Creating Incentives for Research Collaboration, Research Commercialization and Technology Transfer

Establish a matching grant program for university and business research partnerships by building upon the federal SBIR/STTR (Small Business Innovation Research/Small Business Technology Transfer) model.

Dr. MJ Soileau
Vice President for Research & Commercialization
University of Central Florida

Outline

- SBIR-STTR Overview
- Florida High Tech Corridor Council
- UCF Business Incubator
- Top STTR Institutions
- Enterprise Florida Phase 0
- Other State Programs
  - Ben Franklin – Pennsylvania
- NIH SBIR STTR Funding
- Ideas for Florida
  - Florida SUS Match System
  - Central Florida Health Care

What is SBIR & STTR?

The Small Business Innovation Research (SBIR) and the Small Business Technology Transfer Research (STTR) are federal programs that enable small businesses to compete for research dollars to ***test, prototype and commercialize*** new solutions for needs identified by participating federal agencies.

SBIR/STTR Three-Phase Program

Phase I

- **Feasibility** Study; Proof of Concept
- Up to **$150K** for **6 Months (SBIR) or 12 Months (STTR)**

Phase II

- Full R&D Effort
- May involve **prototype** creation & testing; clinical trials
- Up to **$1Million** for **24 Months**

Phase III

- **Commercialization** Stage
- Seek external funding (Private or federal non-SBIR allocated funding)

Participating Agencies

SBIR

STTR

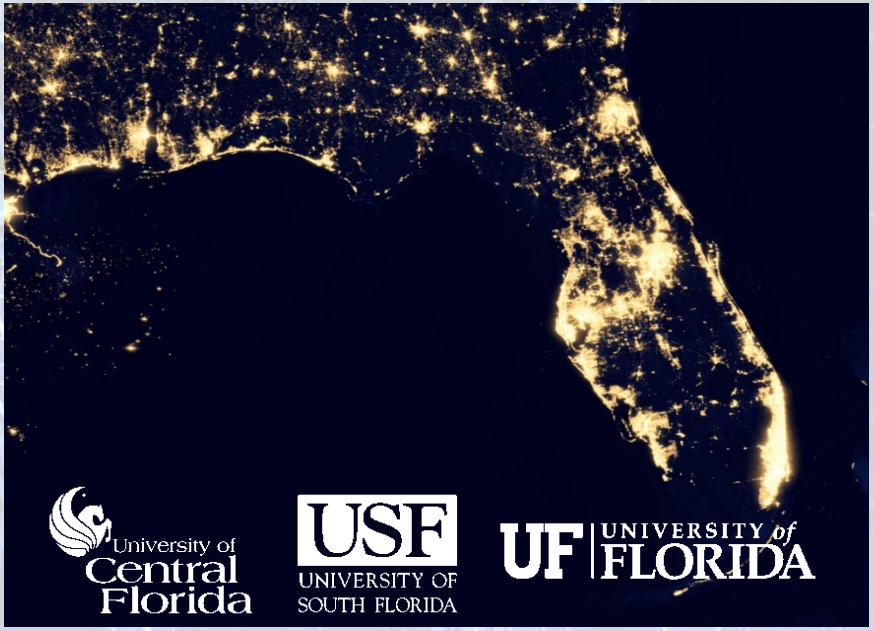
SBIR/STTR Goals

- Meet **Federal R&D needs**.
- Stimulate technological **innovation**
- Increase private-sector **commercialization** of innovations derived from Federal research and development funding.
- Foster and encourage participation in innovation and entrepreneurship by socially and economically disadvantaged persons.

Florida High Tech Corridor

Mission Statement:

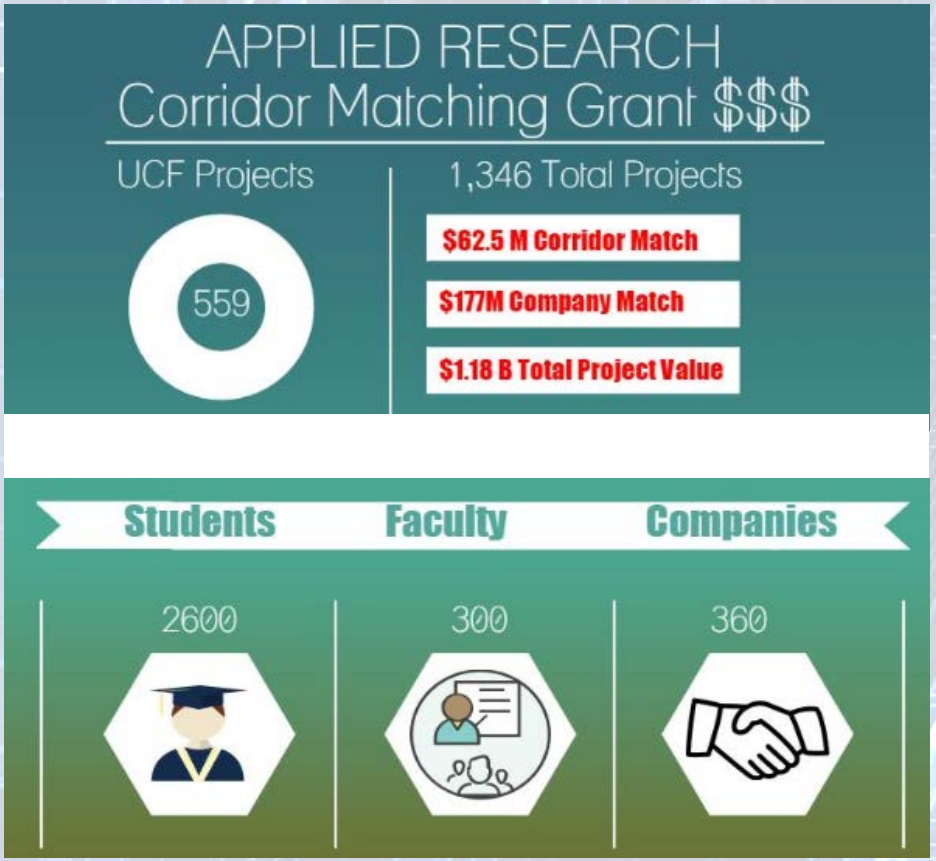
To grow high tech industry and innovation through partnerships that support research, marketing, workforce and entrepreneurship.



- 23 counties
- 360 company/institutional partners
- $2 million annual cash match for each university for work with industry partner
- Grants range from $10K to $100K
- More than $64M in corridor funds – matched by $180M in company funds and federal grants
- $1B impact

MGRP Success

- Matching Grant Research Program - a great resource for small businesses
- SBIR and STTR grants often follow after success of MGRP funding
  - STTR eligibility includes teaming up with a federal lab or a university/college – MGRP takes care of that requirement



UCF Business Incubation Program Connects Companies with SBIR-STTR

Incubator offers:

- SBIR workshops
- Preparation assistance

UCF benefits by:

- Royalty payments from licensed technology
- Jobs for students/postdocs
- Subcontracts from company
- Incubator companies have secured 180+ awards for more than $52M in SBIR/STTR funding

UNIVERSITY OF CENTRAL FLORIDA
BUSINESS INCUBATION PROGRAM

Early Support Increases Third Party Funding

OptiGrate

- Founded by UCF Researchers
- Graduate of UCF Incubator
- University received $1.3M in Matching Grant Funds
- *Company received $7.5M in SBIR/STTR
- Downstream Impact: $11.8M

*Subcontracted to university

Universities partnering with companies make collaboration stronger and more third party funding!

Rini Technologies

- Graduate of UCF Incubator
- University received $820k in Matching Funds
- Company received 42 SBIR-STTR awards, the fifth most in the state.
- Downstream impact of $2.4M

From sbirsource.com as of Feb. 5, 2016 – Does not include DOD

Top Active STTR Research Institutions

Institution	Awards	Total
University of Florida Gainsville, FL	111	$30.1MM
University of Central Florida Orlando, FL	106	$25.9MM
Florida State University Tallahassee, FL	33	$7.36MM
University of South Florida Tampa, FL	22	$5.54MM
Florida Institute of Technology Melbourne, FL	18	$3.01MM
University of Miami Miami, FL	17	$3.16MM
Florida Atlantic University Boca Raton, FL	12	$3.06MM
Florida International University Miami, FL	12	$2.34MM
Embry-Riddle Aeronautical University Daytona Beach, FL	8	$1.51MM
University of Florida-REEF Shalimar, FL	2	$570K

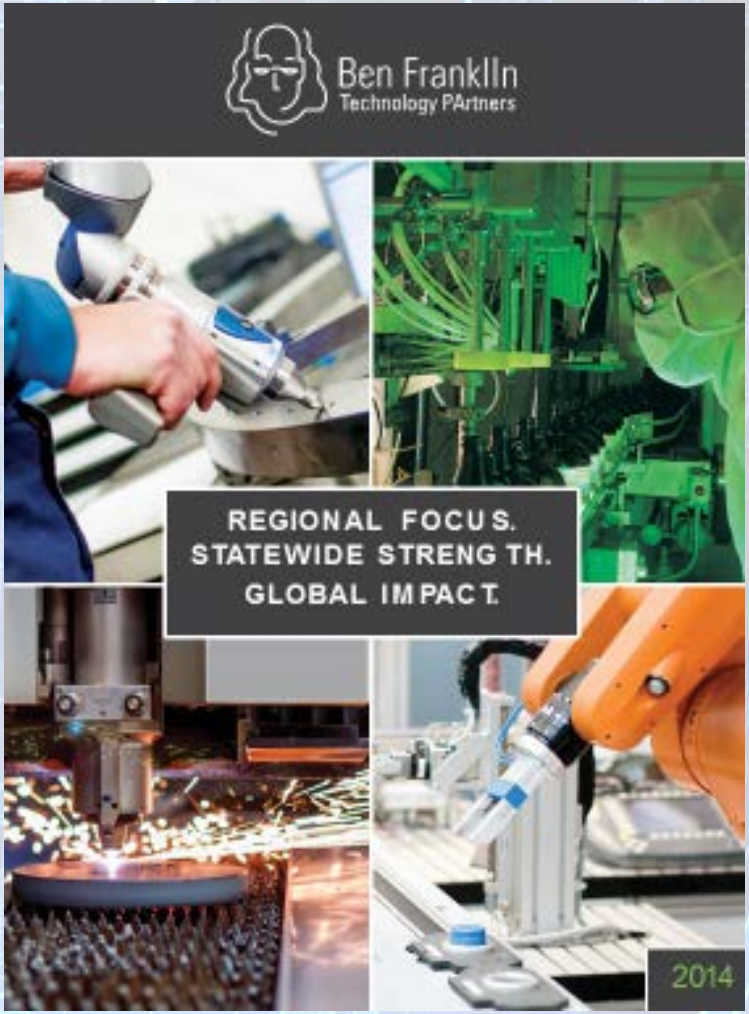
Other State Programs - Pennsylvania

Provides:

- Funding
- Business and technical expertise
- Access to a network of innovative, expert resources

Produces:

- 3.6-to-1 return on state dollar invested



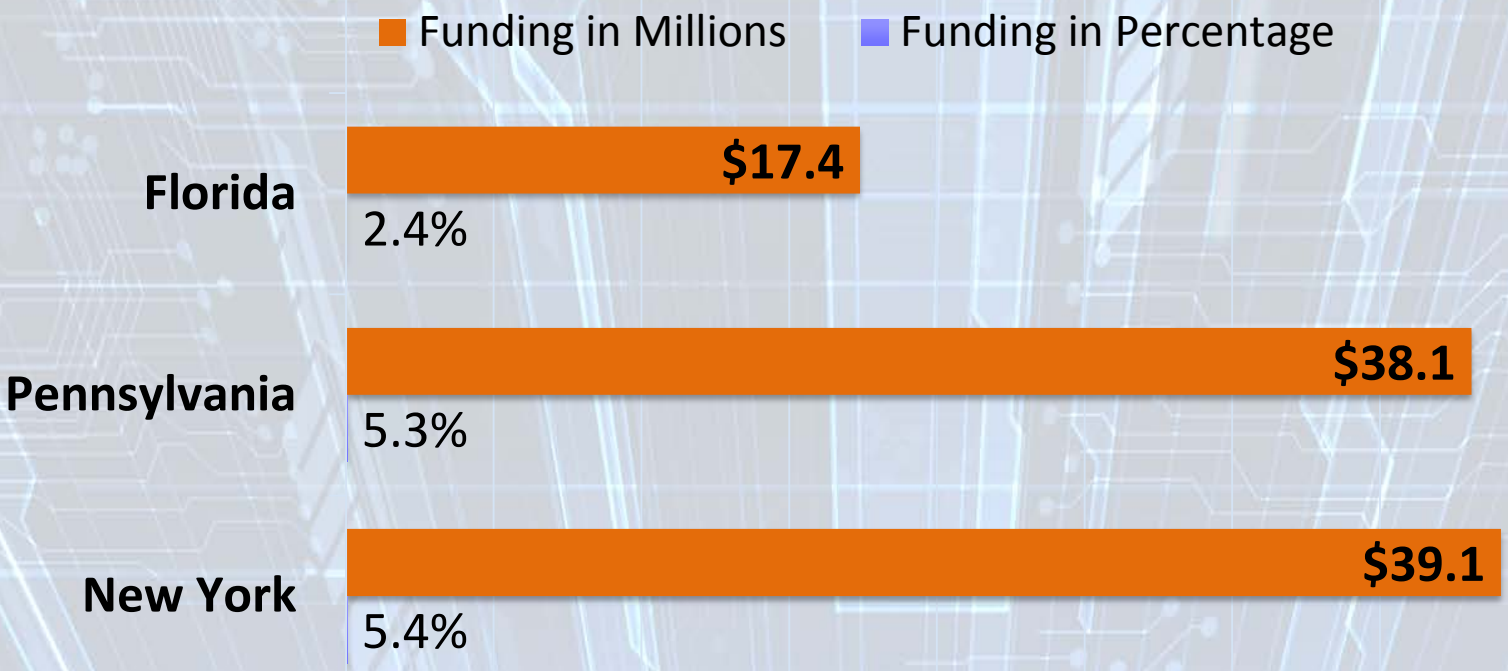
IMPACT 2014

BEN FRANKLIN RIGOROUSLY MEASURES AND QUANTIFIES ITS IMPACT ANNUALLY.

JOBS CREATED BY CLIENT COMPANIES	1,103
JOBS RETAINED BY CLIENT COMPANIES	1,224
POST-BEN FRANKLIN FINANCING SECURED BY CLIENT COMPANIES	$883,749,020
COMPANIES ASSISTED BY BEN FRANKLIN	1,125
NEW PRODUCTS AND PROCESSES LAUNCHED BY CLIENT COMPANIES	311
NEW COMPANIES FORMED	59
PATENTS AND SOFTWARE COPYRIGHTS AWARDED TO CLIENT COMPANIES	130
SALES REVENUES GENERATED BY CLIENT COMPANIES	$557,094,071

NIH National Institutes of Health

NIH 2015 Allocation to SBIR/STTR $719M Total



	New York	Pennsylvania	Florida
Funding in Millions	$39.1	$38.1	$17.4
Funding in Percentage	5.4%	5.3%	2.4%

ENTERPRISE FLORIDA

Phase 0

- It is intended to help Florida companies increase their chances of submitting a successful SBIR or STTR proposal.

- Up to **$3K** for eligible expenses
  - Consulting Fees: proposal review, commercialization strategies, market research
  - Professional Fees: Legal, Accounting
  - Writing services, travel, etc.

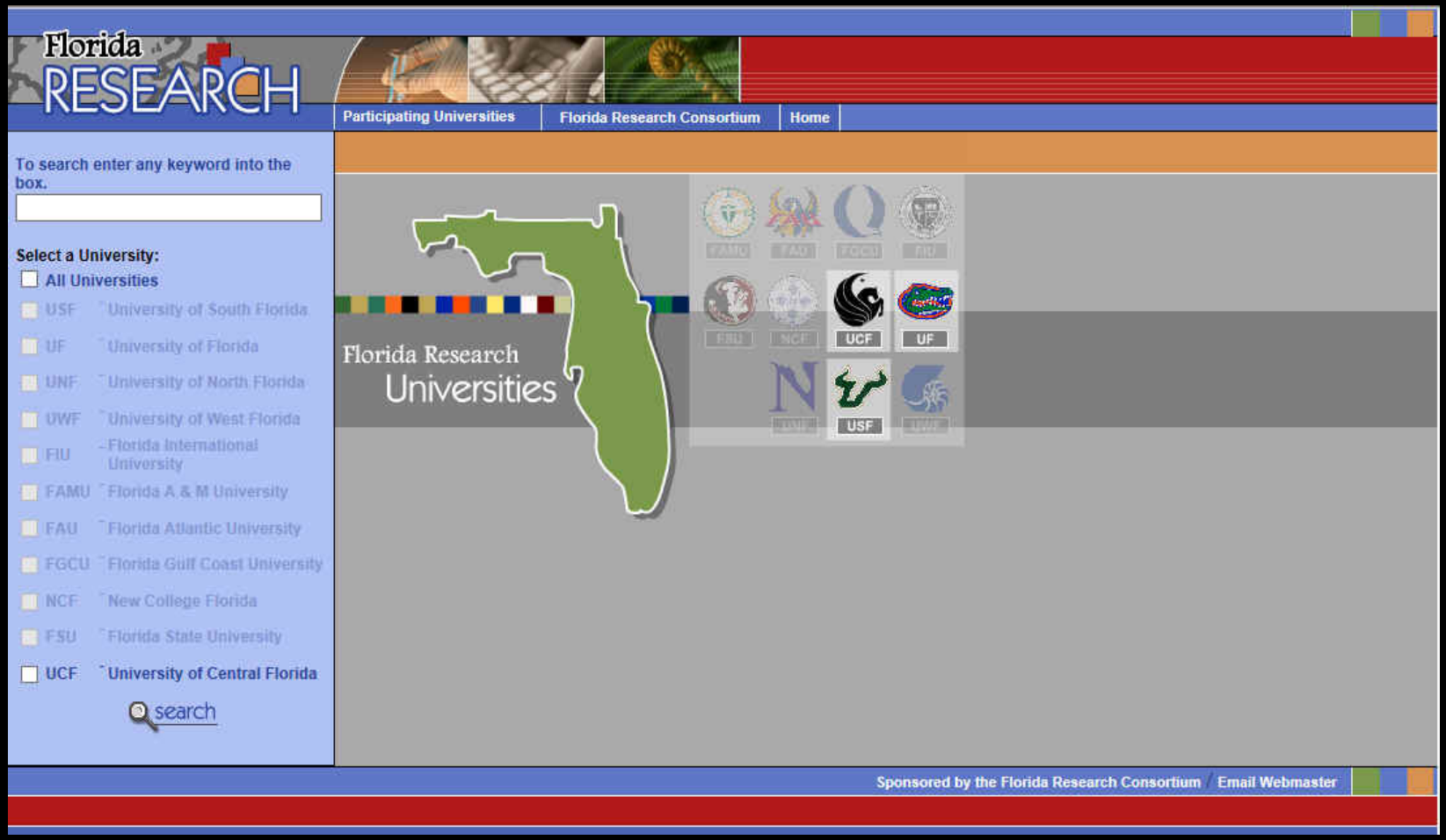
Ideas for Florida

- FHTC process and how we may do this statewide
- Level of funding perhaps with a minimum, to optimum amount. $15M may be the right range.
- 1:1 match for Phase I awards and 3:1 for Phase IIs
- Recommendation for the review panel composition
- Points for projects that promote collaboration among universities

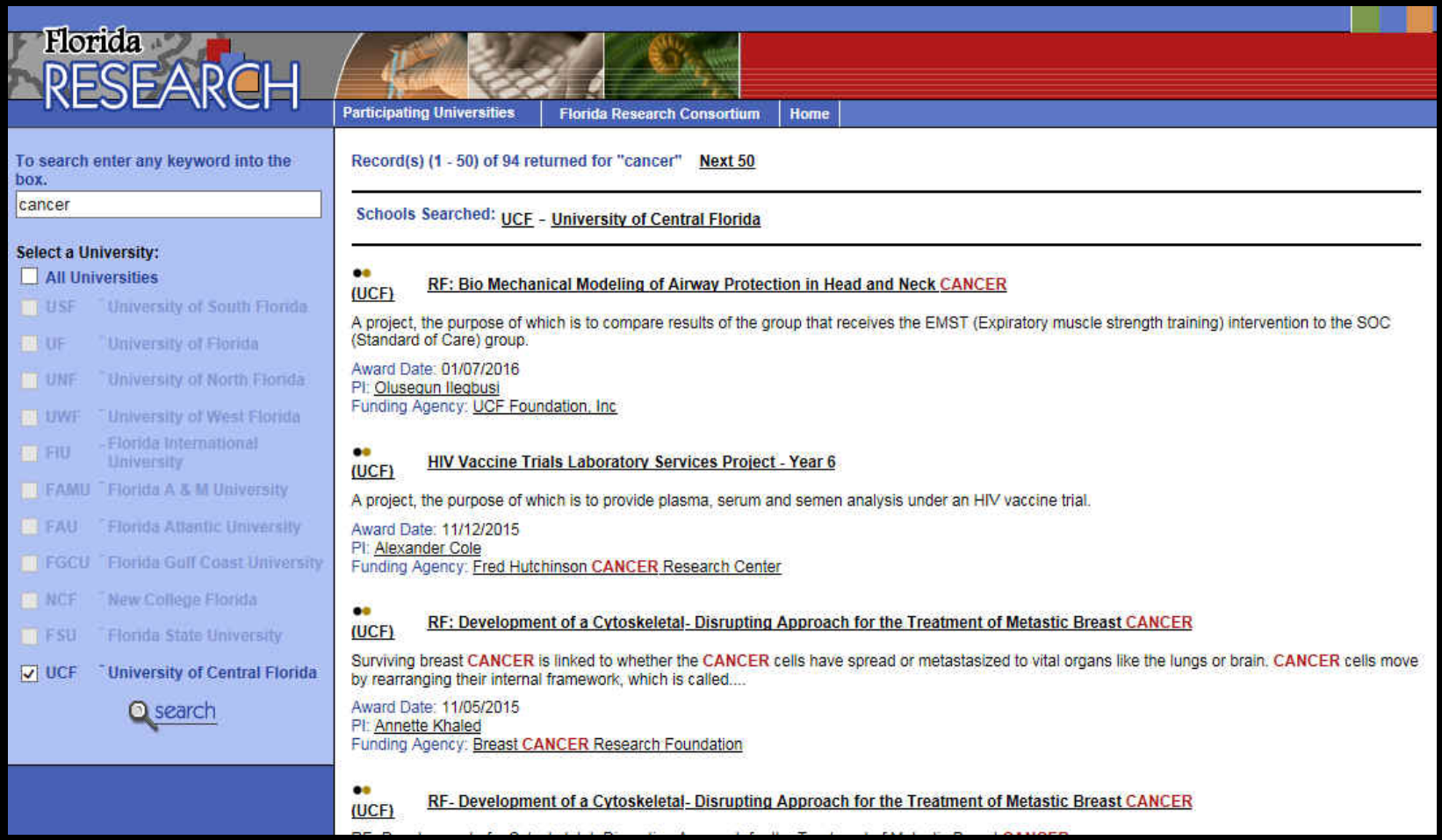
Additional Ideas

- Training and support for faculty interested in SBIR/STTRs
- Technology fairs for faculty to share technologies with industry
- Gap Funding for promising technologies
- An investment fund to match other investment dollars for startups
- Talk about proposed increase in NIH and other funding overall
- Keep FHTC admin simple
- Partnerships with hospital great example

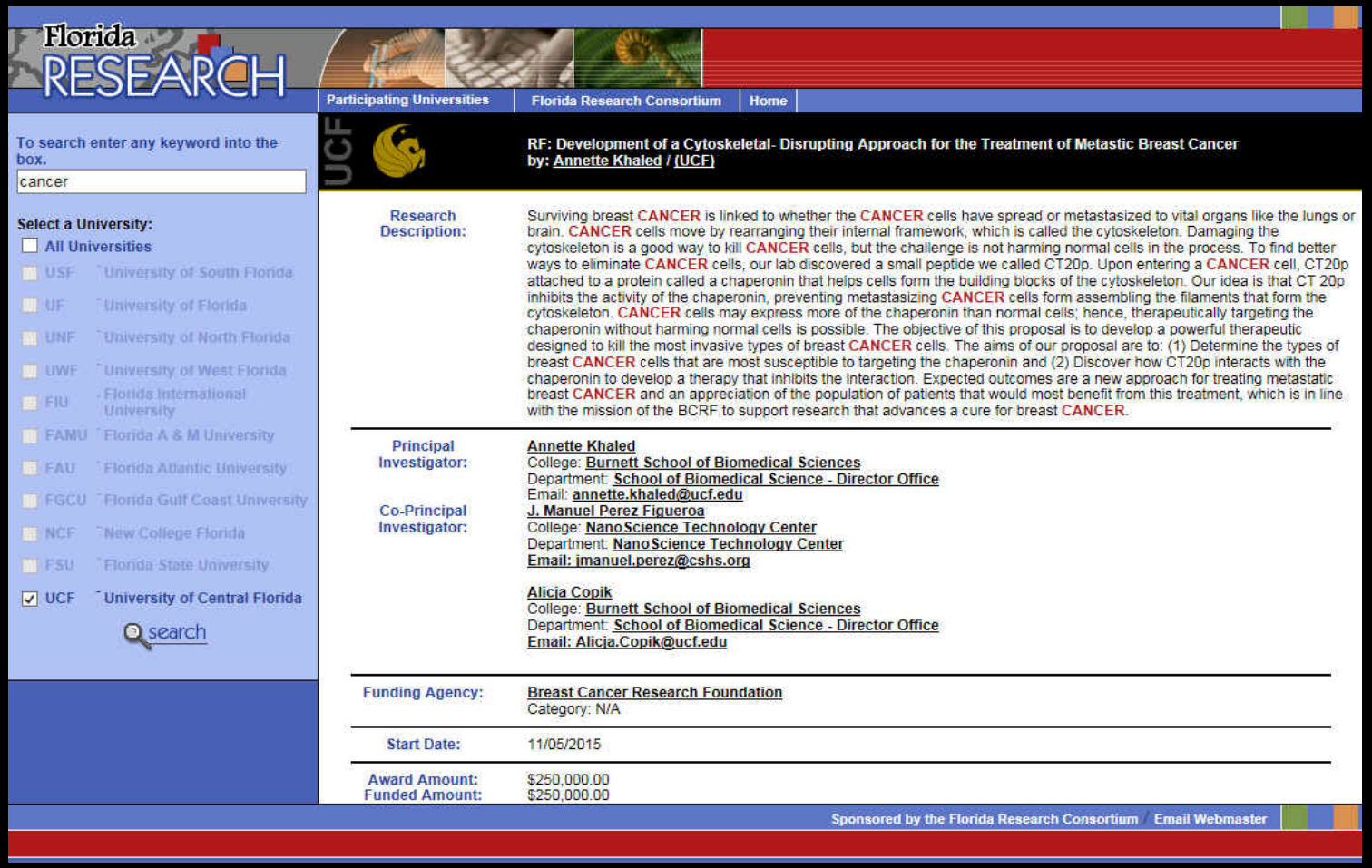
Florida SUS Match System



Florida Research Site



Match Found


Florida RESEARCH
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Florida Research Consortium
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To search enter any keyword into the box.
cancer
Select a University:
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FAU Florida Atlantic University
FGCU Florida Gulf Coast University
NCF New College Florida
FSU Florida State University
UCF University of Central Florida
search
UCF
RF: Development of a Cytoskeletal- Disrupting Approach for the Treatment of Metastic Breast Cancer
by: Annette Khaled / (UCF)
Research Description:
Surviving breast CANCER is linked to whether the CANCER cells have spread or metastasized to vital organs like the lungs or brain. CANCER cells move by rearranging their internal framework, which is called the cytoskeleton. Damaging the cytoskeleton is a good way to kill CANCER cells, but the challenge is not harming normal cells in the process. To find better ways to eliminate CANCER cells, our lab discovered a small peptide we called CT20p. Upon entering a CANCER cell, CT20p attached to a protein called a chaperonin that helps cells form the building blocks of the cytoskeleton. Our idea is that CT 20p inhibits the activity of the chaperonin, preventing metastasizing CANCER cells form assembling the filaments that form the cytoskeleton. CANCER cells may express more of the chaperonin than normal cells; hence, therapeutically targeting the chaperonin without harming normal cells is possible. The objective of this proposal is to develop a powerful therapeutic designed to kill the most invasive types of breast CANCER cells. The aims of our proposal are to: (1) Determine the types of breast CANCER cells that are most susceptible to targeting the chaperonin and (2) Discover how CT20p interacts with the chaperonin to develop a therapy that inhibits the interaction. Expected outcomes are a new approach for treating metastatic breast CANCER and an appreciation of the population of patients that would most benefit from this treatment, which is in line with the mission of the BCRF to support research that advances a cure for breast CANCER.
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College: NanoScience Technology Center
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Email: jmanuel.perez@cshs.org
Alicia Copik
College: Burnett School of Biomedical Sciences
Department: School of Biomedical Science - Director Office
Email: Alicia.Copik@ucf.edu
Funding Agency:
Breast Cancer Research Foundation
Category: N/A
Start Date:
11/05/2015
Award Amount:
$250,000.00
Funded Amount:
$250,000.00
Sponsored by the Florida Research Consortium / Email Webmaster

Central Florida Health Care

- Website created to stimulate collaboration and synergistic proposal development between researchers from Florida Hospital (FH) and UCF.
- Researchers from different organizations can locate others with similar interests and work together to develop necessary preliminary data, funded by the partnered organizations, that will lead to submission of extramural grant funding.

Awards Intended To:

- Promote collaboration between FH and UCF researchers
- Provide seed funding for proof-of-concept studies
- Provide seed funding to generate preliminary data for submission of future extramural grant applications

Awards

- First award made in January 2016 for “Biomechanical modeling of airway protection in head and neck cancer.”
- Team: Dr. Olusegun Ilegbusi, CECS; Dr. Bari Ruddy-Hoffman, COHPA, and Dr. Nikhil Rao, radiation oncologist at Florida Hospital

HHS SBIR/STTR Conference in Orlando Nov. 15-17

- Organized by UCF, this is the first time the conference will cover the full range of HHS agencies.