department of Biological Chemistry, UCLA.

9/79-10/81: Postdoctoral Fellow for Dr. Solomon Snyder, Department of Neuroscience, Johns Hopkins University School of Medicine.

11/81-12/89: Sr. Receptor Pharmacologist, Molecular Theory Department, SRI International.

1/90-08/11: Sr. Director, Neuropharmacology Program, Biosciences Division, SRI International.

8/94-8/95: Visiting scientist, Laboratoire de Pharmacologie et de Toxicologie Fondamentales, Centre National de la Recherche Scientifique, Toulouse, FRANCE.

8/04-8/05: Visiting scientist, University Louis Pasteur, IGBMC, Strasbourg, FRANCE.

8/11-12-17: Director, Neuropharmacology Program, Torrey Pines Institute for Molecular Studies

1/18 – present: Professor of Biomedical Sciences, Florida Atlantic University

Publications

Original Research

1. Targowska-Duda KM, Ozawa A, Bertels Z, Cippitelli A, Marcus JL, Mielke-Madaya HK, Zribi G, Rainey AN, Kieffer BL, Pradhan AA, and Toll L. NOP receptor agonist attenuates nitroglycerin-induced migraine-like symptoms in mice. 2020, Neuropharmacology, Jun 15;170:108029.. Epub 2020 Mar 6. PMID: 32278976
2. Cippitelli A, Barnes M, Zaveri NT, Toll L. Potent and selective NOP receptor activation reduces cocaine self-administration in rats by lowering hedonic set point. Addict Biol. 2019 Nov

10: e12844844. [Epub ahead of print] PMID: 31709687

3. Brunori G, Weger M, Schoch J, Targowska-Duda K, Barnes M, Borruto AM, Rorick-Kehn LM, Zaveri NT, Pintar JE, Ciccocioppo R, Toll L, Cippitelli A. NOP Receptor Antagonists Decrease Alcohol Drinking in the Dark in C57BL/6J Mice. Alcohol Clin Exp Res. 2019 43(10):2167-2178. PMID: 31386211

4. Kiguchi N, Ding H, Cami-Kobeci G, Sukhtankar DD, Czoty PW, DeLoid HB, Hsu FC, Toll L, Husbands SM, Ko MC. BU10038 as a safe opioid analgesic with fewer side-effects after systemic and intrathecal administration in primates. Br J Anaesth. 2019, 122(6):e146-e156. PMID: 30916003.

5. Mann A, Moulédous L, Froment C, O'Neill PR, Dasgupta P, Günther T, Brunori G, Kieffer BL, Toll L, Bruchas MR, Zaveri NT, Schulz S. Agonist-selective NOP receptor phosphorylation correlates in vitro and in vivo and reveals differential post-activation signaling by chemically diverse agonists. Sci Signal. 2019 Mar 26;12(574). PMID: 30914485

6. Kumar V, Polgar WE, Cami-Kobeci G, Thomas MP, Khroyan TV, Toll L, Husbands SM. Synthesis, Biological Evaluation, and SAR Studies of 14β-phenylacetyl Substituted 17-cyclopropylmethyl-7, 8-dihydronoroxymorphinones Derivatives: Ligands With Mixed NOP and Opioid Receptor Profile. Front Psychiatry. 2018 Sep 19. eCollection 2018
PMID: 30283364

7. Brunori G, Schoch J, Mercatelli D, Ozawa A, Toll L, Cippitelli A. Influence of neuropathic pain on nicotinic acetylcholine receptor plasticity and behavioral responses to nicotine in rats. Pain. 2018 159(11):2179-2191. PMID:29939964

8. Cippitelli A, Brunori G, Schoch J, Armishaw CJ, Wu J, Zaveri NT, Giulianotti MA, Welmaker GS, **Toll L.** Differential regulation of alcohol taking and seeking by antagonism at α4β2 and α3β4 nAChRs. Psychopharmacology (Berl). 2018 235(6):1745-1757. PMID: 29572652

9. Ozawa A, Brunori G, Cippitelli A, Toll N, Schoch J, Kieffer BL, **Toll L**.
Analysis of the distribution of spinal NOP receptors in a chronic pain model using NOP-eGFP knock-in mice. Br J Pharmacol. 2018, 175(13), 2622-2675 PMID: 29582417 **7**

10. Wu J, Cippitelli A, Zhang Y, Debevec G, Schoch J, Ozawa A, Yu Y, Liu H, Chen W, Houghten RA, Welmaker GS, Giulianotti MA, **Toll L**. Highly Selective and Potent α4β2 nAChR Antagonist Inhibits Nicotine Self-Administration and Reinstatement in Rats. J Med Chem. 2017 60(24):10092-10104. PMID:29178785 **2**

11. Khroyan TV, Cippitelli A, Toll N, Lawson JA, Crossman W, Polgar WE, **Toll L**. In Vitro and In Vivo Profile of PPL-101 and PPL-103: Mixed Opioid Partial Agonist Analgesics with Low Abuse Potential. Front Psychiatry. 2017 Apr 12;8:52. PMID: 28446883

12. Spetea M, Eans SO, Ganno ML, Lantero A, Mairegger M, **Toll L**, Schmidhammer H, McLaughlin JP. Selective κ opioid receptor partial agonist HS666 produces potent antinociception without inducing aversion after i.c.v. administration in mice. Br J Pharmacol.

2017; 174(15):2444-2456. PMID: 28494108

13. Cippitelli A, Schoch J, Debevec G, Brunori G, Zaveri NT, **Toll L**. A key role for the N/OFQ-NOP receptor system in modulating nicotine taking in a model of nicotine and alcohol co-administration. Sci Rep. 2016 May 20;6:26594. PMID: 27199205**.0**

14. Li Y, Cazares M, Wu J, Houghten RA, **Toll L**, Dooley C. Potent μ-Opioid Receptor Agonists from Cyclic Peptides Tyr-c[d-Lys-Xxx-Tyr-Gly]: Synthesis, Biological, and Structural Evaluation. Journal of medicinal chemistry. 2016; 59(3):1239-45. PMID: 26789491 **2**

15. Ciesla L, Okine M, Rosenberg A, Dossou KS, **Toll L**, Wainer IW, Moaddel R Development and characterization of the α3β4α5 nicotinic receptor cellular membrane affinity chromatography column and its application for on line screening of plant extracts. Journal of chromatography. A. 2016; 1431:138-44. PMID:26774122 PMCID:PMC4748418 **2**

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111. G. H. Loew, J. Nienow, J. A. Lawson, **L. Toll**, and E. T. Uyeno. Structure-activity studies of ß-carboline analogs: 2. Calculated stereoelectronic properties and model receptor interactions. Mol. Pharmacol. 28, 17-31 (1985).

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113. **L. Toll**, C. Keys, and G. Loew. Computer-assisted determination of benzodiazepine receptor heterogeneity. Eur. J. Pharmacol. 99, 203-209 (l984)

114. . J. A. Lawson, **L. Toll**, E. T. Uyeno, J. Nienow, and G. H. Loew. Structure-activity studies of β-carboline analogs: l. Synthesis, receptor binding and antagonist activity. Life Sci. 34, 2007-20l3 (l984).

115. R. G. Almquist, C. M. Olsen, E. T. Uyeno, and **L. Toll**. Replacement of the peptide backbone amides connecting Tyr-Gly and Gly-Gly in leucine enkephalin with ketomethylene groups: Synthesis and biological activity. J. Med. Chem. 27, l15-l20 (l984).

116. G. Loew, **L. Toll**, J. Lawson, E. Uyeno, and H. Kaegi. Pyrazolo[1,5-a]-pyrimidines: Receptor binding and behavioral studies of putative specific anxiolytic agents. Brain Biochem. Behav. 20, 343-348 (l984).

117. **L. Toll**. Calcium antagonist binding and calcium uptake inhibition in a clonal cell line. J. Biol. Chem. 257, 13189-13193 (1982).

118. **L. Toll** and S. H. Snyder. Solubilization and characterization of histamine H1-receptors in brain. J. Biol. Chem. 257, 13593-13601 (1982).

119. V. T. Tran, R. Lebovitz, **L. Toll**, and S. H. Snyder. 3H-Doxepin interactions with histamine H1-receptors and other sites in guinea pig and rat brain homogenates. Eur. J. Pharmacol. 70, 501-509 (1981).

120. **L. Toll** and B. D. Howard. Evidence that an ATPase and a protonmotive force function in the transport of acetylcholine into storage vesicles. J. Biol. Chem. 255, 1787-1789 (1980).

121. R. V. Rebois, E. E. Reynolds, **L. Toll**, and B. D. Howard. The storage of dopamine and acetylcholine in granules of PC12, a clonal pheochromacytoma cell line. Biochemistry 19, 1240-1248 (1980).

122. **L. Toll** and B. D. Howard. The role of Mg2+-ATPase and a pH gradient in the storage of catecholamines in synaptic vesicles. Biochemistry 17, 2517-2523 (1980).

123. **L. Toll**, C. B. Gundersen, Jr., and B. D. Howard. Energy utilization in the uptake of catecholamines by synaptic vesicles and adrenal chromaffin granules. Brain Res. 136, 59-66 (1977).

Review Articles peer reviewed

1. **L. Toll**, I.P. Berzetei-Gurske, W.E. Polgar, S.R. Brandt, I.D. Adapa, L. Rodriguez, R. W. Schwartz, D. Haggart, A. O'Brien, A. White, J. M Kennedy, K. Craymer, L. Farrington, J.S. Auh Standard binding and functional assays related to Medications Development Division testing for potential cocaine and opiate narcotic treatment medications. NIDA Res. Monograph, 178, The College on Problems of Drug Dependence, 59th Annual Meeting, 1998, pp. 440-466.

2. **L. Toll.** The Use of Bifunctional NOP/Mu and NOP Receptor Selective Compounds for the Treatment of Pain, Drug Abuse, and Psychiatric Disorders. Curr Pharm Des. 2013 19(42):7451-60.

3. Cox BM, Christie MJ, Devi L, **Toll L,** Traynor JR. Challenges for opioid receptor nomenclature: IUPHAR Review 9. Br J Pharmacol. 2014 Feb 15.

4. **Toll L**, Bruchas MR, Calo' G, Cox BM, Zaveri NT, Nociceptin/Orphanin FQ Receptor Structure, Signaling, Ligands, Functions, and Interactions with Opioid Systems. Pharmacological reviews. 2016; 68:419-57. PMID:26956246

5. Madariaga-Mazón, A. Marmolejo-Valencia, A.F. Li, Y. **Toll, L**. Houghten, R.A. Mu Opioid Receptor biased ligands: A safer and painless discovery of analgesics? Drug Discovery Today,.

2017 (11):1719-1729. PMID: 28743488

6. Toll L, Ozawa A, Cippitelli A. NOP-Related Mechanisms in Pain and Analgesia. Handb Exp Pharmacol. 2019; 254:165-186. PMID: 31119465.

Peer Reviewed Papers from Meetings

1. G. H. Loew, **L. Toll**, and C. Keys. Computer-assisted analysis of receptor-binding studies of [3H]-naloxone and [3H]-DADL: A reinterpretation of the Na+ effect. Life Sci. 33, Suppl. l, l63-l66 (l983).

2. **L. Toll**, C. Keys, and G. Loew. Detailed receptor binding studies of a series of N-substituted ethyl 3-arylnipecotates. Life Sci. 33, Suppl. l, 427-430 (l983).

3. G. H. Loew, **L. Toll,** E. Uyeno, A. Cheung, A. Judd, J. Lawson, C. Keyes, P. Amsterdam, and W. Polgar. Mechanistic structure-activity studies of peptide and nonpeptide flexible opioids: An interdisciplinary approach. Opioid Peptides: Medicinal Chemistry, NIDA Res. Monogr. 69, 231-265 (1986).

4. A. C. Cheung, E. T. Uyeno, **L. R. Toll,** C. Keys, D. Spangler, J. I. DeGraw, and G. H. Loew. Analgesics 3. Synthesis, resolution, receptor binding and analgesic properties of 3-methyl-3-m-hydroxyphenyl-piperidines with N-substituent variation. Proceedings of Committee for Problems on Drug Dependence. NIDA Res. Monogr. 44, 82-85 (1987).

5. C. Keys, P. Amsterdam, P. Payne, **L. Toll**, and G. Loew. Conformational studies and receptor binding of delta selective opioid peptides. NIDA Res. Monog. 75, 57-60 (1987).

6. J. A. Lawson, **L. Toll**, G. H. Loew, G. Frenking, J. I. DeGraw, E. T. Uyeno, W. Polgar, N. Camerman, A. Camerman, and D. Adhikesavalu. Analgesics 4. Studies on the effects of the introduction of methyl at C-17 of N-cyclopropylmethyl-normorphine: Synthesis receptor binding in vivo activity, conformation energies. Proceedings of the Committee for Problems on Drug Development. NIDA Res. Monogr. 76, 299-303 (1987).

7. G. Loew, J. Lawson, **L. Toll**, E. Uyeno, G. Frenking, and W. Polgar. Structure activity studies of a series of 4-(m-OH phenyl) piperidines. NIDA Res. Monogr. 75, 49-52 (1987).

8. G. Loew, J. Lawson, **L. Toll**, G. Frenking, I. Berzetei-Gurske, and W. Polgar. Structure activity studies of two classes of β-aminoamides: The search for κ-selective opioids. NIDA Res. Monogr. 90, 144-151 (1988).

9. **L. Toll**. Comparison of binding affinities and adenylate cyclase inhibition for the determination of efficacy at μ-opioid receptors in a neuroblastoma cell line. NIDA Res. Monogr. 105, 520-521 (1991).

10. **L. Toll**. Comparison of μ-opioid binding in intact neuroblastoma cells and in broken cell preparations. NIDA Res. Monogr. 119, 253 (1992).

11. **L. Toll**. The effect of association rate on opiate efficacies. NIDA Res. Monogr. 141, 102 (1993).

Book Chapters

1. **L. Toll**, V. T. Tran, M. Gavish, and S. H. Snyder. Properties of soluble histamine H1-receptors in the brain. In Psychopharmacology and Biochemistry of Neurotransmitter Receptors. R. W. Olsen and H. I. Yamamura (Eds.). Elsevier, North Holland, 1980, pp. 301-311.

2. A. Judd, **L. Toll**, J. Lawson, E. Uyeno, W. Polgar, and G. Loew. Putative opioid antagonists: synthesis and biological properties of D-Ala2-Met-enk-amide analogs with unusual tyrosine residues. In Peptides. C. M. Deber, V. J. Hruby, and K. D. Kopple (Eds.). Pierce Chemical Co., Rockford, IL, 1985, pp. 499-502.

3. G. Loew, **L. Toll**, J. Lawson, G. Frenking, and W. Polgar. Opiate receptor heterogeneity: Relative ligand affinities and molecular determinants of high affinity binding at different opiate receptors. In Computer-Assisted Modeling of Receptor-Ligand Interactions: Theoretical Aspects and Applications to Drug Design. Alan R. Liss, Inc., New York (1989).

4. R. G. Almquist, S. R. Kadambi, D. M. Yasuda, F. L. Weitl, W. Polgar, **L. Toll**, and E. T. Uyeno. Development of antagonists of des-Glu1-conotoxin GI. In Peptides, Chemistry, Structure, and Biology. J. E. Rivier and G. R. Marshall (Eds.). ESCOM; Leiden, Netherlands, 1990, pp. 505-507.

5. R. G. Almquist, C. Olsen, C. K. Hiebert, S. R. Kadambi, S. Brandt, and **L. Toll**. Development of peptidomimetic inhibitors of a newly isolated atrial peptide-degrading enzyme. In Peptides: Chemistry and Biology. J. S. Smith and J. E. River (Eds.). ESCOM, Leiden, 1992, pp. 791-792.

6. C. T. Dooley, C. G. Spaeth, **L. Toll**, I. P. Berzetei-Gurske, and R. A. Houghten. Potent Orphanin FQ receptor ligands identified using combinatorial libraries. Peptides 1996, Ramage. R and Epton R. ed. Mayflower Scientific Limited England, 343-344, 1997.

7. **L. Toll**, T.V. Khroyan, W.E. Polgar, S. M. Husbands, N.T. Zaveri. Pharmacology of Mixed NOP/Mu Ligands. In ACS Symposium Series, Vol. 1131, Research and Development of Opioid-Related Ligands, Chapter 17, pp 369–391, May 10, 2013.

Survey Articles, non-peer review

1. Alexander SP, Benson, HE, Faccenda E, et al. The Concise Guide to PHARMACOLOGY 2013/14. Br J Pharmacol. 2013 Dec;170(8):1449-58.

2. Alexander SP, Kelly E, Marrion N, Peters JA, Benson HE, et al. The Concise Guide to PHARMACOLOGY 2015/16: Overview. British Journal of Pharmacology. 2015; 172(24):5729-

5743. PMID:26650438 PMCID:PMC4718217

3. Alexander SP, Kelly E, Marrion NV, Peters JA, Faccenda E, Harding SD, Pawson AJ, Sharman JL, Southan C, Buneman OP, Cidlowski JA, Christopoulos A, Davenport AP, Fabbro D, Spedding M, Striessnig J, Davies JA; **CGTP Collaborators**. THE CONCISE GUIDE TO PHARMACOLOGY 2017/18: Overview. Br J Pharmacol. 2017 Dec;174 Suppl 1:S1-S16. PMID:29055037

4. Toll L, Standifer KM, Massotte D. Editorial: Current Topics in Opioid Research. Front Psychiatry. 2019 Aug 15;. eCollection 2019. PMID: 31474891

Patents

Inventors: Ronald G. Almquist, **Lawrence Toll**
Isolated atrial peptide-degrading enzyme and novel compounds useful as inhibitors thereof.
Patent number: 5262521. Issue date: Nov 16, 1993

Inventors: **Lawrence Toll**, Patrick Denis Lincoln, Peter D. Karp, Kemal Sonmez. Biopolymer sequence comparison. Patent number: 7133781. Issue date: Nov 7, 2006

Inventors: Kemal Sonmez, **Lawrence Toll**, Patrick Denis Lincoln, Peter D. Karp. Data relationship model. Patent number: 7039238. Issue date: May 2, 2006

Inventors: Irving W. Wainer, Michel Bernier, **Lawrence Robert Toll**, Lucita Arenas Jimenez.
The use of fenoterol and fenoterol analogues in the treatment of glioblastomas and astrocytomas
Application number: 20130005799 Issued: January 3, 2013

Inventors: **Lawrence R. TOLL**, David C. Yeomans, Martin S. Angst, Daniel I. Jacobs.
METHODS FOR TREATMENT OF PAIN
Application number: 12/844,721
Publication number: US 2011/0021426 A1
Filing date: Jul 27, 2010 Issued: October 8, 2013

Inventors Faming Jiang, Taline Khroyan, Cris M. Olsen, Willma E. Polgar, **Lawrence R. Toll,** Nurulain T. Zaveri
Nicotinic Acetylcholine Receptor Modulators
Application number: 11/934,583
Publication number: US 2009/0118326 A1
Filing date: Nov 2, 2007 Issued**:** April 15, 2014

Patents Pending

Inventors: Stephen Husbands, John Lewis, **Lawrence Toll**
Novel Opioid Compounds and Their Uses
Filing Date – 05/2014
University of Bath

Inventors: Jinhua Wu, Marc Giulianotti, **Lawrence Toll**, Yongping Yu.
Novel nicotinic acetylcholine receptor antagonists.
Filed 05/2017

Funding

Ongoing Research Support

1R01DA023281-01A1 Toll, PI 9/01/11–08/31/22 3 calendar
NIH/ NIDA
Mixed NOP/mu Compounds and the Involvement of Their Receptors in Analgesia
The major goal of this grant is the characterization of compounds with both NOP and -opioid activity with respect to analgesic activity, and the examination of the role of each receptor in an analgesic response.

W81XWH-17-0558 (McCurdy/McLaughlin)9/15/17-9/14/20 1.2 calendar
DoD $604,637
Sigma receptor ligands as nonopioid-based pain management
The goal of this project is to identify and develop sigma receptor antagonists as pain therapeutics.
Role Co-I

1R41DA044894/01A1 (Toll) 09/01/2018-01/01/2021 1.2 calendar
NIH/NIDA $181,627 (total direct costs requested)
This project seeks to determine whether the partial kappa agonist PPL-103 can block cocaine self-administration and relapse.
Role PI

BA160369 (Toll) 12/01/2018-02/28/2021 2.4 calendar
USAMRMC $1,065,791
This DoD grant to Phoenix PharmaLabs is to conduct pre-IND development studies of the non-addicting analgesic PPL-103 for treatment of acute pain.
Role: PI

Pending Research Support

R61DA051098 Puthanveettil/Toll MPI(PD/PI) 04/01/2021 - 03/31/2026
NIH/NIDA
Long noncoding RNA mechanisms underlying chronic neuropathic pain (Title)
Pending IRG Review

R01NS117152 Breitwieser/Robishaw/Toll MPI 09/01/2020 - 08/31/2025
NIH/NINDS
Functional Genomics of GPR37L1 in Migraine
Pending Council Review

R01DA052456 Li/Kelly/Toll MPI 09/01/2020 - 08/31/2025
NIH/NIDA

Safer opioid drugs: matching multifactorial signaling and in vivo profiles of novel mu opioid receptor agonists
Pending Council Review

R21NS122154 (Toll/Quan MPI) 04/01/2021 - 03/31/2023
NIH/NINDS
$150,000
In this grant we will identify neuronal cells containing IL-1 that are involved in pain.
Role MPI

R01NS12223 (Toll/Ozawa MPI) 04/01/2021 - 03/31/2026
NIH/NINDS
$325,000
This grant examines migraine neuronal circuitry and the involvement of NOP receptors.
Role MPI

Completed Research Support

2R44DA036968-02 (Wu) 09/01/2015-08/31/2017
NIH/NIDA
Novel Selective Alpha4beta2 Nicotinic Receptor Antagonists For Smoking Cessation
The goal of this Phase II SBIR is to identify Alpha4beta2 Nicotinic Receptor Antagonists as lead compounds to be developed as smoking cessation medications. (In no-cost extension).
Role Co-I

1R01DA023281-01S1, NIH/NIDA
Toll, Lawrence (PI)
Supplement to "Mixed NOP/mu Compounds and the Involvement of Their Receptors in Analgesia"
For this supplement, we will test the hypotheses that alcohol modulates the NOP receptor changes induced by chronic opioids and that the presence of alcohol will affect the rewarding properties of buprenorphine and analogs and therefore affect their efficacy as analgesics and drug abuse medications.
Role: PI

1R01DA027811-01 Zaveri (PI) 9/30/2009–8/30/2014
NIH/NIDA
Discovery of Bifunctional NOP/Opioid Receptor Ligands for Drug Abuse Therapy
We will synthesize and characterize novel high affinity bifunctional NOP/opioid ligands. Compounds will be tested in vitro and in vivo as potential drug abuse medications.
Role: Co-Investigator

1R01DA020811-01 Toll (PI) 06/2006–05/2011
NIH/NIDA. Subtype-Selective Nicotinic Receptor Ligands as Smoking Cessation Pharmacotherapy.
The goals of this project are to develop and characterize selective α3β4 nicotinic acetylcholine receptor antagonists and examine the hypothesis that this receptor is a valid target for smoking cessation medication.
Role: PI

1R03DA025939-01 Jiang (PI) 02/2009–01/2012
NIH/NIDA
Development of Photoaffinity Ligands for the Alpha3Beta4 Nicotinic Acetylcholine
We will develop photoaffinity ligands for the α3β4 nicotinic acetylcholine receptor in order better characterize the ACh binding site to aid in the discovery of novel selective ligands.

1R01DA020469-01A2 Husbands (PI) 07/08–06/2011
NIH/NIDA
Derivatives of Naltrexone as Opioid Pharmacotherapies
The principal aim of the project is to provide potential pharmacotherapies for opiate dependence with profiles similar to buprenorphine, but having higher mu opioid receptor efficacy. The target ligands are based on 14-(O)-ethers and -esters of the opioid antagonist naltrexone and on the orvinols.
Role Co-I

Courses Taught at FAU
Neuroscience and Behavior PBL Winter 2019
4 lectures in Graduate Neuroscience 2018, 2019

Undergraduate Students
Jasmine Cano 2018-2019
Jason Marcus 2019-
Maymun Mohiuddin 2019-
Darian Peters 2019-
Daniel Padron 2019-
Marcel Orellana 2019-

Graduate Students
Amanda Rainey 2019-

Summer Medical Students
Hanna Mielke-Maday 2018
Jamshed Desai 2020
Nadia Sial 2020

Service and Professional Development Since Joining FAU (01/2018-06/2020)

Service to the Institution

Committees

Comparative Medicine Advisory Committee
Comparative Medicine Equipment Committee
Radiation Safety Committee, **Chair**
Faculty search committee, Genomics 04/19
iPSC faculty search committee 10/18

Director of Learning Health Center Search Committee 5/19
Faculty search committee Biomedical Sciences 07/19
Research Climate Survey Task Force 11/2019
Social Work/Brain Institute Joint Hire Search Committee 11/2019
College of Medicine Space Committee-**Chair** 2/20
Director, Center for Brain Health Search Committee, **Chair**
Internal Advisory Board of the Brain Institute
Integrated Biology Graduate Admissions Committee

Service to the Profession

Grant Review

NIH Study Sections

SCS Feb. 2018
SCS June 2018
SCS Oct. 2018
SPS Feb. 2019
HEAL grants Feb. 2019
SPS June 2019
HEAL grants July 2019
SEP Nov. 2019
HEAL grants Nov. 2019
SPS Feb. 2020
SPS June 2020

Editorial Boards

Associate Editor of Frontiers in Psychopharmacology
Editorial Board of Neuropharmacology
Journal of Drug Abuse Research

Manuscript Reviewer or Editor

Science Advances, Reviewer, 05/18
Frontiers in Psychiatry, Reviewer, 07/18
Neuropharmacology, Reviewer, 11/18
Frontiers in Psychiatry, Reviewer, 11/18
Neuropharmacology, Reviewer, 03/19
Frontiers in Psychiatry, Guest Editor, Special Topic on Opiates, 25 manuscripts
Journal of Medicinal Chemistry, Reviewer 9-19
Frontiers in Psychiatry, Reviewer 10-19
PNAS, Reviewer 11-19
Frontiers in Psychiatry, Reviewer 2-20
Frontiers in Psychiatry, Editor 6-20

Invited Lectures/Conference Symposia

Broward County Crime Commission's 5th Annual Narcotics Conference-- May 17, 2018
Brainy Days-- March, 2018
Committee for Problems on Drug Dependence, San Diego, Invited symposium June 2018
University of Florida-- Jan. 17, 2019
Brainy Days-- March 22, 2019
March Madness Panel Discussion -- March 29, 2019
Albert Einstein School of Medicine-- April 1, 2019
Institute for Learning in Retirement (ILIR)--April 8, 2019
Biomedical Sciences Retreat – May 7, 2019
Neuroscience Student Organization Retreat – June 10, 2019
Neurology residents – September 10, 2019
International Brian Research Organization (IBRO), Daegu South Korea, Invited symposium - October, 2019
Hoshi University, Tokyo, October 16, 2019
DOR Research in Action series -- May 21, 2020 (online seminar)

Organizations

INRC
Head Organizing committee, INRC meeting 2018
President of the Society 2019-present

Professional Organizations and Honors:

Society for Neuroscience
College for Problems of Drug Dependence
ASPET
International Narcotics Research Conference
- Chair Local Organizing and Program Committee (2002)
- Member Executive Committee (2002-2005)
- President (2018-2022)

Winner of 2002 SRI Fellowship Award for Research Excellence
Current Chair of the Opioid Receptor Subcommittee of NC-IUPHAR (IUPHAR Nomenclature).
National Academy of Inventors – FAU Chapter

Henriette van Praag, Ph.D.
Associate Professor of Biomedical Sciences
FAU Brain Institute
Charles E. Schmidt College of Medicine
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Jupiter, FL 33458
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EDUCATION AND TRAINING

1989-92 Ph.D. Biopsychology, Tel-Aviv University, Israel

1986-89 M.A. Biopsychology, Tel-Aviv University, Israel

1981-84 B.A. Psychology, Bar-Ilan University, Israel

ACADEMIC APPOINTMENTS

June 2018 Associate Professor, FAU Brain Institute, Florida Atlantic University

Sept. 2007 Investigator, Intramural Research Program, National Institute on Aging/NIH

Jan. 2000 Staff Scientist, Laboratory of Genetics,
The Salk Institute, La Jolla, California

June 1997 Research Associate, Laboratory of Genetics,
The Salk Institute, La Jolla, California

Jan.1992 Postdoctoral Fellow, Department of Neuroscience and Cell Biology,
Robert Wood Johnson Medical School, Piscataway, New Jersey

AWARDS and HONORS

The D. Trotsky award for excellence in graduate studies, 1990.
Selected as participant of the International School of Neuroscience, Course in Developmental Neurobiology, organized by Fidia Research Foundation, Praglia, Italy, 1990.
Morris M. Pulver Scholarship for Ph.D. students, 1991.
Selected as participant of the course: The biology of memory: from molecules to behavior, Cold Spring Harbor Laboratory, Cold Spring Harbor, New York, 1993.
Selected as participant in McDonnell Summer Institute for Cognitive Neuroscience, 1995.
Individual Cash Awards 2008 – 16; Special Act Award, 2010; Group time off award 2013, NIA.
Distinguished Traveling Scientist, Midlands Chapter of the Society for Neuroscience, 2013.
NIH Merit Award for mentorship of women scientists of NIA, 2016.

PATENT

U.S. Patent No. 7,763,588
van Praag et al. Method for increasing cognitive function and neurogenesis. Issued July 27, 2010

BIBLIOGRAPHY

Research Papers

1. Myslobodsky, M.S., Coppola, R., Bar-Ziv, J., Karson, C., Daniel, D., **van Praag, H.**, Weinberger, D.R. EEG asymmetries may be affected by cranial and parenchymal asymmetries, *Brain Topography,* 1(4):221-228, 1989.

2. Myslobosdsky, M.S., Bar-Ziv, J., **van Praag, H.**, Glicksohn, J. Bilateral alpha distribution and anatomic brain asymmetries, *Brain Topography,* 1(4):229-235, 1989.

3. **van Praag, H.**, Frenk, H. The role of glutamate in opiate descending inhibition of nociceptive spinal reflexes, *Brain Research,* 524:101-105, 1990.

4. **van Praag, H.**, Frenk, H. Evidence for opiate tolerance in newborn rats, *Developmental Brain Research,* 60:99-102, 1991.

5. **van Praag, H.**, Frenk, H. The development of stimulation produced analgesia (SPA) in the rat, *Developmental Brain Research,* 64:71-76, 1991.

6. **van Praag, H.**, Frenk, H. The effects of systemic morphine on EEG and behavior in newborn rats, *Developmental Brain Research,* 67:19-26, 1992.

7. **van Praag, H.**, Dreyfus, C.F., Black, I.B. Dissociation of motor hyperactivity and spatial memory deficits by selective hippocampal lesions in the neonatal rat, *Journal of Cognitive Neuroscience,* 6:321-331, 1994.

8. **van Praag, H.**, Alberch, J., Perez-Navarro, E., Wu, H., Qu, P.M., Black I.B., Dreyfus, C.F. Unilateral neonatal hippocampal lesion alters septal innervation and trophism of the entorhinal cortex, *Experimental Neurology*, 141:130-140, 1996.

9. **van Praag, H.**, Black, I.B., Staubli, U.V. Neonatal vs. adult unilateral hippocampal lesions: differential alterations in contralateral hippocampal theta rhythm, *Brain Research,* 768:233-241, 1997.

10. **van Praag, H.**, Qu, P.M., Elliott, R.C., Wu, H., Dreyfus, C.F., Black, I.B. Unilateral hippocampal lesions in newborn and adult rats: effects on spatial memory and BDNF gene expression, *Behavioural Brain Research,* 92:21-30, 1998.

11. **van Praag, H.**, Chun, D., Black, I.B., Staubli, U.V. Unilateral hippocampal ablation at birth causes a reduction in contralateral LTP, *Brain Research,* 795:170-178, 1998.

12. Kafri, T., **van Praag, H.**, Ouyang, L., Gage, F.H., Verma, I.M. A packaging cell line for lentiviral vectors, *Journal of Virology*, 73: 576-584, 1999.

13. **van Praag, H.**, Kempermann, G., Gage, F.H. Running increases cell proliferation and neurogenesis in the adult mouse dentate gyrus, *Nature Neuroscience*, 2:266-270, 1999.

14. **van Praag, H.**, Christie, B.R., Sejnowski, T.J., Gage, F.H. Running enhances neurogenesis, learning and long-term potentiation in mice. *Proc. Natl. Acad. Sci*., 96:13427-13431, 1999.

15. Kafri, T., **van Praag, H.**, Gage, F.H, Verma, I.M. Lentiviral vectors: regulated gene expression. *Molecular Therapy*, 1:516-521, 2000.

16. Allen, D[#], **van Praag, H**[#]., Ray, J., Weaver, Z., Winrow, C.J., Carter, T.A., Braquet, R., Harrington, E., Ried, T., Brown, K.D., Gage F.H., Barlow, C. Ataxia Telangiectasia Mutated is essential during adult neurogenesis. *Genes and Development*, 15:554-566, 2001. [#]contributed equally.

17. **van Praag, H[#].**, Schinder, A.F., Christie, B.R., Toni, N., Palmer, T.D., Gage, F.H. Functional neurogenesis in the adult hippocampus. *Nature*, 415:1030-1034, 2002. [#]Corresponding author

18. Brown, J., Cooper-Kuhn, C. M., Kempermann, G., **van Praag, H.**, Winkler, J., Gage, F. H., Kuhn, H. G. Enriched environment and physical activity stimulate hippocampal but not olfactory bulb neurogenesis. *European Journal of Neuroscience*, 17:2042-2046, 2003.

19. Rhodes, J.S., **van Praag, H.**, Jeffrey, S., Girard, I., Mitchell, G. S., Garland Jr., T., Gage, F. H. Exercise increases hippocampal neurogenesis to high levels but does not improve spatial learning in mice bred for increased voluntary wheel running. *Behavioral Neuroscience*, 117(5):1006-1016, 2003.

20. Farmer, J., Zhao, X., **van Praag, H.**, Wodtke, K., Gage, F.H., Christie, B.R. Effects of voluntary exercise on synaptic plasticity and gene expression in the dentate gyrus of adult male Sprague-Dawley rats. *Neuroscience*, 124(1):71-79, 2004.

21. Galimi, F., Summers, R.G., **van Praag, H.**, Verma, I.M., Gage, F.H. A role for bone marrow-derived cells in the vasculature of non-injured CNS. *Blood,* 105(6):2400-2402, 2005.

22. **van Praag, H.**, Shubert, T., Zhao, C., Gage, F.H. Exercise enhances learning and hippocampal neurogenesis in aged mice. *Journal of Neuroscience*, 25(38):8680-8685, 2005.

23. Laplagne, D.A., Esposito, M.S., Piatti, V.C., Morgenstern, N.A., Zhao, C., **van Praag, H.**, Gage, F.H., Schinder, A.F. Functional convergence of neurons generated in the developing and adult hippocampus. *PLoS Biol*. 4(12): 2349-2360, 2006.

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30. Potter, M., Yuan, C., Ottenritter, C., Mughal, M., **van Praag H**. Exercise is not beneficial and may accelerate symptom onset in a mouse model of Huntington's disease. *PLoS Curr. Huntington's Disease* 7;2:RRN1201, 2010.

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32. Kobilo, T., Yuan, C., **van Praag, H**. Endurance factors improve hippocampal neurogenesis and spatial memory in mice, *Learning and Memory*, 18:103-107, 2011.

33. Cockrell, A.S., **van Praag, H**., Santistevan, N., Ma H., Kafri, T. The HIV-1 Rev/RRE system is required for HIV-1 5' UTR cis elements to augment encapsidation of heterologous RNA into HIV-1 viral particles, *Retrovirology* 8:51doi:10.1186/1742-4690-8-51, 2011.

34. Kobilo, T., Liu, Q.R., Gandhi, K., Mughal, M., Shaham, Y., **van Praag, H**. Running is the neurogenic and neurotrophic stimulus in environmental enrichment. *Learning and Memory*, 18: 605-609, 2011.

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38. Vivar, C., Potter, M.C., Choi, J., Lee, J.Y., Stringer, T.P., Callaway, E.M., Gage, F.H., Suh, H., **van Praag, H**. Monosynaptic inputs to new neurons in the dentate gyrus. *Nature Communications* 3:1107, 2012.

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40. Marlatt, M.W., Potter, M.C., Bayer, T.A., **van Praag H**., Lucassen P.J. Prolonged running, not fluoxetine treatment, increases neurogenesis but does not alter neuropathology in the 3xTG model of Alzheimer's Disease. *Curr Top Behav Neurosci*., 15:313-340, 2013.

41. Kobilo, T., Guerrieri, D., Zhang, Y., Collica, S., Becker, K.G., **van Praag, H**. AMPK agonist AICAR improves cognition and motor coordination in young and aged mice. *Learning and Memory*, 21:119-126, 2014.

42. Zhang, Z., **van Praag, H**. Maternal immune activation differentially impacts mature and adult-born hippocampal neurons in male mice, *Brain, Behavior and Immunity*, 45:60-70, 2015.

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44. Guerrieri, D., **van Praag, H.** Exercise-mimetic AICAR transiently benefits brain function. *Oncotarget*, 4715, 2015.

45. Vivar, C., Peterson, B.D., **van Praag, H**. Running rewires the neuronal network of adult-born granule cells. *NeuroImage,* 131:29-41, 2016.

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Invited Reviews

1. **van Praag, H.**, Falcon, M., Guendelman, D., Frenk, H. The development of analgesic, pro-and anticonvulsant opiate effects in the rat. *Annali dell' Institutio Superiore di Sanita*. 29:419-429, 1993.

2. Kempermann, G., **van Praag, H.**, Gage, F.H. Activity-dependent regulation of neuronal plasticity and self-repair. *Progress in Brain Research* 127: 35-48, 2000.

3. Jacobs, B.L., **van Praag, H.**, Gage, F.H. Adult brain neurogenesis and psychiatry: a novel theory of depression. *Molecular Psychiatry*. 5:262-269, 2000.

4. Jacobs, B.L., **van Praag, H.**, Gage, F.H. Depression and the birth and death of brain cells. *American Scientist*, 88:340-345, 2000.

5. **van Praag, H.**, Kempermann, G., Gage, F.H. Neural consequences of environmental enrichment. *Nature Reviews Neuroscience* 1: 191-198, 2000.

6. **van Praag, H.,** Gage, F.H. Genetics of childhood disorders: XXXVI. Stem Cell Research part 1: New neurons in the adult brain: a historical perspective. *Journal of the American Academy of Child and Adolescent Psychiatry*, 41:354-356, 2002.

7. **van Praag, H.** Neurogenesis and Exercise: Past and Future Directions. *Neuromolecular Med*. 10(2):128-140, 2008.

8. **van Praag, H.** Exercise and the brain: something to chew on. *Trends in Neurosciences*, 32: 283-290, 2009.

9. Lazarov, O., Mattson, M.P., Peterson, D.A., Pimplikar, S.W., **van Praag, H**. When neurogenesis encounters aging and disease, *Trends in Neurosciences*, 33:569-579, 2010.

10. Vivar C. and **van Praag, H.** Functional circuits of new neurons in the dentate gyrus. *Frontiers in Neural Circuits*, doi:10.3389/fncir.2013.00015, 2013.

11. Voss, M.W., Vivar C., Kramer, A.F., **van Praag, H**. Bridging animal and human models of exercise-induced brain plasticity. *Trends in Cognitive Sciences* 17(10):525-544, 2013.

12. Vivar, C., Potter, M.C., **van Praag, H.** All About Running: Synaptic Plasticity, Growth Factors and Adult Hippocampal Neurogenesis. *Curr Top Behav Neurosci*. 15:189-210, 2013.

13. **van Praag, H**., Fleshner, M., Schwartz, M., Mattson M.P. Exercise, Energy Intake, Glucose Homeostasis and the Brain. *Journal of Neuroscience*, 34(46):15139-15149, 2014.

14. Duzel, E., **van Praag, H**., Sendtner, M. Can physical exercise in old age improve memory and hippocampal function? *Brain*, 139:662-673, 2016.

15. Guerrieri, D., Moon, H.Y., **van Praag, H**. The latest on exercise mimetics. *Brain Plasticity*, 2: 153-169, 2017.

16. Cooper, C., Moon, H.Y., **van Praag, H**. On the run for hippocampal plasticity. *Cold Spring Harbor Laboratory, Perspectives in Medicine*, doi: 10.1101/cshperspect.a029736, 2017.

17. Vivar, C. and **van Praag, H**. Running changes the brain: the long and the short of it. *Physiology*, 410-424, 2017.

18. Voss, M.V., Soto, C., Yoo, S., Sodoma, M., Vivar, C., **van Praag, H**. Exercise and hippocampal memory systems. *Trends in Cognitive Sciences*, 23(4): 318-333, 2019.

19. Zhao X. and **van Praag, H.** Steps towards standardized quantification of adult neurogenesis. *Nature Communications*, 11:4275, 2020.

Commentaries, News and Views

1. **van Praag, H.**, Barlow, C., Gage, F.H. Are drug targets missed owing to lack of physical activity? *Drug Discovery Today* 6:615-617, 2001.

2. Mattson, M.P., **van Praag, H.** TAGing APP constrains neurogenesis. *Nat Cell Biol.* 10(3):249-250, 2008.

3. Kobilo, T., **van Praag, H**. Muscle fatigue and cognition: what is the link? Commentary for *Frontiers in Physiology*, 3, 2012.

4. Moon, H.Y., **van Praag, H.** Muscle over mind. *Cell Metabolism*, 20(4):560-562, 2014.

5. **van Praag, H.** Exercise benefits the brain. 'Voices' for *Cell Metabolism* 22:19, 2015.

Book Chapters

1. Myslobodsky, M.S., **van Praag, H.**, Bar-Ziv, J., Glicksohn, J. The contribution of calvarial and brain parenchymal variables to VEP asymmetries. In: Brunia, C.M.H., Gaillard, A.W.K., Kok, A.: *Psychophysiological Brain Research,* The Netherlands: Tilburg Univ. Press, pp 30-33, 1990.

2. Gage, F.H., **van Praag, H**. Neurogenesis in Adult Brain. In: *American College of Neuropsychopharmacology: The Fifth Generation of Progress,* Eds. Davis, K.L., Charney, D., Coyle, J.T., Nemeroff, C., Philadelphia, PA: *Lippincott, Williams & Wilkins*, pp. 110-119. 2002.

3. **van Praag, H.**, Zhao, X., Gage, F.H. Regulation and function of Adult neurogenesis, In: Gazzaniga, M. (Ed.) *The Cognitive Neurosciences III*, Cambridge, MA 2004, MIT Press/SAGE, pp. 127-137, 2004.

4. **van Praag, H.** Exercise, neurogenesis and learning in rodents. In: Acevedo E. and P. Ekkekakis (Eds.) *Psychobiology of Physical Activity,* 10th Edition, Champaign, IL, Human Kinetics, pp. 61-74, 2006.

5. Kobilo T., Potter M.C., **van Praag H**. Neurogenesis and Exercise. In: Koob G.F., Le Moal M. and Thompson R.F. (eds.) Encyclopedia of Behavioral Neuroscience, volume 3, Oxford: Academic Press, pp. 404–409, 2010.

6. Wang, Z., **van Praag, H**., Exercise and the Brain: Neurogenesis, Synaptic Plasticity, Spine Density and Angiogenesis. In *Functional Neuroimaging in Exercise and Sport Sciences* (Boecker H., Hillman, C., Scheef, L., Struder, H.K., Eds), Springer, pp. 3-24, 2012.

Editor and Editorial board

Co-Editor in Chief, 'Brain Plasticity' IOS Press.

Editorial board member: 'Neuromolecular Medicine','npj Aging and Mechanisms of Disease' and 'NeuroSports'. Associate Editor for 'Neurogenesis' and 'Pathological Conditions' in 'Frontiers in Neuroscience'.

Membership of Professional Societies

Society for Neuroscience, since 1991

SERVICE

Reviewer for Science, Nature Neuroscience, Nature Medicine, Nature Communications, Molecular Psychiatry, J. Neuroscience, Cell Stem Cell, PNAS, Translational Psychiatry, Neuroscience, Brain Res.,

Cell Transplantation, Learning and Memory, Neurobiology of Learning and Memory, Behavioural Brain Research, J. Comp. Neurol., Neuropsychopharmacology, Scientific reports (and others).
Reviewer for the Society for Neuroscience annual meeting press program.
Reviewer for Biobehavioral Regulation, Learning, and Ethology NIH Study Section, Division of AIDS, Behavioral and Population Sciences.
Invited participant in "Exercise-Drug Synergy: Neuroprotection and Neural Plasticity in Huntington's Disease (HD)." Workshop, CHDI Foundation, New York City, February 2011.
Invited participant in External Advisory Board for Center of Excellence for Research in Complementary and Alternative Medicine in Alzheimer's Disease, Noble Foundation, Ardmore OK, September 2010.
Intramural:
Established NIA mouse behavioral testing facility (e.g. water maze, novel object recognition, fear conditioning, touch-screen, open field, rotarod, mouse treadmill, touch screens), 2008.
NIA Tenure Track Search Committee for the Laboratory of Experimental Gerontology, 2008.
Review of applications for the NIH National Graduate Student Research Festival, 2010.
NIH FARE competition judge, 2011.
NIA Postbac Poster Day judge, 2012, 2017.
NIDA/IRP Tenure and promotions committee member, 2012-2016.
NIA/IRP Laboratory Specialist Promotion Committee member, since 2013.
IACUC NIA 2013-2015.
NIA Summer students Poster Day judge 2015.
NIA Search Committee for Staff Scientist for the Laboratory of Genetics, 2015.
Women Scientists Advisor for NIA, since 2013.
Organized lectures for Women's History Month:
Dr. Julia Marciari-Alexander, Executive Director of the Walters Art Museum, 'The Walters Art Museum: what will you discover?', January 2014.
Dr. Susan Carlson, KUMC, 'Evidence that DHA is an essential nutrient for human development', 2014.
Dr. Carla Hayden, CEO Enoch Pratt Free Library, March 2015.
Dr. Wendy Suzuki, New York University. 'Brain plasticity two ways', March 2016.
Dr. Catherine DeAngelis, Johns Hopkins University. 'Pursuing equity in medicine: One woman's journey, March 2017.

FUNDING

Ed and Ethel Moore Alzheimer's Disease Research Program, 01/2019-01/2023, Florida Department of Health, P.I.

FAU Brain Institute Start-up funds 06/01/2018-06/01/2022, P.I.

Temporal ontogeny of epileptogenesis in a model of adult-onset, spontaneous seizures. Co-Investigator 1R15 NS115049-01. 12/01/2019 – 11/30/2022

MENTOR

Seungwoo Yoo, PhD
Alejandro Pinto
Olivia Curtis

Summer student, Nambu REU: Jasmine Pesante, Dominican College, 2020

Graduate student committee: Kristi Guerrero, UT San Antonio, TX, 2019- (Veronica Galvan lab)
Nathan Kerr, Univ. of Missouri, MO, 2020- (Frank Booth lab)

Muhammed Nauman Arshad, Wesleyan Univ. CT, 2020- (Jan Naegele lab)
Master's Student thesis committee: Brandon Hindman, FAU, 2019

Rotation students: Gabriel Pena, IB, FAU, 2019
Amanda Rojas, GNTP, FAU, 2019

Trainee awards
Emma Janke (postbac): Best Poster, NIA Retreat, 2017
Hyo Youl Moon (postdoc): Supplemental Visiting Fellowship Korea 2013-2015
Carmen Vivar (postdoc): Nathan W. Shock Travel Award 2013
Tali Kobilo (postdoc): Young Scientist Travel Award, ASPET 2012
Sarah Collica (summer student): Barbara A. Hughes Award of Excellence 2012
Michelle Potter (postdoc): FARE travel award 2011

Former trainees

Postdoctoral Fellows:
Nirnath Sah, June 2014-June 2018, Postdoc, Johns Hopkins University, Baltimore, MD
C'iana Cooper, January 2016-June 2018, Postdoc, NIA/NIH, Baltimore, MD
Hyo Youl Moon, August 2013-February 2017, Assistant Professor, Department of Physical Education, Seoul National University, Republic of Korea
Peter Clark, November 2013-July 2016, Assistant Professor, Dept. of Nutrition, Iowa State University
Davide Guerrieri, January 2012-October 2015, Head of Bioanalytics Laboratory, Sandoz, Germany
Carmen Vivar-Estudillo, March 2009-March 2015, Professor, Department of Physiology, Biophysics and Neuroscience, CINVESTAV, Mexico City, Mexico.
Zhi Zhang, August 2011-August 2013, Assistant Professor, Dept. of Neuroscience, University of Michigan
Michelle Potter, June 2008-May 2012, Senior Scientist at Sanofi, Boston, MA
Tali Kobilo, June 2008-June 2013, Kennedy Krieger Institute, Baltimore, MD
Nicholas Mitchell, July 2008–August 2010, Clarivate Analytics

Postbac IRTAs:
Jameice DeCoster, July 2017-May 2018, graduate student, Argosy University, MD
Susan Lubejko, June 2015-June 2017, graduate student, Univ. of California, San Diego, CA
Emma Janke, July 2015-June 2017, graduate student, Univ. of Pennsylvania, PA
Galit Benoni, July 2015-July 2016, medical student, Albert Einstein College of Medicine, NY
Ben Peterson, August 2012-July 2015, graduate student, Univ. of Madison, WI
Ben Becker, July 2014-June 2015, medical student, Wake Forest University Medical School, NC
Jonathan Cheung, November 2013-June 2014, graduate student, USC, CA
Sarah Collica, August 2013-June 2014, medical student, Johns Hopkins University, MD
Thomas Stringer, July 2011-July 2013, medical student, NYU Medical School, NY
Jason Boulter, August 2012-June 2013, medical student, Emory University GA
David Rotstein, M.D., October 2010-2011, Univ. of Medicine and Dentistry of New Jersey, NJ
Nicholas Santistevan, August 2009-January 2010, MedImmune Inc., Germantown, MD
David Creer, July 2008-May 2010, law student, Univ. of New Hampshire, NH
Robert Rowe, M.D., August 2008-July 2009, Wake Forest University Medical School, NC
Conwell Ottenritter, M.D., Nov. 2007-May 2008, Eastern Virginia Medical School, VA

Graduate students:
Emmette Hutchinson, Brown University GPP, thesis committee, PhD 2012
Michael Marlatt, visiting researcher, University of Amsterdam, PhD 2012

Zejun Wang, visiting researcher, East China Normal University, PhD 2012

Summer Students:
Aida Jaldi, Howard University, 2016
Noah Fu, University of Washington, St. Louis, 2016
Nicole Rumian, University of Colorado, 2015
Kaylee Held, High School student, 2015
Paapa Nyanin, Brown University, 2013
Emily Clark, UC Davis, 2013 (Oakland University William Beaumont School of Medicine)
Sarah Collica, Yale University, 2011, 2012 (Johns Hopkins School of Medicine)
Kriti Gandhi, McGill University, 2009, 2010 (University of Maryland School of Medicine)

Special Volunteers:
Chunyan Yuan, June – Sept, 2009
Linda R. Kitabayashi, Jan 2013 – Dec 2017
Matthew H. Stremlau, Sept, 2017 – May 2018

External examiner of PhD Theses: Joyce Siette, University of New South Wales, Australia, 2013; Bart Jongbloets, Department of Translational Neuroscience, University Medical Center Utrecht, The Netherlands, 2016; Julia Morgan, University of Adelaide, Australia, 2019.

INVITED PRESENTATIONS

Exercise & Organ Crosstalk Symposium Integrative Physiology of Exercise, Austin, TX, November, 2020 (Virtual)

Effects of exercise on function and plasticity in the adult and aging brain. Symposium on Neurodegenerative Diseases, ACSM, Annual World Congress in Regenerative Medicine, San Francisco, May 2020 (postponed)

Wesleyan University, seminar series, Middletown, CT, April, 2020 (via Zoom)

Exercise and the brain, Fifteenth annual Neuromuscular Plasticity Symposium, University of Florida, Gainesville, March 2020 (postponed)

New Insights into the Biology of Exercise, Keystone Symposia, Keystone, CO, March 2020
Systemic and central effects of exercise on adult neurogenesis and memory function. University of Southern California Diabetes and Obesity Research Institute, Los Angeles, CA, Feb 2020

Regulation of adult-born neuron integration into the hippocampal network, 5th meeting on "Stem cells and Regenerative medicine", Mexican Society for Stem Cell Research and 2019 Congress of the International Society for Cell and Gene Therapy (ISCT, Central and South American Region), Mexico City, Mexico, October 2019

Albert Foundation, Phoenix, AZ, October, 2019

International Sports Neuroscience Conference, IBRO satellite symposium, Tsukuba, Japan, Sept., 2019, **Keynote speaker**

Regulation of adult neurogenesis by exercise, Eurogenesis 2019 conference, Bordeaux, France, June 2019

Running-induced changes in networks of new hippocampal neurons, NeuroFrance 2019, Marseille, France, May, 2019 (upcoming)

A systemic view on exercise and memory systems, DZNE meeting on Heart & Brain Diseases, Gottingen, Germany, May, 2019

Regulation of adult neurogenesis and memory function by exercise, Thomas Jefferson University, Philadelphia PA, May 2019

The role of muscle in the benefits of exercise for the brain, UAB Center for Exercise Medicine, Birmingham, AL, April 2019

Exercise regulation of biological aging, Barshop Institute Annual Symposium on Aging, Bandera TX, October 2018

Graduate student mini-symposium on Biochemistry and Exercise, University of Georgia, October, 2018

Exercise-mediated improvements in memory function, American Diabetes Association Annual Conference, Orlando, FL, June 2018

Symposium on Exercise and the Brain, Duke University, NC, December, 2017

The benefits of exercise for brain plasticity: from rodents to humans. 30th European College of Neuropsychopharmacology (ECNP) Congress of Applied and Translational Neuroscience. Paris, France, September 2017

Exercise and neural plasticity, American College of Sports Medicine (ACSM) Annual Meeting, Denver CO, June 2017, **Keynote Speaker**

The Changing Brain: How Brain Plasticity, Exercise, and Nutrition Affect Function and Cognition, Symposium, American Society for Nutrition (ASN) at Experimental Biology, Chicago, IL, April, 2017

Regulation and Function of Adult Hippocampal Neurogenesis: the Role of Exercise, Chapman University, CA, March 2017

The regulation of adult hippocampal neurogenesis by exercise. Exercise and Brain Health Symposium, UC Irvine, CA, March, 2017

Exercise Triggers Adaptive Brain Cell Stress Responses, Symposium, Integrative Biology of Exercise VII (IBE), American Physiology Society, Phoenix, AZ, November, 2016

Networks of new neurons in the adult hippocampus. Bodian Seminar series. Johns Hopkins University, September, 2016

Exercise and brain plasticity. Symposium, European Association for the Study of Diabetes, 52nd EASD Annual Meeting, Munich, Germany, September 2016

Regulation and Function of Adult Hippocampal Neurogenesis: the Role of Exercise, University of Amsterdam, The Netherlands, September 2016

Regulation and Function of Adult Hippocampal Neurogenesis: the Role of Exercise. Joint Symposium of the 5th International Neural Regeneration Symposium (INRS2016) and the 10th Asia Pacific Symposium on Neural Regeneration (APSNR2016), Yinchuan City, the Ningxia Hui Autonomous Region, P. R. China, July, 2016

Regulation and Function of Adult Hippocampal Neurogenesis: the Role of Exercise. International Behavioral Neuroscience Society 25th Annual Meeting, Budapest, Hungary, June, 2016, **Keynote Speaker**

Regulation and function of adult hippocampal neurogenesis. Howard University, Washington D.C., February 2016

Running modifies the circuitry and function of new neurons in the dentate gyrus. Winter Conference on Learning and Memory. Park City, UT, January 2016

Regulation of adult hippocampal neurogenesis and spatial memory by activity. Conference on Neuroplasticity in Leuven, Belgium, December, 2015

Regulation and function of exercise-induced adult neurogenesis. Adult Neurogenesis, 3rd Provence Summer Workshop, France, September, 2015, **Keynote Speaker**

Exercise, adult hippocampal neurogenesis and spatial memory: from muscle to brain. Cell Symposia: Exercise and Metabolism, Amsterdam, Netherlands, July 2015

Exercise and adult hippocampal neurogenesis. Exercise is Medicine for the Brain, Symposium, Tel Aviv University, Tel-Aviv, Israel, May 2015

Regulation and function of the circuitry of new neurons in the mouse hippocampus by exercise, Department of Biology, Technion, Haifa, Israel, May 2015

Regulation and function of the circuitry of new neurons in the mouse hippocampus by exercise. Hebrew University, Jerusalem, Israel, May 2015

Regulation and Function of Adult Hippocampal Neurogenesis: the Role of Exercise. Behavioral Neuroscience Group, Dept. of Psychology, University of Delaware, April, 2015

Exercise and the functional integration of new neurons in the hippocampus. Co-organizer and co-chair, Society for Neuroscience Symposium: Exercise, Energy Intake and the Brain, November 2014.

Modulation of cue separation discrimination and new hippocampal neurons by physical activity. Symposium: The role of cues and contexts in adaptive and maladaptive behaviors: From mice to humans. NIH Research Festival, Bethesda, Maryland, September 2014

Combining retrovirus and rabies virus to study new cell integration into an existing circuit. In the Workshop: Novel trans-synaptic tracing approaches for functional-anatomical studies of neuronal circuits. FENS meeting, Milan, Italy, July 2014

Mechanisms by which physical activity induces adult neurogenesis. In Symposium 'Effects of physical activity on brain function and mental health'. ACSM, Orlando FL, May 2014

Physical activity and new neuron connectivity. Adult Neurogenesis, Keystone Conference, Stockholm, Sweden, May 2014

Regulation of adult neurogenesis in memory circuits. Opening Ceremony of a new DZNE research center in Magdeburg, Germany, February 2014

Regulation and Function of Adult Hippocampal Neurogenesis: the Role of Exercise. **Distinguished Traveling Scientist**, Midlands Chapter of the Society for Neuroscience, Omaha, NE, December, 2013

Regulation and function of adult hippocampal neurogenesis: the role of exercise, NIA IRP Retreat, Baltimore, Maryland, March, 2013

Regulation of adult neurogenesis in memory circuits, NIDA seminar series, Baltimore, Maryland, February, 2013

Regulation and function of adult hippocampal neurogenesis: the role of exercise, Translational research of Aging Symposium, NIH Research Festival, Bethesda, Maryland, October 2012

Regulation and function of adult hippocampal neurogenesis: the role of exercise. Symposium of the Central Institute of Mental Health in Mannheim, Germany, September 2012, **Keynote Speaker**.

Regulation and function of adult hippocampal neurogenesis. University of Amsterdam, The Netherlands, September 2012

Regulation and function of adult hippocampal neurogenesis. NIH-Brown University GPP graduate student retreat, Woods Hole, MA, April, 2012

Regulation of neural plasticity by exercise and phytoestrogens in female mice. Kansas University Medical School, March, 2012.

Adult hippocampal neurogenesis: the role of exercise. 2012 Macmillan Lectures - The Brainy Side of Exercise: Benefits to Neurons, Mind and Behavior, Burlington, Vermont, March 2012, **Plenary Speaker**.

Can you outrun your genes? Effects of exercise on brain function during aging. Panel on Alzheimer's disease: Pathology and treatment in animal models. 45rd Annual Winter Conference on Brain Research, Utah, January, 2012.

New neurons in the adult brain: regulation and function. UNSW Symposium, Brain Plasticity, The Adaptable Brain, Sydney, Australia, September 2011, **Plenary Speaker**.

Adult hippocampal neurogenesis and memory function. Summer school: Plasticity in the Adult Brain, Utrecht, The Netherlands, August 2011.

Regulation and function of adult hippocampal neurogenesis: the role of exercise. IBRO Symposium: Mental and physical activity as modulators of brain function and disease, Florence, Italy, July 2011.

Effects of combined exercise and nutrients on brain function. The effects of exercise and nutrients on brain function, symposium. Copenhagen, Denmark, August, 2010.

Cognition, memory and well-being. The 15th Annual Congress of the European College of Sport Science (ECSS) Antalya, Turkey, June, 2010. **Plenary speaker**.

Regulation and function of neurogenesis in the adult and aged hippocampus, Rosalind Franklin University Medical School, Chicago, IL, April, 2010.

Exercise and Other Factors that Regulate Adult Hippocampal Neurogenesis, Frontiers in Exercise Biology Course, UC Davis, CA, April, 2010.

Regulation and function of neurogenesis in the adult and aged hippocampus. And: Effects of the plant-derived flavanol (-)epicatechin on memory function, neurogenesis and angiogenesis. 43rd Annual Winter Conference on Brain Research, Colorado, January, 2010.

Regulation and function of neurogenesis in the adult and aging brain. Dementia Consortium at Johns Hopkins, Baltimore, November, 2009.

Regulation and function of neurogenesis in the aging hippocampus. International College of Geriatric Psychoneuropharmacology, Baltimore, November, 2009.

Regulation and function of neurogenesis in the aging hippocampus. Minisymposium on neurogenesis and Alzheimer's Disease, Society for Neuroscience meeting, Chicago, October, 2009.

Neurogenic and neuroprotective effects of diet and exercise in the adult and aging brain. Neurotrauma 2009, Santa Barbara, CA, September, 2009.

Regulation and function of neurogenesis in the adult and aged hippocampus. Johns Hopkins University, Biomarkers of Neurodegeneration Symposium, Baltimore, June, 2009.

Regulation and function of neurogenesis in the adult and aged hippocampus. Meeting of the Puerto Rico Chapter of the Molecular & Cellular Cognition Society, May, 2009.

Neurogenesis and Neurological Disease: Can the Brain Repair Itself? Panel chair and organizer. 42nd Annual Winter Conference on Brain Research, Colorado, January 2009.

Aging, exercise and neurogenesis: food for thought. Workshop: Update on Alzheimer Research, Westminster, Maryland November, 2008.

Regulation and function of neurogenesis in the adult and aged hippocampus. Adler meeting, Salk Institute, La Jolla, California, February, 2008.

Regulation and function of neurogenesis in the adult and aged hippocampus. The 4th Dutch Endo-Neuro Meeting, The Netherlands, June, 2007. **Plenary speaker**.

Neurogenesis in the aged adult hippocampus. Nutrition, Exercise and Neurodegenerative Diseases, Verbier, Switzerland, January 2007.

Exercise, experience and neurogenesis. American Geriatrics Society Conference, Philadelphia PA, March, 2006.

Regulation of neurogenesis by exercise in rodents. Conference on Neurogenesis in the Adult Brain, Banbury Center, Cold Spring Harbor Laboratory, February, 2006.

Impact of voluntary exercise on neurogenesis and learning in the rodent. SFN Symposium on Exercise and Central Nervous System Disease, Washington DC, November, 2005.

Regulation and function of neurogenesis in the adult hippocampus. Frontiers in Spinal Cord Regeneration Symposium, Louisville KY, June, 2005.

Regulation and function of neurogenesis in the adult hippocampus. XI Symposium on Learning and Memory in Magdeburg, Germany, May, 2005.

The role of exercise in adult neurogenesis. Stem Cells in the Mammalian Brain - The 4th Brain Research Interactive Symposium, San Diego CA, November, 2001.

Regulation and function of neurogenesis in the adult hippocampus. Continuing Medical Education, Sharp HealthCare Rehabilitation Services, September, 2001 and April, 2003.

Regulation and function of neurogenesis in the adult hippocampus. The 4th Dutch Endo-Neuro Meeting, The Netherlands, June, 2000.

Carmen Varela, Ph.D.
carmenv.work@gmail.com
www.varelalab.org

Psychology Department
Florida Atlantic University
MC19, Jupiter, Florida

Research mission: My laboratory aims to discover the mechanisms by which thalamic neurons contribute to cognitive and sleep-regulated functions, such as memory consolidation and cognitive flexibility. Learning and memory require the coordination of brain regions that have the thalamus as a common link and potential pivot target for therapeutic interventions. I believe that clinical and technological innovations that capitalize on understanding the brain network mechanisms underlying cognition have the potential to utterly transform the way we learn, educate others, and treat neurological and psychiatric disorders.

ACADEMIC APPOINTMENTS

Psychology Department, Florida Atlantic University **2019-current**
Assistant Professor

MIT, Cambridge, MA.
Research Scientist, NARSAD young investigator **2012-2018**

EDUCATION

MIT, Cambridge, MA.
Post-Doctoral Associate. Advisor: Matthew A. Wilson **2010-2012**
Post-Doctoral Fellow. Advisor: Matthew A. Wilson **2008-2010**

The University of Chicago, IL.
Ph.D. Computational Neuroscience. Advisor: S. Murray Sherman **2002-2008**

University Pablo de Olavide, Seville, Spain.
M.S. Neuroscience. Advisor: Javier Cudeiro **1999-2001**

University of A Coruña, Spain.
B.S. Biology. Highest GPA across regional schools. **1995-1999**

University of A Coruña, Spain.
B. in Physical Therapy. **1992-1995**

RESEARCH CONTRIBUTIONS AND EXPERTISE

POST-DOCTORAL & RESEARCH SCIENTIST

- *Topic*: **Thalamo-Neocortico-Hippocampal Interactions (network level)**
- I validated a preparation to record, for the first time, single cells and local field potentials simultaneously from three functionally related areas that are key for cognitive function (midline thalamus, prefrontal cortex and CA1) in behaving rats. Demonstrated functional and anatomical contributions of cells in the midline thalamus to the coordination between hippocampus and neocortex thought to underlie sleep-dependent memory consolidation.
- *Methods*: behaving rodent electrophysiology, quantitative methods, behavioral testing, optogenetics, pharmacogenetics, anatomical tracing.
- Partly funded through a NARSAD Young Investigator Award and a Caja Madrid Foundation fellowship. Results from this project were also the basis for NIH and additional private funding.

PH.D. THESIS

- *Title*: '**Functional Differences between First and Higher Order Thalamic Nuclei: Effects of Modulatory Systems and Response Properties**'.
- Demonstrated that cells in primary sensory and associative nuclei of the thalamus are differentially affected by sleep-related neuromodulators (acetylcholine, serotonin), suggesting heterogeneous state-dependent functional channels in thalamocortical associative networks.
- *Methods*: in vitro (slice) electrophysiology and pharmacology.
- Partly funded through a fellowship from the Pedro Barrié de la Maza Foundation.
- *Outcomes*: 5 publications (1 review, 1 book chapter).

PRE-DOCTORAL

New York University, NY. Advisor: Bernardo Rudy. Visiting student, **Sep 2001-Dec 2001**

- *Topic*: **Function of potassium channels in thalamic relay cells**. *Techniques*: in vitro (slice) electrophysiology.

University of A Coruña, Spain. Advisor: Javier Cudeiro. Master's student, **Sep 1999-Sep 2001**

- *Topic*: **The role of corticothalamic feedback in dLGN visual responses.** *Techniques*: in vivo electrophysiology, anesthetized cat.

University of Quilmes, Argentina. Advisor: Diego Golombek. Visiting student, **Jul 1999-Sep 1999**

- *Topic*: **Circadian enzymatic activity in the suprachiasmatic nucleus.** *Techniques*: biochemical assays. University of A Coruña, Spain.

Undergraduate research assistant

- *Techniques*: in vivo electrophysiology, anesthetized cat. **Sep 1998-Jun 1999**
- *Techniques*: Histological methods (sectioning, staining, immunohistochemistry). **Sep 1997-Jun 1998**

PUBLICATIONS AND MANUSCRIPTS IN PREPARATION

- **Varela C**, Ahmad S. A dendritic mechanism for dynamic routing and control in the thalamus (in preparation).
- **Becker LA, Penagos H, Flores FF, Manoach DS, Wilson MA, Varela C.** Pharmacological control of hippocampal ripple density with eszopiclone and zolpidem (**under review**).
- **Desai NV, Varela C.** Distinct burst properties contribute to the functional diversity of thalamic nuclei. **Under review, Journal of Comparative Neurology.**
- **Varela C,** Wilson MA. mPFC spindle cycles organize sparse thalamic activation and recently active CA1 cells during non-REM sleep. eLife 9, e48881 (2020).
- **Varela C**, Wilson MA 2019. Simultaneous extracellular recordings from midline thalamic nuclei, medial prefrontal cortex and CA1 from rats cycling through bouts of sleep and wakefulness. 2019 CRCNS.org. https://doi.org/10.6080/K0K35RVG
- Penagos H, **Varela C**, Wilson MA. **Oscillations, neural computations and learning during wake and sleep**. *Current Opinion in Neurobiology* 2017 (May 29; 44:193-201).
- **Varela C**, Weiss S, Meyer RM, Biedenkapp JC, Halassa MM, Goosens KA, Wilson MA, Bendor D. **Tracking the time-dependent role of the hippocampus in memory recall using DREADDs**. *PLoS One*. 2016 May 4;11(5):e0154374).
- Wilson MA, **Varela C***, Remondes M.* **Phase organization of network computations**. *Curr Opin Neurobiol. 2015* Apr; 31:250-3. *Equal contribution

- Duan A, **Varela C**, Zhang Y, Shen Y, Xiong L, Wilson MA, Lisman J. **The causal role of abnormal delta oscillations in producing working memory deficits; relevance to schizophrenia**. *Biol Psychiatry. 2015* Jun 15; 77(12):1098-1107.
- **Varela C. Thalamic neuromodulation and its implications for executive networks**. *Front. Neural Circuits. 2014* Jun 24. 8:69.
- **Varela C**, Kumar S, Yang JY, Wilson MA. **Anatomical substrates for direct interactions between hippocampus, medial prefrontal cortex and the thalamic nucleus reuniens**. *Brain Structure & Function 2014* May; 219, no. 3: 911–29.
- **Varela C. The gating of neocortical information by modulators**. *J Neurophysiol. 2013* Mar; 109(5):1229-32.
- **Varela C,** Llano DA, Theyel BB. **An introduction to in vitro slice approaches for the study of neuronal circuitry**. Chapter 6, in "Neuronal Network Analysis", "Neuromethods *Series*", *Springer, 2012*.
- **Varela C,** Sherman SM. **Differences in response to serotonergic activation between first and higher order thalamic nuclei**. *Cereb Cortex. 2009* Aug; 19(8):1776-86.
- **Varela C,** Sherman SM. **Differences in response to muscarinic activation between first and higher order thalamic relays**. *J Neurophysiol. 2007* Dec; 98(6):3538-47.
- Lam YW, Cox CL, **Varela C**, Sherman SM. **Morphological correlates of triadic circuitry in the lateral geniculate nucleus of cats and rats**. *J Neurophysiol. 2005* Feb; 93(2):748-57.
- Rivadulla C, Martínez LM, **Varela C**, Cudeiro J. **Completing the corticofugal loop: a visual role for the corticogeniculate type I metabotropic glutamate receptor**. *J Neurosci. 2002* Apr 1; 22(7):2956-62.

FUNDED GRANTS, FELLOWSHIPS AND AWARDS

- **NIMH.** "Optimizing sleep spindle measurements as translational assays of memory consolidation". Direct Costs: $1.7M. PIs: Manoach, Varela; Dates: 2021-2024.
- **NSF-Advance, FAU Division of Research:** Research Mentoring Fellowship. Summer Stipend: $2,000. Dates: June-July 2020
- **Whitehall Foundation Research Grant.** "Thalamocortical dynamics underlying flexible memory consolidation". Direct Costs: $225k **PI: Varela.** Dates: 2020-2023
- **WNPRC Pilot Project Grant.** "A novel freely moving macaque preparation for studying the neural basis of navigation". Direct Costs: $50k. **PIs: Kim, Varela, Rosenberg.** Dates: 2020-2022
- Member of the 2020 Mentoring Institute for Neuroscience Diversity Scholars (MINDS).
- **Seed grant from the Center for Brains, Minds and Machines (MIT).** "Sleep Network Dynamics Underlying Flexible Memory Consolidation and Learning". Total Direct Costs: $40k **PI: Varela C.** Dates: 2019-2020
- **NIMH.** "Sleep-dependent memory processing in schizophrenia". **R01, >$1.7M direct costs.** PIs: Dara S. Manoach and Matthew A. Wilson. **Role:** Co-author. I provided preliminary results and wrote one of the aims with Drs. Manoach and Wilson. Dates: 2017-2022
- **MGH-MIT Grand Challenge on Neurosciences Grant.** "Characterization and manipulation of the coordination of sleep oscillations to improve memory processing during sleep in schizophrenia". Direct costs: $**600k.** PIs: Dara S. Manoach and Matthew A. Wilson. The preparation I validated to record simultaneously from the thalamus, neocortex and hippocampus in freely behaving rats served as the

basis for this proposal. **Role:** Co-author. I provided preliminary results and wrote the grant with Drs. Manoach and Wilson. Dates: 2015-2017

- I have contributed preliminary results to an NIH TRO1 (PIs: Emery N. Brown, Edward Boyden and Matthew A. Wilson) and have helped with results, writing and editing in additional grants (PI: Matthew A. Wilson), funded through the Picower Institute for Learning & Memory and through the Simons Foundation.
- NARSAD Young Investigator Award, Brain & Behavior Research Foundation. **$75k direct costs**

  Role: PI **2015-2018**
- Post-doctoral Fellowship Award, Fundación Caja Madrid. **2008-2010**
- Pre-doctoral Fellowship Award, Fundación Pedro Barrié de la Maza. **2002-2004**
- Fellowship Award, Spanish Ministry of Education and Science, visiting student, Department of Physiology and Neuroscience, New York University. **2001**
- Pre-doctoral Fellowship Award, Spanish Ministry of Education and Science. **1999-2001**
- Fellowship Award, Spanish Ministry of Foreign Affairs, to visit the Department of Science and Technology at the University of Quilmes, Buenos Aires, Argentina. **1999**
- BS extraordinary award, highest GPA, class of 1999, University of A Coruña. **1999**
- BS extraordinary award, highest GPA, class of 1999, regional level (Galicia). **1999**

INVITED TALKS

Florida State University, Tallahassee, FL. **September 2019**

- "Fine Timescale Coordination of Thalamic Activity with mPFC and CA1 non-REM Oscillations"

Neuroscience Graduate Student Organization Retreat, Florida Atlantic University. **June 2019**

- "Thalamo-Cortical Interactions across Systems and Brain States"

The Institute for Learning in Retirement, Boca Raton, FL. **March 2019**

- "The Brain Learning Machine"

University of Coimbra, Portugal. **February 2019**

- "Fine Timescale Coordination of Thalamic Activity with mPFC and CA1 non-REM Oscillations"

Gladstone Institutes, UCSF. San Francisco, CA. **April 2018**

- "Thalamic Contribution to Neocortico-Hippocampal Interactions during Sleep"

Florida Atlantic University. Boca Raton, FL. **March 2018**

- "Contribution of the Midline Thalamus to Neocortico-Hippocampal Interactions during Sleep"

University of Wisconsin. Madison, WI. **July 2017**

- "Contribution of the Midline Thalamus to Neocortico-Hippocampal Interactions during Sleep"

Annual Biomedical Research Conference for Minority Students (ABRCMS) **November 2016**

- "Multidisciplinarity in Systems Neuroscience"

University of Barcelona, Spain **July 2016**

- "Thalamic Contribution to Sleep Neocortico-Hippocampal Interactions"

Brown University. Providence, RI. **May 2016**

- "Thalamic Contribution to Sleep Neocortico-Hippocampal Interactions"

University of Illinois at Urbana-Champaign, IL. **October 2015**

- "Sleep Thalamo-Neocortico-Hippocampal Interactions"

University of Connecticut. Storrs, CT. December 2014

- "Thalamo-Cortico-Hippocampal Interactions and Memory Consolidation"

University of Coimbra, Portugal. March 2014

- "Disruption of Hippocampal Function Using Pharmacogenetics"

CONFERENCE PRESENTATIONS

ORAL

Florida Consortium on the Neurobiology of Cognition. Remote Conference. August, 2020

- "Fine Timescale Coordination of Thalamic Activity with mPFC and CA1 non-REM Oscillations"

Winter Conference on Brain Research. Big Sky, Montana. January, 2020

- "Fine Timescale Coordination of Thalamic Activity with mPFC and CA1 non-REM Oscillations"

Hippocampus Spring Conference. Taormina, Italy. June, 2017

- "Thalamic Contribution to Neocortico-Hippocampal Interactions during Sleep"

Brains on Brains. Fundraising symposium, MIT. May, 2017

- "Science of Education"

COSYNE. ~5% abstracts selected for oral presentation February, 2017

- "Thalamic Contribution to Neocortico-Hippocampal Interactions during Sleep"

Janelia Research Campus. Ashburn, VA. April 2015

- "Sleep thalamo-neocortico-hippocampal Interactions"

POSTERS

- **Becker LA, Penagos H, Manoach DS, Wilson MA, Varela C.** Disruption of CA1 Sharp-Wave Ripples by the nonbenzodiazepine hypnotic eszopiclone. Society for Neuroscience, Chicago, 2019.
- **Varela C,** Ahmad S. A dendritic mechanism for dynamic routing and control in the thalamus. COSYNE; Lisbon, Portugal, 2019.
- **Varela C**, Wilson MA. Thalamic contribution to CA1-mPFC interactions during sleep. Society for Neuroscience Meeting, Washington DC, 2017.
- **Varela C**, Wilson MA. Sleep thalamo-cortico-hippocampal interactions. Thalamus and corticothalamic interactions conference. Janelia. April 26-29, 2015.
- **Varela C**, Weiss S, Meyer R, Halassa M, Biedenkapp J, Goosens K-A, Wilson MA, Bendor DA. Pharmacogenetic disruption of hippocampal function. Society for Neuroscience Meeting, San Diego, 2013.
- **Varela C***, Bendor D*, Halassa MM, Biedenkapp JC, Meyer RM, Kuo E, Goosens KA, Wilson MA. Reversible pharmacogenetic inactivation of the hippocampus using DREADDs. Poster presentation at the FENS Forum of neuroscience, Barcelona, 2012. * Equal contribution
- Bendor D*, **Varela C***, Weiss S, Halassa MM, Biedenkapp JC, Meyer RM, Goosens KA, Wilson MA. Tracking the hippocampus-dependence of a contextual fear memory using pharmacogenetics. Poster presentation at the Society for Neuroscience Meeting, and talk at the 7th Brain Research Conference on Optogenetics and Pharmacogenetics in Neuronal Function and Dysfunction, New Orleans, 2012. * Equal contribution
- **Varela C**, Yang JY, Kumar S, Wilson MA. Interactions between the midline thalamus, medial prefrontal cortex and dorsal CA1 in the rat. Society for Neuroscience Meeting, Washington DC, 2011.
- **Varela C**, Sherman SM. Spike-frequency adaptation in higher order thalamic relays: modulation by muscarinic receptors. Society for Neuroscience, Washington DC, 2005.
- **Varela C**, Sherman SM. A further difference between first and higher order thalamic relay: response to cholinergic input. Society for Neuroscience, San Diego, 2004.

- **Varela C**, Sherman SM. A further difference between first and higher order thalamic relay: response to cholinergic input. Symposium 'Cortical Function: A view from the thalamus'. Madison, Wisconsin; September 12th-14th 2004.
- Lam Y-W, **Varela C**, Sherman SM. Morphological and physiological correlates of cells of rat dLGN". Society for Neuroscience, New Orleans, 2003.
- **Varela C**, Rivadulla C, Martínez LM, Cudeiro J. Stimulus dependent modulation of LGN activity by cortically activated metabotropic glutamate receptors. Society for Neuroscience, San Diego, 2001.
- Rivadulla C, Martínez LM, **Varela C**, Cudeiro J. Efecto del bloqueo de las aferencias corticales en la respuesta de las células del núcleo geniculado lateral: estímulos estáticos. IX Spanish Society for Neuroscience, 2001.
- Martínez LM, Rivadulla C, **Varela C**, Cudeiro J. Efecto del bloqueo de las aferencias corticales en la respuesta de las células del núcleo geniculado lateral: estímulos dinámicos. IX Spanish Society for Neuroscience, 2001.
- Ferreyra G, Murad A, **Varela C**, Golombek D. Cyclic nucleotides, kinases and phosphorylation: some intimacy in the hamster suprachiasmatic nulcei. V Latin American Symposium of Chronobiology. Buenos Aires, 1999.

TEACHING

FAU

- The Neurobiology of Learning & Memory. Undergraduate Level. Organizer **Fall**
- Neuroscience-2. Systems Neuroscience. Graduate Level. Organizer **Spring**

MIT

- "Memory Wars: Contrasting Views of Memory from Systems Neuroscience Research" **January 2018**
- "The Neuroscience Business". Reading-discussion group. Organizer. **January 2016**
- CBMM Annual Quantitative Methods Workshop. Lecture: "Intro to Systems Neuroscience". **January 2016, 2017**
- Systems Neuroscience (graduate level). Lecture: "Organization and Function of Thalamic Networks". **October 2015**
- CBMM Summer Workshop for High School Science Teachers. Guest lecture: "Network Mechanisms of Behavior. The View from Electrophysiology". **July 2015**
- "So You Wanna be a Scientist". Organizer. **January 2015**
- "Building Your Own Neuroscience Lab". Co-organizer. **January 2012**

Boston University

- Course faculty, BE-710 Neuroplasticity and Perceptual Learning. Lectures on: "A Systems Neuroscience Perspective to Hippocampal Neuroplasticity". **2015, 2017**

University of Coimbra, Portugal

- MIT-Portugal PhD Program in Bioengineering. Two lectures, "Introduction to Electrophysiology in Behaving Animals". **March 2014**

The University of Chicago

- "Introduction to Neuroscience" (undergraduate level). Teaching assistant. **Spring 2007**
- "Computational Neuroscience I" (graduate level). Teaching assistant. **Fall 2006**

LEADERSHIP AND MANAGEMENT

- Coursework at Harvard Extension School (HES) and MIT's Sloan School of Business:
  - "Innovation, Entrepreneurship and Business Transformation" (HES) **Fall 2014**
  - "Essentials of Executive Speaking" (HES) **Spring 2014**
  - "Creating and Leading Team Dynamics" (HES) **Fall 2013**
  - "Negotiation for Executives" (MIT-Sloan) **October 2015**
- Mentorship: Supervised over 10 undergraduate and graduate students at MIT, including underrepresented minorities (URMs) from various international and socioeconomic backgrounds.

SERVICE & AFFILIATIONS

- Graduate recruitment committee. Center for Complex Systems, FAU **2020**
- Advisory Committee, Neuroscience and Behavioral B.S. Program, FAU **2020**
- Selection committee, IMPRS Graduate program. Max Planck-FAU **2020-2021**
- Affiliate Faculty, Center for Complex Systems and Brain Sciences, FAU **2020-present**
- Affiliate Faculty, Max Planck IMPRS Brain & Behavior Graduate Program **2020-present**
- Instructor Search Committee. FAU **2019**
- Graduate Recruitment Committee. FAU **2019**
- Affiliate Brain Institute, FAU **2019-present**
- Research Affiliate. Center for Brains, Minds and Machines, MIT **2019-present**
- Board member, University of Chicago Alumni Club-Boston chapter **2016**
- Selection committee, MIT Excellence Awards + Collier Medal **2015-2017**
- Selection committee, Postdoctoral "Mentor of the Year Award" **2014**
  Brain & Cognitive Sciences Department
- Organizing committee, MIT-Harvard "2012 European Career Fair" **Sep 2011-Feb 2012**
- Volunteer mentor for URMs with the MAP undergraduate mentoring program, **2011-2013**
  Office of Minority Education, MIT
- Memberships: Society for Neuroscience
- Reviewer for Rubriq, Neuroscience & Biobehavioral Reviews, Hippocampus, Nature Communications

CURRICULUM VITAE

Name: Robert Paul Vertes

Education:

1969 B.A., University of Dayton, Dayton, Ohio (Psychobiology)

1975 Ph.D., New School University, New York, NY

Doctoral research and dissertation done under the direction of Dr. Neal E. Miller at The Rockefeller University, New York, NY (Neurophysiology)

Post-doctoral Training:

1975-1977 NIH (NINCDS) post-doctoral fellowship in the laboratory of Dr. Kenneth L. Casey, Department of Physiology, University of Michigan, Ann Arbor, MI.

Professional Employment:

1993-present Professor, Center for Complex Systems and Brain Sciences, Florida Atlantic University, Boca Raton, FL

1989-1993 Associate Professor, Center for Complex Systems and Brain Sciences, Florida Atlantic University, Boca Raton, FL

1986-1989 Associate Professor, Division of Basic Medical Sciences, Mercer University School of Medicine, Macon, GA

1984-1986 Assistant Professor, Division of Basic Medical Sciences, Mercer University School of Medicine, Macon, GA

1982-1984 Assistant Professor, Department of Physiology, Wayne State University, Detroit, MI.

1978-1981 Assistant Research Scientist, Department of Physiology, University of Michigan, Ann Arbor, Michigan.

Teaching Experience:

Florida Atlantic University

Graduate Courses:
- Neuroscience Core I and II
- Neuroscience Core III

Neural Control of Sleep/Wakefulness
Brainstem Mechanisms of Behavior
Functional Neuroanatomy
Structure, Function and Disorders of the CNS
Neuroscience of Sleep

Undergraduate Courses:
Biological Bases of Behavior
Sleep and Dreams
Neuroscience of Sleep

Grants and Awards:

2018-2023 Agency, NIH (NIMH), Project title: The role of the nucleus reuniens in the temporal organization of memory and behavior. Role: Co-PI; Total Award: $1,825,848.

2018-2021 Agency, NIH (NINDS), Project Title: Nucleus reuniens: critical role in working memory and executive functions. Role: PI; Total Award: 423, 839.

2013-2017 Agency, NIMH, Project Title: Role of the midline thalamus in arousal, attention and cognition. Role: PI; Total award: $423,421.

2008-2013 Agency: NSF; Project Title: Role of Subcortical Systems in Hippocampal Memory Processing; Role: PI; Total Award: $449,135.

2008-2009 Agency: Johnnie B. Byrd Alzheimer's Foundation; Project Title: Examination of Serotonin Systems in AD using a Transgenic Mouse Model; Role: PI; Total Award: $31,387.

2003-2008 Agency: NIMH; Project Title: Brainstem-Diencephalic Modulation of the Hippocampus; Role: PI; Total Award: $1,414,546.

1998-2003 Agency: NIMH; Project Title: Circuitry Controlling the Hippocampal Theta Rhythm; Type of Award: K02; Role: PI; Total award: $525,151.

1996-2001 Agency: NIH (NINDS); Project Title: Brainstem-Diencephalic Modulation of the Hippocampus; Role: PI; Total Award: $869,445.

1995-1997 Agency: Health Foundation of South Florida; Project Title: Experimental Studies on Physiological Mechanisms of SIDS; Role: PI; Total Award: $40,000.

1990-1995 Agency: NIMH; Project Title: Brainstem Modulation of the Hippocampus; Role: PI; Total Award: $641,740.

1993-1995 Agency: Sudden Infant Death Syndrome Alliance; Project Title: Sleep and Respiratory Variables in a Kitten Model of SIDS; Role: PI; Total Award:

$104,000.

1985-1988 Agency: NSF; Project Title: Brainstem Modulation of the Hippocampus; Role: PI; Total Award: $197,000.

1978-1982 Agency: NSF; Project Title: Brainstem Neurons: Response during Behavior and Sleep; Role: PI; Total Award: $118,000.

Professional Activities:

Director of Doctoral and Masters Students

at Florida Atlantic University: doctoral students: Gene Kinney, James T. McKenna, Zimbul Albo, Walter Hoover, Tatiana Viena; Masters students: William Fortin, Jeffrey S. Thinschmidt, Michelle Owens, Argira Glama

Society Memberships:

American Association for the Advancement of Science
Sleep Research Society
Society for Neuroscience

BIBLIOGRAPHY

Koslovskaya, I.B., Vertes, R.P. and Miller, N.E. Instrumental learning without proprioceptive feedback. *Physiol. Behav*. 10:101-107, 1973.

Vertes, R.P. A device for recording single unit activity in freely-moving rats by a movable fine-wire microelectrode. *Electroenceph. Clin. Neurophysiol.* 38:90-92, 1975.

Vertes, R.P and Miller, N.E. Brain stem neurons that fire selectively to a conditioned stimulus for shock. *Brain Res.* 103:229-242, 1976.

Vertes, R.P. Selective firing of rat pontine gigantocellular neurons during movement and REM sleep. *Brain Res.* 128:146-152, 1977.

Vertes, R.P. Brain stem gigantocellular neurons: Patterns of activity during behavior and sleep in the freely moving rat. *J. Neurophysiol*. 42:214-228, 1979.

Vertes, R.P. Brain stem activation of the hippocampus: A role for the magnocellular reticular formation and the MLF. *Electroenceph. Clin. Neurophysiol*. 50:48-58, 1980.

Vertes, R.P. An analysis of ascending brain stem systems involved in hippocampal synchronization and desynchronization. *J. Neurophysiol*. 46:1140-1159, 1981.
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Vertes, R.P. and Linley S.B. No cognitive processing in the unconscious, anesthetic-like, state of sleep. J. Comp. Neurol. 529:524-538, 2021.

Vertes, R.P. and Linley. S.B. Structural and functional organization of the midline and intralaminar nuclei of the thalamus. In: The Thalamus, Halassa, M. (Ed), Cambridge University Press, New York, in press.

Linley, S.B., Athanason, A.C., Rojas, A.K.P. and Vertes, R.P. Role of the reuniens and rhomboid thalamic nuclei in anxiety-like avoidance behaviors in the rat. Hippocampus, in press.

Vertes, R.P., Linley, S.B. and Viena, T.D. Nucleus reuniens: circuitry, function and dysfunction. In: In: Electrophysiological Recording Techniques, 2nd ed, Vertes R.P. and Allen T.A. (Eds.), Humana Press, New York, in press.

Viena, T.D., Vertes, R.P. and Linley, S.B. Discharge characteristics of neurons of nucleus reuniens across sleep-wake states in the behaving rat. Behav. Brain Res., in press.

Current curriculum vitae

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EDUCATION

INSTITUTION AND LOCATION	DEGREE	YEAR	FIELD OF STUDY
University of Science and Technology of China, Hefei, Anhui, P. R. China	B.S.	07/99	Organic Chemistry
University of Kansas, Lawrence, KS	Ph.D.	07/03	Biochemistry/Neuroscience

ACADEMIC POSITIONS

Aug 1999-July 2003	**Graduate Assistant,** Department of Molecular Biosciences, University of Kansas, Lawrence, KS.
Aug 2003-Dec 2005	**Postdoctoral Fellow,** Department of Biomedical Science, Charles E. Schmidt College of Science, Florida Atlantic University, Boca Raton, FL.
Jan 2006-July 2006	**Research Assistant Professor**, Department of Biomedical Science, Charles E. Schmidt College of Science, Boca Raton, FL.
Aug 2006-July 2013	**Assistant Professor**, Department of Biomedical Science, Charles E. Schmidt College of Medicine, Boca Raton, FL.
Aug 2013-present	**Associate Professor with Tenure**, Department of Biomedical Science, Charles E. Schmidt College of Medicine, Boca Raton, FL.
Sep 2008- Aug 2010	**Affiliated Assistant Professor** of Biochemistry and Molecular Biology, University of Miami Miller School of Medicine.

MAJOR RESEARCH INTEREST

Neuroregeneration and degeneration, Protein misfolding, Neuronal apoptosis/Autophagy, Neuronal protein trafficking, Cellular stresses.

CONTRACTS OR GRANTS RECEIVED

ACTIVE

1. **1R01EB025819-01 (NIH/NIBIB, 9/15/2017-6/30/2021)** Title: SCH: INT: Virtual Neuroprosthesis: Restoring Autonomy to People Suffering From Neurotrauma. **Role: multi-PI** (Other PIs: Drs. Erik Engeberg (contact PI), Sarah Du, Emmanulle Tognoli, Douglas Hutchinson). Total amount: $1,297,577.

2. **9AZ06 (Department of Health, Florida, 03/01/2019-2/28/2021)** Title: Effect of neuronal activity on synaptopathy in Alzheimer's disease using a novel multi-electrode microfluidic platform. **Role: PI.** Total amount: $95,000 (Direct: $82,609).

3. **1R21NS111202-01 (NIH/NINDS, 4/1/2019-3/31/2021)** Title: Dynamic network analysis of huntingtin interactome in response to cellular stresses. **Role: PI.** Total amount: $342,081 (Direct: $275,000).

COMPLETED

1) Brain Institute Pilot Grant/FAU 03/10/2017-09/09/2018, PI, $20,000
Title: Lysosomal Positioning in the Pathogenesis of Huntington's Disease.

2) i-SENSE-FAU 01/09/2017-01/08/2018, co-PI, $20,000
Title: Robotic Symbiosis with Neuronal Action Potential Sensing Electrodes (ROBO-SYNAPSE): Network Connection To Link Living Systems with Robotic Devices

3) R15NS066339-02 (NIH/NINDS) 07/01/2012-06/30/2015, PI, $428,694
Title: Regulation of BimEL phosphorylation in the pathogenesis of Huntington's disease.

4) R15DA029863 (NIH/NIDA) 07/01/2010-06/30/2013, Co-I, $287,775
Title: Mechanisms of sudden onset of malignant MDMA toxicity.

5) R15DC012425-01A1 (NIH/NIDCD), 9/13/2012-9/12/2015, Co-I, $430,000
Title: BDNF over-expression and olfactory neurogenesis

6) FAU Seed grant 1/1/2012-12/31/2013, PI, $20,000
Title: Regulation of BimEL phosphorylation in the pathogenesis of Huntington's disease.

8) R15NS066339-01 (NIH/NINDS) 07/01/2009-06/30/2012, PI, $211,200
Title: Regulation of BimEL phosphorylation in the pathogenesis of Huntington's disease.

9) 07KB-08 Bridge Grant (State of Florida) 07/01/2007-6/30/2008, Co-I, $173,223
Title: Regulation of GABA Biosynthesis in the Brain.

10) New Project Development Award (FAU) 06/01/2007-05/31/2008, PI, $10,000
Title: Neuron Protective Effect of Granulocyte-Colony Stimulating Factor in a Model of Huntington's Disease.

PEER-REVIEWED PUBLICATIONS (Last ten years)

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2. McCollum, M., Ma, Z., Cohen, E., Leon, R., Tao, R., Wu, J-Y., Maharaj, D., Wei, J. (2010) Post-MPTP treatment with granulocyte colony-stimulating factor improves nigrostriatal function in the mouse model of Parkinson's disease. *Mol Neurobiol.* 41(2-3), 410-9.
3. Krishnamoorthy, S., Ma, Z., Zhang, G., Wei, J., Auerbach, SB., Tao, R. (2010) Involvement of 5-HT(2A) Receptors in the Serotonin (5-HT) Syndrome caused by Excessive 5-HT Efflux in Rat Brain. *Basic Clin Pharmacol Toxicol.* 107 (4), 830-41.
4. Rush, D., Leon, R., McCollum, M., Treu, R., Wei, J. (2012) Palmitoylation and trafficking of GAD65 is impaired in a cellular model of Huntington disease. *Biochem J.* 442(1) 39-48. PMCID: PMC4646170.
5. McGreal, R.S., Kantorow, W.L., Chauss, D.C., Wei, J., Brennan, L.A., Kantorow, M. (2012)

αB-crystallin/sHSP protects cytochrome c and mitochondrial function against oxidative stress in lens and retinal cells. *Biochim Biophys Acta.* 820(7), 921-30.

6. Brennan, L.A., Kantorow, W.L., Chauss, D., McGreal, R., He, S., Mattucci, L., Wei, J., Riazuddin, S.A., Cvekl, A., Hejtmancik, J.F., Kantorow, M. (2012) Spatial expression patterns of autophagy genes in the eye lens and induction of autophagy in lens cells. *Mol. Vis.* 18, 1773-86.
7. McGreal, R.S., Brennan, L.A., Kantorow, W.L., Wilcox, J.D., Wei, J., Chauss, D., Kantorow, M. (2013) Chaperone-independent mitochondrial translocation and protection by αB-crystallin in RPE cells*. Exp Eye Res.* 110, 10-7.
8. McCollum, M., Leon, R., Rush, D., Guthrie, K., Wei, J. (2013) Striatal oligodendrogliogenesis and neuroblast recruitment is increased in the R6/2 mouse model of Huntington's disease. *Brain Res.* 1518, 91-103. PMCID: PMC3684253.
9. Liu X, Busby J, John C, Wei J, Yuan X, Lu ML. (2013) Direct Interaction between AR and PAK6 in Androgen-Stimulated PAK6 Activation. PLoS One. 8(10):e77367.
10. Erie C, Sacino M, Houle L, Lu M, Wei J. (2015) Altered lysosomal positioning affects lysosomal functions in a cellular model of Huntington's disease. Eur J Neurosci. 42(3): 1941-51. PMCID: PMC4523460.
11. Chou CC, Modi JP, Wang CY, Hsu PC, Lee YH, Huang KF, Wang AH, Nan C, Huang X, Prentice H, Wei J, Wu JY. (2017) Activation of Brain L-glutamate Decarboxylase 65 Isoform (GAD65) by Phosphorylation at Threonine 95 (T95). Mol Neurobiol. 54(2):866-873
12. Huang, N., Erie, C., Lu, M., Wei, J (2017) Aberrant subcellular localization of SQSTM1/p62 contributes to increased vulnerability to proteotoxic stress recovery in Huntington's disease. Mol. Cell. Neurosci. 88: 43-52. PMCID: PMC5893379.
13. Davis S, Cirone AM, Menzie J, Russell F, Dorey CK, Shibata Y, Wei J, Nan C. Phagocytosis-mediated M1 activation by chitin but not by chitosan. Am J Physiol Cell Physiol. (2018) 315 (1): C62-C72.
14. Louis P, Mercer B, Cirone AM, Johnston C, Lee ZJ, Esiobu N, Li Z, Wei J, Dorey CK, Shibata Y, Nan C. Dietary Chitin Particles Called Mimetic Fungi Ameliorate Colitis in Toll-Like Receptor 2/CD14- and Sex-Dependent Manners. Infect Immun. 2019 Apr 23;87(5).
15. Galpayage Dona, K., Du, E., Wei, J. An impedimetric assay for the identification of abnormal mitochondrial dynamics in living cells. Electrophoresis (2020). 10.1002/elps.202000125.
16. Bensalel, J., Xu, H., Lu, M., Capobianco, E., Wei, J. (2020) RNA-seq analysis reveals significant transcriptome changes in huntingtin-null human neuroblastoma cells. Submitted to BMC Medical Genomics (submitted after minor revision).

REVIEWS AND BOOK CHAPTERS:

1. Sha, D., Wei, J., Jin, H., Wu, H., Osterhaus, G.L. and Wu, J.-Y. (2003) Effect of taurine on regulation of GABA and acetylcholine biosynthesis. In: Taurine 5 (Lombardini, J.B. and Schaffer, S.W., eds) Kluwer Academic/Plenum Publisher, New York. Pp. 499-505.
2. Wu, J-Y., Wu, H., Jin, Y., Wei, J., Sha, D., Prentice, H., Lee, H-H., Lin, C-H., Lee, Y-H., Yang, L-L. (2008) Mechanism of neuroprotective function of Taurine. In: Taurine 7 (Lombardini, J.B. and Schaffer, S.W., eds) Kluwer Academic/Plenum Publisher, New York. Pp. 169-179.
3. Wei, J and Wu, J-Y. (2008) Post-translational regulation of L-glutamic acid decarboxylase in the brain. *Neurochemical Res* 33, 1459-65.

ABSTRACT:

A1. Zhu, M.Z., Wei, J., Wu, Q.H., Zheng, X.Q., and Guo, Q.X. Synthesis and characterization of cationic lipids bearing cholesteryl groups for gene delivery *in vitro*. *the 6th International Symposium for Chinese Organic Chemists ISCOC-2000, Shanghai.*

A2. Wei, J., Wang, J.H. (2000) The polymerization of postsynaptic tubulin and actin involved in Ca2+/CaM-induced potentiation of glutamatergic synapses on CA1 interneurons. *Soc. Neurosci. Abstr.* Program No. 335.4.

A3. Wei, J., Kelly, P., Floor, E., Wang, J.H. (2000) Ca2+/CaM signal pathways enhance the function of GABAergic synapses through cytoskeleton-mediated mechanisms. *Soc. Neurosci. Abstr.* Program No. 522.3.

A4. Wang, J.H., Wei, J. (2001) The regulation of unitary synaptic responses to multipulse inputs. *Soc. Neurosci. Abstr.* Program No. 501.1.

A5. Wei, J., Osterhaus, G., Wu, H., Davis, K.M., Jin, H., Sha, D., Wu, J-Y., Floor, E. (2002) Role of truncated human glutamate decarboxylase 65 (hGAD65) in GABA biosynthesis. *Soc. Neurosci. Abstr.* Program No. 837.18.

A6. Chen, R., Wei, J., Fowler, S.C., Wu, J-Y. (2002) Cocaine-induced behavioral sensitization and functional changes in plasmalemmal and vesicular dopamine transporter. *Soc. Neurosci. Abstr.* Program No. 898.12.

A7. Wu, J-Y., Wei, J., Jin, H., Wu, H., Sha, D., Jin, Y. (2003) Characterization of full length and truncated L-glutamate decarboxylase. BP08-04. *Amer. Soc. Nerochem*. Annual meeting. May 4-8.

A8. Wu, J-Y., Wei, J. (2004) Cysteine 446 is crucial for human glutamate decarboxylase (GAD), GAD65, activity. CP4-02, *Amer. Soc. Neurochem*. Annual meeting. Aug 14-18.

A9. Leon, R., Buddhala, C., Bhagathula, N., Wu, J-Y., Wei, J. (2007) Neuron protective effect of taurine against glutamate-induced excitotoxicity. *FAU Research Fair.*

A10. Bhagathula, N., Ulukpo, O., Wei, J. (2008) Polyglutamine aggregates stimulate ER stress and triggers apoptosis by activating BH3-only protein Bim. *FAU Research Fair.*

A11. Leon R., McCollum M., Rush, D., Wei, J. (2010) BimEL as a key molecule in regulating mHtt-induced cell death. Soc. Neurosci. Abstr. Program No.860.3.

A12. McCollum, M., Rush, D., Leon, R., Wei, J., (2010) Dopaminergic modulation of adult neurogenesis in the striatum using transgenic mouse model of Huntignton disease. Soc. Neurosci. Abstr. Program No. 235.13.

A13. Rush, D., Leon, R., McCollum, M., Treu, R., Wei, J. (2011) Palmitoylation and trafficking of GAD65 is impaired in a cellular model of Huntington disease. Soc. Neurosci. Abstr. Program No.148.06.

A14. McCollum, M., Rush, D., Leon, R., Wei, J. (2011) Adult striatal neurogenesis is altered in the R6/2 transgenic mouse model of Huntington's disease. Soc. Neurosci. Abstr. Program No. 557.02.

A15. Tao, R., Ma, Z., Adams, H., O'Malley, B.D., Tran, P., Wei, J. (2011) Effect of MDMA on integrity of serotonergic projections from dorsal raphe nucleus to prefrontal cortex. Soc. Neurosci. Abstr. Program No. 690.14.

A16. McCollum, M., Rush, D., Leon R., Guthrie, K., Wei, J. (2012) Striatal oligodendrogliogenesis and neuroblast recruitment is increased by BDNF overexpression in the R6/2 transgenic mouse model of Huntington's disease. Soc. Neurosci. Abstr. (2012-S-18145-SfN).

A17. Sacino, M., Lambrino, N., Erie, C., Lu, M., Wei, J. (2013) Impairment of Parkin-mediated mitophagy in Huntington's disease. Soc. Neurosci. Abstr. (2013-S-13500-SfN).

A18. A Noninvasive Microfluidic Platform: Understanding How Hand Actions and Nerve Regeneration Play Hand-to-hand". Genevieve Liddle, Moaed Abd, Erik Engeberg, Sarah Du, Emmanuelle Tognoli, Jianning Wei, Third Annual Neural Engineering Symposium in Miami 4/4/2019

A19. Microglial dynamics in Huntington's disease: Physical interactions between microglia and synaptic nerve terminals. Johanna Bensalel, Nicole Rosa, Jianning Wei. FAU undergraduate research symposium, 4/8/2019.

A20. Liddle, G., Abd., M., Engeberg, E., Tognoli, E., Du, E., Wei, J. A Study of Activity-Dependent Synaptic Plasticity in Primary Alzheimer's Neurons by Means of Microfluidic Electrical Stimulation. FAU Graduate Study Research Day. April. 10th, 2020. (poster abstract submitted on 3/18/2020, virtual presentation cancelled due to the COVID-19 outbreak)

A21. Johnson, K., Wei, J. The Integrated Stress Response is Differentially Regulated in Huntington's Disease. FAU Medical Research Day. 2/28/20.

A22. Liddle, G., Abd., M., Engeberg, E., Tognoli, E., Du, E., Wei, J. A Study of Activity-Dependent Synaptic Plasticity in Primary Huntington's Disease Neurons by Means of Microfluidic Electrical Stimulation. FAU Research day showcase. 9/26/2019

A23. Wei, J., Xu, H., Capobianco, E., Lu, M. Dynamic analysis of huntingtin interactomes, normal and diseased, in response to proteotoxic stress. SFN Global Connectome (Jan 11-13, 2021). 2021-S-1300-SfN.

TEACHING EXPERIENCE

1. Adult Neurogenesis, PCB6848 (2009-present, course developer and instructor)
2. Biomedical Concepts and Translational Applications (2018-present, co-course director)
3. Fundamental Topics in Human Health (2017, co-course director)
4. Graduate seminar, PCB6934 (2007-2008, instructor)
5. Topics in Biomedical Sciences I, PCB6933 (2008, instructor)
6. Integrative Biology I, BSC 6390 (2009, invited speaker)
7. Introduction to honors I, BSC 4905 (2012, invited speaker)
8. Problem-Based learning in Medical Teaching (2008-present, core facilitator)

INVITED GRANT REVIEW BOARDS

1. NIH S10 Flow Cytometry review panel, CB-J (30) Study section, July, 8-9, 2009.
2. *Ad Hoc* reviewer for NIH Challenge Grant Initiatives (NIH, RFA-OD-09-003), 2009.

CURRICULUM VITA
Teresa G. Wilcox

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Education

1988-1993	Psychology, Ph.D. University of Arizona
1985-1988	Child Development, M.S. University of California, Davis
1979-1983	Psychology and Education, B.A. Bethel University, St. Paul, MN

Professional Experience

2020-current	Interim Dean College of Science Florida Atlantic University
2018-2020	Professor and Chair Department of Psychology Florida Atlantic University
2015-2017	Research Fellow, Office of the Vice President for Research, Division of Research Graduate Student Ombuds Officer Texas A&M University
2014-2015	ADVANCE Administrative Fellow Assistant Provost for Graduate and Professional Studies Graduate Student Ombuds Officer Texas A&M University
2011-2017	Professor Department of Psychology Texas A&M University
2009-2018	Faculty, Texas A&M Institute for Neuroscience Texas A&M University
2004-2011	Associate Professor Department of Psychology Texas A&M University
2000 - 2004	Assistant Professor Department of Psychology Texas A&M University
1995 - 2000	Assistant Professor Department of Psychology University of Texas, Arlington
1993 - 1995	Postdoctoral Fellow Collaborated with Renée Baillargeon Department of Psychology, University of Illinois, Urbana-Champaign

Federal Grant Support

NIH UG3 OD023244	Preconception Stress Exposure: Impact on Pregnancy and Offspring Neurodevelopment, Consultant (PI, Alison Hipwell, University of Pittsburgh Medical Center), 2016-2022
NIH R15 G0-47553	Obesity, Stress, and Neuromuscular Function in the Elderly Co-I (PI, Ranjana Mehta, School of Rural Public Health, TAMU) 2015-2018
NIH R01 HD-057999	Optical imaging in infants, PI 2009-2016
NSF BCS-0642996	Neuroimaging of infants' processing of spatiotemporal information, PI 2007-2011
NIH R21 HD-48943	The neural basis of object processing, PI 2005-2007
NSF BCS-0518986	Neuroimaging of object processing in human infants, PI 2005-2006
NIH R03 HD-46532	Auditory information and object individuation in infancy, PI 2004-2006
NIH R03 HD-36741	Object individuation and event representation in infancy, PI 1998-2001
NSF Doctoral Dissertation	The development of object recognition memory, memory for the location of objects, and inhibitory control of behavior in preterm and full-term infants, PI, 1992-1993

Other Grant Support

College of Engineering-ISENSE, Seed Grant Program, FAU (Co-I Behnaz Ghoraani), 2020
FAU-Ariel University, Joint Research Program (Co-I Hila Gvirts), 2019
College of Science, Seed Grant Program, FAU (Co-I Erik Engeberg), 2018
APA Undergraduate Summer Scholars Program, (Co-I, PI, Sheerece Fields), 2016
Seed Grant (PI), College of Liberal Arts, Texas A&M University, 2015
Proposal Planning Grant (PI), Texas A&M University, 2004
Children, Youth, and Families Seed Grant (PI), Texas A&M University, 2003
Research Enhancement Program, Texas A&M University (PI), 2003
Program for Enhancement of Scholarly & Creative Activities (PI), Texas A&M University, 2001
Advanced Research Program (PI), Texas Higher Educ. Coordinating Board, 1998-2000
Research Enhancement Program, University of Texas, Arlington, 1996

Academic Honors and Awards

2009	APS Fellow
1993-1995	Postdoctoral Fellowship, NICHD Training Grant University of Illinois, Urbana-Champaign
1993	Predoctoral Fellowship, University of Arizona
1992	Predoctoral Fellowship, University of Arizona
1983	Graduated cum laude

Publications (students in **bold)**

Wilcox, T., & Kraft, R. (1989). Lateral differences in schematic face encoding during dual-task performance with increasing levels of difficulty. *Perceptual and Motor Skills, 68*, 767-778.

Wilcox, T., Rosser, R., & Nadel, L. (1994). Representation of object location in 6.5-month-old infants. *Cognitive Development, 9*, 193-209.

Sell, E., Figueredo, A. J., & Wilcox, T. (1995). Assessment of Preterm Infants' Behavior (APIB): Confirmatory factor analysis of behavioral constructs. *Infant Behavior and Development, 18*, 447 - 457.

Wilcox, T., Nadel, L., & Rosser, R. (1996). Location memory in healthy preterm and full-term

infants. *Infant Behavior and Development, 19,* 309-323.

Wilcox, T., & Baillargeon, R. (1998a). Object individuation in infancy: The use of featural information in reasoning about occlusion events. *Cognitive Psychology, 37*, 97-155.

Wilcox, T., & Baillargeon, R (1998b). Object Individuation in young infants: Further evidence with an event monitoring task. *Developmental Science, 1*, 127-142.

Wilcox, T. (1999). Object Individuation: Infants' use of shape, size, pattern, and color. *Cognition, 72*, 125-166.

Wilcox, T. (2001). Object identity: A developmental perspective. *Cahiers de Psychologie Cognitive (Current Psychology of Cognition), 20*, 269-276.

Wilcox, T., & **Chapa, C**. (2002). Infants' reasoning about opaque and transparent occluders in an individuation task. *Cognition, 85,* B1-B10.

Wilcox, T., & **Schweinle, A.** (2002). Object individuation and event mapping: Developmental changes in infants' use of featural information. *Developmental Science, 5,* 87-105.

Wilcox, T., **Schweinle, A., & Chapa, C**. (2003). Object individuation in infancy. In F. Fagan & H. Hayne (Eds.). *Progress in Infancy Research* (Vol 3, pp. 193-243). Mahwah, NJ: Lawrence Erlbaum Associates.

Wilcox, T., & **Schweinle, A.** (2003). Infants' use of speed information to individuate objects in occlusion events. *Infant Behavior and Development, 26,* 253-282.

Wilcox, T. (2003). Event-mapping tasks: Investigating the effects of prior information and event complexity on performance. *Infant Behavior and Development*, 26, 568-587.

Schweinle, A., & Wilcox, T. (2004). Sex differences in infants' ability to represent complex event sequences. *Infancy, 6*, 333-359.

Wilcox, T., & **Chapa, C.** (2004). Priming infants to use color and pattern information in an individuation task. *Cognition*, 90, 265-302.

Schweinle, A., & Wilcox, T. (2004). Intermodal perception and physical reasoning in young infants. *Infant Behavior and Development, 27,* 246-265.

Wilcox, T., Bortfeld, H., **Woods, R., Wruck, E.,** & Boas, D. A. (2005). Using near-infrared spectroscopy to assess neural activation during object processing in infants. *Journal of Biomedical Optic, 10,* 011010-1 – 011010-9.

Wilcox, T., **Woods, R., Tuggy, L., & Napoli, R**. (2006). Shake, rattle, and…. one or two objects? Infants' use of sound information to individuate objects. *Infancy, 9,* 97-123.

Woods, R., & Wilcox, T. (2006). Infants' ability to use luminance information to individuate objects. *Cognition,99,* B43-B52.

Wilcox, T., & **Woods, R., Chapa, C., & McCurry, S.** (2007). Multisensory exploration and object individuation in infants. *Developmental Psychology, 43,* 479-495.

Wilcox, T. (2007). Sex differences in infants' mapping of complex occlusion sequences: Further evidence. *Infancy, 12,* 1-25.

Wilcox, T., Bortfeld, H., **Woods, R., Wruck, E.**, & Boas, D. (2008). Hemodynamic response to featural changes in the occipital and inferior temporal cortex in infants: A preliminary methodological exploration. *Developmental Science, 11,* 361-370.

Wilcox, T., **Woods, R., & Chapa, C.** (2008). Color-function categories that prime infants to use color information in an object individuation task. *Cognitive Psychology, 57, 220-261*.

Alexander, G. M., Wilcox, T., & **Farmer, M-B**. (2009). Hormone-behavior associations in early infancy. *Hormones and Behavior, 56,* 498-502.

Alexander, G. M., Wilcox, T., & **Woods, R.** (2009). Sex differences in infants' visual interest in toys. *Archives of Sexual Behavior, 38, 427-433.*

McCurry, S., Wilcox, T., & **Woods, R.** (2009). Beyond the search barrier: New evidence for object individuation in young infants. *Infant Behavior and Development, 32*, 429-436.

Wilcox, T. (2009). Perceptual Development: Visual Object Permanence and Identity. In B. Goldstein (Ed.), *Encyclopedia of Perception*. Sage Publishers.

Wilcox, T., Bortfeld, H., **Armstrong, J., Woods, R.,** & Boas, D. (2009). Hemodynamic changes in the infant cortex during the processing of featural and spatiotemporal information. *Neuropsychologia, 47, 657-662*.

Wilcox, T., & **Woods, R**. (2009). Experience primes infants to individuate objects: Illuminating learning mechanisms. In A. Needham & A. Woodward (Eds.), *Learning and the Infant Mind* (pp. 117-143). NY: Oxford University Press.

Woods, R., & Wilcox, T. (2010). Co-variation of color and luminance facilitate object individuation in infancy. *Developmental Psychology, 46*, 681-690.

Wilcox, T., **Haslup, J.**, & Boas, D.A. (2010). Dissociation of processing of featural and spatiotemporal information in the infant cortex. *NeuroImage, 53,* 1256-1263.

Wilcox, T., & **Smith, T.R**. (2010). The Development of infants' use of property-poor sounds to Individuate Objects. *Infant Behavior and Development, 33*, 365-700.

Woods, R., & Wilcox, T., **Armstrong, J.**, & Alexander, G. (2010). Infants' tracking of 3-dimensional objects through occlusion. *Infant Behavior and Development, 33,* 663-671.

Wilcox, T., **Smith, T.R. , Woods, R**. (2011). Priming infants to use pattern information in an object individuation task: The role of comparison. *Developmental Psychology, 47,* 886-897.

Brower, T.R., & Wilcox, T. (2012). Shaking things up: Young infants' use of sound information for object individuation. *Infant Behavior and Development, 35,* 323-327.

Wilcox., T., **Stubbs, J., Hirshkowitz, A.,** & Boas, D.A. (2012). Functional activation of the infant cortex during object processing. *NeuroImage, 62,* 1833-1840.

Alexander, G.A., & Wilcox, T. (2012). Sex differences in early infancy. *Child Development Perspectives, 6,* 400-406.

Wilcox, T., Alexander, G.A., **Wheeler, L., & Norvell, J.** (2012). Sex differences during visual scanning of occlusion events in infants. *Developmental Psychology, 48,* 1091-1105.

Brower, T., & Wilcox, T. (2013). Priming infants to use color in an individuation task: Does social context matter? *Infant Behavior and Development, 35,* 323-327.

Hirshkowitz, A., & Wilcox, T. (2013). Infants' ability to extract three-dimensional shape from coherent motion. *Infant Behavior and Development, 36,* 863-872.

Wilcox, T., **Stubbs, J.A., Wheeler, L.**, & Alexander, G.M. (2013). Infants' scanning of dynamic faces during the first year. *Infant Behavior and Development, 36,* 513-517.

Woods , R.J., & Wilcox, T. (2013). Posture support improves object individuation in infants. *Developmental Psychology*, *49,* 1413-1424. DOI: 10.1037/a0030344

Wilcox, T., **Hirshkowitz, A., Hawkins, L.,** & Boas, D.A. (2014). The effect of color priming on infant brain and behavior. *NeuroImage, 85,* 302-313.

Wilcox, T., **Hawkins, L., Hirshkowitz, A**., & Boas, D.A. (2014). Cortical activation to object shape and speed of motion during the first year. *NeuroImage, 99*, 129-141. DOI: 10.1016/j.neuroimage.2014.04.082

Wilcox, T., & **Biondi, M**. (2015). fNIRS in the developmental sciences. Wiley Interdisciplinary Reviews: Cognitive Science.

Wilcox, T. & **Biondi, M.** (2015). Object processing in the infants: Lessons from Neuroscience. *Trends in Cognitive Sciences, 19,* 406-413.

Wilcox, T. & **Biondi, M.** (2016). Functional activation in the ventral object processing pathway during the first year. *Frontiers in Systems Neuroscience, 9:*180*. doi: 10.3389/fnsys.2015.00180*

Biondi, M., Boas, D.A., & Wilcox, T. (2016). On the other hand: Increased cortical activation to human versus mechanical hands in infants. *NeuroImage, 141*, 143-153.

Alexander, G.M., Wilcox, T., **Hawkins, L., & Hirshkowitz, A**. (2016). Infant Preferences for Sexually Dimorphic Body Traits: Implications for Female-typical Toy Preferences. *Frontiers in Psychology*, *7:*804. doi: 10.3389/fpsyg.2016.00804

Hirshkowitz, A., Biondi, M, & Wilcox, T. (2018; epub 2017). Cortical responses to shape-from-motion stimuli in the infant. Neurophotonics, 1, 011014. doi: 10.1117/1.

Hssayeni, M.D., Wilcox, T., Ghoraani, B. (2020). Tensor decomposition of function near-infrared spectroscopy (fNIRS) signals for pattern discovery of cognitive response in infants. IEEE EMBC.

Manuscripts under Review

Hughes, L., Nyman, T., & Wilcox, T (under review). Spatial transformation of mirror image and structural distinct objects in older infants.

Biondi, M., Stotler, J, & Wilcox, T (under review). Infant cortical responses to mechanical and social entities.

Recent Invited Presentations

Wilcox, T. (February, 2009). Knowledge acquisition in infancy: Cognitive mechanisms and neural foundations. Department of Psychology, Ohio State University.

Wilcox, T. (September, 2009). Babies, brain and behavior. Brain, Cognitive Sciences and

Education: Interdisciplinary Seminar Series, Texas A&M University.

Wilcox, T. (January, 2010). Object processing in infants: brain and behavior. Biomechanical Core Facility, University of Nebraska, Omaha.

Wilcox, T., Alexander, G.A., **Haslup, J.A., & Norvell, J.A.** (April, 2010). Sex differences in visual scanning duration occlusion. Gender Development Research Conference, San Francisco, CA.

Wilcox, T. (July, 2010). Invited presentation at the *Multi-modal Neuroimaging Training Program Symposium: Visual Processing*. Carnegie Mellon University and University of Pittsburgh.

Wilcox, T. (October, 2010). Invited presentation at the conference on *Functional Near Infrared Spectroscopy of the Brain*. Harvard University.

Wilcox, T. (March, 2011). Invited presentation at the 19th meeting of the Centre de rechereche en neuropsychologie et cognition, Montreal, Canada.

Wilcox, T. (November, 2011). Object individuation in infancy: Brain and behavior. Department of Psychology, Texas Christian University, Fort Worth, TX.

Wilcox, T. (May 2013). fNIRS as a tool for studying infant cognition. Invited presentation at Approaches to Answering Questions about Cognitive Development with Neuroscience. Harrington Faculty Fellows Program (David Lui, organizer), University of Texas, Austin.

Wilcox, T. (February 2014). Development of Object Individuation: Cortical Networks and Behavior. Brain and Behavioral Sciences, University of Texas, Dallas.

Wilcox, T. (October, 2015). fNIRS in the developmental sciences. NIRS-DOT Visiting Fellowship Course, Athinoula A. Martinos Center for Biomedical Imaging, MGH, Harvard Medical School, Charlestown, MA**.**

Wilcox, T. (March, 2016). Object Representation in the Infant Brain. Department of Psychology and Department of Communication Sciences and Disorders. University of Texas, Austin.

Wilcox, T. (October, 2016). Cortical Basis of Object Processing in the Infant. Department of Psychology, Florida Atlantic University.

Wilcox, T. (January, 2019). Object processing in the infant: What we have learned from color priming. Budapest CEU Conference on Cognitive Development. Central European University, Budapest, Hungary.

Recent Conference Presentations

Armstrong, J., Wilcox, T., Alexander, G., & **Woods, R**. (March, 2008). Infants Tracking of Objects through Occlusion in 2-D Animated Displays. Presented at the International Conference on Infant Studies, Vancouver, Canada.

Smith, T., & Wilcox, T. (March, 2008). Baby see, baby do: Parents and infants playing with sound. Presented at the International Conference on Infant Studies, Vancouver, Canada.

Smith, T., & Wilcox, T. (March, 2008). Shaking Things Up: Young Infants' Use of Sound Information for Object Individuation. Presented at the International Conference on Infant Studies, Vancouver, Canada.

Wilcox, T., & **Woods, R.** (March, 2008). Infants' use of Color in Object Processing. Presented at the International Conference on Infant Studies, Vancouver, Canada.

Wang, S.H, & Wilcox, T. (April, 2009). Selective Use of Information in Infancy: The Roles of Categorization and Action. Symposium organized for the biennial meeting of the Society for Research in Child Development, Denver, CO.

Wilcox, T. (April, 2009). Infants' category of occlusion: Blocked access or out of view? Presented at the biennial meeting of the Society for Research in Child Development, Denver, CO.

Armstrong, J., & Wilcox, T. (April, 2009). Cortical Activation During Spatiotemporal Processing in the Infant Brain. Presented at the biennial meeting of the Society for Research in Child Development, Denver, CO.

Stubbs, J.A., Smith, T.R., & Wilcox, T. (April, 2009). The Effect of Emotional Communication on Infant Behavior. Presented at the biennial meeting of the Society for Research in Child Development, Denver, CO.

Smith, T.R., & Wilcox, T. (April, 2009). A Social Act: Priming Infants to use Color in and Individuation Task. Presented at the biennial meeting of the Society for Research in Child Development, Denver, CO.

Wilcox, T., Alexander, G.M., **Haslup, J.A., & Norvell, J.M.** (March, 2010). Sex Differences in Visual Scanning Duration an Object Individuation Task. Presented at the International Conference on Infant Studies, Baltimore, MD.

Smith, T.R., & Wilcox, T. (March, 2010). The Exploratory Dyad that Plays Together Stays Together: Playing with Non-Obvious Object Properties. Presented at the International Conference on Infant Studies, Baltimore, MD.

Smith, T.R., Liew, J., & Wilcox, T. (March, 2010). Predicting Preschool Adaptability and Task Engagement from Infant Processing Speed. Presented at the International Conference on Infant Studies, Baltimore, MD.

Stubbs, J.A., Smith, T.R., & Wilcox, T. (March, 2010). The Effect of Emotional Communication on Infant Behavior. Presented at the International Conference on Infant Studies, Baltimore, MD.

Hirshkowitz, A., & Wilcox, T. (March, 2011). Infant Shape Perception in Structure-From-Motion Random-Dot Stimuli. Presented at the biennial meeting of the Society for Research in Child Development, Montreal, Canada.

Stubbs, J., & Wilcox, T. (March, 2011). The Influence of Parent's Emotional Expression on Infants' Preference Attention: An eye-tracking Study. Presented at the biennial meeting of the Society for Research in Child Development, Montreal, Canada.

Wilcox, T. (March, 2011). The Development of Visual Object Processing: Brain and Behavior. Presented at the biennial meeting of the Society for Research in Child Development, Montreal, Canada.

Hirshkowitz, A., & Wilcox, T. (June, 2012). Object Perception in Infancy: A NIRS Study. Presented at the biennial meeting of the International Conference on Infant Studies, Minneapolis, MN.

Stubbs, J.A., Wheeler, L., Wilcox, T., & Alexander, G.M. (June, 2012). Infants' Scanning of Dynamic and Static Faces. Presented at the biennial meeting of the International Conference on Infant Studies, Minneapolis, MN.

Stubbs, J.A., Goodman, L., & Wilcox, T. (June, 2012). Approach and Avoidance Motivation in Social-Referencing Contexts. Presented at the biennial meeting of the International Conference on Infant Studies, Minneapolis, MN.

Wilcox, T. (October, 2012). Experience-Dependent Changes in Infant Brain and Behavior: The Case of Color Priming. Presented at the biennial fNIRS Conference, UCL, London.

Wilcox, T., **Hirshkowitz, A., Hawkins, L**. (October, 2012). Age-related Changes in the Functional Organization of Object Processing Pathways. Presented at the biennial fNIRS Conference, UCL, London.

Wilcox, T., **Hirshkowitz, A., Hawkins, L**. (October, 2012). Different Patterns of Activation in Temporal Cortex Function vs. Motion Events. Presented at the biennial fNIRS Conference, UCL, London.

Biondi, M., Wilcox, T, & **Stubbs, J.** (March, 2013). Infants' Scanning of Positive, Fearful, and Neutral Faces. Presented at the biennial meeting of the Society for Research in Child Development, Seattle, Washington.

Hirshkowitz, A., & Wilcox, T. (March, 2013). Infant Shape Perception in Apparent Motion. Presented at the biennial meeting of the Society for Research in Child Development, Seattle, Washington.

Wilcox, T. (March, 2013). Color priming: Experience-Dependent Changes in Infant Brain and Behavior: Presented at the biennial meeting of the Society for Research in Child Development, Seattle, Washington.

Wilcox, T., **Hirshkowitz, A., Hawkins, L.** (March, 2013). Different Patterns of Activation in Temporal Cortex Function vs. Motion Events. Presented at the biennial meeting of the Society for Research in Child Development, Seattle, Washington.

Biondi, M., & Wilcox, T. (July, 2014). Developmental Changes in Scanning Patterns of Emotional Expressions. Presented at the biennial meeting of the International Conference on Infant Studies, Berlin, Germany.

Biondi, M., & Wilcox, T. (July, 2014). Processing of Biological and Mechanical Motion in the Infant Brain. Presented at the biennial meeting of the International Conference on Infant Studies, Berlin,Germany.

Hirshkowitz, A., & Wilcox, T. (July, 2014). Do Social Events Prime Individuation-by-Color in Physical Events? Presented at the biennial meeting of the International Conference on Infant Studies, Berlin, Germany.

Hirshkowitz, A., & Wilcox, T. (July, 2014). The Roles of Color and Luminance in Apparent Motion Shape Perception. Presented at the biennial meeting of the International Conference on Infant Studies, Berlin, Germany.

Biondi, M. & Wilcox, T. (October, 2014). Differences in Activation to Biological and Mechanical Motion in the Infant Temporal Cortex. Presented at the biennial meeting of the Society for Functional Near-infrared Spectroscopy, Montreal, Canada.

Wilcox, T., **Hawkins, L., & Hirshkowitz, A.** (October, 2014). Functional Organization of Object Processing Areas in the Infant Brain. Presented at the biennial meeting of the Society for Functional Near-infrared Spectroscopy, Montreal, Canada.

Wilcox, T. (March, 2015). Functional (Re)organization of the Ventral Stream during the First Year. Presented at the biennial meeting of the Society for Research in Child Development, Philadelphia, PA.

Biondi, M. & Wilcox, T. (March, 2015). Not all "Negative" Emotions are Treated Equally: Using Eye Tracking to Determine Infant Preferences. Presented at the biennial meeting of the Society for Research in Child Development, Philadelphia, PA.

Biondi, M., & Wilcox, T. (March, 2015). Using fNIRS to Investigate Processing of Social and Mechanical Events in the Infant Brain. Presented at the biennial meeting of the Society for Research in Child Development, Philadelphia, PA.

Herrera, L., Holmes, S., & Wilcox, T. (June, 2016). Effects of Categorization on Object Individuation in Infants: An Eye-tracking Study. The Society for Philosophy and Psychology, Austin Texas.

Biondi, M. & Wilcox, T. (October, 2016). Increased Cortical Activation to Human Versus Mechanical Hands in Infants. Presented at the biennial meeting of the Society for Functional Near-infrared Spectroscopy, Paris, France.

Biondi, M. & Wilcox, T. (October, 2016). Cortical Basis of Social and Mechanical Object Processing in Infancy. Presented at the biennial meeting of the Society for Functional Near-infrared Spectroscopy, Paris, France.

Biondi, M. & Wilcox, T. (April, 2017). Increased Cortical Activation to Human Versus Mechanical Hands in Infants. Presented at the biennial meeting of the Society for Research in Child Development, Austin, TX.

Biondi, M. & Wilcox, T. (April, 2017). Priming and Object Individuation: The Importance of Human Agents. Presented at the biennial meeting of the Society for Research in Child Development, Austin, TX.

Biondi, M. & Wilcox, T. (October, 2018). Development of Infants' Processing of Social and Mechanical Entities: Patterns of Cortical Activation during the First Year. Presented at the biennial meeting of the Society for Functional Near-infrared Spectroscopy, Tokyo, Japan.

Specialized Training

Institute for Academic Leadership (June and October, 2019).
Foundations of Organizational Ombudsman Practice (October, 2014)
International Ombudsman Association
Mediation Training and Certification (April, 2015)
Center for Change and Conflict Resolution through Office of Diversity, Texas A&M University

Workshops Organized

May 2009, fNIRS Workshop, Texas A&M University
August 2013, fNIRS Workshop, Texas A&M University

Courses Taught

Undergraduate courses:
- Developmental Psychology (Life-span and Infancy, Childhood, & Adolescence)
- Developmental Psychobiology (co-taught)
- Cognitive Development
- Infancy and Early Childhood
- Infant Cognition
- Freshman Critical Thinking Seminar: Origins of Knowledge

Graduate courses:
- Cognitive Development
- Developmental Psychobiology (co-taught)
- Principles of Human Development
- Visual Cognition in Infancy
- Infant Cognition

Postdoctoral Trainees

Rebecca Woods (2006 – 2007)

Ph.D. Committees

Amy Schweinle (Psychology, UT Arlington, Wilcox Chair, 1998-2000)
Luis Paulo Rodrigues (Health & Kinesiology, TAMU, Gabbard Chair, 2002-2004)
Eric Wruck (Psychology, TAMU, Bortfeld Chair, 2003-2005)
Diala Ammar (Health & Kinesiology, TAMU, Gabbard Chair, 2003-2005)
Rebecca Woods (Psychology, TAMU, Wilcox Chair, 2004-2006)
Jin Park (Architecture, TAMU, Shepley Chair, 2005-2008)
Alberto Cordova (Health & Kinesiology, TAMU, Gabbard Chair, 2005-2008)
Tracy Smith (Psychology, Wilcox Chair, 2007-2010)
Wondae Kim (Health & Kinesiology, TAMU, Gabbard Chair, 2005-2013)
Priscila Caçola (Health & Kinesiology, TAMU, Gabbard Chair, 2007-2013)
Andrea Wahlberg (Education & Human Development, TAMU, Riccio Chair, 2011-2014)
Amy Hirshkowitz (Psychology, TAMU, Wilcox Chair, 2012-2014)
Janet Saenz (Psychology, TAMU, Alexander Chair, 2010-2014)
Marisa Biondi (Psychology, TAMU, Wilcox Chair, 2010-2018)
Tristin Nyman (Psychology, TAMU, Wilcox Chair, 2016-2018)

Oral and/or Written Exam Committees

Luis Paulo Rodrigues (Health & Kinesiology, TAMU, Gabbard Chair, 2003)
Eric Wruck (Psychology, TAMU, Bortfeld Chair, 2004)
Rebecca Woods (Psychology, TAMU, Wilcox Chair, 2005)
Diala Ammar (Health & Kinesiology, TAMU, Gabbard Chair, 2004)
Jin Park (Architecture, TAMU, Shepley Chair, 2006)
Alberto Cordova (Health & Kinesiology, TAMU, Gabbard Chair, 2007-2008)
Wondae Kim (Health & Kinesiology, TAMU, Gabbard Chair, 2007-2013)
Tracy Smith (Psychology, TAMU, Wilcox Chair, 2007-2008)
Priscila Caçola (Health & Kinesiology, TAMU, Gabbard Chair, 2007-2013)
Andrea Wahlberg (Education & Human Development, TAMU, Riccio Chair, 2011-2014)
Amy Hirshkowitz (Psychology, TAMU, Wilcox Chair, 2012-2014)
Janet Saenz (Psychology, TAMU, Alexander Chair, 2010-2014)
Marisa Biondi (Psychology, TAMU, Wilcox Chair, 2010-2018)
Jacqueline Stotler (Psychology, FAU, Wilcox Chair, 2018-present)
Jasmine Chan (Psychology, FAU, Wilcox Chair, 2018-present)

Master's Committees

Amy Schweinle (Psychology, UT Arlington, Wilcox Chair, 1996-1998)
Sami Rae Grimes (Philosophy, TAMU, 2000-2002)
Rebecca Woods (Psychology, TAMU, Wilcox Chair, 2002-2004)
Sara Pearce (Bush School, TAMU, 2003-2005)
Tracy Smith (Psychology, TAMU, Wilcox Chair, 2006-2007)
Eswen Fava (Psychology, TAMU, Bortfeld Chair, 2007-2008)
Jennifer Armstrong (Psychology, TAMU, Wilcox Chair, 2007-2008)
Melissa Harris (Education, TAMU, 2009-2011)
Amy Hirshkowitz (Psychology, TAMU, Wilcox Chair, 2009-2011)
Tyler Kasper-Bauer (Psychology, TAMU, Wilcox Chair 2009-2011)
Laura Hawkins (Psychology, TAMU, Wilcox Chair 2011-2014)
Priya Patel (Health & Kinesiology, TAMU, Gabbard Chair, 2014-2017)
Tristin Nyman (Psychology, TAMU, Wilcox Chair, 2016-2018)
Jacqueline Stotler (Psychology, FAU, Wilcox Chair, 2018-present)
Jasmine Chan (Psychology, FAU, Wilcox Chair, 2018-present)

Undergraduate Honors Thesis

Sarah McCurry, Psychology, TAMU, 2003-2004

Undergraduate Research Scholars (TAMU)

Lynnel Goodman, Psychology, TAMU, 2011-2012
Lynee Herrera, Psychology, TAMU, 2015-2016
Sydney Holmes, Psychology, TAMU, 2015-2016

OURI Grant Recipients (FAU)

Daniella Hernandez, Grant Recipient, Office of Undergraduate Research & Inquiry, FAU, 2019
Chloe Joseph, Grant Recipient, Office of Undergraduate Research & Inquiry, FAU, 2019

Student Awards

Rebecca Woods, Student Research Week, 2005, TAMU, 1st place poster presentation (graduate)
Tracy Smith, Student Research Week, 2009, TAMU, 1st place poster (graduate)
Jessica Stubbs, Student Research Week, 2009, TAMU, 1st place poster (undergraduate)
Lynnel Goodman, Student Research Week 2012, TAMU, 1st place oral presentation (undergraduate)
Amy Hirshkowtiz, Student Research Week 2012, TAMU, 1st place poster presentation (graduate)
Amy Hirshkowtiz, Graduate Student Travel Award, Graduate Student Council, TAMU, 2014
Amy Hirshkowtiz, Graduate Student Travel Award, International Society for Infant Studies, 2014
Marisa Biondi, Professional Development Award, College of Liberal Arts, TAMU, 2015
Marisa Biondi, Student Research Week 2015, TAMU, 1st place oral presentation (graduate)
Marisa Biondi, Travel Honorarium, Office of Graduate and Professional Studies, TAMU, 2015
Marisa Biondi, STAR Fellowship, College of Liberal Arts, TAMU, 2015
Marisa Biondi, Aggies Commit Fellowship, Graduate and Professional Student Council, TAMU, 2015
Marisa Biondi, Accountability, Climate & Equity Diversity Service Award, TAMU, 2016
Marisa Biondi, Buck Weirus Spirit Award, TAMU, 2016
Jacqueline Stotler, Science Graduate Research Support Scholarship, FAU, 2020
Jasmine Chan, Graduate Fellowship for Academic Excellence, FAU, 2020

Professional Organizations (member)

American Psychological Association
American Psychological Association - Division 7
American Psychological Society
Cognitive Development Society
International Society for Infant Studies
Society for Neuroscience
Society for Research in Child Development
Society for Functional Near-Infrared Spectroscopy
Council of Graduate Departments of Psychology
International Ombudsman Association

Reviewing Activities

Associate Editor:
Infant and Child Development (2015-current)
Editorial Board:
*Infancy (*2005-2013*)* and *Frontiers in Developmental Psychology (Review Editor)*
Grant Review Panel:
National Science Foundation 2008-2012
National Science Foundation, College of Reviewers, 2016-current
Guest reviewer for funding agencies:
Canadian Research Chairs Program, National Science Foundation, National Institutes of Health
Guest reviewer for journals:
Child Development, Cognition, Cognitive Development, Cognitive Psychology
Cahiers de Psychologie Cognitive (Current Psychology of Cognition), Developmental Psychology, Developmental Science, Infancy, Infant Behavior and Development, Journal of Experimental Child Psychology, NeuroImage, Neurophotonics, Neuroscience, Journal of Experimental Psychology: General, Journal of Biomedical Optics, Journal of Experimental Child Psychology; Psychological Science, Scandinavian Journal of Psychology, Trends in Cognitive Sciences, WIRES Cognitive Science
Conference review panels:
Biennial International Conference on Infant Studies (1998, 2008, 2010, 2012, 2014, 2016)
Biennial Meeting of the Society for Research in Child Development (1999, 2001, 2005, 2007, 2009, 2011, 2013)
fNIRS Society (2016)

Departmental Service at Texas A&M University (2000-2017)

Departmental Operations Committee (2000-2005)
Clinical Faculty Search Committee (2000-2001)
Promotion and Tenure Committee (2004 – present)
Departmental Head Search Committee (2001-2001; 2005-2006; 2009-2010)
Faculty Evaluation Committee (2005-2007)
Parliamentarian, Psychology Department (2005-2006)
Diversity Committee (2005-2009)
Advisory Committee (2005-2014)
Advisory Committee, Chair (2010-2011, 2013-2014)
Neuroscience Faculty Search Committee (2007-2009)
Cognitive Faculty Search Committee (2009-2010)
Social Faculty Search Committee (2009-2010)
Graduate Studies Committee (2011-2014)
Chair, Senior Search Committee in fMRI (2013-2014)

University Service at Texas A&M University (since 2000-2017)

Children, Youth, and Families (CYF) Initiative, Task Force Member (2001-2003)
Task force members appointed by former Provost Ronald Douglas
Children, Youth, and Families Interdisciplinary Executive Committee (2003-2008)
Children, Youth, and Families Interdisciplinary Research Program (2003-2008)
Search Committee, faculty position in Developmental Psychology, Department of Educational Psychology, College of Education and Human Development (2003-2004 and 2004-2005)
Officer, Faculty Senate (2004-2005).
Funding Mechanisms Committee, Chair, CYF Interdisciplinary Research Program (2004 – 2006)
Communications Committee, College of Liberal Arts (2004 – 2005)
Committee members appointed by Dean Charles Johnson, CLA
Selection Committee, Advanced Research Program, Consortium Proposals, Texas Higher Education Coordinating Board (2005)
Faculty Panel on NIH Funding, Office of Proposal Development, VPR Office, (Spring, 2009)
Optical Imaging Mini-Workshop (October, 2009 and August, 2014). Provided as a service to an interdisciplinary group of faculty, students, and researchers at TAMU.
Texas A&M University Institute for Neuroscience, Graduate Curriculum Committee (2011-2012)
Human Subjects Protection Program, Practice & Procedures Subgroup (2011-2012)
Program for the Enhancement of Scholarly Activities (PESCA), Review Board (2011, 2012)
Council of Principle Investigators, CLA representative (2012-present)
Council of Principle Investigators, Member of Executive Committee (2014-2016)
Search Committee, Faculty Ombuds position, Dean of Faculties, Texas A&M University (2013)
Search Committee, faculty position in Educational Neuroscience, Department of Educational Psychology, College of Education and Human Development (2014)
Faculty Reviewer: Diversity Fellowships and Phil Gramm Awards, OGAPS, Texas A&M (2015 - 2017)

National Service (since 2000)

Member of the Sigma Xi Admittance Committee, TAMU Chapter (2000-2004)
Editorial Board: *Infancy, Infant and Child Development,* and *Frontiers in Developmental Psychology*
National Science Foundation Grant review panel (2008-2012)
National Science Foundation, College of Reviewers, DLS (2016-current)
Conference Review Panels for ICIS and SRCD (1998-2014)
Ad hoc reviewer, National Institute for Child Health and Human Development and NSF

Collaborators (past or present student in *italics)*:

Gerianne Alexander, Texas A&M University
Jennifer Armstrong Haslup, Texas A&M University
Renée Baillargeon, University of Illinois
Marisa Biondi, Texas A&M University
Jasmine Chan, Florida Atlantic University
David Boas, Athinoula A. Martinos Center for Biomedical Imaging, MGH, Harvard Medical School
Heather Bortfeld, University of California, Merced
Catherine Chapa, Palo Alto College
Erik Engeberg, Florida Atlantic University
Behnaz Ghoraani, Florida Atlantic University
Hila Gvirts, Ariel University

Heather Howard, Florida Atlantic University
Laura Hawkins, Texas A&M University Amy Hirshkowitz, Texas A&M University Ted Huppert, University of Pittsburg
Tyler Kasper-Bauer, Texas A&M University
Jeffrey Liew, Texas A&M University
Murtadha Hssayeni, Florida Atlantic University
Amy Schweinle, University of South Dakota
Tracy Smith, Texas A&M University Jacqueline Stotler, Florida Atlantic University Jessica Stubbs, Texas A&M University
Lesley Wheeler, Texas A&M University
Rebecca Woods, North Dakota State University

(Rev. 10/20)

CURRICULUM VITAE

DAVID L. WOLGIN

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Education

Ph.D.	1973	Rutgers University, New Brunswick, NJ
M.A.	1968	Vanderbilt University, Nashville, TN
B.A.	1967	Rutgers University, New Brunswick, NJ

Academic Experience

1996 - 2016	Chair Department of Psychology Florida Atlantic University Boca Raton, FL
1999 - Present	Professor of Biomedical Science Florida Atlantic University Boca Raton, FL
1990 - Present	Professor of Biological Science Florida Atlantic University Boca Raton, FL
1985 - Present	Professor of Psychology Florida Atlantic University Boca Raton, FL
1979 - 1985	Associate Professor of Psychology Florida Atlantic University Boca Raton, FL
1975 - 1979	Assistant Professor of Psychology Florida Atlantic University Boca Raton, FL
1974 - 1975	Research Associate, Department of Psychology, University of Illinois Champaign, IL

1972 - 1974 Postdoctoral Fellow
Institute of Neurological Sciences
University of Pennsylvania, School of Medicine
Philadelphia, PA

Honors and Awards

Excellence in Undergraduate Teaching Award
Florida Atlantic University, 1990.

Outstanding Achievement Award
Florida Atlantic University, 1990

Fellow
International Behavioral Neuroscience Society, 1997

Professorial Excellence Award
Florida Atlantic University, 1998

Professional Affiliations

American Society for Pharmacology and Experimental Therapeutics
European Behavioural Pharmacology Society
Federation of European Neuroscience Societies
International Behavioral Neuroscience Society
International Brain Research Organization
Society for Neuroscience
Society for Stimulus Properties of Drugs
Society for the Study of Ingestive Behavior

Grant Support

1990-1993 PHS Grant RO1DA 04592, Role of instrumental learning in tolerance to stimulants, National Institute on Drug Abuse. $156,373 (direct costs).

1993-1996 PHS Grant R01DA 04592, Role of instrumental learning in tolerance to stimulants, National Institute on Drug Abuse. $331,393 (direct costs).

1997-2002 PHS Grant RO1DA 04592, Role of instrumental learning in tolerance to stimulants, National Institute on Drug Abuse. $608,577 (direct costs)

Publications

Carlton, P.L. & Wolgin, D.L. Contingent tolerance to the anorexigenic effects of amphetamine. Physiology and Behavior, 1971, 7, 221-223.

Huber, H., Wolgin, D.L. & Williams, J.M. A simple tailshock electrode for restrained rats. Behavioral Research Methods and Instrumentation, 1971, 3, 56.

Teitelbaum, P., & Wolgin, D.L. Neurotransmitters and the regulation of food intake. Progress in Brain Research, 1975, 42, 235-249.

Wolgin, D.L., Cytawa, J., & Teitelbaum, P. The role of activation in the regulation of food intake. In: Hunger: Basic Mechanisms and Clinical Implications. D. Novin, W. Wrywicka & G. Bray (Eds.), Raven Press, New York, 1976, pp. 179-191.

Teitelbaum, P., Wolgin, D.L., De Ryck, M. & Marin, O. Bandage-backfall reaction: Occurs in infancy, hypothalamic damage and catalepsy. Proceedings of the National Academy of Science, 1976, 73, 3311-3314.

Wolgin, D.L. & Teitelbaum, P. The role of activation and sensory stimuli in recovery from lateral hypothalamic damage in the cat. Journal of Comparative and Physiological Psychology, 1978, 92, 474-500.

Golani, I., Wolgin, D.L., & Teitelbaum, P. A proposed natural geometry of recovery from akinesia in the lateral hypothalamic rat. Brain Research, 1979, 164, 234-267.

Wolgin, D.L., Hein, A. & Teitelbaum, P. Recovery of forelimb placing after lateral hypothalamic damage in the cat: Parallels and contrasts with development. Journal of Comparative and Physiological Psychology, 1980, 94, 795-807.

Wolgin, D.L. Motivation, activation and behavioral integration. In: The Expression of Knowledge. R.L. Isaacson & N.E. Spear (Eds.), Plenum Press, New York, 1982, pp. 243-290.

Wolgin, D.L. Tolerance to amphetamine anorexia: Role of learning versus body weight settling point. Behavioral Neuroscience, 1983, 97, 549-562.

Wolgin, D.L. & Kehoe, P. Cortical KC1 reinstates forelimb placing reflexes following damage to the internal capsule. Physiology and Behavior, 1983, 31, 197-202.

Wolgin, D.L. & Salisbury, J.J. Amphetamine tolerance and body weight set point: A dose-response analysis. Behavioral Neuroscience, 1985, 99, 175-185.

Wolgin, D.L. & Bonner, R. A simple, computer-assisted system for measuring latencies of contact placing. Physiology and Behavior, 1985, 34, 315-317.

Wolgin, D.L. Forelimb placing and hopping reflexes in haloperidol- and morphine-treated cataleptic rats. Behavioral Neuroscience, 1985, 99, 423-435.

Salisbury, J.J. & Wolgin, D.L. Role of anorexia and behavioral activation in amphetamine-induced suppression of feeding: Implications for understanding tolerance. Behavioral Neuroscience, 1985, 99, 1153-1161.

Wolgin, D.L., Thompson, G.B., & Oslan, I.A. Tolerance to amphetamine: Contingent suppression of stereotypy mediates recovery of feeding. Behavioral Neuroscience, 1987, 101, 264-271.

Wolgin, D.L., Oslan, I.A., & Thompson, G.B. Effects of "anorexia" on appetitive and consummatory behavior. Behavioral Neuroscience, 1988, 102, 312-318.

Pellis, S.M., O'Brien, D.P., Pellis, V.C., Teitelbaum, P., Wolgin, D.L., & Kennedy, S. Escalation of feline predation along a gradient from avoidance through "play" to killing. Behavioral Neuroscience, 1988, 102, 760-777. (Reprinted in J.P.J. Pinel, Current research in biopsychology. Allyn & Bacon, Boston, 1991, pp 78-95.)

Wolgin, D.L. The role of instrumental learning in behavioral tolerance to drugs. In: Psychoactive drugs: Tolerance and sensitization. A.J. Goudie & M.W. Emmett-Oglesby (Eds.). Humana Press, Clifton, N.J., 1989, pp. 17-114.
Wolgin, D.L. & Thompson, G.B. Contingent suppression of tolerance to the "anorexigenic" effect of haloperidol. Behavioral Neuroscience, 1989, 103, 673-677.

Wolgin, D.L. Contingent suppression of tolerance to haloperidol: A dose-response analysis. Pharmacology Biochemistry & Behavior, 1990, 35,273-280.

Wolgin, D.L. & Wade, J.V. Effect of lithium chloride-induced aversion on appetitive and consummatory behavior. Behavioral Neuroscience, 1990, 104, 438-440.

Wolgin, D.L. & Benson, H.D. Tolerance to morphine "anorexia" is not contingent on experience with food while in the drugged state. Behavioral Neuroscience, 1990, 104, 441-448.

Wolgin, D.L. & Benson, H.D. Role of associative and nonassociative mechanisms in tolerance to morphine "anorexia." Pharmacology Biochemistry & Behavior, 1991, 39, 279-286.

Wolgin, D.L. & Moore, J.A. Sensitization to haloperidol-induced suppression of milk intake: Effect of interdose interval. Psychopharmacology, 1992, 107, 290-296.

Wolgin, D.L. & Dalzell, L. Sensitization of haloperidol-induced hypophagia is contingent on behavioral experience with food. Behavioural Pharmacology, 1992, 3, 275-277.

Wolgin, D.L. & Kinney, G.G. Effect of prior sensitization of stereotypy on the development of tolerance to amphetamine-induced hypophagia. Journal of Pharmacology and Experimental Therapeutics, 1992, 262, 1232-1241.

Wolgin, D.L. Development and reversal of sensitization to amphetamine-induced hypophagia: Role of temporal, pharmacological, and behavioral variables. Psychopharmacology, 1995, 117, 49-54.

Wolgin, D.L. & Wade, J.V. Learned suppression of stereotypy in amphetamine-treated rats: Implications for understanding tolerance to amphetamine 'anorexia.' Behavioural Pharmacology, 1995, 6, 254-262.

Wolgin, D.L. & Hertz, J.M. Effects of acute and chronic cocaine on milk intake, body weight, and activity in bottle- and cannula-fed rats. Behavioural Pharmacology, 1995, 6, 746-753.

Wolgin, D.L. & Hughes, K.M. Effect of sensitization of stereotypy on the acquisition and retention of tolerance to amphetamine hypophagia. Psychopharmacology, 1996, 126, 219-225.

Wolgin, D.L. & Hughes, K.M. Role of behavioral and pharmacological variables in the loss of tolerance to amphetamine hypophagia. Psychopharmacology, 1997, 132, 342-349.

Hughes, K.M., Popi, L. & Wolgin, D.L. Experiential constraints on the development of tolerance to amphetamine hypophagia following sensitization of stereotypy: Instrumental contingencies regulate the expression of sensitization. Psychopharmacology, 1998, 140, 445-449.

Hughes, K.M., Popi, L. & Wolgin, D.L. Loss of tolerance to amphetamine-induced hypophagia in rats: Homeostatic readjustment versus instrumental learning. Pharmacology Biochemistry & Behavior, 1999, 64, 177-182.

Wolgin, D.L. Contingent tolerance to amphetamine hypophagia: New insights into the role of environmental context in the expression of stereotypy. Neuroscience & Biobehavioral Reviews, 2000, 24, 279-294.

Wolgin, D.L. & Hughes, K.M. Long term retention of tolerance to amphetamine hypophagia following cessation of drug injections and feeding tests. Pharmacology Biochemistry & Behavior, 2001, 70, 367-373.

Wolgin, D.L. Effects of chronic amphetamine on the appetitive and consummatory phases of feeding. Appetite, 2002, 38, 221-223.

Hughes, K.M. & Wolgin, D.L. Changes in behavioral contingencies produce a loss of tolerance to amphetamine hypophagia in rats despite continued tests while drugged. Behavioural Pharmacology, 2002, 13, 279-286.

Wolgin, D.L. & Jakubow, J.J. Tolerance to amphetamine hypophagia: A microstructural analysis of licking behavior in the rat. Behavioral Neuroscience, 2003, 117, 95-104.

Wolgin, D.L. & Jakubow, J.J. Tolerance to amphetamine hypophagia: A real-time depiction of learning to suppress stereotyped movements in the rat. Behavioral Neuroscience, 2004, 118, 470-478.

Wolgin, D.L. & Munoz, J.R. Role of instrumental learning in tolerance to cathinone hypophagia. Behavioral Neuroscience, 2006, 120, 362-370.

Bachand, K.D., Guthrie, K.M. & Wolgin, D.L. Expression of c-fos mRNA in the basal ganglia associated with contingent tolerance to amphetamine-induced hypophagia. Behavioural Brain Research, 2009, 198, 388-396.

Wolgin, D.L. Amphetamine stereotypy, the basal ganglia, and the "selection problem." Behavioural Brain Research, 2012, 231, 297-308.

Presentations (1995-Present)

Wolgin, D.L. Appetite suppression: Why amphetamines don't work. Invited speaker, The Herrick Neuroscience Lecture, Denison University, Granville, OH, 1995.

Hughes, K.M. & Wolgin, D.L. Effect of prior sensitization of stereotypy on the acquisition and retention of tolerance to amphetamine hypophagia. Society for Neuroscience Meeting, San Diego, CA, 1995.

Wolgin, D.L. Are psychostimulants anorexigenic? Invited speaker, Sixth Biennial Meeting of the European Behavioural Pharmacology Society, Sardinia, Italy, 1996.

Hughes, K.M. & Wolgin, D.L. Role of behavioral and pharmacological variables in the retention of tolerance to amphetamine hypophagia. Society for Neuroscience Meeting, Washington, D.C., 1996.

Hughes, K.M. & Wolgin, D.L. Behavioral contingencies, not pharmacological exposure, determine the retention and reacquisition of tolerance to amphetamine hypophagia. FASEB Summer Research Conference, Copper Mountain, CO, 1997.

Hughes, K.M. & Wolgin, D.L. Sensitization of oral stereotypy blocks tolerance to amphetamine hypophagia. Society for Neuroscience Meeting, New Orleans, LA, 1997.

Hughes, K.M., Popi, L. & Wolgin, D.L. Contingent loss of tolerance to amphetamine hypophagia. Society for Neuroscience Meeting, Los Angeles, CA, 1998.

Wolgin, D.L. Can tolerance to amphetamine hypophagia be "forgotten" over time? First International Meeting of the Behavioral Pharmacology Society and European Behavioural Pharmacology Society, Boston, MA, 1999.

Hughes, K.M. & Wolgin, D.L. Changes in behavioral contingencies without disrupted drug exposure can produce a loss of tolerance to amphetamine hypophagia in rats. Society for Neuroscience Meeting, Miami Beach, FL, 1999.

Hughes, K.M. & Wolgin, D.L. Recovery from anorexia is not a prerequisite for feeding in amphetamine intoxicated rats. Society for Neuroscience Meeting, New Orleans, LA, 2000.

Wolgin, D.L. Amphetamine tolerance: Homeostatic and operant conditioning models. Invited speaker, ASPET Symposium on Behavioral Tolerance: Evolving Concepts. Experimental Biology 2001 Meeting, Orlando, FL, 2001.

Jakubow, J.J. & Wolgin, D.L. A microstructural analysis of licking behavior in the rat. Eastern Psychological Association Meeting, Washington, D.C., 2001.

Wolgin, D.L. & Jakubow, J.J. Tolerance to amphetamine hypophagia: A real time analysis of learning to suppress stereotyped movements. Society for Neuroscience Meeting, San Diego, CA, 2001.

Hughes, K.M. & Wolgin, D.L. Long term retention of tolerance to amphetamine hypophagia following cessation of drug injections and feeding tests. Society for Neuroscience Meeting, San Diego, CA, 2001.

Wolgin, D.L. Effects of chronic amphetamine and other "anorexigenic" psychostimulants on the appetitive and consummatory phases of feeding. Invited speaker, Columbia University Seminar on Appetitive Behavior, New York, NY, 2002.

Wolgin, D.L. & Jakubow, J.J. Effects of chronic amphetamine administration on licking behavior in the rat. Society for Neuroscience Meeting, Orlando, FL, 2002.

Wolgin, D.L. & Jakubow, J.J. Rapid loss of tolerance to amphetamine hypophagia following changes in the contingencies of reinforcement. Society for Neuroscience Meeting, New Orleans, LA, 2003.

Wolgin, D.L. & Munoz, J.R. Effects of acute and chronic cathinone on the appetitive and consummatory phases of feeding. Society for Neuroscience Meeting, San Diego, CA, 2004.

Bachand, K.D., Guthrie, K.M. & Wolgin, D.L. Neural activity associated with contingent tolerance to amphetamine hypophagia. Society for Neuroscience Meeting, Washington, D.C., 2005.

Bachand, K.D., Guthrie, K.M. & Wolgin, D.L. A distributed network for the learned suppression of amphetamine stereotypy. Society for Neuroscience Meeting, Atlanta, GA, 2006.

Teaching

Undergraduate

Psychopharmacology
Biological Bases of Behavior 1 & 2
Psychology of Motivation
Research Methods in Psychology
Laboratory in Psychobiology
Directed Independent Study

Graduate

Psychopharmacology
Seminar in Behavioral Neuroscience
Principles of Neuroscience
Methods in Psychobiology
Models of Behavioral Tolerance

Service

National

NIH Special Emphasis Review Panel ZRG1 SSS-C (02), 2001, 2002
NIDA Cutting-Edge Basic Research Awards (CEBRA) reviewer, 2005

Ad hoc reviewer for *Behavioral Neuroscience, Behavioural Brain Research, Behavioural Pharmacology, Brain Research, Developmental Psychobiology, Experimental & Clinical Psychopharmacology, Journal of Neuroscience, Journal of Psychopharmacology, Neuroscience Letters, Pharmacology Biochemistry and Behavior, Physiology and Behavior, Proceedings of the National Academy of Sciences USA, Psychobiology, Psychopharmacology, Science, U.S. - Israel Binational Science Foundation, PLOS ONE, Journal of Neural Transmission*

University

Graduate Council	1980 - 1982
Institutional Review Comm.	1975 - 1989
Acting Chair	1983 - 1984
Research Committee	1982 - 1984
Library Committee	1986 - 1996
Director, Institute for the Study of Alcohol & Drug Dependence	1986 – 1996
Search Committee - Men's Basketball Coach	1987
DARC Steering Committee	1990 - 1994
Animal Care & Use Committee	1990 – 2003
Board of Directors, Karen Slattery Educational Research Center for Child Development	1999 - 2002
Search Comm., Dir. Animal Facilities	2000 - 2001
Search Committee, Director of Veterinary Services	2001 – 2002
Chair, Research Misconduct Review Panel	2009
Research Priorities Steering Committee	2010
College of Arts & Letters Program Review Committee	2012

College (C) & Department (D)

Preprofessional Comm. (C)	1978 - 1980
Promotion & Tenure Comm. (D)	1981 - 1982
Library Committee (C,D)	1976 - 1996
Chair, Psychobiology Search Committee (D)	1985 - 1986
Chair, Personnel Committee (D)	1989 - 1996
Dean's Evaluation Comm. (C)	1990
Planning Committee (C)	1990 - 1996
Assistant Chair (D)	1990 - 1996
Executive Committee (C)	1996 - 2016
Faculty Advisor, Program in Psychobiology (D)	1999 - 2003
Search Committee, Biological Sciences Chairperson (C)	1999 - 2000
Medical Education Steering Comm. (C)	1999 - 2003
Search Committee, Schmidt Senior Fellow (C)	2001
Advisory Committee on Technology Transfer	2001 - 2016
Chair, Psychobiology Search Committee (D)	2001-2002; 2003-2004; 2004-2005
Search Committee, Davimos Eminent Scholar Chair in Brain Science (C)	2002
Strategic Planning Committee/Research (C)	2003
College Research Council	2004 - 2016
Neuroscience Steering Committee (C)	2005 - 2016
Distance Learning Resources Committee (C)	2007
Graduate Committee (D)	2016 - Present
Director of Graduate Studies (D)	2018 - Present
College Graduate Program Committee (C)	2018 - Present
Sustained Performance Evaluation Comm. (D)	2017 - Present
Strategic Planning Committee (D)	2018 – 2019
Executive Committee (D)	2017 – 2019
By-Laws Committee (D)	2020

CURRICULUM VITAE

NAME: Jang-Yen Wu, Ph.D.

DATE OF BIRTH: January 9, 1942

PLACE OF BIRTH: Taiwan

CITIZENSHIP: U.S.A.

BUSINESS ADDRESS: Department of Biomedical Science
Florida Atlantic University
777 Glades Road
Boca Raton, FL 33431-0991
Phone: (561) 297-0167
FAX: (561) 297-0174
e-mail: jwu@health.fau.edu

ACADEMIC RECORD: National Taiwan University
Chemistry: B.S. - 1963

University of California Medical Center
San Francisco, California
Biochemistry: Ph.D. - 1968
(Mentor: J. T. Yang)

University of California
Los Angeles, California
Biochemistry: Postdoctoral - 1968-70
(Mentor: P. D. Boyer, 1997 Nobel Laureate)

HONOR/AWARD:

1. Inducted Senior Member, National Academy of Inventors, February 11 1, 2020
2. Inducted Member, National Academy of Inventors, August 1, 2018.
3. One of the world's most cited authors identified by Current Contents/ISI (2002)
4. First Chinese Neuroscience Society in America Presidential Award in Basic Research (1991).
5. Instituto Venezolano de Investigacion Cientifica (IVIC) Award (1987).
6. Taiwanese American Foundation Achievement Award in Science and Technology (1986).
7. China Institute in America, C.T. Loo Fellowship (1965).

PATENTS:

1. Title: Method for Treatment of Glutamate Related Disorders.

U.S. Patent Number: 6,156,794
Date issued: July 14, 2000
Inventors: Morris D. Faiman, John V. Scholoss and Jang-Yen Wu

2. Title: Mechanism and therapy of granulocyte colony-stimulating factor (G-CSF) in Parkinson's Disease and other neurodegenerative diseases.
U.S. patent #7,723,302
Date issued: May 25, 2010
Inventors: Jang-Yen Wu and Dipnarin Maharaj

3. Title: TREATMENT FOR ISCHEMIC STROKE
U.S. Patent Number: 9,050,305
Date issued: June 9, 2015
Inventors: Jang-Yen Wu and Howard Prentice

4. Title: TREATMENT FOR ISCHEMIC STROKE
U.S. Patent Number: 9827220
Date issued: 11/28/2017
Inventors: Jang-Yen Wu and Howard Prentice

5. Title: TREATMENT FOR ISCHEMIC STROKE
U.S. Patent Number: 10272063
Date issued: 04/30/2019
Inventors: Jang-Yen Wu and Howard Prentice

6. Provisional Patent Application entitled" Carbamathione, S-(N,N diethylcarbamoyl)glutathiones, as a novel agent for the treatment of stroke" No. 51125696_1_09-26-2017 6818-298-PRO PTO ; Filed: September 26, 2017;
Inventor: Jang-Yen Wu

7. Provisional Patent Application entitled" Granulocyte colony-stimulating factor (G-CSF) gene therapy for stroke and Alzheimer's disease " EFSID: 32672024;
Application # 62674049 ; Filed: May 21, 2018;
Inventor: Jang-Yen Wu

8. International Patent Application entitled " Granulocyte colony-stimulating factor (G-CSF) gene therapy for treating neurological diseases " EFSID: 36063150;
International Application Number: PCT/US19/33124 ; Filed: May 20, 2019;
Inventor: Jang-Yen Wu

CURRENT GRANT AWARDS:

1. Title of Research Project "Granulocyte colony-stimulating factor (GCSF) gene therapy for stroke". Grant # 6JK08. Amount of Award: $ 1,231,336.00; Source of

support: State of Florida RC-1.Period covered: 04/01/2016-08/31/2019. Role: PI

2. Title of Research Project: Neuroprotection of GCSF Gene Therapy in Alzheimer's Disease.Grant # AWD-001440. Amount of Award: $100,000.00; Source of support: State of Florida, AD-Moore Alzheimer's disease Research Program. Period covered: 04/01/2018-03/31/2020. Role: Mentor.

PENDING FUNDING SOURCES:

1. PROPOSAL/GRANT TITLE: . Smoking and Alzheimer's disease: Mechanism and Therapy; Federal Agency/Institute: James & Esther King Biomedical Research Program., The Florida Department of Health; Principal Investigator: Jang-Yen Wu ; Time/Effort: 35%; Proposal Submission Date:10/31//2018; Grant Start – End Date: 03/01/2019-02/28/2022;Total Funds Requested: $900,000;Total Funds Awarded: Pending.
   This grant is focusing on GCSF therapy for Alzheimer's disease and hence there is no overlap with the currently proposed application of GCSF gene therapy for PD.
2. PROPOSAL/GRANT TITLE: . Develop a new hydrogel drug delivery system for enhanced neural tissue regeneration after stroke; Federal Agency/Institute: *,* James & Esther King Biomedical Research Program., The Florida Department of Health; Role: Co-Investigator, Time/Effort:15%; (PI:Yunqing Kang); Proposal Submission Date: 11/01/2018; Grant Start – End Date: 03/01/2019-02/28/2022; Total Funds Requested: $795,792; Total Funds Awarded: Pending
   This grant is focusing on developing a new hydrogel drug delivery system for enhanced neural tissue regeneration after stroke and hence there is no overlap with the currently proposed application of GCSF gene therapy for PD.

RECENT GRANT AWARDS

1. Title of Research Project: "G-CSF, DETC-MeSO and Sulindac as Multi-drug Combination Therapy for TBI and Stroke". Grant # 09KW -11. Amount of Award: $748,046.00); Source of support: State of Florida RC-1.Period covered: 01/01/2010-12/31/2012. Role: PI
2. Title of Research Project: "Regulation of GABA Biosynthesis in the Brain" Amount of Award: $184,280; Period covered: 7/01/2007-6/30/2008 Source of Funding: State of Florida; Role in the project: PI.
3. Title of Research Project: "Carboxylated Neuroprotective Agents from Cone Snails"Amount of Award: $225,000; Period covered: August 1, 2007-July 31, 2009 Source of Funding: Department of Defence; Role in the project: Co-PI (PI: Frank Mari)
4. Title of Research Project: "Neuropharmacology of Conophans and Hydroxyconophans"
   Amount of Award: $200,000; Period covered: March1, 2007-February 28, 2009
   Source of Funding: National Institutes of Health; Role in the project: Co-PI (PI: Frank Mari)
5. Title of Research Project: Role of Oxidative Damage to Protein in Aging.Amount of Award: $213,750. Source of Funding: National Institutes of Health.Time Period: July 1, 2008 - June 30, 2010.

Role in the projectr: Co-PI (PI: David Binninger).

6. Title of Research Project: "Regulation of GABA Biosynthesis in the Brain". Amount of award: Total -- $1,018,500; Direct cost: $700,000. Source of support: National Institutes of Health (R01NS37851). Period covered: July 1, 2000-Nov 15, 2006. Role in the project: Principal Investigator

. 8. Title of Research Project: "Role of cannabinoid receptor 1 in novelty-seeking phenotype & treatment for nicotine dependence". Amount of award: $450,000. Source of support: State of Florida. Period covered: Aug 1, 2005-July 31, 2008. Role in the project: Mentor (PI: C Isgor).

9. Title of Research Project: " Development of Neuroprotective Agents". Amount of award: $ 70,000. Source of support: Center of Excellence for Marine and Biotechnology, State of Florida. Period covered: 8/1/03-7/31/05.
10. Title of Research Project: "Regulation of Taurine Biosynthesis in the Brain". Amount of award: $297,000. Source of support: National Science Foundation (IBN-9723079). Period covered: 1997-2001. Role in the project: Principal Investigator.
11. Title of Research Project: "GABA, Glutamate and the Mode of Action of Alcohol". Amount of award: $114,255. Source of support: Research Development Fund, University of Kansas. Period covered: 1999-2002. Role in the project: Principal Investigator.
12. Title of Research Project: "Mammalian Auditory Hair Cell Renewal Following Acoustic Trauma". Amount of award: $30,000. Source of support: Naval Medical Center, San Diego (NCRADA-NMCSD-00-030). Period covered: 10/04/2000 – 10/03/2003. Role in the project: Principal Investigator.
13. Title of Research Project: "The Mechanism by Which DETC-MeSO and Its Analogs Prevent Seizures". Amount of award: $9,586. Source of support: JR & Inez W. Jay Biomedical Research Fund. Period covered: 7/1/99 - 6/30/00. Role in the project: Principal Investigator.
14. Title of Research Project: "Hyperbaric Oxygen Toxicity, Mechanism and Therapy". Amount of award: $661,710. Source of support: Office of Naval Research (N 00014-94-1-0457). Period covered: 10/1/99 - 09/30/2002. Role in the project: Co-Principal Investigator (PI: John V. Schloss).
15. Title of Research Project: "Stimulation of Nociceptive Cardiac Afferent Nerves by Thromboxanes". Amount of award: $69,250. Source of support: American Heart Association Heartland Affiliate. Period covered: July 1, 2000 to June 30, 2002. Role in the project: Co-Principal Investigator.

PREVIOUS GRANT AWARDS:

1. 1994-1999 Title of Research Project: "Hyperbaric oxygen toxicity: mechanism and therapy".
Source of Support: Office of Naval Research, N00014-94-1-0457.
Amount of Support: $667,163.
Co-P.I.: (P.I.: John V. Schloss).

2. 1995-1997 Title of Research Project: "Thromboxanes and cardiorespiratory control".
Source of Support: American Heart Association, Kansas Affiliate.
Amount of Support: $46,640.
Co-P.I. (P.I.: James A. Orr).

3. 1994-1995 Title of Project: "The oxygenase reaction of glutamate decarboxylase and its relevance to mammalian neurophysiology under conditions of hyperbartic oxygen".
Source of Support: The Office of Naval Research
Amount of Support: $97,652
Co-P.I.: Jang-Yen Wu (P.I.: John V. Schloss)

4. 1992-1994 Title of Project: "Mechanism of Thromboxane A_2-Mediated Signal Transduction".
Source of Support: American Heart Association, Kansas Affiliate
Amount of Support: $46,640
P.I.: Jang-Yen Wu

5. 1991-1993 Title of Project: "Neurotransmitter and Brain Aging".
Source of Support: Marion Merrell Dow Foundation
Amount of Support: $65,000
P.I.: Jang-Yen Wu

6. 1989-1993 Title of Project: Studies of Neuronal and Glial Glutamate Decarboxylase
Source of Support: NIH (NS 20978)
Amount of Support: $755,494
P.I: Jang-Yen Wu

7. 1989-1993 Title of Project: "Benzodiazepine Receptor and GABA System".
Source of Support: National Science Foundation (BNS-8820581)
Amount of Support: $180,000
P.I.: Jang-Yen Wu

8. 1984-1989 Title of Project: Benzodiazepine Receptor and GABA System
Source of Support: NIH (NS 20922)
Amount of Support: $255,990 (DC)
P.I.: Jang-Yen Wu

9. 1984-1989 Title of Project: The Role of Taurine and GABA in Mammalian Retina
Source of Support: NIH (EY 05385)
Amount of Support: $331,267 (DC)
P.I.: Jang-Yen Wu

10. 1985-1989 Title of Project: Studies of Neuronal and Glial Glutamate Decarboxylase
Source of Support: NIH (NS20978)
Amount of Support: $521,030 (DC)
P.I.: Jang-Yen Wu

11. 1982-1985 Title of Project: Studies of Neuronal and Glial Glutamate Decarboxylase
Source of Support: NIH (NS 13224)
Amount of Support: $235,507 (DC)
P.I.: Jang-Yen Wu

12. 1981-1984 Title of Project: Benzodiazepine Receptor and GABA System
Source of Support: NIH (NS 17038)
Amount of Support: $196,081 (DC)
P.I.: Jang-Yen Wu

13. 1981-1984 Title of Project: The Role of Taurine and GABA in Mammalian Retina

Source of Support: NIH (EY03909)
Amount of Support: $194,737 (DC)
P.I.: Jang-Yen Wu

14. 1979-1982 Title of Project: Studies of Neuronal and Glial L-Glutamate Decarboxylase
Source of Support: NIH (NS 13224)
Amount of Support: $235,529 (DC)
P.I.: Jang-Yen Wu

15. 1977-1980 Title of Project: Insolation and Characterization of Demyelinating Factor(s) in Multiple Sclerosis
Source of Support: National Multiple Sclerosis Society
Amount of Support: $150,231 (DC)
P.I.: Jang-Yen Wu

16. 1977-1979 Title of Project: GABA System and Huntington's Disease
Source of Support: Huntington's Chorea Foundation
Amount of Support: $32,000 (DC)
P.I.: Jang-Yen Wu

17. 1976-1979 Title of Project: Studies of Neuronal and Glial Glutamate Decarboxylase
Source of Support: NIH (NS 13224)
Amount of Support: $250,530 (DC)
P.I.: Jang-Yen Wu

18. 1975-1980 Title of Project: Neurotransmission and Neuronal Disorders
Source of Support: NIH (PO1NS 12116)
Amount of Support: $991,896 (DC)
P.I.: Eugene Roberts
Co-P.I.: Jang-Yen Wu

19. 1972-1975 Title of Project: Studies of Neuronal and Glial Glutamate Decarboxylase
Source of Support: NIH (NS-10622)
Amount of Support: $195,800 (DC)
PI: Jang-Yen Wu

MAJOR RESEARCH INTEREST:

Structure and Function of Neurotransmitter Enzymes and Receptors; Mechanism of Signal Transduction and Neuronal Degeneration; Neurotransmission and Neurological Disorders.

POSITIONS HELD:

2011- Present Professor, Department of Biomedical Science, Charles E. Schmidt College of Medicine, Florida Atlantic University, Boca Raton, FL.

2008- 2011 Senior Schmidt Fellow and Distinguished Professor, Department of Biomedical Science,
Charles E. Schmidt College of Biomedical Science, Florida Atlantic University, Boca Raton, FL and Affiliated Professor of Physiology/Biophysics, Miller School of Medicine, University of Miami at FAU

2002- 2008 Senior Schmidt Fellow and Distinguished Professor, Department of Biomedical

	Science, Charles E. Schmidt College of Science, Florida Atlantic University, Boca Raton, FL.
2007- 2009	Associate Dean for Research, Charles E. Schmidt College of Biomedical Science, Florida Altantic University, Boca Raton, FL.
2006-2008	Senior Assistant Vice President for Biomedical Science, Florida Altantic University, Boca Raton, FL.
2006-Present	Chair, Neuroscience Program Steering Committee, Florida Altantic University, Boca Raton, FL.
August 1998 – August 2002	Professor, Department of Molecular Biosciences, University of Kansas, Lawrence, KS
May 1998 - August, 1998	Distinguished Visiting Professor, Institute of Biological Chemistry, Academia Sinica, Taipei, Taiwan
July 1997- August 1998	Professor, Department of Biochemistry, Cell and Molecular Biology, University of Kansas, Lawrence, KS 66045-2106
August 1995 -July 1997	Professor, Department of Physiology and Cell Biology, University of Kansas, Lawrence, KS 66045-2106
August 1989 - August 1995	Chairman and Professor, Department of Physiology and Cell Biology, The University of Kansas, Lawrence, KS 66045-2106
July 1988 - August 1989	Professor, Department of Anatomy, Neuroscience Program and Molecular and Cell Biology Program, The Pennsylvania State University, College of Medicine, Hershey, PA 17033
June 1987 - January 1988	Director, Graduate Program, Department of Physiology, The Pennsylvania State University, College of Medicine, Hershey, PA 17033
December 1983 - July 1988	Professor, Department of Physiology, Neuroscience Program, and Molecular and Cell Biology Program, The Pennsylvania State University, College of Medicine, Hershey, PA 17033
December 1975 - November 1983	Associate Professor, Department of Cell Biology and Neuroscience Program, Baylor College of Medicine, Houston, TX
October 1974 - November 1975	Head and Research Scientist, Section of Protein Chemistry and Immunology, Division of Neurosciences, City of Hope National Medical Center, Duarte, CA
June 1973 - October 1974	Associate Research Scientist, Division of Neurosciences, City of Hope National Medical Center, Duarte, CA
September 1970 - June 1973	Assistant Research Scientist, Division of Neurosciences, City of Hope National Medical Center, Duarte, CA

August 1968 - August 1970	Postdoctoral Fellow (with Dr. Paul D. Boyer), UCLA, Los Angeles, CA
August 1967 - July 1968	Research Assistant (with Dr. J. T. Yang), University of California Medical Center
September 1964 - August 1967	Teaching Assistant, University of California Medical Center

MEMBERSHIPS:

American Physiological Society
American Society for Neurochemistry
International Society for Neurochemistry
Society for Neurosciences
American Association for the Advancement of Science
The Association for Research in Vision and Opthalmology
The New York Academy of Sciences
Chinese Neuroscience Society
Society of Chinese Bioscientists in America

ADMINISTRATIVE EXPERIENCE AND SERVICE:

AT FLORIDA ATLANTIC UNIVERSITY:

2007- 2009	Associate Dean for Research, Charles E. Schmidt College of Biomedical Science.
2006- 2009	Senior Assistant Vice President for Biomedical Science.
2006-Present	Chair, Neuroscience Program Steering Committee.
2003-2005; 2016-Present	Chair, Research Committee, Department of Biomedical Science
2004- 2008	Member, Program Committee, Integrative Biology Ph.D. Program
2002-2005	Member, Promotion and Tenure Committee, Department of Biomedical Science
2004-2007	Member, Research Committee, College of Science
2004-2015	Chair, Search Committee for Senior Schmidt Fellow, Department of Biomedical Science

AT THE UNIVERSITY OF KANSAS:

1999	The Faculty Senate Research Committee
1998	Member of the Chair Search Committee, Department of Molecular Biosciences
1998	Member of the Executive Committee, Department of Molecular Biosciences
1998	Dean's Scholars Program, College of Liberal Arts and Sciences
1997	Member of the Chair Search Committee, Department of Biochemistry, Cell and Molecular Biology, The University of Kansas
August 1989 - 1995	Chairman and Professor, Department of Physiology and Cell Biology, The University of Kansas
1993 - 1995	Budget Subcommittee, College of Liberal Arts and Sciences
August 1989 - Present	Professor and Senior Member of the Graduate Faculty, The University of Kansas

AT OTHER INSTITUTES:

June 1987 - January 1988	Director of Graduate Program, Department of Physiology, The Pennsylvania State University
1986 - 1987	Chairman, Faculty Teaching Evaluation Committee, Department of Physiology, The Pennsylvania State University
1987 - 1988	Member, Faculty Tenure and Promotion Committee, Department of Physiology, The Pennsylvania State University
1985 - 1986	Member, Faculty Tenure and Promotion Committee, Department of Anatomy, The Pennsylvania State University
1984 - August, 1989	Member of the Advisory Committee for Neuroscience Center and Neuroscience Graduate Program, The Pennsylvania State University
1984 - August, 1989	Senior Member of the Graduate Faculty, The Pennsylvania State University
1976 - 1978	Member of Graduate Curriculum Committee, Department of Cell Biology, Baylor College of Medicine

TEACHING EXPERIENCE:

Courses Developed and Taught:

AT FLORIDA ATLANTIC UNIVERSITY:
Develop and teach a new course, PCB 4930/6933, " Brain Diseases: Mechanism & Therapy", 2004.
Develop and teach part of Neuroscience/Behavior section of the Problem-based learning (PBL) to medical students, 2005.
Develop and teach part of Special Topics in Biomedical Sciences II, 2005.

AT THE UNIVERSITY OF KANSAS:

Developed four new courses, namely, Brain Diseases and Neurological Disorders, Introduction to Neurobiology, Molecular and Cellular Neurobiology and Advanced Cell Biology since 1990.

1997	Biol. 454/754 Brain Diseases and Neurological Disorders (Developed and taught in the Spring Semester, 1997)
1997	Biol. 773 (changed to Biol. 673 later) Molecular and Cellular Neurobiology (Developed and taught together with Dr. Erik Floor (50% each) in the Spring Semester, 1997)
1996	Biol. 520 (changed to Biol. 435 later) Introduction to Neurobiology (Developed and taught together with Dr. Erik Floor (50% each) in the Fall Semester, 1996)
1990	Biol. 752 Advanced Cell Biology, [Developed and taught together with Drs. William Dentler, Kathy Supernant and Erik Floor (25% each)]
1990	Biol. 305 Human Physiology, (Team taught, 33% effort)

Graduate Students and Postdoctoral Fellows Trained At Florida Atlantic University:

Ph.D. Students: Di Sha, Heng Wu, Hema Damania and Yin Jin
Postdoctoral Fellows: Jianning Wei and Eugene Lin (Visiting Scientist)

Graduate Students and Postdoctoral Fellows Trained At The University of Kansas:
Postdoctoral Fellows: Mina Yarom, David Depuree.
Ph.D Students trained as thesis advisor:

1. Britto Nathan
2. Yolanda Yi-Hsuan Lee
3. Jun Bao
4. Xiao Wen Tang
5. John B. Tyburski
6. Jeff Hsu
7. Weiqing Chen
8. Kathleen Davis
9. Hong Jin
10. Jianning Wei

Ph.D./M.S.students trained as member of the thesis committee:

1. Linda Chen
2. Lei Liu
3. Michael Wacker
4. Yongbo Hu
5. Qiang Yu
6. Gang Liu
7. Fei Liu
8. Yalin Wang
9. Hong Qi
10. L. Meng
11. Xia Yuan Wang
12. Michael Elliott

COURSES DEVELOPED AND TAUGHT AT OTHER INSTITUTES:

1984 - August, 1989	Medical Neurobiology and Neurophysiology, The Pennsylvania State University, College of Medicine
1978 - 1980	Molecular Neuroscience, Baylor College of Medicine
1976 - 1977	Neuroscience Seminar Course, Baylor College of Medicine
1977	Cell Biology Seminar Course, Baylor College of Medicine

EDITORIAL BOARD:

Journal of Biomedical Science: 1993-present, Editor for US and Regions in America
Journal of Biomedical Science and Bioengineering: 2010- Present
Peer Journal: 2012 – Present
World Journal of Methodology: 2013 – Present
Journal of Molecular Biology and Molecular Imaging: 2013 – Present
Science Postprint: 2014 – Present
Journal of Biotechnology and Cell Biology: 2014 –Present
International Journal of Neuroscience and Behavioral Science: 2014-Present
Journal of Medical Research and Development: 2014 – Present
Madridge Journal of Neuro Science: 2015 – Present
SOJ Biotechnology: 2015 – Present
International Journal of Dermatology and Clinical Research: 2015 - Present
JSM Brain Science: 2016 – Present
SciTz Neurology and Neurosciences: 2016 - Present
Journal of Pediatric Neurology and Medicine: 2016 – Present
SOJ Quantitative and Computational Biology: 2016-Present
Neurology and Neuroscience Research: 2017, 4 –Present
SCIOL Biomedicine: 2017 – Present
Neurology and Neuroscience Research: 2017- Present
Open Journal of Cell and Protein Science: 2017 – Present
Journal of Stroke and Epilepsy: 2017 – Present
Journal of Biomedical Science & Applications: 2017 –Present
Current Trends in Medicinal Chemistry: 2017 – Present

MED ONE: 2017 – Present
Current Updates in Stroke: 2017-Present
Journal of Dementia -2017-Present
Current Neurobiology-2017-Present
Journal of Psychiatry and Behavioral Sciences - 2017-Present
Research Advances in Brain Disorders and Therapy: 2017 – Present
Journal of Cell Science and Apoptosis: 2017 – Present
Neurochemistry International: 1987-1996
Newsletter on Neurochemistry:1990-2000

PROFESSIONAL EXPERIENCE AND SERVICE:

2004-present	Member, Advisory Board, Academia Sinica, Taiwan
2002-present	Member, Scientific Review Committee, National Genomics and Proteomics Center, Taiwan
1993-2003	Member, Scientific Review Committee, National Health Research Institute, Taiwan.
1994-1997	Member, Merit Review Committee, Department of Veterans Affairs, USA.
1991	Member, Organizing Committee, International Taurine Symposium: New Dimensions on its Mechanism of Action.
1991	Member, Program Committee, American Society for Neurochemistry.
1989	Chairman, Program Committee. International Symposium on Neurotransmission and Signal Transduction.
1985	Member, Ad hoc, Study Section, National Eye Institute, NIH
1983 - 1985	Member, Program Committee, International Society of Neurochemistry
1980	Member, Ad hoc, Study Section, National Institute of Neurological Disease and Stroke, NIH National Science Foundation and Whittaker Foundation External Reviewers
1979	Member, National Institute of Neurological Disease and Stroke, NIH Site Visit Team

REVIEWER FOR VARIOUS SCIENTIFIC JOURNAL INCLUDING:

Journal of Biological Chemistry
Journal of Neuroscience
Brain Research
Journal of Neurochemistry
Journal of Comparative Neurology
Journal of Neuroscience Research
Neurochemistry International
Biochemical Pharmacology
Journal of Cell Biology
Analytical Biochemistry
Biochemical and Biophysical Research Communication
Other Journals

INVITED LECTURES, SEMINARS, AND SYMPOSIUM PRESENTATIONS (Since 1983):

1. Invited Speaker, on "GABA and Taurine Enzymes in Mammalian Brain", Symposium on "Enzyme Mechanism", University of California, Los Angeles, CA, 1983.

2. Invited Speaker, on "Immunocytochemical Identification of GABAergic Neurons and Pathways", International Symposium on "Metabolic Relationship Between Glutamine, Glutamate, and GABA in the CNS", Saskatoon, Canada, July 17-20, 1983.

3. Invited Speaker, “Amino Acid Transmitters in Vertebrate Retina”, University of Washington, Seattle, WA, 1983.

4. Invited Speaker, “Benzodiazepine Receptor and GABA System”, University of Texas Biomedical Branch, Galveston, TX, 1983.

5. Chairman and Speaker, Workshop on “Is Taurine a Transmitter?”, Winter Brain Conference, Steam Boat, CO, 1984.

6. Invited Speaker. “Endocoids for Benzodiazepine Receptors in Brain”, First International Symposium: Endocoids, Fort Worth, TX, 1984.

7. Invited Speaker, “Interaction of GABA and Benzodiazepine in the Mammalian CNS”, Department of Pharmacology, Oxford University, Oxford, England, 1984.

8. Invited Speaker, “Isolation and Purification of Benzodiazepine Receptor and Its Endogenous Ligand”, at International Symposium on “GABA Mechanisms and their Clinical Significance”, Cambridge, England, 1984.

9. Invited Speaker, “Identification of Neurotransmitters in the Mammalian Retina by Combined Immuno-cytochemistry and Autoradiography”, at the VIIth International Congress of Histochemistry and Cyto-chemistry, Helsinki, Finland, 1984.

10. Invited Speaker, “Immunocytochemical and Physiological Identification of Taurine Neurons in Mammalian CNS”, Satellite Symposium of the IUPHAR 9th International Congress of Pharmacology Symposium on “Taurine: Biological Actions and Clinical Perspectives”, Helsinki, Finland, 1984.

11. Session Chairman at the 14th Collegium Internationale Neuropsychopharmacologicum Congress, Florence, Italy, 1984.

12. Invited Speaker at Oxford University on “Amino Acid Transmitters: Localization and Regulation”, Oxford University, England, 1984.

13. Invited Speaker at Oklahoma Medical Research Foundation on ‘Identification of GABAergic Neurons and Their Processes in Mammalian CNS”, Oklahoma City, OK, 1984.

14. Invited Speaker, “Synaptic Chemistry of Amino Acid Neurotransmitters in the Vertebrate Central Nervous System”, at the Department of Biochemistry, The Pennsylvania State University at University Park, PA, 1984.

15. Biochemistry Department Seminar, “Regulation of GABAergic System in the Mammalian CNS”, at The Pennsylvania State University, Hershey, PA, 1984.

16. Pharmacology Seminar, “Benzodiazepine Receptor and its Endogenous Ligand”, at The Pennsylvania State University, Hershey, PA, 1984.

17. Physiology Seminar, “Characterization of Taurine System in the Vertebrate CNS”, at The Pennsylvania State University, Hershey, PA, 1985.

18. Invited Speaker and Chairman at the Tenth Meeting of The International Society for Neurochemistry at the Round Table session on “Endogenous Benzodiazepine Agonists and Antagonists”, Riva del Garda, Italy, 1985.

19. Invited Speaker at the 4th Capo Boi Conference on Neurosciences, "Endogenous Control of Anxiety", Sardinia, Italy, 1985.

20. Invited Seminar Speaker, "GABA System -- Identification and Regulation", Department of Biological Chemistry and Structures, Chicago Medical School, 2/19/86.

21. Invited Symposium Speaker, "Recent Advances in GABA Transmission" in Symposium on "Synaptic Transmission", First SCBA International Symposium and Workshop, San Francisco, CA, 6/29/86-7/1/86.
22. Invited Speaker, "Synaptic Connectivities Involving Amino Acid Transmitters in the Mammalian CNS", Department of Pharmacology, Chicago Medical School, 8/1/86.

23. Invited Speaker, "Taurine System in the Normal and Ischemic Rat Hippocampus" at the 7th International Meeting on Taurine and Related Compounds, Florence, Italy, 10/5/86-10/9/86.

24. Invited Speaker, "Application of Antibodies Against Transmitter Enzymes in Neurobiology", Texas A&M University, 2/9/87.

25. Invited Symposium Speaker, "Amino Acid Neurotransmitters in the Vertebrate Retina", Satellite Symposium on "Extracellular and Intracellular Messengers in the Vertebrate Retina", Caracas Venezuela, 5/30/87-5/31/87.

26. Invited Speaker, "Benzodiazepine and GABA Systems in the Mammalian CNS", Baylor College of Medicine, Houston, Texas, 6/17/87.

27. Invited Speaker and Co-Chairman of Neurochemistry Workshop, Taipei, Taiwan, 7/29/87-8/14/87.

28. Invited Speaker, "Mode of Action of Amino Acid Transmitters in Mammalian CNS", Taiwan University, Institute of Biochemistry, 7/28/87.

29. Invited Speaker, "Mode of Action of Benzodiazepine", Taiwan University, Department of Anesthesia, 8/10/87.

30. Invited Speaker, "Synaptic Chemistry of GABAergic Transmission", Yang-Ming College, Taipei, Taiwan, 8/12/87.

31. Invited Speaker, "Mode of Regulatory Mechanism of GABA System in Mammalian CNS", Academia Sinica Institute of Biomedical Sciences, Taipei, 8/13/87.

32. Invited Symposium Speaker on "Amino Acid Neurotransmitters", Satellite Symposium of Xth International Congress of Pharmacology, Canberra, Australia, 8/19/87-8/21/87.

33. Invited Speaker, "The International Symposium of Neurotransmitter Receptors-Receptor Mechanisms of Neurotransmitters and Neuropeptides", Hiroshima, Japan, 10/6/87-10/9/87.

34. Invited Speaker on "Glutamic Acid Decarboxylase (GAD): New Insights into Molecular Structure, Function, and Distribution", The Neuroscience Institute of The Neuroscience Research Program, The Rockefeller University, 10/25/87-10/26/87.

35. Invited Speaker on "Endogenous Control of Anxiety", at the Symposium of "Recent Progress in Neuroscience", Academia Sinica, 12/17/87-12/19/87.

36. Invited Symposium Speaker on "Taurine", Annual Meeting of American Nutrition Society, Las

Vegas, May, 1988.

37. Invited Speaker on "A Chemist's View of Neuroscience - A Look at GABA System" at Chun Yuan University, February, 1989.

38. Invited Speaker on "Amino Acid Receptors - Purification and Endogenous Regulation" and "The Role of Taurine in the Mammalian CNS", at National Taiwan University, College of Medicine, March, 1989.

39. Invited Speaker on "Synaptic Circuitry and Control of GABA System", at Chinese Defense Medical College, March, 1989.

40. Invited Speaker on "The Role of Taurine in the Excitable Tissue" at the Academia Sinica, Taipei, Taiwan, R.O.C., March, 1989.

41. Invited Special Speaker on "GABAergic System - Synaptic Connectivities and Regulation", and "Taurine System in the Mammalian CNS", at Universidad Nacional de Educacion a Distancia, Madrid, Spain, April, 1989.

42. Invited Speaker on "Taurine Receptor in the Mammalian CNS", at the International Symposium of "Functional Neurochemistry of Taurine", Huelva, Spain, April 19-22, 1989.

43. Invited Speaker on "Brain Glutamate and GABA Receptors - Purification and Endogenous Modulation" at the International Symposium on Neurotransmission and Signal Transduction, Taipei, Taiwan, October 16-18, 1989.

44. Invited Speaker at "Third International Symposium of Neurotransmitter Receptors", Hiroshima, Japan, February 5-8, 1990.

45. Invited Speaker at Symposium on "Inhibitory Amino Acid Transmitters", Tucson, Arizona, March 1-3, 1990.

46. Invited Speaker on "Endogenous ligands for GABA and glutamate receptors" at The Frederick E. Samson Symposium on Neurochemistry, Toxic and Trophic Effect of Neuronal Stimulation, Kansas City, Kansas, Oct. 26-27, 1990.

47. Co-Chairman, Symposium on "Signal Transduction and Neuronal Functions" at the Joint Meeting of the American Physiology Society and the Chinese Physiology Society, Taipei, Taiwan, Nov. 2-5, 1990.

48. Invited Speaker on "Endogenous modulators for taurine, GABA, and L-glutamate receptors", at the International Society for Developmental Neuroscience Satellite Symposium on "Neuroactive Amino Acids as Developmental Signals in the Nervous System", Cancun, Mexico, June 24-26, 1990.

49. Invited Speaker on "Regulation of GABA System", at Beckmann Research Institute, City of Hope National Medical Center, Duarte, California, March 11, 1991.

50. Invited Speaker on "Synaptic Interaction and Regulation of GABA System in the Mammalian CNS" at NASA-Ames Research Center, Moffett Field, California, March 15, 1991.

51. Invited Speaker on "Synaptic Circuitry and Mechanism of Regulation of GABA System in the Brain" at University of Missouri, Kansas City, Missouri, May 23, 1991.

52. Invited Speaker on "Recent Advances in GABA/Benzodiazepine System" at National Cheng Kun University Medical School, Tainan, Taiwan, July, 1991.

53. Invited Speaker on "Structure and Function of GABA System in Mammalian CNS" at Chang Gun Medical College, Tao Yuan, Taiwan, July, 1991.

54. Invited Speaker on "Taurine receptor and its regulation in the mammalian brain" at the International Symposium on "Taurine", Mobile, Alabama, Oct., 1991.

55. Invited Speaker on "Two Decades in the Wonderland" at award ceremony of First President Award of Chinese Neuroscience Society, New Orleans, LA, Nov. 12, 1991.

56. Invited Speaker on "The role of amino acid neurotransmitters in stroke" at the "Symposium on Stroke and Atherosclerosis", April 23-27, 1992, Kaohsiung, Taiwan.

57. Invited Speaker on "Amino acid neurotransmitters and stroke" at the "Annual Meeting of Gerontology and Aging", April 26, 1992, Taipei, Taiwan.

58. Invited Speaker on "Synaptic circuitry and mode of regulation of GABA system in mammalian CNS" at Kansas State University, Manhattan, KS, Nov. 23, 1992.

59. Invited Speaker on "Amino acid neurotransmitters: GABA as a model system" at Taipei Medical College, Taipei, Taiwan, Dec. 15, 1992.

60. Invited Speaker on "GABAergic neurotransmission: Synaptic circuitry and mode of regulation" at University of Missouri, Columbia, MO, April 26, 1993.

61. Invited Speaker on "Regulation of GABA system by protein phosphorylation/dephosphorylation" at Pennsylvania State University, Hershey Medical Center, Hershey, PA, May 17, 1993.

62. Seminar Speaker on "L-Glutamate decarboxylase-mode of regulation and its relation to insulin-dependent diabetes mellitus" Joint Biochemistry/Physiology & Cell Biology Seminar at University of Kansas, Lawrence, KS, Sept. 13, 1993.

63. Invited Seminar Speaker on "Structure and function of L-glutamate decarboxylase" at University of Texas Medical Branch, Galveston, TX, Nov. 17, 1993.

64. Invited Speaker on "Endogenous modulators of $GABA_A$ and taurine receptors: Isolation, purification and characterization" at the International Symposium on "Taurine", Cologne, Germany, August 29 - September 1, 1993.

65. Invited Speaker and Chairman on "Membrane L-glutamate decarboxylase and its relation to insulin-dependent diabetes mellitus" at the 25th annual meeting of American Society for Neurochemistry, Colloquium on "Structure and Function of GABA Enzymes." March 5-9, 1994.

66. Invited Seminar Speaker on "Mechanism of excitatory amino acid mediated signal transduction in cultured neurons" at Taipei Medical College, Taipei, Taiwan, June 2, 1994.

67. Invited Seminar Speaker on "Role of protein phosphorylation/dephosphorylation on the regulation of brain L-glutamate decarboxylase" at National Taiwan University, Taipei, Taiwan, June 6, 1994.

68. Invited Seminar Speaker on "Mechanism of excitatory amino acid-mediated neurotoxicity in cultured neurons" at Ying Ming Medical College, Taipei, Taiwan, June 8, 1994.

69. Invited Seminar Speaker on "Studies of EAA-mediated neuronal death in cultured neurons" at Chang Gung College of Medicine & Technology, Taoyuan, Taiwan, June 10, 1994.

70. Invited Seminar Speaker on "A novel form of L-glutamate decarboxylase and its role in type I diabetes" at Academia Sinica, Taipei, Taiwan, June 15, 1994.

71. Invited Speaker and Chairman on "Regulation of brain L-glutamate decarboxylase by protein phosphorylation/dephosphorylation" at the Symposium on "Neurotransmission and Neurological Disorder", Taipei, Taiwan, June 19, 1994.

72. Invited Speaker and Chairman on "L-Glutamate decarboxylase as an autoantigen in insulin-dependent diabetes mellitus and stiff-man syndrome" at the Symposium on "Neurotransmission and Neurological Disorders", Taipei, Taiwan, June 19, 1994.
73. Invited Speaker on "Biphasic Function of Taurine on Glutamate-induced Neurotoxicity in Cultured Neurons" at International Taurine Symposium N95, Taurine-Basic and Clinical Aspects. June 27-July 1, 1995, Osaka, Japan.

74. Invited Speaker on "A novel form of membrane L-glutamate decarboxylase as a major autoantigen in insulin-dependent diabetes mellitus" at International GABA Symposium N95, July 7-10, 1995, Kobe, Japan.

75. Invited Speaker on "Role of calcium and chloride in excitatory amino acid-induced neurotoxicity" at International Symposium on Excitatory Amino Acid Signaling, July 15-18, 1995, Kyoto, Japan.

76. Chairman and Speaker, Symposium on "Mechanism on Neuronal Degeneration" at American Society for Neurochemistry 27th Annual Meeting, March 2-6, 1996, Philadelphia, PA.

77. Invited Seminar Speaker at KU Medical Center. Mental Retardation Center and Neuroscience KC Chapter, "Regulation of amino acid neurotransmitters synthesis in the brain", September 26, 1996.

78. Invited Speaker at Office of Naval Research on "Neuroprotective Functions of Taurine and DETC-MeSO", October 10, 1996.

79. Invited Seminar Speaker at Taipei Medical College, Department of Physiology, "Taurine: Mode of Action and Regulation of its Biosynthesis", November 11, 1996.

80. Invited Seminar Speaker at Chang Gung Medical School, Department of Anatomy, "Role of Protein Phosphorylation in the Regulation of GABA Synthesis", November 08, 1996.

81. Invited Speaker on "DETC-MESO: A glutamate antagonist and neuroprotective agent." At Scheim Pharmaceutical, Inc. Florham Park, N.J. May 30, 1997.

82. Invited Speaker at Beckman Research Institute, City of Hope National Medical Center, Duarte, Calif. "Protein phosphorylation and regulation of GABA and taurine biosynthesis in the brain" June 12, 1997.

83. Invited Speaker on "Regulation of taurine biosynthesis and its physiological significance in the brain" at International Taurine, Symposium 197, July 15-19, 1997, Tucson, Arizona.

84. Invited Speaker on "Neurorescue by the novel glutamate antagonist-DETC-MeSO" at NORAM Foundation International Symposium - Cell and Gene Therapy for Parkinson's Disease and Other

Neurological Disorders, October 9-13, 1997, Beijing, China.

85. Invited Speaker on "Amino acid transmitters and neurodegenerative diseases" at Institute of Biochemistry, National Taiwan University, Taipei, Taiwan, October 21, 1997.

86. Invited Speaker on "A novel approach towards prevention of neurodegenerative disorders" at Institute of Biomedical Sciences, Academia Sinica, Taipei, Taiwan, November 6, 1997.

87. Invited Speaker on "A novel therapeutic approach to neurodegenerative diseases" at Kansas Medical Association Continuation Education, March 21, 1998, Topeka, Kansas.

88. Invited Speaker on "Neurorescue by taurine and a novel glutamate antagonist, DETC-MeSO" at Washington University Neurology-Neurosurgery Research Seminar, St. Louis, MO., April 20, 1998.

89. Invited Speaker on "Protein phosphorylation and amino acid neurotransmitters biosynthesis in the brain" at National Health Research Institute (NHRI), Taipei, Taiwan, June 19, 1998.

90. Invited Speaker on "Novel mechanisms of taurine and DETC-MeSO as neuroprotective agents" at Pig Research Institute Taiwan, Chunan, Taiwan, June 16, 1998.

91. Invited Speaker on "Neurodegenerative Diseases:Molecular basis and therapeutic intervention" at Chung Yuan University, Chung Li, Taiwan, July 8, 1998.

92. Invited Speaker on "Regulation of GABA and taurine biosynthesis by stimulation coupled protein phosphorylation" at Cheng Kung University, Tainan, Taiwan, July 20, 1998.

93. Invited Speaker on "Activation coupled protein phosphorylation and synthesis of GABA and taurine in the brain" at Yang-Ming University, Taipei, Taiwan, July 31, 1998.

94. Invited Plenary Lecturer on "Mode of action of taurine and regulation dynamics of its synthesis in the CNS" at Taurine Symposium N99, August 3-8, 1999, Certosa of Pontignano, Italy.

95. Invited Seminar Speaker on "Coupling of GABA biosynthesis and GABA packaging in synaptic vesicles" at Institute of Biological Chemistry, Academia Sinica, Taipei, Taiwan on May 24, 1999.

96. Chairman, U.S. - Taiwan Neuroscience Symposium on "Opioids and Opioid Receptors" in Miami Beach, October 23, 1999.

97. Invited Plenary Speaker on "An overview on amino acid neurotransmission" at the 2nd Society for Neuroscience, Guangdong, China, January 5-7, 2000.

98. Invited Plenary Speaker on "Taurine: Mode of action as a neuroprotective agent" at the 2nd Society for Neuroscience, Guangdong, China, January 7, 2000.

99. Invited Seminar Speaker on "New strategy in drug development-DETC-MeSO as a model" at the First Military Medical University, Guangzhou, China, January 7, 2000.

100. Invited Seminar Speaker for Distinguished Seminar Series on "Anchoring mechanism of GABA enzymes to synaptic vesicles and the dynamics of its regulation" at the Department of Physiology and Neuroscience Group, Taipei Medical College, Taipei, Taiwan, January 11, 2000.

101. Invited Seminar Speaker on "Coupling of GABA synthesis and GABA transport to synaptic vesicles: A hypothesis" at Chang Gung Medical University, Tao Yuan, Taiwan, January 12, 2000.

102. Invited Chairman and Speaker on "Mode of action of taurine and its clinical perspectives" at the American Society for Neurochemistry/Annual Meeting in Chicago, IL on March 28, 2000.

103. Invited Speaker on "Regulation of GABA and taurine systems by nitric oxide". Satellite Symposium on "Nitric Oxide". Society for Neuroscience, Nov. 4, 2000.

104. Invited Symposium Speaker on "Mode of action of DETC-MeSO and Acamprosate as anti-alcohol agents" at the International Symposium on Alcohol, Taipei, Taiwan, July 8-12, 2000.

105. Invited Speaker on "Dynamics of neurotransmitter synthesis and packaging" at University of Illinois Medical Center, Chicago, IL, March 22, 2001.

106. Invited Speaker on "A functional coupling of GABA synthesis and packaging into synaptic vesicles" at Texas Tech University Medical Center, Lubbock, TX, June 28, 2001.

107. Invited Speaker on "Regulation of GABA biosynthesis in the brain and development of a neuroprotective agent" at Florida Atlantic University, Biomedical Program, Boca Raton, FL, July 11, 2001.

108. Plenary Speaker on "A functional and structural coupling of neurotransmitter synthesis and packaging in synaptic vesicles" at the International Symposium on Neurotransmitters and Receptors, Zhuhai, China, January 18-20, 2002.

109. Keynote Speaker on "Structural and functional coupling between neurotransmitter synthesis and packaging into synaptic vesicles" at the Choh Hao Li Memorial Lecture, Institute of Biological Chemistry, Academia Sinica, April 22, 2002.

110. Invited Speaker on "Role of taurine on regulation of calcium-dependent protein kinase activity" at the International Taurine Symposium, Kauai, Hawaii, September 20-23, 2002.

111. Invited Speaker on "Mechanism of neurotransmitter GABA synthesis and packaging in the brain" at the Department of Med. Chemistry and Pharmaceutics, University of Kentucky, Lexington, KY, November 15, 2002.

112. Invited Speaker on "A novel approach for discovery and development of new medicine from natural sources" at The 2nd Taiwan-America Biotech conference & Exhibition, Nov. 13-15, 2003 Taipei, Taiwan.

113. Invited Speaker on "Metabolism-based drug discovery and development" at Chia-Yi National University, Chia-Yi, Taiwan, Nov. 17, 2003.

114. Invited Speaker on "A novel mechanism for neurotransmitter synthesis and packaging in the brain" at 10th Anniversary of Journal of Biomed. Sci. Symposium, Nov. 20, 2003, Kaohsiung, Taiwan

115. Invited Speaker on " Structure and function of human brain L-glutamate decarboxylase" at 10th Anniversary of Journal of Biomedical Science Symposium, Nov. 22, 2003, Taipei, Taiwan

116. Invited Public Lecture on "Brain mystery and the prospect for therapeutic intervention for neurodegenerative diseases", January 8, 2005, Chang-Hwa, Taiwan.

117. Invited Seminar Speaker on "Novel approaches for new drug discovery and development", January

10, 2005, Da-Yeh University, Chang-Hwa, Taiwan.

118. Invited Seminar Speaker on "Mechanism of GABA synthesis and transport into synaptic vesicles", January 12, 2005, National Sun-Yet Sen University, Kaohsiung, Taiwan.

119. Invited Seminar Speaker on "A coupling mechanism in synthesis and transport of GABA and acetylcholine in mammalian brain", January 14, 2005, Academia Sinica, Taipei, Taiwan.

120. Invited Seminar Speaker on "Regulation of the GABAergic system: a proteomics approach". January 17, 2005, National Health Research Institute, Taiwan.

121. Invited Seminar Speaker on "Role of cysteine in regulation of brain glutamate decarboxylase" April 1, 2005, Academia Sinica, Taipei, Taiwan.

122. Invited Seminar Speaker on "Mechanism of neuroprotective function of taurine and DETC-MeSO", April 6, 2005, Chuang San Medical University, Taichuang, Taiwan.

123. Invited Special Lecture on "Activity-dependent regulation of GABA synthesis in the brain", Neuroplasticity Symposium, October 22-23, 2005, Taipei Medical University, Taipei, Taiwan.

124. Invited Seminar Speaker on "Mechanism of regulation of GABAergic neurotransmission in the brain" October 21, 2005, Institute of Biomedical Science, Academia Sinica, Taipei, Taiwan.

125. Invited Speaker on "Neurotransmission and Neurological Disorders-An overview" at Fudan University, December 17-21, 2005, Shanhai, China.

126. Invited Speaker on "Molecular basis of regulation of GABA neurotransmission." February 5-12, 2006.Academia Sinica, Taipei, Taiwan

127. Invited Speaker on " Industry/Academia Scientific Collaboration- Benefit and Pitfalls" at 6th Annual Biotech Conference on " New Frontiers in Bioscience", Florida Atlantic University, Boca Raton, FL., April 4, 2007.

128. Invited Speaker on "Mechanism of Neuroprotective Function of Taurine" at the 16th International Taurine Meeting "Taurine for Future Healthcare" September 2-5, 2007, Shimoda, Shizuoka, Japan**.**

129 Invited Speaker on "Industry/Academia Scientific Collaboration - Benefit and Pitfalls" at 6th Annual Biotech Conference on " New Frontiers in Bioscience", Florida Atlantic University, Boca Raton, FL., April 4, 2007.

130 Invited Seminar Speaker on "Mechanism of treatment of Parkinson's Disease by G-CSF" November 15, 2007, Institute of Biomedical Science, Academia Sinica, Taipei, Taiwan.

131. Invited Special Lecture on "Mechanism and therapy of G-CSF in Parkinson's Disease", November 12, 2007, Taipei Medical University, Taipei, Taiwan.

132.Invited Special Lecture on "Molecular basis of regulation of GABA neurotransmission", November 13, 2007, Taipei Medical University, Taipei, Taiwan.

133.Invited Special Lecture on "Problem/Case-based learning in medical education", November

15, 2007, Taipei Medical University, Taipei, Taiwan.

134 Invited Speaker on Stem Cell Round Table Discussion at Tzu-Chi University, Hua-Lien, Taiwan, June 27, 2008.

134. Invited Speaker at International Symposium on "Glutamate in the Tripartite Synapse" to be held in Wierzba, Poland, August 23-27, 2008.

Invited seminar, symposium speaker, plenary speaker study section grant review etc are no longer listed after 2008. (Available upon request)

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1. Wu, J.-Y. and Yang, J.T. Physicochemical characterization of citrate synthase. *J. Biol. Chem.* 245:212-218, 1970.

2. Wu, J.-Y. and Yang, J.T. Effect of salts and organic solvents on the activity of citrate synthase. *J. Biol. Chem.* 245:3561-3564, 1970.

3. Leitzmann, C., Wu, J.-Y., and Boyer, P.D. Subunits, composition, and related properties of succinyl CoA synthetase. *Biochemistry* 9:2338-2346, 1970.

4. Wu, J.-Y. The role of glutamate decarboxylase in the function of GABA as a transmitter. *Federation Proceedings* 32:1454-1455, 1973.

5. Wu, J.-Y., Matsuda, T., and Roberts, E. Purification and characterization of glutamate decarboxylase from mouse brain. *J. Biol. Chem.* 248:3029-3034, 1973.

6. Matsuda, T., Wu, J.-Y., and Roberts, E. Immunochemical studies on glutamic acid decarboxylase from mouse brain. *J. Neurochem.* 21:159-166, 1973.

7. Matsuda, T., Wu, J.-Y., and Roberts, E. Electrophoresis of glutamic acid decarboxylase (EC 4.1.1.15) from mouse brain in sodium-dodecyl sulphate polyacrylamide gels. *J. Neurochem.* 21:167-172, 1973.

8. Schousboe, A., Wu, J.-Y., and Roberts, E. Purification and characterization of the 4-aminobutyrate-2-ketoglutarate transaminase from mouse brain. *Biochemistry* 12:2868-2873, 1973.

9. Saito, K., Schousboe, A., Wu, J.-Y., and Roberts, E. Some immunochemical properties and species specificity of GABA-á-ketoglutarate transminase from mouse brain. *Brain Res.* 65:287-296, 1974.

10. Saito, K., Wu, J.-Y., and Roberts, E. Immunochemical comparisons of vertebrate glutamate decarboxylase. *Brain Res.* 65:277-285, 1974.

11. Saito, K., Barber, R., Wu, J.-Y., Matsuda, T., Roberts, E., and Vaughn, J.E.

Immunohistochemical localization of glutamic acid decarboxylase in rat cerebellum. *Proceedings National Academy of Science USA* 71:269-273, 1974.

12. Wong, E., Schousboe, A., Saito, K., Wu, J.-Y., and Roberts, E. Immunochemical studies of brain glutamate decarboxylase and GABA-transaminase of six inbred strains of mice. *Brain Res.* 68:133-139, 1974.

13. McLaughlin, B.J., Wood, J.G., Saito, K., Barber, R., Roberts, E., and Wu, J.-Y. Fine structural localization of glutamic acid decarboxylase in adult and developing cerebellum on rodents. *Anatomical Record* 178:407-408, 1974.

14. McLaughlin, B.J., Wood, J.G., Saito, K., Barber, R., Vaughn, J.E., Roberts, E., and Wu, J.-Y. The fine structural localization of glutamate decarboxylase in synaptic terminals of rodent cerebellum. *Brain Res.* 76:377-391, 1974.

15. Wu, J.-Y. and Roberts, E. Properties of brain L-glutamate decarboxylase: Inhibition studies. *J. Neurochem.* 23:759-767, 1974.

16. Schousboe, A., Wu, J.-Y., and Roberts, E. Subunit structure and kinetic properties of 4-aminobutyrate-2-ketoglutarate transaminase purified from mouse brain. *J. Neurochem.* 23:1189-1195, 1974.

17. McLaughlin, B.J., Wood, J.G., Saito, K., Roberts, E., and Wu, J.-Y. The fine structural localization of glutamate decarboxylase in developing axonal processes and presynaptic terminals of rodent cerebellum. *Brain Res.* 85:355-371, 1975.

18. McLaughlin, G.J., Barber, R., Saito, K., Roberts, E., and Wu, J.-Y. Immunocytochemical localization of glutamate decarboxylase in rat spinal cord. *J. Comp. Neur*. 164:305-322, 1975.

19. Chude, O. and Wu, J.-Y. A rapid method for assaying enzymes whose substrates and products differ by charge. Application to brain L-glutamate decarboxylase. *J. Neurochem.* 27:83-86, 1976.

20. Wu, J.-Y., Saito, K., Wong, E., Roberts, E., and Schousboe, A. Properties of L-glutamate decarboxylase from brains of adult and newborn mice. *J. Neurochem.* 27:653-659, 1976.

21. Wu, J.-Y. Comparative study of L-glutamate decarboxylase from brain and heart with purified preparations. *J. Neurochem.* 28:1359-1367, 1977.

22. Brandon,. and Wu, J.-Y. Purification and properties of choline acetyltransferease from torpedo Californica. *J. Neurochem.* 30:791-797, 1978.

23. Wu, J.-Y., Moss, L.G., and Chude, O. Distribution and tissue specificity of 4-aminobutyrate-2-oxoglutarate amino-transferease. *Neurochem. Res.* 3:207-219, 1978.

24. Wu, J.-Y., Chude, O., Wein, J., and Roberts, E. Distribution and tissue specificity of glutamate decarboxylase. *J. Neurochem.* 30:849-857, 1978.

25. Wu, J.-Y. Microanalytical methods for neuronal analysis. *Physiol. Rev.* 58(4):863-904, 1978.

26. Wu, J.-Y., Moss, L.G., and Chen, M.S. Tisssue and regional distribution of cysteic acid decarboxylase in bovine brain. A new assay method. *Neurochem. Res.* 4:201-212, 1979.

27. Chude, O., Roberts, E., and Wu, J.-Y. Partial purification of drosophila glutamate decarboxylase. *J. Neurochem.* 32:1409-1415, 1979.

28. Chan-palay, V., Wu, J.-Y., and Palay, S.L. Immunocytochemical localization of ?-aminobutyric acid transaminase at cellular and ultrastructure levels. *Proc. Natl. Acad. Sci. USA* 76:2067-2071, 1979.

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30. Su, Y.T.T., Wu, J.-Y., and Lam, D.M.K. Purification of L-glutamic acid decarboxylase from catfish brain. *J. Neurochem.* 33:169-179, 1979.

31. Wu, J.-Y., Bird, E.D., Chen, M.S., and Huang, W.M. Abnormalities of neurotransmitter enzymes in Huntington's chorea. *Neurochem. Res.* 4:575-586, 1979.

32. Brandon, C., Lam, D.M.K., and Wu, J.-Y. The ∀-aminobutyric acid system in rabbit retina: Localization by immunocytochemistry and autoradiography. *Proc. Natl. Acad. Sci. USA* 76:3557-3561, 1979.

33. Wu, J.-Y., Welch, K.M.A., and Duncan, C.C. Abnormal proteins in multiple sclerosis. *Neurochem. Res.* 4:811-820, 1979.

34. Chan-Palay, V., Palay, S.L., and Wu, J.-Y. Gamma-aminobutyric acid pathways in the cerebellum studied by retrograde and anterograde transport of glutamic acid decarboxylase antibody after *in vivo* injections. *J. Anat. Embryol.* 157:1-14, 1979.

35. Wu, J.-Y. Properties of L-glutamate decarboxylase from non-neuronal tissues. *Brain Res. Bull.* 5 (Suppl. 2):31-36, 1980.

36. Wu, Y.-Y., Su, Y.Y.T., Lam, D.M.K., Brandon, C., and Denner, L. Purification and regulation of L-glutamate decarboxylase. *Brain Res. Bull.* 5 (Suppl. 2):63-70, 1980.

37. Brandon, C., Lam, D.M.K., Su, Y.Y.T., and Wu, J.-Y. Immunocytochemical localization of GABA neurons in the rabbit and frog retina. *Brain Res. Bull.* 5 (Suppl. 2):21-29, 1980.

38. Su, Y.Y.T., Wu, J.-Y., and Lam, D.M.K. Purification and some properties of choline acetyltransferase from catfish brain. *J. Neurochem.* 34:438-445, 1980.

39. Lam, D.M.K., Marc, R.E., Sarthy, P.V., Chin, C.A., Su, Y.Y.T., Brandon, C., and Wu, J.-Y. Retinal organization-neurotransmitters as physiological probes. *Neurochemistry* 1:183-191, 1980.

40. Schousboe, A., Saito, K., and Wu, J.-Y. Characterization and cellular/subcellular localization of GABA-transaminase. *Brain Res. Bull.* 5 (Suppl. 2):71-76, 1980.

41. Lam, D.M.K., Su, Y.Y.T., Brandon, C., Wu, J.-Y., Marc, R.E., and Lasater, E.M. GABAergic horizontal cells in the teleost retina. *Brain Res. Bull.* 5 (Suppl. 2):137-140, 1980.

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44. Wu, J.-Y., Welch, K.M.A., Duncan, C.C., and Lin, C.T. The demyelinating factor(s) in multiple sclerosis. *Int. J. Rehab. Res.* 3(4):566-567, 1980.

45. Mohler, H., Richards, J.G., and Wu, J.-Y. Autoradiographic localization of benzodiazepine receptors in immunocytochemically identified GABAergic synapses. *Proc. Natl. Acad. Sci. USA* 78:1935-1938, 1981.

46. Gottesfeld, Z., Brandon, C., and Wu, J.-Y. Immunochemistry of glutamate decarboxylase in the deafferented habenula. *Brain Res.* 208:181-186, 1981.

47. Garbern, J.-Y. and Wu, J.-Y. Purification and characterization of clathrin from bovine brain. *J. Neurochem.* 36:602-612, 1981.

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215. Wu, J.-Y. A coupling mechanism between neurotransmitter synthesis and storage. Abstract, JBS Symposium, November 22-23, 2003.

216. Wu, J.-Y., and Wei, J. Cysteine 446 is crucial for human glutamate decarboxylase(GAD), GAD65 activity. Abstract of Amer. Soc. For Neurochem Annual Meeting, August 14-18, 2004.

Abstracts after 2004 are no longer included in the CV. They will be available upon request.

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Research Interests

Artificial Intelligence, large scale machine learning, and data mining
Real-time analytics and decision support systems
Biomedical, bioinformatics, and health information systems

Employment

- August 2018 — Professor, Dept. of Computer & Electrical Engineering and Computer Science, Florida Atlantic University, FAU, Boca Raton, FL 33431, USA
- August 2012 — Associate Professor, Dept. of Computer & Electrical Engineering and Computer Science, Florida Atlantic University, FAU, Boca Raton, FL 33431, USA

Research Grants (Award Total: $6,326,557.0; PI Amount: $1,621,876.0)

List of Projects as the Principal Investigators (recent five years)

1. RAPID: COVID-19 Coronavirus Testbed and Knowledge Base Construction and Personalized Risk Evaluation
   Xingquan Zhu (PI), Michael DeGiorgio (Co-PI), Massimo Caputi (Co-PI)
   Sponsor: National Science Foundation (NSF) Duration: 2020-2021 Amount: $90,000
2. Artificial Intelligence for Tackling Online Cruelty, Toxicity, and Bullying
   Xingquan Zhu (PI), Sameer Hinduja (Co-PI), Borivoje Furht (Co-PI), and Kevin Lanning (Co-PI)
   Sponsor: FAU College of Eng. & Computer Science Duration: 2020-2021 Amount: $25,000
3. MRI: Acquisition of Artificial Intelligence & Deep Learning (AIDL) Training and Research Laboratory
   Xingquan Zhu (PI), Taghi Khoshgoftaar (Co-PI), Dimitris Pados (Co-PI), Hanqi Zhuang (Co-PI), and Laurent Cherubin (Co-PI)
   Sponsor: National Science Foundation Duration: 2018-2021 Amount: $652,850
4. III: Medium: Collaborative Research: KMELIN: Knowledge Mining and Embedding Learning for Complex Dynamic Information Networks
   Xingquan Zhu (PI), Ankur Agarwal (Co-PI), and Dingding Wang (Co-PI)
   Sponsor: National Science Foundation Duration: 2018-2022 Amount: $599,983
5. Real-Time Bidding Price Optimization **Xingquan Zhu** (PI)
   Sponsor: Bidtellect.com Duration: 2016 – 2019 Amount: $89,915
6. NSF I/UCRC: Machine Learning Algorithms for Uses Cases in Auto Industry
   Xingquan Zhu (PI) and Borko Furht
   Sponsor: NSF (FAU I/UCRC, JM Family) Duration: 2016 – 2017 Amount: $39,809
7. RED-CAKE: Novel Data Mining Approaches for Knowledge Based Skill Matching for Employers (research study) **Xingquan Zhu** (PI) and Borko Furht (Co-PI)
   Sponsor: NSF (FAU I/UCRC, incVersity) Duration: 2014 Amount: $ 5,000

Keynote Speech

- ITExpo Panel on AI & Cybersecurity, February 19 2020. Ft Lauderdale, FL, USA
- *IEEE DSC 2017 Workshop on Data Science and Web Analytics*, June 26, 2017, Shenzhen, China.
- Data Mining track of the *30th Florida Artificial Intelligence Research Society annual conference* (FLAIRS-30), May 16-18, 2016, Key Largo, Florida, USA
- *IEEE ICDM 2014 Workshop on Scalable Data Analytics: Theory and Applications*, Dec. 14-17, 2014, Shenzhen, China.
- *The First International Conference on Data Science*, May 27-28, 2014, Beijing, China.

Tutorial

- *The 2nd IEEE International Conference on Data Science in Cyberspace*, June 26-29, 2017, Shenzhen, China.
    - Title: Data Science in Online Digital Advertising

Conference Panellist

- *ITExpo Panel on AI & Cybersecurity*, February 19 2020. Ft Lauderdale, FL, USA
- *Florida International University Critical Technology and Intelligence Summit*, Jack D. Gordon Institute for Public Policy, Florida International University, Miami, FL, September 17 2019.

Best Paper Award

- M. Wu, S. Pan, and X. Zhu, OpenWGL: Open-World Graph Learning, Proc. of the 20th IEEE International Conference on Data Mining, Sorrento, Italy, Nov 17-23, 2020 **(Best Student Paper Award)**
- Z. Gharibshah and X. Zhu, TriNE: Network Representation Learning for Tripartite Heterogeneous Networks, Proc. Of the 11th IEEE International Conference on Knowledge Graph (ICKG-2020), August 9-11, 2020, Nanjing China **(Best Student Paper Award)**
- G. Rasario, T. Sonderman, and **X. Zhu**, Deep Transfer Learning for Traffic Sign Recognition, *IEEE International Conference on Information Reuse and Integration (IRI-2018)*, July 6-9, 2018, Salk Late City, USA **(Best Paper Award)**
- L. Chi, B. Li, and **X. Zhu**, Fast Graph Stream Classification Using Discriminative Clique Hashing, Proc. Of the 17th Pacific-Asia Conference on Knowledge Discovery and Data Mining (PAKDD-2013), April 14-17, Brisbane, Australia. **(Best Paper Award)**
- M. Fang and **X. Zhu**, I Don't Know the Label: Active Learning with Blind Knowledge, Proc. Of the 21st International Conference on Pattern Recognition (ICPR-12), November 11-15, 2012, Tsukuba, Japan. **(Best Student Paper Award)**
- Y. Zhang, **X. Zhu**, X. Wu, and J. P. Bond, ACE: An Aggressive Classifier Ensemble with Error Detection, Correction and Cleansing, *Proc. of the 17th IEEE International Conference on Tools with Artificial Intelligence (ICTAI)*, Hong Kong, November 14-16, 2005. (**Best Paper Award**)

IEEE Digital Library Most Popular Papers

- Xindong Wu, **Xingquan Zhu**, Gong-Qing Wu, Wei Ding: Data Mining with Big Data. *IEEE Transactions on Knowledge and Data Engineering*, 26(1): 97-107, 2014.
  Cited over 2,923 times, and No. 4 most popular article (evidenced in the Scholarly citations)
- Daokun Zhang, Jie Yin, **Xingquan Zhu**, and Chengqi Zhang, Network Representation Learning: A Survey, IEEE Trans. On Big Data, 6(1):3-28, 2020.
  Ranked No. 1 most popular article (evidenced in the Scholarly citations)

Award and Membership

- Outstanding Engineering Achievement Merit Award: The Engineers' Council, 2019
- Excellence in Research Award (Senior Faculty): College of Engineering and Computer Science, Florida Atlantic University, 2019
- IEEE Senior Member, 2012

Selected Publications（105 journal articles and 160 conference proceeding papers）

Selected Books:

- **Xingquan Zhu**, Haicheng Tao, Zhiang Wu, Jie Cao, Kris Kalish, and Jeremy Kayne, *Fraud Prevention in Digital Advertising*, Springer Briefs in Computer Science, ISBN 978-3-319-56792-1, 2017.
- **X. Zhu**, R. Alhajj, T. Khoshgoftaar, and N. Bourbakis, Proceedings of the IEEE 14th International Conference on Bioinformatics and Bioengineering, Boca Raton, FL, USA, Nov. 10-12, November 2014.

Selected Journal Articles (Peer Reviewed):

1. Min Shi, Yufei Tang, **Xingquan Zhu**, Jianxun Liu, and Haibo He, Topical Network Embedding, *Data Mining and Knowledge Discovery*, 34:75-100, 2020.
2. Huimei Han, **Xingquan Zhu**, and Ying Li, Generalizing Long Short-Term Memory Network for Deep Learning from Generic Data. *ACM Trans. on Knowledge Discovery from Data*. 14(2):13:1-13:28, 2020.
3. Min Shi, Yufei Tang, and **Xingquan Zhu**, MLNE: Multi-Label Network Embedding, *IEEE Trans. on Neural Network and Learning Systems*, 31(9): 3682-3695, 2020.
4. Haishuai Wang, Jia Wu, **Xingquan Zhu**, Yixin Chen, and Chengqi Zhang, Time-Variant Graph Classification, *IEEE Trans. on Systems, Man, and Cybernetics: Systems*, 50(8): 2883-2896, 2020.
5. Daokun Zhang, Jie Yin, Xingquan Zhu, Chengqi Zhang, Netowork Representation Learning: A Survey, IEEE Trans. On Big Data, 6(1): 3-28, 2020.
6. Min Shi, Yufei Tang, Xingquan Zhu, Jianxun Liu, Topic-aware Web Service Representation Learning, ACM Trans. On Web, 14(2): 9:1-9:23, 2020.
7. Ting Guo, Shirui Pan, **Xingquan Zhu**, Chengqi Zhang, CFOND: Consensus Factorization for Co-Clustering Networked Data. *IEEE Trans. Knowledge & Data Engineering*, 31(4): 706-719 (2019)
8. Daokun Zhang, Jie Yin, **Xingquan Zhu**, and Chengqi Zhang, Attributed Network Embedding via Subspace Discovery, Data Mining and Knowledge Discovery, 33(6):1953-1980, 2019.
9. Huimei Han, Ying Li, **Xingquan Zhu**, Convolutional neural network learning for generic data classification. *Information Sciences*, 477: 448-465, 2019.
10. Eric Golinko, **Xingquan Zhu**, Generalized Feature Embedding for Supervised, Unsupervised, and Online Learning Tasks. *Information Systems Frontiers*, 21(1): 125-142, 2019.
11. Bozhong Liu, Ling Chen, **Xingquan Zhu**, Weidong Qiu, Encrypted data indexing for the secure outsourcing of spectral clustering. *Knowledge and Information Systems*, 60(3): 1307-1328, 2019.
12. Jia Wu, Shirui Pan, **Xingquan Zhu**, Chengqi Zhang, and Philip S. Yu, Multiple Structure-View Learning for Graph Classification, *IEEE Transactions on Neural Networks and Learning Systems*, 29(7):3236-3251, 2018.
13. Lianhua Chi, Bin Li, **Xingquan Zhu**, Shirui Pan, Ling Chen, Hashing for Adaptive Real-Time Graph Stream Classification with Concept Drifts. IEEE Trans. on Cybernetics, 48(5): 1591-1604, 2018.
14. Youxi Wu, Yao Tong, **Xingquan Zhu**, Xindong Wu, NOSEP: Nonoverlapping Sequence Pattern Mining With Gap Constraints. IEEE Trans. on Cybernetics, 48(10): 2809-2822, 2018.
15. Jia Wu, Shirui Pan, **Xingquan Zhu**, Chengqi Zhang, and Xindong Wu, Towards Multi-instance Learning with Discriminative Bag Mapping. *IEEE Trans. on Knowledge and Data Engineering*, 30(6):1065-1080, 2018.
16. Wei Wu, Bin Li, Ling Chen, **Xingquan Zhu**, Chengqi Zhang, K-Ary Tree Hashing for Fast Graph Classification. IEEE Trans. Knowledge and Data Engineering, 30(5): 936-949, 2018.
17. Yisen Wang, Shu-Tao Xia, Qingtao Tang, Jia Wu, **Xingquan Zhu**, A Novel Consistent Random Forest Framework: Bernoulli Random Forests. IEEE Trans. on Neural Network and Learning Systems, 29(8): 3510-3523 (2018)
18. Ankur Agarwal, Christopher Baechle, Ravi S. Behara, **Xingquan Zhu**, A Natural Language Processing Framework for Assessing Hospital Readmissions for Patients With COPD. *IEEE J. Biomedical and Health Informatics* 22(2): 588-596 (2018)
19. Lianhua Chi and **Xingquan Zhu**, Hashing Techniques: A Survey and Taxonomy, *ACM Computing Surveys*, 50(1): 11:1-11:36, 2017.

20. Ting Guo, Jia Wu, **Xingquan Zhu**, and Chengqi Zhang, Combining Structured Node Content and Topology Information for Networked Graph Clustering, *ACM Transactions on Knowledge Discovery from Data*, 11(3): 29:1-29:29, 2017.
21. Shirui Pan, Jia Wu, **Xingquan Zhu**, Guodong Long, and Chengqi Zhang, Task Sensitive Feature Exploration and Learning for Multitask Graph Classification, *IEEE Trans. on Cybernetics*, 47(3): 744-758, 2017.
22. Jia Wu, Shirui Pan, **Xingquan Zhu**, Chengqi Zhang, and Xindong Wu, Positive and Unlabeled Multi-Graph Learning *IEEE Transactions on Cybernetics*, *IEEE Trans. Cybernetics* 47(4): 818-829, 2017.
23. Haishuai Wang, Peng Zhang, **Xingquan Zhu**, Ivor Wai-Hung Tsang, Ling Chen, Chengqi Zhang, and Xindong Wu, Incremental Subgraph Feature Selection for Graph Classification, *IEEE Transactions on Knowledge and Data Engineering*, 29(1):128-142, 2017.
24. Shirui Pan, Jia Wu, **Xingquan Zhu**, Guodong Long, Chengqi Zhang, Boosting for graph classification with universum, *Knowledge and Information Systems*, 50(1): 53-77, 2017.
25. Fei Xie, Xindong Wu, **Xingquan Zhu**, Efficient sequential pattern mining with wildcards for keyphrase extraction, *Knowledge-Based Systems*, 115: 27-39, 2017.
26. Dongkuan Xu, Jia Wu, Dewei Li, Yingjie Tian, **Xingquan Zhu**, Xindong Wu, SALE: Self-adaptive LSH encoding for multi-instance learning. *Pattern Recognition* 71: 460-482, 2017.
27. Christopher Baechle, Ankur Agarwal, **Xingquan Zhu**, *Big data driven co-occurring evidence discovery in chronic obstructive pulmonary disease patients*. Journal of Big Data 4: 9 (2017)
28. Jose L. Hurtado, Ankur Agarwal, and **Xingquan Zhu**, Topic discovery and future trend forecasting for texts, Journal of Big Data, 3(7), 2016.
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