# Proposed New Professional Program- Doctor of Pharmacy
## – Clarifying the Case for Program Approval –

Thank you for the time on October 24, 2008 to discuss our proposed new degree program, the Doctor of Pharmacy. I trust that it is evident that we have given this endeavor much thoughtful time and consideration. I would like to submit to your office a revised budget and further clarifications of our program planning needs. I believe this communication is very important as we move forward to work together to establish a program that meets the strategic goals of our university, the Florida Board of Governors, and the state of Florida.

The following are points of consideration concerning the initiation of the USF Doctor of Pharmacy degree program:

1. **Development Timeline for New Professional Degree Program-** The new professional degree program requires several levels of approvals and accreditation. The organization responsible for accrediting all colleges of pharmacy in the United States is the Accreditation Council for Pharmacy Education (ACPE.) There is a published development timeline for their accreditation process (**See Appendix A**). To meet this required deadline, we must have approval from the USF Board of Trustees, and the Board of Governors. Legislative approval is also required as the program is preparation for a licensed profession. Through direct discussion with ACPE, USF will be permitted to submit our draft application report prior to legislative approval, which will be attained by May 2009. Once legislative approval has been granted, we will amend the application for final application submission by the May 15, 2009 deadline. We will be seeking to have an on-site visit from ACPE during the last quarter of 2009. This represents an acceleration from their published program development timeline; however, we have met with them in person, and they have agreed to this timeline as long as legislative approval is attained prior to the May application deadline. Further, this maintains the goal of accepting students for an August 2010 program initiation date.

2. **Revised Budget**- The program budget displayed on Table Two is revised to show program costs for Year 1 of the program. It does not show the Year 0 (planning year) required to initiate the professional degree program. We have decreased the Year 1 E&G Funding by $ 1.7 million dollars through a combination of faculty, staff, and resource reductions. The planning for this Doctor of Pharmacy program year differs from other PhD programs in that most doctoral programs have a critical mass of faculty and staff prior to doctoral program initiation. The planning year is necessary for accreditation requirements of hiring a founding dean and an initial leadership team, including faculty. A curriculum and infrastructure for teaching professional students must be developed; this will include some current resources at USF Health. Current USF financial resources will be sufficient for

Year 0, and extending just beyond the July 1, 2010 fiscal year start date. Addition outside funding sources will continue to be pursued.

3. **Board of Governors approval of degree program request-** Our current request is to attain approval of the degree program from the Board of Governors prior to seeking required degree approval from the Florida legislature. This may require decoupling of the degree request from the budget that has been submitted as part of the New Degree Program proposal. We will achieve two goals once BOG and legislative approval have been attained: 1) Fulfill requirements of ACPE for final submission of application, and 2) Fulfill requirement of legislative approval for degree programs leading to State licensure. As stated, the rigorous accreditation standards and timeline require us to proceed at this time. While the current fiscal environment may seem unsteady at this time, we are prepared to manage the program during the fiscal year 2009; state support would not be sought until July 1, 2010. Fiscal recovery would be expected to have occurred by this time, and the financial support sought is comparable to that of other graduate programs in the state.

4. **Strategic importance to University of South Florida and the State of Florida-**
   a. **Education-** USF as an institution has matured into a premier academic health science center. Pharmacy as a discipline is a key component of all of the academic health disciplines; the faculty in these respective areas are vigorously requesting that more pharmacy interdisciplinary activities and faculty resources be added to our academic culture. Many of their respective academic governing and accreditation bodies have strongly encouraged further pharmacy interdisciplinary interaction. Further, the student demand for pharmacy education is very high (**see Appendix B**) Additional opportunities will be available for health professions undergraduate students from not only USF, but other Florida public institutions as well.
   b. **Research-** There will be expanded opportunities to include pharmacy faculty with ongoing and future research activities within USF Health. Interdisciplinary research involving clinical PharmDs is increasing. Clinical and translational research very often requires the presence of clinical PharmDs. Addition of pharmacy faculty will significantly build upon the outstanding research culture that has been developed at USF during the past decade, and foster greater opportunities for clinical research, molecular drug discovery, and public health research initiatives.
   c. **Strategic Alliances-** All of the Tampa area teaching hospitals have provided their overwhelming support for the creation of a pharmacy program at USF. There are current plans to create additional pharmacy residency programs with Tampa area hospitals. The pharmacogenomics lab at the James A. Haley VA Hospital (Tampa, FL) is eager to collaborate with our pharmacy program in curricular and research development. Other entities that have expressed their support for the creation of a pharmacy program include entrepreneurial businesses, pharmacy organizations, and pharmaceutical manufacturing organizations.
   d. **State of Florida workforce needs-** There is a national and state workforce shortage of pharmacists. Current statistics reveal that although there are 22,000 registered pharmacists in Florida, only 16,000 maintain a current Florida address. With looming retirement of many registered pharmacists in Florida, this shortage may expand. The

public health burden of addressing pharmaceutical agents for our elderly will be addressed by the addition of a pharmacy program at USF. Pharmacy employers constantly tout the need for a pharmacy academic presence at USF. Graduates of a USF pharmacy program will be in high demand; further they will add high-wage earning positions to the Florida economy immediately upon graduation.

5. **The State of Florida is behind comparable states with similar populations-** The state of Florida ranks fourth in population size, and first in percentage of elderly by population. When compared to other states of similar (or less) population, the state of Florida lags behind in the number of pharmacy schools (**see Appendix C**). And, the state of Florida is one of the few states in eastern America that does not contain a public pharmacy school institution in a metropolitan/ urban center (with the exception of Charlotte, NC). Only Nova Southeastern University- College of Pharmacy (private entity) is in a major metropolitan area in Florida (Ft. Lauderdale). Tampa, FL remains a highly sought area for academic health education, and particularly for the academic pharmacy programs.

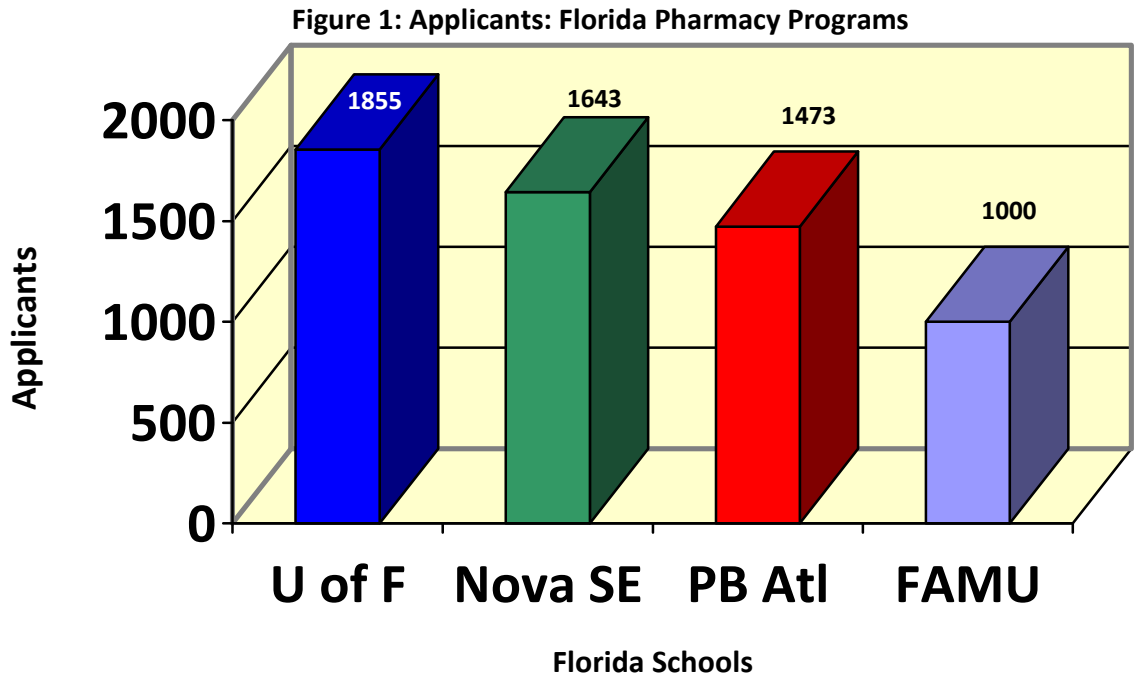
6. **Summation statement-** We request that careful consideration be given to these points. While we understand the difficult challenges that face the state university system in Florida at this time, we also recognize the need to plan and establish this very important program to meet the needs of our faculty, future students, and most importantly the citizens of the state of Florida. We emphasize the financial resources that the university pledges to the initiation of this program, and fully expect the state to recognize its commitment to students, workforce development, and the health of citizens as quickly as feasible given our economy. We look forward to future and continued discussions with your staff concerning the initiation of this important degree program. Thank you sincerely for your time to review our revised request for a new degree program at USF- the Doctor of Pharmacy degree program.

Appendix A- Development Timeline- USF Doctor of Pharmacy Degree Program

## Development Timeline for New Colleges and Schools of Pharmacy

| | 2 Years Prior to Matriculation of First Class | 1 Year Prior to Matriculation of First Class | Year of Matriculation of First Class | 2 Years Following Matriculation of First Class | 3 Years Following Matriculation of First Class | 5 Years Following Granting of Precandidate Status |
|---|---|---|---|---|---|---|
| AUG | Recommended time for dean to be hired and on campus (24 months prior to first class) | | Earliest recommended date to matriculate first class of students (if Precandidate status granted) | | | |
| | Begin recruiting leadership team | | | | | |
| SEPT | | On-site evaluation (if authorized) to assess readiness for Precandidate status (12 months prior to first class) | | | | |
| OCT | | ⇩ | | | | |
| NOV | | | | | | |
| DEC | | | | | | |
| JAN | | Applicant appears before ACPE Board of Directors | On-site evaluation to assess readiness for Candidate status | On-site evaluation to continue Candidate status | On-site evaluation prior to graduationg the first class of students to assess readiness for Full Accreditation status | U.S. Department of Education deadline to withdraw accreditation status if Full Accreditation status is not achieved |
| | | ACPE Board decision regarding whether or not to grant Precandidate status (Y or N[3]) | ⇩ | ⇩ | ⇩ | |
| FEB | | | | | | |
| MAR | Draft application report and fee due March 1st (18 months prior to first class) | | ⇩ | ⇩ | ⇩ | |
| | On-site Consultation with ACPE Staff | | | | | |
| APR | ⇩ | | ⇩ | ⇩ | ⇩ | |
| MAY | | | | | | |
| | Deadline for Final Application Report (May 15th) | | | | Initial class of students graduates | |
| JUNE | Applicant appears before ACPE Board of Directors | | Applicant appears before ACPE Board of Directors | ACPE Board decision regarding continuation of Candidate Status (Y or N[4]) | Applicant appears before ACPE Board of Directors | |
| | ACPE Board of Directors decision regarding authorization of an on-site evaluation (Y or N[1]) | | ACPE Board decision regarding granting of Candidate Status (Y or N[3]) | | ACPE Board decision regarding granting of Full Accreditation status (Y or N[4]) | |
| JULY | Leadership team is hired and on campus | | | | | |

Appendix B- Number of applicants to Florida Pharmacy Programs – Year 2005




AACP Reports, 2005; Appendix B
Original Source- PharmD New Degree proposal submitted to FL BOG

Appendix C- Comparison of Florida to other states with Doctor of Pharmacy Programs

| **Doctor of Pharmacy Program Status** | California | Texas | New York | Pennsylvania | Ohio | TN | **Florida** |
|---|---|---|---|---|---|---|---|
| Accredited Pharmacy Programs | 7 | 6 | 5 | 6 (*) | 6 | 3 | 4 (*) |
| Candidate Status Programs | 1 | 1 | 1 | 1 | | 3 | |
| Total Rx Schools | 8 | 7 | 6 | 7 (*)= 8 | 6 | 6 | **4(*)= 5** |

(*)- LECOM (PA) Pharmacy School campus in Bradenton, FL. Private entity

**Florida Board of Governors**

**Request to Offer a New Degree Program**

| | |
|---|---|
| University of South Florida<br>University Submitting Proposal | August 2010<br>Proposed Implementation Date |
| USF College of Pharmacy<br>Name of College or School | <br>Name of Department(s) |
| Pharmacy<br>Academic Specialty or Field | Doctor of Pharmacy **CIP 51.2099**<br>Complete Name of Degree<br>(Include Proposed CIP Code) |

**The submission of this proposal constitutes a commitment by the university that, if the proposal is approved, the necessary financial resources and the criteria for establishing new programs have been met prior to the initiation of the program.**

| | | | |
|---|---|---|---|
| Date Approved by the University Board of Trustees | | President | 10/8/08<br>Date |
| Signature of Chair, Board of Trustees | Date | Vice President for Academic Affairs | 10/8/08<br>Date |

Provide headcount (HC) and full-time equivalent (FTE) student estimates of majors for Years 1 through 5. HC and FTE estimates should be identical to those in Table 1. Indicate the program costs for the first and the fifth years of implementation as shown in the appropriate columns in Table 2. Calculate an Educational and General (E&G) cost per FTE for Years 1 and 5 (Total E&G divided by FTE).

| Implementation Timeframe | Projected Student Enrollment (From Table 1) | | Projected Program Costs (From Table 2) | | |
|---|---|---|---|---|---|
| | HC | FTE | Total E&G Funding | Contract & Grants Funding | E&G Cost per FTE |
| Year 1 | 50 | 50 | $2,947,306 | N/A | $58,946 |
| Year 2 | 125 | 125 | | | |
| Year 3 | 225 | 225 | | | |
| Year 4 | 325 | 325 | | | |
| Year 5 | 375 | 375 | $5,557,500 | 1,000,000 | $14,820 |

**Florida Board of Governors**

**Request to Offer a New Degree Program**

University of South Florida
University Submitting Proposal

August 2010
Proposed Implementation Date

USF College of Pharmacy
Name of College or School

Name of Department(s)

Pharmacy
Academic Specialty or Field

Doctor of Pharmacy **CIP 51.2099**
Complete Name of Degree
(Include Proposed CIP Code)

**The submission of this proposal constitutes a commitment by the university that, if the proposal is approved, the necessary financial resources and the criteria for establishing new programs have been met prior to the initiation of the program.**

June 12, 2008
Date Approved by the University Board of Trustees

Judy Genshaft 7/2/08
President Date

Allen F Law 7-16-08
Signature of Chair, Board of Trustees Date

Ralph C. Wilcox by Dwayne Lee 7-23-2008
Vice President for Academic Affairs Date

Provide headcount (HC) and full-time equivalent (FTE) student estimates of majors for Years 1 through 5. HC and FTE estimates should be identical to those in Table 1. Indicate the program costs for the first and the fifth years of implementation as shown in the appropriate columns in Table 2. Calculate an Educational and General (E&G) cost per FTE for Years 1 and 5 (Total E&G divided by FTE).

| Implementation Timeframe | Projected Student Enrollment (From Table 1) | | Projected Program Costs (From Table 2) | | |
|---|---|---|---|---|---|
| | HC | FTE | Total E&G Funding | Contract & Grants Funding | E&G Cost per FTE |
| Year 1 | 50 | 50 | $4,644,344 | -0- | $92,887 |
| Year 2 | 100 | 100 | | | |
| Year 3 | 200 | 200 | | | |
| Year 4 | 300 | 300 | | | |
| Year 5 | 350 | 350 | $5,756,315 | $1,000,000 | $16,447 |

*Note: This outline and the questions pertaining to each section must be reproduced within the body of the proposal to ensure that all sections have been satisfactorily addressed.*

## INTRODUCTION

### I. Program Description and Relationship to System-Level Goals

**A. Briefly describe within a few paragraphs the degree program under consideration, including (a) level; (b) emphases, including concentrations, tracks, or specializations; (c) total number of credit hours; and (d) overall purpose, including examples of employment or education opportunities that may be available to program graduates.**

Initial considerations for a College of Pharmacy at the University of South Florida (USF), and more specifically USF Health, were generated in 2004 as part of the USF Health Sciences Center 10-year projection for new and expanded programs at the USF Health Sciences Center. USF has been designated a Research I institution by the former Board of Regents, and is a Carnegie I Research Institution, with the intent that USF will place increasing emphasis on graduate and professional education in order to meet the expanding needs of the Tampa Bay region, and the state of Florida. The profession of pharmacy has been widely recognized as a very necessary and integral component of the health care system. It is now widely *anticipated and expected* by USF Health faculty that all of the colleges at USF Health will benefit from the addition of a college of pharmacy. Pharmacy as a discipline and as a profession co-exists extremely well with all other health professions disciplines; pharmaceutical and medicinal agents are profoundly important for health care to be administered by health care professionals, and for basic science researchers to continue their quest for new discoveries. Further, the administration, maintenance, purchasing, monitoring, and removal of pharmaceutical agents represent one of the most important public health initiatives that exist within the entire healthcare arena. USF Health currently teaches components of the pharmacy discipline throughout all of its colleges by non-pharmacists, revealing the significance of the pharmacy profession to all components of health initiatives that affect the public. The addition of a college of pharmacy at USF will serve to strengthen teaching and educational endeavors throughout the Health Sciences Center, improve opportunities for research, and add to the delivery of critical healthcare resources to the citizens of Florida, and more particularly to the citizens of the Tampa region.

(a) Level

The degree program under consideration will produce graduates with a terminal professional degree; that degree will be the Doctor of Pharmacy degree. This is a four-year professional degree, and is currently the only degree type that is sanctioned by the official accrediting body for the profession of pharmacy, the Accreditation Council for Pharmacy Education.

It is fully expected that joint degree programs will develop between the college of pharmacy and other colleges within USF Health. While attainment of a joint degree will not be mandatory for students entering the college of pharmacy, it is expected to be a very strong factor in assisting potential applicants make a decision about which pharmacy professional degree program they will choose to receive their professional training.

(b) Emphases, including concentrations, tracks, or specializations

A stated objective of the creation of a college of pharmacy at USF Health will be to address the workforce issues of the state of Florida and of the nation. The stated emphasis of this degree program will be the creation of clinician pharmacists. The individuals graduating from the program will be eligible for state licensure from the Boards of Pharmacy throughout the United States, with a majority seeking licensure from the state of Florida. With this particular terminal degree, additional concentrations, tracks, or specializations will not be required as a condition for attaining the degree.

(c) Total number of credit hours

The total number of credit hours proposed for the USF Health College of Pharmacy will be approximately *140 - 145 hours*. This is in line with other colleges of pharmacy throughout the United States, and within the state of Florida. When applied to a curriculum based on semesters, this corresponds to approximately 17-18 credit hours per semester for a total of eight semesters. Variances in the number of credit hours applied to each student for graduation will depend upon elective courses, or traditional courses with variable hours selected by the student.

(d) Overall purpose, including examples of employment or education opportunities that may be available to program graduates.

Current data shows that there is a significant shortage of pharmacists in the state of Florida, as well as nationally. Independent workforce analyses reveal that the state of Florida is at the higher end of the shortages scale.[1] Traditional roles of pharmacists continue to expand as pharmacists are called upon to serve as medication experts on hospital health care teams. Increasingly, pharmacists are also called upon to serve in a primary care role. For example, the current language in the Florida Statutes of the pharmacy profession refers to pharmacists as primary care providers. Pharmacist clinicians are involved with primary care providers (physicians, nurse practitioners, etc…) through collaborative practice agreements to provide clinical services with medication management of chronic disease states such as hypertension and diabetes. The profession of pharmacy also offers professional flexibility, including entrepreneurial opportunities for pharmacists in retail ownership; other pharmacy health-related careers include the pharmaceutical industry; employment in academic institutions; careers in managed-care organizations; nursing home consultant services; health-systems administrative positions; and nuclear pharmacy. This is a special consideration when considering the pharmacy-related health care needs of the state of Florida. The creation of the College of Pharmacy at USF Health will seek to create pharmacists to serve all of these needs.

Further analysis of student demographics at the various colleges of pharmacy within the state of Florida, as well as other colleges and schools of pharmacy around the country, shows an ever-increasing number of female students enrolled (See Appendix A- Table 54). The profession of pharmacy offers unique flexibility, allowing for part-time schedules, which is very appealing to female health care professionals possibly seeking to have families. This may ultimately have the net effect of decreasing pharmacist workforce numbers. A college of pharmacy at USF Health would serve to meet the challenges of possible pharmacist work force shortages that may be created by a part-time workforce.

*1.* Pharmacy Manpower Project, Inc*;* accessed *08/20/07* - http://www.pharmacymanpower.com/state.html PMP, Inc. is a non-profit comprised of 13 national pharmacy associations that study workforce trends in pharmacy profession.

**B. Describe how the proposed program is consistent with the current State University System (SUS) Strategic Planning Goals. Identify which goals the program will directly support and which goals the program will indirectly support. (See the SUS Strategic Plan at http://www.flbog.org/StrategicResources/ )**

The proposed Doctor of Pharmacy professional degree program is consistent with the State University System Strategic Plan that was approved in the year 2005. The strategic plan for the State University System was developed by the Florida Board of Governors, and the proposed Doctor of Pharmacy professional degree program expressly meets the following goals:

a. Meeting statewide professional and work force needs.
b. Access to and production of health related degrees.
    i. Critical needs in health care.

In Appendix I of the Board of Governors Approved Accountability Measures: the following statements are noted:

| | |
|---|---|
| II. Production of bachelor's, master's, professional, and doctoral degrees | Increasing the number of degrees granted. |
| III. Meet statewide professional and workforce needs | Producing more degrees in education, the health professions, programs that promote economic development, programs involving emerging technologies, and other high-wage / high-demand areas. |

**The following statements are also captured from the Board of Governors State University System Strategic Plan:**

## I.B.1-2 Critical needs in education and health care

In the State University System Strategic Plan, the two areas identified as critical state needs are ***health care*** and education.

As stated in the State University System Strategic Plan, the profession of pharmacy is identified as an area of critical shortage that could negatively affect health care in key patient care areas. The proposed Doctor of Pharmacy degree program supports the strategic direction of the University of South Florida's strategic plan to "Advance Collaborative Learning and Discovery to improve health in the community," and specifically "to advance Health Professions Education." Within the realm of the USF Health - College of Medicine, basic scientists and clinicians work together with a goal of creating a collaborative learning community, and the addition of a USF College of Pharmacy can only serve to enhance and complement its current disciplines.

### I.B.2. Critical needs: Health Care

In its July 2000 report, Shortages of Allied Health Professionals, the Florida Hospital Association documents that hospitals are experiencing shortages in other key patient care positions, such as in Pharmacy and Medical technology. Various national reports and research on the national pharmacist workforce indicate a continuing shortage of pharmacists.[1] Reasons for the shortage

include a marked increase in medication use, the aging of the baby boomer generation, and the emergence of more clinical activities within pharmacies.

The state of Florida leads the nation in the percentage of the population over the age of 65; this number is expected to significantly increase by the year 2015.[2] The majority of these potential patients will require medication therapy as part of their healthcare, services commonly expected to be performed by trained pharmacists. With recent changes in Medicare, and more specifically with the initiation of the prescription medication plan as part of the national Medicare plan (Medicare Part D), pharmacist's involvement in the pharmacy services for seniors has greatly increased. Medication Therapy Management (MTM) related to Medicare Part D, immunization programs, and medication formulary counseling all represent expanded services that are now provided to seniors by pharmacists.

Efforts by the Florida Board of Pharmacy to increase the number of pharmacists in the state by easing restrictions on licensure from other states have not relieved the workforce shortages that exist within the state of Florida. The Florida Pharmacy Association (FPA) reports that of the 22,000 registered pharmacists in Florida, only 16,000 maintain a Florida address. Roles of pharmacists continue to expand as the healthcare needs in primary care and hospital settings expand.

**INSTITUTIONAL AND STATE LEVEL ACCOUNTABILITY**

**II. Need and Demand**

**A. Need: Describe national, state, and/or local data that support the need for more people to be prepared in this program at this level. Reference national, state, and/or local plans or reports that support the need for this program and requests for the proposed program which have emanated from a perceived need by agencies or industries in your service area. Cite any specific need for research and service that the program would fulfill.**

The demand for trained pharmacy professionals has grown rapidly in recent years, related in part to the rapid growth of health care delivery systems, growth of the pharmaceutical industry, and Florida's rapidly growing elderly population.[1] New roles are developing for pharmacists with active involvement in drug therapy decision-making and education for patients throughout the lifespan. Development of a new College of Pharmacy at USF is planned to meet Florida's workforce need for increased doctorally prepared pharmacy professionals for both industry and care of the public. The program will meet the standards of the Accreditation Council for Pharmacy Education (ACPE) and will build on synergies currently available in the Health Science Center for faculty, other instructional personnel, and clinical opportunities with the numerous clinical affiliates. Further synergies are planned with various other academic units throughout the University of South Florida; this will be explained in greater detail later in the proposal. There is not a full service School or College of Pharmacy in the Tampa Bay and Southwest Florida region and thus USF will meet a large unmet need and capitalize on existing strengths of the Health Science Center.

1 See Attached Pharmacist Workforce Analysis- State of Florida
2 U.S. Census Bureau, Population Division, Interim State Population Projections, 2005. Internet Release Date: April 21, 2005

The **Institutes Of Medicine (IOM)** summit committee identified five core **competencies** needed for all health professionals, as summarized in the following statement: "All health professionals should be educated to deliver patient-centered care as members of an interdisciplinary team, emphasizing evidence-based practice, quality improvement approaches and informatics." The five core competencies as stated in the IOM report are:

1. Providing patient-centered care**;**
2. Working in interdisciplinary teams;
3. Employing evidence-based practice;
4. Applying quality improvement
5. Using informatics

The profession of pharmacy currently implements and supports all of the competencies listed in the IOM report. The academic pharmacy community in many cases has been the leader in implementing and endorsing many of these competencies, which has served to strengthen the pharmacy professions' position as a vital component in all health-related systems. The USF Health academic profile does not currently include the profession of pharmacy; its addition will only serve to strengthen all of the other health-related disciplines and academic centers currently in existence within USF Health, and will foster advancement of any future health-related programs that may be implemented at USF Health. The impetus for the existence of a college of pharmacy at USF Health is clearly supported by this leading national report.

An analysis of the projected population census for various states in the country shows that the state of Florida, currently fourth in terms of population compared to other states, will overtake the state of New York and become the third largest state in the country. This change represents approximately an additional 2.5 million people residing in the state of Florida by the year 2015. The U.S. Department of Labor-Bureau of Labor statistics reveals a sharp increase in the demand for pharmacist nationwide by the year 2015, ranging from 18% to greater than 60% in the most prevalent industries requiring pharmacist labor (Dept. of Labor website). The state of Florida is currently a popular destination for persons of retirement age, and as this population continues to age, the health care needs will continue to increase. The state of Florida is the current national leader in percentage of the population over the age of 65; this percentage of the population is expected to significantly increase by the year 2015.[1] (See Appendix B- Population Data) The majority of these potential patients will require medication therapy as part of their healthcare, services currently performed by trained pharmacists.

With the increased influx of large businesses into the state of Florida, the influx of employees from outside the state of Florida will continue to increase. As the health care needs of Floridians continue to grow, there will be virtually no aspect of health care that will not involve advanced pharmacotherapeutic therapies. This increasing demand on the health care system will precipitate increasing use of pharmacists to assist health care teams and health care provisions.

Currently, the American Association of Colleges of Pharmacy (AACP) currently sponsors an ongoing analysis of workforce needs in all 50 states in the United States of America. This workforce analysis, referred to as the Aggregated Demand Index (ADI), is the widely accepted validated analysis for colleges of pharmacy throughout the country (See Appendix C- Workforce Data). The ADI is a national survey about pharmacist shortage that is updated monthly; this data is provided by panelists whose organizations are directly involved in hiring pharmacists throughout the country. It uses a rating scale to indicate the shortages and needs of various states

1 U.S. Census Bureau, Population Division, Interim State Population Projections, 2005. Internet Release Date: April 21, 2005

throughout the country; the scale ranges from 1 to 5, with 1 representing a high surplus and 5 representing the highest demand for pharmacist positions. At the time of this publication, *Florida's ADI was **4.61***, placing Florida above the national average of **4.05**. An attempt by the Florida Board of pharmacy to relax restrictions on licensure reciprocation with other states has been unable to meet the needs of pharmacist shortages throughout the state of Florida. Since initiation of licensure by endorsement through the Florida State Board of Pharmacy in the year 2003, the demand for pharmacist in the state of Florida has steadily grown. All of this combined information clearly displays the necessity for creation of pharmacists by our state university system.

Emphasis will be placed upon USF College of Pharmacy faculty to be involved in research endeavors throughout USF Health. The addition of pharmacy faculty to assist in research will allow increased opportunities for entrepreneurial types of research models currently not in existence. The USF Health Clinical Research Center will utilize pharmacy faculty to promote and direct clinical research for all USF Health researchers. Entrepreneurial collaboration with the existing USF Centers of Excellence would be enhanced by the presence of the USF College of Pharmacy, potentially leading to the development of innovative medications. Creation of additional doctoral programs would be emphasized.

Significant opportunities exist to expand research with pharmacy faculty with the creation of Pharmacy-Based Research Networks, a growing trend among academic pharmacy programs throughout the nation. Clinical Trial research models and continued expansion of entrepreneurial models will be enhanced from increased partnerships with pharmaceutical and business industries. Continued expansion of research-based programs and opportunities for students enrolled in USF Health would occur with a USF College of Pharmacy.

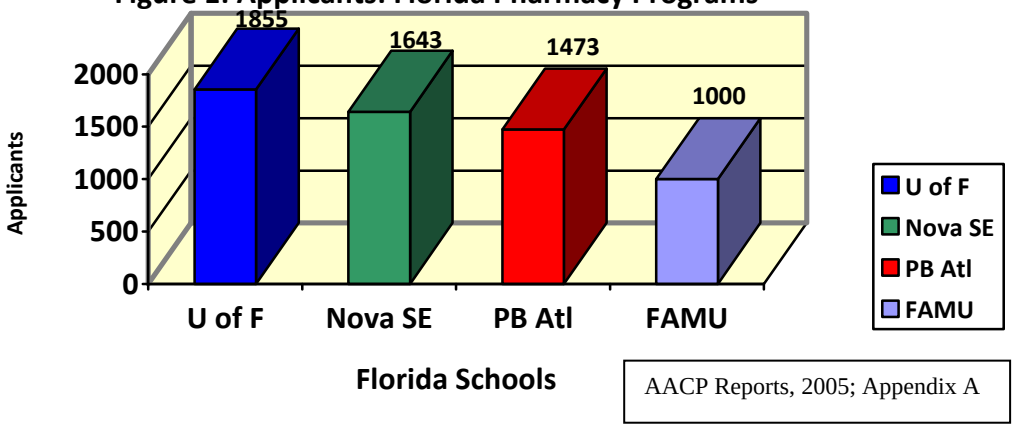
An emerging area within health care that currently exists is the area of Pharmacogenetics and Pharmacogenomics. In the Tampa area, there are opportunities to partner with the James A. Haley Veterans Administration Hospital for the purpose of training health professions students in the sciences surrounding Pharmacogenomics. There is an opportunity to make Pharmacogenomics a core course in the pharmacy curriculum that will be developed. Further, with the ever-increasing demand to create research-trained clinicians, research will also be a focal point of a curriculum that will be developed. By developing a pharmacy program that emphasizes the science of Pharmacogenomics, increased translational clinical research, and special emphasis on geriatric populations, USF Health will be filling a critical need with regard to public health within the state of Florida.

**B. Demand: Describe data that support the assumption that students will enroll in the proposed program. Include descriptions of surveys or other communications with prospective students.**

There is a significant student demand for entrance into the pharmacy profession according to the AACP's reports of the number of student applications to the current colleges of pharmacy in the state of Florida. These reports reveal an extremely high demand for the pharmacy profession. All of the colleges of pharmacy receive applications in excess of 1000 annually; the University of Florida and Nova Southeastern report application numbers in excess of 1600 and 1700 applicants, respectively. (See Figure 1) The University Florida currently enrolls approximately 300 students

into its entry-level Doctor of Pharmacy program; the other colleges of pharmacy enroll approximately 100 to 150 students into an entry- level class. These numbers also represent application rates that exist at colleges and schools throughout the country as reported to the AACP by member schools. These enrollment numbers very likely represent the maximum student capacity that each individual program can effectively manage per their available faculty and financial resources.

**Figure 1: Applicants: Florida Pharmacy Programs**




AACP Reports, 2005; Appendix A

At the University of South Florida-main campus, there is a very vibrant learning community of health pre-professional students seeking admissions into the health professions. Because of the presence of the USF College of Medicine and the USF College of Nursing, many of the students prepare themselves for entry into one of these two programs. With the addition of a Doctor of Pharmacy program, many of the health professions students may also seek to gain entrance into a college of pharmacy. Currently, undergraduate students on the main campus of USF are seeking to initiate a formal pre-pharmacy organization. These students have already contacted Dr. Kevin B. Sneed with the intention of inquiring about his availability to provide his services as an adviser to the organization. This interest on the part of pre-pharmacy students on the main campus of the University of South Florida further serves notice that has a strong interest in entry into the pharmacy profession. USF Health has continued to engage pre-professional students from the main campus, and has put forth an initiative known as the **Emerging Health Professions** program. A College of Pharmacy at USF Health will certainly become a focal point of interest to students that have an interest in the pharmacy profession.

An increasing number of female students are enrolling in colleges of pharmacy in Florida according to an analysis of student demographics. The profession of pharmacy offers unique flexibility and the potential for part-time positions. This flexibility is appealing to female health care professionals possibly seeking to have families or balance their family and career pursuits. The part time scheduling and flexibility may ultimately have the net effect of decreasing pharmacist workforce numbers. This is a special consideration when considering the pharmacy-related health care needs of the state of Florida. A college of pharmacy at USF Health will serve to address the challenges of possible pharmacist work force shortages that may be created by a part-time workforce.

**C. If similar programs (either private or public) exist in the state, identify the institution(s) and geographic location(s). Summarize the outcome(s) of any communication with such**

**programs with regard to the potential impact on their enrollment and opportunities for possible collaboration (instruction and research). Provide data that support the need for an additional program.**

In the state of Florida there are currently five pharmacy education programs (See Table 1 Below). Two are public institutions (the University of Florida, and Florida A&M University). The other three pharmacy programs are private entities (Nova Southeastern University, Palm Beach Atlantic University, and Lake Erie College of Medicine →Pharmacy). The University of Florida College of Pharmacy is located in Gainesville, FL; U of F also maintains three additional 4-year branch campuses in the cities of Jacksonville, Orlando, and St. Petersburg. The Florida A&M University College of Pharmacy is located in Tallahassee Florida; there are pharmacy practice branch divisions that exist in Jacksonville, Miami, and Tampa. These pharmacy practice branch divisions for Florida A&M College of Pharmacy are currently used as clinical training divisions for their graduating fourth-year professional students, and do not represent full four-year campuses offering full pharmacy curricular instruction. *The U of F College of Pharmacy- St. Petersburg campus and the Florida A&M College of Pharmacy- Tampa Division are at their anticipated maximum student capacity that each individual program can effectively manage per their currently available faculty and financial resources.* Nova Southeastern University College of Pharmacy exists in Fort Lauderdale and West Palm Beach. Palm Beach Atlantic University College of Pharmacy exists in Boca Raton, Florida. And the Lake Erie College of Medicine/School of Pharmacy is a new school located in Bradenton, FL. With its first entering class beginning in August 2007, they are in Candidate Status with the pharmacy accrediting agency, ACPE, and do not currently appear on any databases produced by AACP. It is not expected that opening a Doctor of Pharmacy program at USF will prove to be an impedance to the enrollment endeavors of any of the colleges of pharmacy that exist within the state of Florida. The overwhelming numbers of applications to all of the colleges of pharmacy strongly suggest that there is a very qualified applicant pool to fill all of the enrollment requirements for each college of pharmacy.

There are several distinctive characteristics that represent the five current colleges of pharmacy that exist in the state of Florida. Of the five programs listed, only the Nova Southeastern College of Pharmacy is located in a major urban area (Fort Lauderdale, Florida); all of the other main campuses are located in more rural areas by comparison. The Nova Southeastern College of Pharmacy, which is private, is also part of a larger health sciences complex. None of the other private colleges of pharmacy are part of a comprehensive health sciences educational system.

The following table summarizes the information previously presented in narrative form:

| **Colleges of Pharmacy currently in the state of Florida** | Campus Locations- includes satellite operations | Professional Student Enrollment/ class | Annual Tuition (approximate) | Number of Applicants/ year |
|---|---|---|---|---|
| **Public Institutions** | | | | |
| **University of Florida COP** | Main Campus- Gainesville<br>Satellite Campuses-<br>o St. Petersburg<br>o Orlando<br>o Jacksonville | ~ 275 | ~ $10,500 | ~ 1800 |

| | | | | |
|---|---|---|---|---|
| **Florida A&M University COPPS** | Main Campus- Tallahassee<br>Divisions-<br>o Tampa<br>o Jacksonville<br>o Miami | ~ 150 | ~ $ 5,000- first 2 professional years<br><br>~ $ 10, 500- last 2 professional years | ~ 1,000 |
| **Private Institutions** | | | | |
| **Nova Southeastern University COP** | Ft. Lauderdale<br>West Palm Beach<br>Puerto Rico | ~ 120<br>N/A<br>N/A | ~ 26,000 | ~ 1,600 |
| **Palm Beach Atlantic University** | Boca Raton | ~ 100 | ~ 26,000 | ~ 1,400 |
| **LECOM** | Bradenton | 75- 1st year<br>125- ongoing | ~ 28,000 | N/A |
| Information gathered from American Association of Colleges of Pharmacy (AACP) | | | | |

**Table 1**

The University of Florida College of Pharmacy is currently the only public university college located within an existing Health Science Center, complete with a comprehensive health sciences program profile.

The University of South Florida College of Medicine (USF) and the University of Florida (UF) College of Pharmacy had previously discussed in an innovative collaboration to potentially offer a joint PharmD program/degree in Tampa. The relationship between USF and UF extends beyond initiating a joint degree. During the past several months, USF and UF have discussed several joint collaborative projects. These projects are varied in their interest, very innovative, and represent a true spirit of joint collaboration to advance the academic, research and clinical missions of both universities. The University of Florida currently has a regional instructional pharmacy site in St. Petersburg that offers an entry-level four-year curriculum for the terminal PharmD degree. It is a natural progression for USF Health to initiate professional pharmaceutical education in addition to the other professional degree programs currently available. In the future, there will likely be areas of joint interest from which both programs may benefit.

Currently, the Florida A&M University College of Pharmacy and Pharmaceutical Sciences (FAMU COPPS) has active affiliation agreements with USF Health. For the past ten years, FAMU COP students have been actively engaged in clinical learning endeavors on the campus of USF, in particular with the USF College of Medicine. FAMU has provided clinician pharmacists to various departments with USF Health (Department of Family Medicine, and the Department of Psychiatry), and USF Health has provided clinical practice sites, office space, administrative support, and information technology support to the FAMU pharmacy faculty at no additional direct costs. In exchange, the FAMU pharmacy faculty have provided collaborative clinical services to the respective departments, and engaged the medical students and medical residents in interdisciplinary educational endeavors. This affiliation agreement remains in place, and is a prime example of collaboration between universities.

The Tampa area experiences a very high demand for clinical sites for professional pharmacy

students from not only within Florida, but from schools outside of the state of Florida. This high demand is the result of having numerous teaching hospital facilities and outpatient clinical sites within the greater Tampa Bay area, all of which currently service the USF College of Medicine (See Appendix D). Other pharmacy programs such as UF, FAMU and Nova Southeastern have been the beneficiaries of the enhanced number of clinical sites in the Tampa area. Additional students from USF would not be expected to enter these clinical sites until the year 2012 as part of their Introductory Pharmacy Practice Experience (IPPE); during the program implementation phase additional clinical sites will need to be attained, with clinical teaching resources redistributed among the colleges of pharmacy that currently utilize Tampa as a service area for their students. Currently, all of the colleges of pharmacy within the state of Florida make earnest attempts to coordinate their activities together by meeting to discuss strategies for scheduling students for clinical activities.

It would be the full intention of the USF College of Pharmacy to supply clinical pharmacy instructors to the Tampa area to engage the USF professional students in clinical pharmaceutical education. Currently, only the Florida A&M University College of pharmacy offers clinical instructors for the purpose of training their own students; all of the other colleges of the pharmacy rely upon the hospitals and clinics to supply clinical pharmacy educators. With critical human resource allocation geared towards clinical faculty, the USF College of Pharmacy will allow for minimal impact on other clinical faculty resources currently being used by the other colleges of pharmacy in the Tampa area. Subsequently, the addition of a USF College of Pharmacy could serve to ease the pressure and responsibility for training pharmacy students in the hospitals in the Tampa area.

Various programmatic infrastructure components are also in place to support initiating the pharmacy program to be located at USF Health. Continued interactions with the University of Florida College of Pharmacy and the Florida A&M College of Pharmacy will continue to be assessed while the endeavor of creating a Doctor of Pharmacy program at USF Health is implemented.

**D. Use Table 1 (A for undergraduate and B for graduate) to categorize projected student headcount (HC) and Full Time Equivalents (FTE) according to primary sources. Generally undergraduate FTE will be calculated as 40 credit hours per year and graduate FTE will be calculated as 32 credit hours per year. Describe the rationale underlying enrollment projections. If, initially, students within the institution are expected to change majors to enroll in the proposed program, describe the shifts from disciplines that will likely occur.**

Table 1-B - Appendix E illustrates an approximation of the demographics of the students that would be expected to enroll in a USF College of Pharmacy. During the initial entering classes, it is expected that a substantial number of students applying will have a previous health pre-professional Bachelors degree from the University of South Florida, or from another State of Florida university. As previously mentioned, there is a vibrant health-professions undergraduate population at USF, and the opportunity to enter the pharmacy profession will be very appealing to these students. It is expected that there will be a number of non-traditional students that will seek admission. These students likely represent individuals that were engaged in pre-professional education as a means of entering an alternate profession from their current place of employment. These students are older than the traditional student that entered college from high school, and may have been involved in the health professions in another capacity.

During the third entering pharmacy class, and in subsequent years, the number of students with previous bachelors degrees will continue to increase. This estimation is gathered from data collected from AACP on the demographics of students applying to pharmacy programs throughout the United States (Table 2). The AACP reports that greater than 40% of applicants have a previous baccalaureate degree; and approximately 24 % of applicants have at least 3 years of college experience, but have not yet attained a degree. This represents the 60% of students expected to apply to a USF College of Pharmacy shown in Table 1B- Appendix E. This also represents USF being located in a major urban setting in the state of Florida, separate from the two other state university Colleges of Pharmacy.

DISTRIBUTION OF 2004-05 APPLICATIONS BY GENDER AND PREVIOUS POSTSECONDARY EXPERIENC
APPLICANT (represents data, some incomplete, submitted by 84 schools)

| Postsecondary Experience | Male | Female | Gender Not Specified | Total | Percent |
|---|---|---|---|---|---|
| 0 Years of College | 4115 | 6114 | 21 | 10250 | 14.6% |
| 1-2 Years of College/No Degree | 3055 | 4962 | 305 | 8322 | 11.8% |
| Associate Degree | 918 | 1451 | 18 | 2387 | 3.4% |
| 3 or More Years of College/No Degree | 6409 | 10415 | 113 | 16937 | 24.0% |
| Baccalaureate Degree | 11217 | 18660 | 687 | 30564 | 43.4% |
| Master's Degree | 689 | 854 | 41 | 1584 | 2.2% |
| Doctoral Degree | 146 | 239 | 8 | 393 | 0.6% |

Table 2- AACP Data- Distribution of 2004-05 Applications by Gender and Previous Postsecondary Experience of Applicant

With the current health related pre-professions undergraduate degrees offered at USF, there is not an expectation that there will be a significant shift of students from one degree program to the proposed college of pharmacy. A modest number of students may attempt this degree program shift, and is represented in Table 1B- Appendix E.

**E. Indicate what steps will be taken to achieve a diverse student body in this program, and identify any minority groups that will be favorably or unfavorably impacted. <u>The university's Equal Opportunity Officer should read this section and then sign and date in the area below.</u>**

The selection of students into the USF College of Pharmacy will be based on selecting the most qualified students. Ethnicity and race will be masked on the students' applications.

A new college of pharmacy at the University of South Florida will present a very unique opportunity to provide a diverse student enrollment profile. USF will take several measures to foster a diverse student population. Some of these measures include:

I. Attempts will be made to produce a diverse faculty population which will create role models for aspiring pharmacy students. All qualified applicants will be encouraged to apply for positions within the USF College of Pharmacy. An appropriately qualified administrative committee charged with the selection of faculty members will be encouraged to seek diversity of all types with regards to faculty appointments.

II. Continued efforts will be made to expose high school and college students to career opportunities in the profession of pharmacy. Currently, USF Health participates in various AHEC initiatives to expose many underrepresented minority students per year to

health careers available at USF Health. Participation in health career fairs currently sponsored several times throughout the year by AHEC will provide ample opportunities for students to examine and seek admission into the USF College of Pharmacy.

III. Community outreach endeavors within the city of Tampa will also provide exposure for various student applicants to gain exposure to USF Health, and more specifically the USF College of Pharmacy. The profession of pharmacy has always been noted to be a big participant in community health endeavors, and this exposure by USF Health and the USF College of Pharmacy will continue to expose underrepresented students to opportunities that may become available to this population of students.

Ted Williams — 9/21/08

Equal Opportunity Officer — Date

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## III. Budget

**A. Use Table 2 to display projected costs and associated funding sources for Year 1 and Year 5 of program operation. Use Table 3 to show how existing Education & General funds will be shifted to support the new program in Year 1. In narrative form, summarize the contents of both tables, identifying the source of both current and new resources to be devoted to the proposed program. (Data for Year 1 and Year 5 reflect snapshots in time rather than cumulative costs.)**

Year 1 is representative of the possible reallocation of funds for the purpose of supporting the program's initiation. The vast majority of the reallocated funds would go to support faculty salaries and benefits; the likely source of this reallocation is from the university's Development and Carry- Forward funds. State enrollment growth dollars would be used to support new faculty lines, and offset necessary library support services. Because of accreditation concerns, the vast majority of faculty is expected to be hired during the year 1 planning phase, and the Year 1 enrollment phase. This is necessary to cover early clinical education that is mandated by the ACPE (pharmacy accrediting agency). By Year 5, enrollment growth dollars, E & G funding, including tuition, will be in place to cover the planned additional faculty and support staff. It is fully expected that the faculty, through dedicated research and teaching mentoring programs, will be able to complete for extramural contract and grants. It is also fully expected that program initiation funding will be sought from the legislature.

**B. If other programs will be impacted by a reallocation of resources for the proposed program, identify the program and provide a justification for reallocating resources. Specifically address the potential negative impacts that implementation of the proposed program will have on related undergraduate programs (i.e., shift in faculty effort, reallocation of instructional resources, reduced enrollment rates, greater use of adjunct faculty and teaching assistants). Explain what steps will be taken to mitigate any such impacts. Also, discuss the potential positive impacts that the proposed program might have on related undergraduate programs (i.e., increased undergraduate research opportunities, improved quality of instruction associated with cutting-edge research, improved labs and library resources).**

The proposed degree program is a professional program, and would not be expected to have a negative impact upon undergraduate resource programs at the University. Reallocation of existing funds will likely occur within the Health Science Center. With the addition of the proposed degree program, undergraduate opportunities will likely develop with involvement in faculty research projects, mentoring/ shadowing opportunities, and interaction with pre-professional programs.

**C. Describe other potential impacts on related programs or departments (e.g., increased need for general education or common prerequisite courses, or increased need for required or elective courses outside of the proposed major).**

There is not an expectation for an impact on related programs or departments. The various health professional degrees currently in existence at USF Health have very similar pre-professional requirements. Thus, there will not be an increased need for general education or common prerequisite courses, or required or elective courses beyond what is currently available at the University of South Florida.

**D. Describe what steps have been taken to obtain information regarding resources (financial and in-kind) available outside the institution (businesses, industrial organizations, governmental entities, etc.). Describe the external resources that appear to be available to support the proposed program.**

The Assistant Dean of the USF Division of Clinical Pharmacy has been aggressively working with the Executive Director of Development at USF Health to identify potential sources of financial resources for the proposed college of pharmacy. A strategic plan is currently being developed with the Chief Development Officer from USF Health to seek attainment of new outside financial resources specifically for the USF College of Pharmacy. Currently, none of USF Health's dedicated external resources are available for the proposed program.

## IV. Projected Benefit of the Program to the University, Local Community, and State

**Use information from Table 1, Table 2, and the supporting narrative for "Need and Demand" to prepare a concise statement that describes the projected benefit to the university, local community, and the state if the program is implemented. The projected benefits can be both quantitative and qualitative in nature, but there needs to be a clear distinction made between the two in the narrative.**

USF has been designated a Research I institution by the former Board of Regents, and is a Carnegie I Research Institution, with the intent that USF will place increasing emphasis on graduate and professional education in order to meet the expanding needs of the Tampa Bay region, and the state of Florida. Numerous publications and independent study groups around the country have identified the profession of pharmacy as being of critical shortages. The proposed Doctor of Pharmacy program enhances and complements USF Health in its quest to provide outstanding health care to the Tampa Bay region, and the state of Florida. USF Health is already being identified as a community leader with regards to health care delivery, and creation of the College of Pharmacy only enhances the University's efforts to continue to provide the Tampa Bay region with outstanding health care quality while serving the needs of students and pharmacy faculty.

Health, Research, and Education are of paramount importance to USF Health. With the addition of pharmacy faculty and staff, even greater health care, increased research, and outstanding education will be achieved. As shown in Figure 1 earlier in this document, and in Table 1B, student demand for this degree program is expected to be very high. State enrollment growth dollars, tuition collections, and private fundraising campaigns are expected to sustain this program from years 1 through 5. Following year 5, with normal tuition increases seen in other degree programs, continued enrollment at the proposed level, and continued efforts with regards to private fundraising campaigns, it is fully expected that the program will be self-sustaining from year six. This also takes into account normal and expected recurring state funding support throughout the existence of the program.

USF Health is taking extraordinary strides to meet the health care workforce needs of the state of

Florida, and of our nation. Currently, USF Health is comprised of the College of Medicine, College of Nursing, College of Public Health, and the School of Physical Therapy. All of these programs have national prominence; and all are striving to get even better. The addition of pharmacy faculty will significantly enhance the research interests of USF Health, while being a welcome addition to the teaching and learning opportunities for all of the healthcare professions at the University of South Florida. With the creation of a USF Doctor of Pharmacy program, the addition of pharmacy practice faculty will serve to assist the healthcare endeavors of USF's medical physicians, nurses, nurse practitioners, and physical therapy practitioners. Pharmacy practice faculty's participation in health care will occur at all of the affiliate organizations through which USF practitioners currently provide health care. With the creation of the Centers for Advanced Health Care, North and South campuses, additional clinical training sites will be provided for pharmacy faculty to achieve their required healthcare endeavors. USF Health continues to seek ways to add to the educational, health, and research profile of its colleges. *All faculty will be expected to be engaged in research endeavors, especially in collaboration with the other health disciplines within USF Health.* External grants and contracts will be sought by pharmacy faculty, adding further to the overall research profile of USF. The addition of a USF Doctor of Pharmacy program will add prominently to the USF Health community.

Currently, USF Health is intimately involved in community endeavors. Recently, USF researchers from the Lawton and Rhea Chiles Center for Healthy Mothers and Babies at USF Health were a pivotal part in producing legislation geared towards reducing infant mortality in the state of Florida. Numerous other departments at USF Health have been significantly involved within the community, with a particular focus in reducing health care disparities with regards to cardiovascular, cancer, and social disparities within the state of Florida. Currently, USF Health pharmacy academic clinicians are actively engaged in health disparities activities and research throughout the Tampa community. Partnerships and research projects are currently and constantly being developed with Tampa area organizations, especially non-profit organizations, to provide needed social services and activities in the areas of enhancing knowledge of cardiovascular and cancer risks, and proper pharmaceutical care utilization. The addition of a USF College of Pharmacy will significantly assist USF Health in addressing the needs of the Tampa community, and the public health needs of the state of Florida.

## V. Access and Articulation – Bachelor's Degrees Only

**A. If the total number of credit hours to earn a degree exceeds 120, provide a justification for an exception to the policy of a 120 maximum and submit a request to the BOG for an exception along with notification of the program's approval. (See criteria in BOG Regulation 6C-8.014)**

N/A.

**B. List program prerequisites and provide assurance that they are the same as the approved common prerequisites for other such degree programs within the SUS (see Common Prerequisite Manual http://www.facts.org). The courses in the Common Prerequisite Counseling Manual are intended to be those that are required of both native and transfer students prior to entrance to the major program, not simply lower-level courses that are required prior to graduation. The common prerequisites and substitute courses are mandatory for all institution programs listed, and must be approved by the Articulation Coordinating Committee (ACC). This requirement**

**includes those programs designated as "limited access."**

**If the proposed prerequisites ~~they~~ are not listed in the Manual, provide a rationale for a request for exception to the policy of common prerequisites. NOTE: Typically, all lower-division courses required for admission into the major will be considered prerequisites. The curriculum can require lower-division courses that are not prerequisites for admission into the major, as long as those courses are built into the curriculum for the upper-level 60 credit hours. If there are already common prerequisites for other degree programs with the same proposed CIP, every effort must be made to utilize the previously approved prerequisites instead of recommending an additional "track" of prerequisites for that CIP. Additional tracks may not be approved by the ACC, thereby holding up the full approval of the degree program. Programs will not be entered into the State University System Inventory until any exceptions to the approved common prerequisites are approved by the ACC.**

N/A

**C. If the university intends to seek formal Limited Access status for the proposed program, provide a rationale that includes an analysis of diversity issues with respect to such a designation. Explain how the university will ensure that community college transfer students are not disadvantaged by the Limited Access status. NOTE: The policy and criteria for Limited Access are identified in BOG Regulation 6C-8.013. Submit the Limited Access Program Request form along with this document.**

N/A

**D. If the proposed program is an AS-to-BS capstone, ensure that it adheres to the guidelines approved by the Articulation Coordinating Committee for such programs, as set forth in Rule 6A-10.024 (see Statewide Articulation Manual http://www.facts.org). List the prerequisites, if any, including the specific AS degrees which may transfer into the program.**

N/A

## INSTITUTIONAL READINESS

### VI. Related Institutional Mission and Strength

**A. Describe how the goals of the proposed program relate to the institutional mission statement as contained in the SUS Strategic Plan and the University Strategic Plan.**

As previously mentioned, the proposed Doctor of Pharmacy professional degree program is consistent with the State University System Strategic Plan that has been approved in the year 2005. The strategic plan for the State University System was developed by the Florida Board of Governors, and expressly meets the following goals:

c. Meeting statewide professional and work force needs.
d. Access to and production of health related degrees.
    i. Critical needs in health care.

As stated in the State University System Strategic Plan, the profession of pharmacy is identified as an area of critical shortage that could negatively affect health care in key patient care areas. The proposed Doctor of Pharmacy degree program supports the strategic direction number 2 of the University of South Florida's strategic plan to "Advance Collaborative Learning and Discovery to improve health in the community, "and specifically "to advance Health Professions Education." Within the realm of the USF Health - College of Medicine, basic scientists and clinicians work together with a spirit of collaborative learning, and the addition of a USF College of Pharmacy can only serve to enhance and be complementary to its current disciplines.

**B. Describe how the proposed program specifically relates to existing institutional strengths, such as programs of emphasis, other academic programs, and/or institutes and centers.**

## Interdepartmental Plan for Collaboration

The proposed doctor of pharmacy program will coalesce well with the other colleges within USF Health. The additional faculty that will be recruited will enhance opportunities for collaborative research initiatives and collaborative teaching endeavors. Many of the existing departments within the College of Medicine will be the very same departments that will be serving a USF College of Pharmacy. There is an earnest attempt on the part of various departments to create a truly unique collaborative partnership that will cross traditional barriers between departments typically utilized at various universities throughout both the state of Florida and the country.

The American Association of Colleges of Pharmacy developed the Center for the Advancement of Pharmaceutical Education (CAPE) Guidelines to assist colleges of pharmacy in their assessment/evaluation activities (See Appendix A- Educational Outcomes). The 2004 CAPE Educational Outcomes identify three broad domains of education for pharmacy school curricula: 1) Pharmaceutical Care; 2) Systems Management; and 3) Public Health. In most colleges of pharmacy around the country, entire departments are developed to address these outcomes. USF Health, through many of its existing departments and colleges, already possesses all the resources necessary to address the educational outcomes outlined by AACP. Rather than having to establish entire private departments within a college of pharmacy at USF, we propose that collaborative efforts with other departments and colleges throughout the University of South Florida be used to meet these educational outcomes as defined by the AACP. While issues will have to be worked out between departments and colleges throughout USF to make it short, initial discussions with all departments and colleges involved have been very favorable for joint collaborative teaching endeavors. Faculty from within a USF college of pharmacy can be shared with other colleges and departments to assist teaching endeavors of both entities, in particular in the areas of Systems Management and Public Health. The presence of existing departments and colleges throughout USF and USF health is an advantage that the University of South Florida has over many existing colleges of pharmacy, both in the state of Florida and throughout the country. The notion of interdepartmental collaboration has been very attractive for many of the departments and colleges that have been approached in preparation for a USF College of Pharmacy.

Examples of plans for interdepartmental collaboration are as follows:

1. **College of Public Health**- accredited colleges of pharmacy usually maintain a Social, Economic, and Administrative Sciences division. The professors responsible for teaching and conducting this portion of the curriculum share the same discipline and background as professors within our USF College of Public Health. We propose a mechanism of shared faculty resources between the proposed college of pharmacy and USF College of Public Health with the following programs:

    a. *Social and Administrative Sciences*- processes for both colleges will be responsible for teaching the following disciplines within the pharmacy curriculum:
        i. Public Health (Pharmacoepidemiology)
        ii. Pharmacy Management courses
        iii. Biostatistics

    b. *Pharmacy Administrative Residency*- a postgraduate administrative pharmacy residency has been proposed to be run jointly between USF Health, Tampa General Hospital, and Moffitt Cancer Center. This will involve graduate pharmacy training, as well as graduate academic studies. Currently, the graduate degree thought to best fit this program will be the Masters of Healthcare Administration (MHA). TGH and Moffitt Pharmacy administrators have identified a deficit in leadership training for the pharmacy profession's future leaders. The goal of this residency program will be to provide a structured post-graduate experience for the administrative pharmacy resident that will provide them with the necessary supervised training to become outstanding health-system administrators; the Master's component of the residency will serve to enhance the training and marketability of the pharmacy residents. While the proposed USF College of Pharmacy will be the administrator of the residency program, the MHA graduate degree will be conferred by the USF College of Public Health. Tampa General Hospital and Moffitt Cancer Center will be the administrators of the pharmacy administrative residency program.
        i. Tampa General Hospital - Administrative Pharmacy Residency
        ii. Moffitt Cancer Center - Administrative Pharmacy Residency
        iii. USF College of Public Health- Masters in Healthcare Administration
    c. Systems Management- courses currently exist within the College of Public Health to meet this particular objective of the CAPE guidelines. Pharmacy faculty will be responsible for course coordination and teaching of this educational outcome, while also providing core support to other courses within the College of Public Health. Educational goals of this outcome are to manage and use resources of the health care system, in cooperation with patients, prescribers, other health care providers, and administrative and supportive personnel to promote health.

2. **College of Medicine**- proposed USF College of Pharmacy faculty, in addition to clinical adjunct pharmacy faculty, will assist in portions of teaching for other colleges throughout the USF Health. Proposed teaching collaborations include:
    a. Clinical Instruction- Pharmacology course(s); clinical cases, small group

discussions
   b. Clinical Services- Various Medical Departments

3. **College of Nursing**- the current academic nursing facility houses Center for Applied Clinical Skills laboratory. It has been proposed that students from the pharmacy program would participate in joint clinical skills sessions with both nursing students and medical students. More specifically, clinical skills would be honed in mock code situations, as well as simulated critical care scenarios in the hospital critical care simulation suite. Joint physical assessment skills labs would also be implemented.

4. **Department of Chemistry**- the chemistry department on the main campus of the University of South Florida has faculty that may be available to serve in a teaching and research capacity with the proposed USF College of Pharmacy. (i.e.- Department of Chemistry- contains several medicinal chemists). Rather than produce a separate medicinal chemistry division within the proposed USF College of Pharmacy, collaborative teaching and research could exist between the USF College of Pharmacy and the USF Department of Chemistry on the main campus of USF. Proposed collaborations for education and research include the following:
   a. Medicinal Chemistry Professors- teaching, research in USF COP
   b. CMD5- Center for Molecular Diversity in Drug Design, Discovery and Delivery- collaborative research for innovation and entrepreneurial endeavors.

5. **Department of Pharmacology**- We propose that modest numbers of pharmacology faculty would be added to the USF College of Pharmacy since there already exists an entire pharmacology unit within the USF Department of Molecular Pharmacology and Physiology. This will serve the purpose of adding to the existing pharmacology faculty without increasing their already high teaching workloads. Collaborative research projects would be an expectation for those professors jointly appointed to both educational units.

The recruitment of clinical pharmacy faculty will provide clinical services throughout various areas in both USF Health and the Tampa teaching hospitals and outpatient clinics. This will serve another important initiative of the College of Medicine by adding interdisciplinary models of providing health care. The increased number of faculty that the College of Pharmacy will provide will foster academic enrichment and scholarship throughout all of the colleges that currently exist within USF Health.

The proposed USF Doctor of Pharmacy program will begin the process of nurturing developing relations between USF Health and the undergraduate departments on the main campus of the University of South Florida. Since the USF Doctor of Pharmacy program will be a professional degree program, there will be no direct impact on the undergraduate degree programs; course load, scheduling, and overall FTE issues will be worked out. However, there exists potential for an increasing number of USF undergraduate students to possibly enroll in the pharmacy program because of the presence of the USF College of Pharmacy on campus. The health professions learning communities currently in position on the main campus of the University South Florida offer a well-trained applicant pool from which of the USF College of Pharmacy could draw applicants. And with the **Emerging Health Professions** endeavor currently in progress through collaborative efforts of USF Health and University of South Florida College of Arts and Sciences, there will be additional opportunities for USF students.

**C. Provide a narrative of the planning process leading up to submission of this proposal. Include a chronology (table) of activities, listing both university personnel directly involved and external individuals who participated in planning. Provide a timetable of events necessary for the implementation of the proposed program.**

The planning process for this proposed college of pharmacy began in May 2007. It was initiated by a series of meetings between Dr. Klasko, VP of USF Health, Dr. Haney, Associate Vice President of Development for USF Health, and Dr. Kevin Sneed, Assistant Dean and Clinical Director of the newly created Division of Clinical Pharmacy. Dr. John Curran, Associate Dean of Academic Affairs for USF Health, also played an integral role in the initial phases of the proposal. Since this is a new professional degree program, the creation of this proposal is the initial endeavor. Pursuant to recommendations from the Board of Governors of the state of Florida, we contacted an outside consultant to perform a workforce analysis of the need for pharmacists within the state of Florida.

It is planned that this proposal will be submitted to the USF Provost, the USF Graduate Education Council and the Health Affairs Management Council in January 2008. Upon approval from the various councils, it will then be submitted to the USF Board of Trustees for approval. Considering the necessary timetable from the Florida Board of Governors, it will expeditiously be submitted for consideration by the Board of Governors as early as possible, but no later than the beginning of October; we would then plan to have this proposal considered by the Board of Governors during their December meeting for approval.

Once approved by the Florida Board of Governors, it will then go before the Florida legislature for program approval during the 2008 legislative session. Once approved, at this point, the remainder of 2008 in the beginning of the year 2009 will be a planning and implementation year for the addition of faculty, renovation/creation of buildings for didactic teaching and clinical teaching purposes. Admissions processes will begin in early 2009, with the initial class entering in the fall of 2009.

**Planning Process**

| Date | Participants | Planning Activity |
|---|---|---|
| May 3, 2007 | Dr. S. Klasko, Dr. Patricia Haynie | Initial Planning meeting |
| | | |
| April 16, 2007 | Dr. Klasko, Dr. Haynie, Dr. Sneed, Steve Blair, John Ekarious, Dr. Ralp Wilcox | Program planning |
| April 20, 2007 | USF- Haynie, Klasko, Sneed, Wilcox<br>UofF- Mike Brodeur, CFO,Assoc.Dean Bill Millard, Executive Associate Dean Jennifer Williams, Assist. Dean, St. Petersburg Campus<br>Bill Riffee, Dean, Pharmacy | Discussion of joint degree program, terms of agreement |
| April 23, 2007 | Phone call – USF Participants: Drs. Haynie, Klasko, Sneed, Kathleen Moore, John Ekarius<br>UF Participants – Laura Barton, Mike Brodeur, Bill Millard, Sven Normann, Bill Riffee, Jennifer Williams | Discussion of joint degree program, Term Sheet developed, agreed upon. |

| | | |
|---|---|---|
| April 26, 2007 | Phone call – USF Participants: Drs. Haynie, Klasko, Sneed, Kathleen Moore, John Ekarius<br>UF Participants – Laura Barton, Mike Brodeur, Bill Millard, Sven Normann, Bill Riffee, Jennifer Williams | Developed Florida Board of Governors Letter of Intent; finalized document to be sent to FL. BOG. |
| May 10, 2007 | Dr Haynie, Dr. Sneed | Review FL BOG Letter of Intent, |
| May 24, 2007 | Tallahassee Visit-Dr. R.E. LeMon:<br>USF Participants: Drs. Haynie, Moore and Sneed;<br>UF Participants: Bill Riffee; Jennifer Williams; Mike Brodeur; Sven Normann<br>FL BOG- Dr. RE LeMon, | Joint PharmD Program discussed with FL BOG members, terms of agreement between USF and UF discussed; impact on other universities discussed, next course of action for both universities |
| June 13, 2007 | Dr. Haynie and Dr. Sneed met with Dr. Jurgens (Pfizer, Inc) | Discussed implementation of industry curriculum components into an eventual USF COP |

**Events Leading to Implementation**

| Date | Implementation Activity |
|---|---|
| August 22, 2007 | Negotiate with Consultant for Worforce analysis. |
| August 28, 2007 | Roundtable meeting, USF Graduate Executive Curriculum Committee |
| December 2007 | Recruitment of adjunct clinical pharmacy faculty to the newly created Division of Clinical Pharmacy from Tampa area hospitals. |
| January 17, 2008 | External Consultants perform curriculum and program assessment for Graduate Education Council |
| January 23, 2008 | Doctor of Pharmacy Proposal submitted to the USF Graduate Council |
| February 28, 2008 | Meeting with USF Graduate Education Council |

## VII. Program Quality Indicators - Reviews and Accreditation

**Identify program reviews, accreditation visits, or internal reviews for any university degree programs related to the proposed program, especially any within the same academic unit. List all recommendations and summarize the institution's progress in implementing the recommendations.**

At this time, no full accreditation process has been initiated with respect to a college of pharmacy at the University of South Florida. The organization responsible for accrediting all colleges of pharmacy in the United States is the Accreditation Council for Pharmacy Education (ACPE.) A distinct feature of the ACPE is the recognition that the professional program will be evaluated on the extent to which it accomplishes its stated goals and is consistent with the concept that pharmacy is a unique, personal service profession and the health science field. This notion promotes diversity among colleges of pharmacy across the country.

External reviewers, one from the newly created college of pharmacy at the University of Texas A&M –Kingsville, the other from the Ohio State University College of Pharmacy, have been retained to perform an external review of the proposal to be submitted to the Graduate Education Council on January 17, 2008. An executive summary of this external review will be provided. Completion of this external review is forthcoming.
The creation of a College of Pharmacy at USF Health will require approval by the USF Health

Graduate Education Council, USF Board of Trustees, and the state Board of Governors prior to submission of an application to the ACPE Board of Governors. The proposed entering class that will begin in Fall 2010 will allow sufficient time to implement all pre-accreditation standards set forth by the ACPE Board of Governors.

## VIII. Curriculum

**A. Describe the specific expected student learning outcomes associated with the proposed program. If a bachelor' and in s degree program, include a web link to the Academic Learning Compact or include the document itself as an appendix.**

The primary expected student learning outcomes associated with the proposed doctor of pharmacy program will be a curriculum which prepares the student for professional licensure with a Board of Pharmacy and the United States. Secondary learning outcomes will include preparing students to provide health-related services, both clinical and administrative, throughout numerous areas within the healthcare arena, especially as it pertains to public health initiatives. The curriculum will provide opportunities for students to learn and achieve ability-based outcomes in both didactic and experiential courses. Pharmacy education has created a set the standards for all accredited colleges and schools throughout the country. The Center for the Advancement of Pharmaceutical Education (CAPE) created the standard learning objectives for colleges and schools of pharmacy in the United States. These learning objectives have been adopted by all of the colleges and schools of pharmacy that have membership with the American Association of Colleges of Pharmacy (AACP) {See Appendix A- Educational Outcomes.} The CAPE Outcomes include a series of educational outcomes meant to assist and guide colleges of pharmacy in molding their respective programs, and have emerged as the prevailing learning outcomes for all pharmacy education. Students and educators utilize the CAPE Educational Outcomes for an objective example of what their education should provide, as well as obtain a sense of the current "role of a pharmacist." The most recent revision of the CAPE Educational Outcomes has produced three sole educational outcomes: (1) Pharmaceutical Care; (2) Systems Management; and (3) Public Health. Definitions of each educational outcome as supplied by the AACP- CAPE guidelines are as follows:

1. **PHARMACEUTICAL CARE** Provide pharmaceutical care in cooperation with patients, prescribers, and other members of an inter-professional health care team based upon sound therapeutic principles and evidence-based data, taking into account relevant legal, ethical, social, economic, and professional issues, emerging technologies, and evolving pharmaceutical, biomedical, socio-behavioral, and clinical sciences that may impact therapeutic outcomes.

2. **SYSTEMS MANAGEMENT** Manage and use resources of the health care system, in cooperation with patients, prescribers, other health care providers, and administrative and supportive personnel, to promote health; to provide, assess, and coordinate safe, accurate, and time-sensitive medication distribution; and to improve therapeutic outcomes of medication use.

3. **PUBLIC HEALTH** Promote health improvement, wellness, and disease prevention in cooperation with patients, communities, at-risk populations, and other members of an inter-professional team of health care providers.

Upon completion of the pharmacy program, pharmacy graduates should be proficient in all three of these broad educational outcomes as a result of successfully completing the pharmacy curriculum.

**B. Describe the admission standards and graduation requirements for the program.**

The proposed admission standards for the USF College of Pharmacy will be very similar to other colleges and schools of pharmacy, both in the state of Florida and around the country. For admission into pharmacy professional programs, an Associate of Arts Degree or a higher degree must typically be attained by the student. Completion of all pre-professional coursework with a minimum pre-professional GPA of **3.0** will be required. Each applicant must take the Pharmacy College Admission Test (PCAT), with a qualifying minimum score in the **65th** percentile. All applicants will be expected to submit their application to PharmCAS, which will include their official transcripts and PCAT scores. Two or three letters of recommendation will be required, along with a personal profile and essay.

As previously mentioned, an Associate of Arts degree or a higher degree will be required. Pre-professional course work typically takes a minimum of two years at the undergraduate level. Trends in colleges of pharmacy point to requiring a possible third pre-professional year. Additionally, some AACP member schools propose that students seeking the professional pharmacy degree be required to possess the equivalent of a baccalaureate degree prior to admission. The final outcome of pre-professional course work will be decided by the administration of the new college once installed.

Pre-pharmacy course requirements include the following: Chemistry-the General Chemistry I and General Chemistry II with labs; Organic Chemistry- Organic Chemistry I and Organic Chemistry II with labs; Biological Sciences-Biology I and Biology II; Anatomy and Physiology I and II with labs; Physics I and II; Calculus I; English; and Speech or Communications.

Graduation requirements for the USF College of Pharmacy will be successful completion of all courses, within a designated period of time, to be determined by the founding Dean and administrative staff. Successful completion of all course work will include all clinical rotations, and all didactic course work with a "C" greater higher. This is important since the degree leads to possible professional licensure with the state Boards of Pharmacy.

**C. Describe the curricular framework for the proposed program, including number of credit hours and composition of required core courses, restricted electives, unrestricted electives, thesis requirements, and dissertation requirements. Identify the total numbers of semester credit hours for the degree.**

The Doctor of Pharmacy curricula throughout the accredited colleges and schools of pharmacy have begun to focus on a patient-centered learning model that represents the changing paradigm of pharmaceutical care throughout the country. Standard number 10 of the ACPE Standards and Guidelines states that the professional curriculum must be four years in length, or the equivalent credit hours and contact hours. The proposed length the study for the Doctor of Pharmacy professional degree program at USF Health is four years. Each year will coincide with the academic year currently implemented by the University of South Florida, and divided by semesters. It is anticipated that the curriculum will have nine semesters, with 6 semesters comprised of 16-week course instruction, and three semesters of advanced pharmacy practice

experiential training. The total number of course credits is anticipated to be approximately 140 – 145 hours. This may vary according to elective courses selected by the professional students.

While the doctor of pharmacy professional degree program offers a terminal degree at the doctoral level, there is no research-based dissertation requirement for the professional doctorate degree. However, it is anticipated that research requirements may be built into the curriculum.

The Doctor of Pharmacy professional degree program is anticipated to be divided into three distinct pedagogical segments. The first year will comprise basic science foundational instruction; this will include pharmaceutical sciences, principles of pharmacology, and human anatomy and physiology-related sciences. The next two years of the curriculum will focus on patient-centered learning, with more advanced pharmacology principles, and special emphasis on pharmacotherapeutics. These years represent the "clinician-building" phase for students. During the initial three years, the pedagogical approach will be one of a **"vertical-integration"** of learning in which all courses taught initially will be consistently integrated into subsequent courses. This approach will include integration of basic sciences, along with patient-centered learning, and utilizing principles of evidence-based medicine.

The fourth professional year will begin in the summer semester immediately following the sixth semester, and will initiate the advanced pharmacy practice experience for the students. This year will comprise 1440 hours of clinical instructional training at clinical sites throughout the Tampa Bay region. This total number of clinical instructional training hours represents **25%** of the curriculum, and is mandated by AACP for accreditation. Particular utilization of teaching hospitals throughout the region and the new Centers for Advanced Healthcare, campuses North and South, will be achieved.

Other required components of the curriculum will include courses in public health, pharmacy management, and other administrative and social sciences. Collaboration with the USF College of Public Health will assist with achieving these components.

**The mission of the Doctor of Pharmacy professional degree program:**

To create health care clinicians trained in the discipline of pharmacy that will provide health care services to meet the needs of the citizens of the Tampa Bay region, the state of Florida, and nationally. The curriculum will place emphasis in the areas of pharmaceutical care services, Pharmacogenomics/Pharmacogenetics, clinical research, public health, and geriatrics. The pharmacy teaching faculty of the Doctor of Pharmacy professional degree program will be involved in clinical care, collaborative clinical research, and creation of outstanding, innovative pedagogical techniques for student learners.

**D. Provide a sequenced course of study for all majors, concentrations, or areas of emphasis within the proposed program.**

**Proposed USF College of Pharmacy**
**Professional Degree Curriculum**

**PY1- Fall**

| Course | Class | Credit Hours |
|---|---|---|
| | Pharmaceutics I | 3 |

| | | |
|---|---|---|
| | Pathophysiolgy | 4 |
| | Clinical Biochemistry | 3 |
| | Pharmaceutical Skills I | 3 |
| | Pharmacy Calculations | 2 |
| | Drug Information/ Literature Evaluation | 2 |
| **Total** | | **17** |

**PY1- Spring**

| **Course** | **Class** | **Credit Hours** |
|---|---|---|
| | Pharmaceutics II | 2 |
| | Medical Microbiology and Immunology | 3 |
| | Introduction to Principles of Drug Action | 4 |
| | Principles of Public Health/ Pharmacoepidemiology | 3 |
| | Pharmaceutical Skills II | 3 |
| | IPPE | 2 |
| | Patient Assessment | **1** |
| **Total** | | **18** |

**PY2- Fall**

| Course | Class | Credit Hours |
|---|---|---|
| | Pharmacotherapeutics I | 4 |
| | Biopharmaceutics | 3 |
| | Pharmacokinetics/ Pharmacodynamics I | 3 |
| | Healthcare Administration & Economics | 2 |
| | Pharmaceutical Skills III | 3 |
| | IPPE | 2 |
| **Total** | | **17** |

**PY2- Spring**

| Course | Class | Credit Hours |
|---|---|---|
| | Pharmacotherapeutics II | 4 |
| | Pharmaceutical Skills IV | 3 |
| | Pharmacokinetics/ Pharmacodynamics II | 3 |
| | Principles in Geriatric Pharmacotherapy | 2 |
| | Evidence-Based Medicine/ Biostatistics | 3 |
| | IPPE | 2 |
| **Total** | | **17** |

**PY3- Fall**

| Course | Class | Credit Hours |
|---|---|---|
| | Pharmacotherapeutics III | 4 |
| | Pharmaceutical Skills V | 4 |

| | | |
|---|---|---|
| | Research Methods | 2 |
| | Pharmacogenetics/ Pharmacogenomics | 3 |
| | Elective Course | 3 |
| | IPPE | 2 |
| **Total** | | **18** |

**PY3- Spring**

| Course | Class | Credit Hours |
|---|---|---|
| | Pharmacotherapeutics IV | 4 |
| | Pharmaceutical Skills VI | 4 |
| | Jurisprudence | 2 |
| | Non-Prescription Medications | 2 |
| | Elective Course | 3 |
| | IPPE | 2 |
| **Total** | | **17** |

**PY4- Summer**

| Course | Class | Credit Hours |
|---|---|---|
| | Clinical- APPE (COM, HOS, GER) | 8 |
| | Clinical Research/ Patient Assessment Forum | **4** |
| **Total** | | **12** |

**PY4- Fall**

| Course | Class | Credit Hours |
|---|---|---|
| | Clinical- APPE (AMB, MED, ELE) | 16 |
| **Total** | | **16** |

**PY4- Spring**

| Course | Class | Credit Hours |
|---|---|---|
| | Clinical- APPE (CC, AdvAmb, ELE) | 16 |
| | | |
| | Board Review Capstone- Online | 1 |
| **Total** | | **17** |

**E. Provide a one- or two-sentence description of each required or elective course.**

**Year One (PY1)- Semester One**

**Pharmaceutics I and Laboratory - 4 credits**
Fundamental biological and physicochemical principles important for the formulation, preparation, stability, and performance of pharmaceutical dosage forms (compounding). A weekly laboratory session required

**Pharmacy Calculations - 2 credits**
Teaches mathematics encountered in the practice of pharmacy, focused on calculating proper

dosages of medication for a patient. Topics include unit systems and conversions, the calculation of doses and other calculations involved in dispensing and compounding.

**Pathophysiology- 4 Credits**
An in-depth study of the disease processes that affect human anatomy and physiology function. Special emphasis on cell and molecular biology, inflammatory process, and Gross anatomy disease states. Discussed by organ systems.

**Pharmaceutical Skills I- 3 Credits**
Preliminary discussion of pharmaceutical care techniques, including the history of pharmacy, professional communication tactics, professional behavior, and cultural competency.

**Clinical Biochemistry- 3Credits**
Focus on the structure, chemistry and function of macromolecules and their building blocks, i.e., amino acids, carbohydrates, nucleotides and fatty acids. Major metabolic and catabolic pathways will be discussed in relation to drug action. Enzyme kinetics and regulation, and bioenergetics will be presented.

**Drug Information/Literature Evaluation- 2 Credits**
Teaches students the various databases used for drug information inquiries, and includes both text and web-based media. Students are instructed in the principles of evaluating drug literature.

**Year One (PY1)- Semester Two**

**Pharmaceutics II and Laboratory - 4 credits**
Emphasis on institutional pharmacy and sterile techniques (TPN, IV preparation, etc). The weekly laboratory session continues to complement classroom topics and to hone students' technical skills. A weekly laboratory session required.

**Medical Microbiology and Immunology – 3 credits**
Comprehensive study of the field of medical microbiology and the immune system. Includes review of infectious microbes and the clinical consequences of infection. Immunology focuses on the structure and function of the individual components of the immune system, and manipulation of immune system in medicine.

**Patient Assessment- 1 Credit.**
Teaches the student how to perform physical assessment of patients in a clinical setting. Includes blood pressures, medical device teaching, examination of skin structures, and assessment of internal organ function.

**Principles of Public Health/Pharmacoepidemiology- 3 Credits**
Introduction to epidemiological studies of patients, import cultural components of society, and the biostatistical analysis of epidemiologic studies.

**Pharmaceutical Skills II- 3 Credits**
Continued discussion of pharmaceutical care techniques, will emphasis upon subjects taught and pharmaceutics, microbiology, and patient assessment.

**Introductory Pharmacy Practice Experience- 2 Credits**

Continuation of introductory experiences exposing pharmacy students to the principles of pharmaceutical care. Conducted in a clinical setting under the supervision of a licensed pharmacist.

**Introduction to Principles of Drug Action- 4 Credits**
Initial discussion of principle of pharmacology, and their application to anatomy and physiology function. Special emphasis on medication receptor recognition, introductory pharmacology, specific organ system, and variations of medications at receptor sites.

**Year Two (PY2)- Semester Three**

**BioPharmaceutics – 2 credits**
Involves the time course of medications in the body with reference to their absorption, distribution, metabolism, and elimination. Discussion concerning formulation factors involved in drug delivery and availability to comprehend the basic principles in the optimization of dosing regimens.
**Pharmacotherapeutics I- 4 Credits**
Applied principles of pharmacotherapy patient management of specified organ systems. Organ systems and covered include cardiology, nephrology, gastroenterology.

**Pharmacokinetics/Pharmacodynamics I- 3 Credits**
Combines basic science and clinical perspectives in the application of physiology, pharmaceutics, mathematics, and clinical assessment to understand the movements of medications administered to individual patients. Basic formulas are examined and applied to enable the student to initiate, monitor and optimize drug regimens to achieve desired therapeutic outcomes.

**Healthcare Administration & Economics**-2 **Credits**
Discusses components of the entire health care system, including the administrative components, and the financial influences that are determinants of patient care. Includes principles of public administration, economic indicators, and public health principles.

**Pharmaceutical Skills II- 3 Credits**
This is a skills course designed to be complementary to Pharmacotherapeutics I, and Pharmacokinetics/Pharmacodynamics I. Special emphasis placed upon patient management, medication literature evaluation, and patient-centered application.

**Introductory Pharmacy Practice Experience- 2 Credits**
Continuation of introductory experiences exposing pharmacy students to the principles of pharmaceutical care. Conducted in a clinical setting under the supervision of a licensed pharmacist.

**Year Two (PY2)- Semester Four**

**Pharmacokinetics/Pharmacodynamics** I**I- 3 Credits**
Continues principles taught in the Pharmacokinetics/ Pharmacodynamics I course. Special emphasis placed upon and in-patient medication management, and advanced monitoring techniques.

**Pharmacotherapeutics II- 4 Credits**
Applied principles of pharmacotherapy patient management of specified organ systems. Organ systems and covered include Pulmonary, neurology, and psychiatry.

**Pharmaceutical Skills IV- 3 Credits**
This is a skills course designed to be complementary to Pharmacotherapeutics II, and Pharmacokinetics/Pharmacodynamics II. Special emphasis placed upon patient management, medication literature evaluation, and patient-centered application.

**Introductory Pharmacy Practice Experience- 2 Credits**
Continuation of introductory experiences exposing pharmacy students to the principles of pharmaceutical care. Conducted in a clinical setting under the supervision of a licensed pharmacist.

**Principles in Geriatric Pharmacotherapy-2 Credits**
Introduces the student learner to specific geriatric pharmacotherapy issues, including medication administration issues, aging processes, and social issues of the elderly. Course content will include changing demographics in the country, and in particular the state of Florida.

**Evidence-Based Medicine/Biostatistics-3 credits**
Teaches advanced application in the evaluation of medical literature, and assesses appropriate statistical analysis of medical literature for translation into patient care. This is an introductory course into research methods

**Year Three (PY 3)- Semester Five**

**Pharmacotherapeutics III- 4 Credits**
Applied principles of pharmacotherapy patient management of specified organ systems. Organ systems and covered include hematology/ oncology, infectious diseases.

**Pharmaceutical Skills V- 3 Credits**
This is a skills course designed to be complementary to Pharmacotherapeutics III. Special emphasis placed upon patient management, medication literature evaluation, and patient-centered application.

**Research Methods-2 Credits**
students will be taught the basic components of initiating clinical research. Includes building a proposal, research ethics, requirement for federal funding agencies, and exercises resulting in the completion of a research proposal for evaluation and grading.

**Pharmacokinetics/Pharmacogenomics- 3 Credits**
Introductory experience to genetic determinants in response to drugs and other chemicals in humans and animals. Shall include instruction of the latest clinical research, and future applied applications of the discipline.

**Introductory Pharmacy Practice Experience- 2 Credits**
Continuation of introductory experiences exposing pharmacy students to the principles of

pharmaceutical care. Conducted in a clinical setting under the supervision of a licensed pharmacist.

**Year Three (PY 3)- Semester Six**

**Pharmacotherapeutics IV- 4 Credits**
Applied principles of pharmacotherapy patient management of specified organ systems. Organ systems and covered endocrine, dermatology, and skeletal/muscle disorders.

**Pharmaceutical Skills VI- 3 Credits**
This is a skills course designed to be complementary to Pharmacotherapeutics IV. Special emphasis placed upon patient management, medication literature evaluation, and patient-centered application

**Jurisprudence- 2 Credits**
This course will provide a basis for practice and begin the student's preparation for licensing exams. The course will explore the details of both federal and state pharmacy law.

**Non-Prescription Medications- 2 Credits**
Provides opportunities for patient counseling, proper utilization, monitoring, and potential adverse reactions associated with over-the-counter medications. Particular emphasis on the geriatric population.

**Introductory Pharmacy Practice Experience- 2 Credits**
Continuation of introductory experiences exposing pharmacy students to the principles of pharmaceutical care. Conducted in a clinical setting under the supervision of a licensed pharmacist.

**Year Four (Advanced Professional Practice Experiences- APPE)- Required Rotations**

**Summer Semester**

**Community Care – 4 credits**
The required Community Care Pharmacy clerkship further develops the student's knowledge and understanding of pharmacy practice through providing direct patient care under the supervision of a licensed pharmacist. The student experiences the various functions of a pharmacist in a community care pharmacy setting.

**Hospital / Institutional Care – 4 credits**
The required Hospital / Institution Pharmacy further develops the student's knowledge and understanding of pharmacy practice through providing direct patient care under the supervision of a licensed pharmacist in a hospital / institutional pharmacy setting.

**Geriatric Care – 4 credits**
The required Geriatric Pharmacy clerkship is designed to further develop the student's knowledge and understanding of pharmacy practice through providing direct patient care under the supervision of a preceptor in a geriatric clinical care setting. Utilization of regional consultant pharmacists shall be required; settings may include nursing homes, and assisted living facilities.

**Clinical Research/Patient Assessment Form- 2 Credits**
Students will complete clinical practices involve a patient assessment; the capstone course and clinical research will be conducted, including completed mock research proposal.

**Year Four (Advanced Professional Practice Experiences- APPE)- Required Rotations**

**Fall/ Spring Semesters**

**Ambulatory Care – 4 credits**
The required Ambulatory Care Pharmacy clerkship is designed to further develop the student's knowledge and understanding of pharmacy practice through providing direct patient care under the supervision of a preceptor in an ambulatory pharmacy setting.

**General Medicine – 4 credits**
The required General Medicine clerkship further develops the student's knowledge and understanding of pharmacy practice through providing direct patient care under the supervision of a preceptor in a general medicine pharmacy setting.

**Critical Care – 4 credits**
The required Ambulatory Care Pharmacy clerkship is designed to further develop the student's knowledge and understanding of pharmacy practice through providing direct patient care under the supervision of a preceptor in a critical care clinical setting. Utilization of area hospitals shall be required.

**Elective Rotations- TBA- 8 Hours**

**F. For degree programs in the science and technology disciplines, discuss how industry-driven competencies were identified and incorporated into the curriculum and identify if any industry advisory council exists to provide input for curriculum development and student assessment.**

USF Health currently partners with pharmaceutical companies. Representatives from various pharmaceutical companies have come forward with a willingness to participate in the creation of the curricular design of a new college of pharmacy at USF. While a formal industry advisory council does not currently exist to provide input into curricular development, input from various individuals with work experience and intellectual input has been welcome to establish dialogue and creation of the proposed curriculum. As curricular development continues, input from pharmaceutical industry representatives will continue to be a valued resource.

**G. For all programs, list the specialized accreditation agencies and learned societies that would be concerned with the proposed program. Will the university seek accreditation for the program if it is available? If not, why? Provide a brief timeline for seeking accreditation, if appropriate.**

N/A- See Section H below.

**H. For doctoral programs, list the accreditation agencies and learned societies that would be concerned with corresponding bachelor's or master's programs associated with the proposed program. Are the programs accredited? If not, why?**

The Accreditation Council for Pharmacy Education is the sole accrediting body for all colleges and schools of pharmacy in the country. All accredited colleges and schools of pharmacy seek admission to the AACP (the American Association of Colleges of Pharmacy), and become active members in the governance of colleges and schools of pharmacy across the country. All new colleges or schools of pharmacy will only have the option of offering the Doctor of Pharmacy degree, and therefore corresponding bachelor's and/or master's programs are not a major consideration with this degree program.

The University of South Florida, and more specifically USF Health, will seek accreditation for the USF College of Pharmacy and the Accreditation Council for Pharmacy Education.

The accreditation process is as follows:

1) Prepare initial application for submission to the ACPE.
2) Selection of a founding Dean for a new college of pharmacy.
    a. Responsible for completion of pre-accreditation status document.
    b. The document includes financial data, program infrastructure, and other information.
3) *Pre-Accreditation Status*- with this status may be achieved by one of the two following statuses:

**Pre-candidate**- A new program that has no students enrolled but has a Dean may be granted Pre-candidate accreditation status. The granting of Pre-candidate status indicates that a College or School's planning for the Doctor of Pharmacy program has taken into account ACPE standards and guidelines and suggests reasonable assurances of moving to the next step, that of Candidate status. Granting of Pre-candidate status brings no rights or privileges of accreditation.

**Candidate**- A new program that has students enrolled but has not had a graduating class may be granted Candidate status. The granting of Candidate status denotes a developmental program, which is expected to mature in accord with stated plans and within a defined time period. Reasonable assurances are expected to be provided that the program may become accredited as programmatic experiences are gained, generally, by the time the first class has graduated. Graduates of a class designated as having Candidate status have the same rights and privileges as graduates of an accredited program.

4) Accreditation by ACPE Board of Directors.

**I. Briefly describe the anticipated delivery system for the proposed program (e.g., traditional delivery on main campus; traditional delivery at branch campuses or centers; or nontraditional delivery such as distance or distributed learning, self-paced instruction, or external degree programs). If the proposed delivery system will require specialized services or greater than normal financial support, include projected costs in Table 2. Provide a narrative describing the feasibility of delivering the proposed program through collaboration with other universities, both public and private. Cite specific queries made of other institutions with respect to shared courses, distance/distributed learning technologies, and joint-use facilities for research or internships.**

The anticipated delivery system for the proposed program will be a combination of traditional

and innovative technologies available at USF Health. Traditional classroom lecture by a professor or other qualified individual will be utilized for various subjects. Laboratory sciences will be conducted in person and appropriate lab space. It is proposed that all lectures will be videotaped and available for podcast to students in the professional degree program. It may be necessary to utilize faculty from locations outside of the College Pharmacy, most notably on the main campus of USF in other departments (i.e. Chemistry). If this were to be the case, webcasting of a professor may be utilized to facilitate lecturing to students in a classroom setting from his office across campus, and this could also be captured for playback on podcast or webcast. It has been noted in various teaching disciplines around the country that videotaped lectures available on the web are viewed multiple times throughout the semester by students. This method increases contact time between the instructor and the student learner without utilizing additional instructor teaching hours.

Initial discussions and inquiries have been made with other state universities with regard to teaching and instruction with available technologies. Most notably, the University of Florida has a pharmacy program and St. Petersburg on the campus of St. Petersburg College. There may be opportunities for joint teaching with this program, but at this time no plans have been initiated or finalized.

## IX. Faculty Participation

**A. Use Table 4 to identify existing and anticipated ranked (not visiting or adjunct) faculty who will participate in the proposed program through Year 5. Include (a) faculty code associated with the source of funding for the position; (b) name; (c) highest degree held; (d) academic discipline or specialization; (e) contract status (tenure, tenure-earning, or multi-year annual [MYA]); (f) contract length in months; and (g) percent of annual effort that will be directed toward the proposed program (instruction, advising, supervising internships and practica, and supervising thesis or dissertation hours).**

See Appendix E- Table 4

**B. Use Table 2 to display the costs and associated funding resources for existing and anticipated ranked faculty (as identified in Table 2). Costs for visiting and adjunct faculty should be included in the category of Other Personnel Services (OPS). Provide a narrative summarizing projected costs and funding sources.**

It is currently expected that the initial faculty hires will be tenure-earning or tenured faculty. There is not currently an expectation that has cost associated with visiting or adjunct faculty. Initial reallocation of funds from university development and carry-forward funds will be used to support faculty salaries and benefits, as well as staff and OPS positions. Enrollment growth dollars and the expected professional tuition fee for students will comprise the remaining funding sources. In year three of enrollment, the car pro forma calls for class size to double to 100 students; this is necessary to meet the final cost of hiring the additional faculty needed to support the program. Further, this increase in enrollment will serve to begin the process of reimbursement for the initially reallocated funds.

**C. Provide the number of master's theses and/or doctoral dissertations directed, and the number and type of professional publications for each existing faculty member (do not include information for visiting or adjunct faculty).**

This is a new degree program not yet in existence; N/A

| Faculty Name | Theses | Dissertations | Professional Publications |
|---|---|---|---|
| Kevin B. Sneed | | | 1. **Atherosclerosis: Assessment of Biochemical Predictors and Corresponding Therapies**. George, A and **Sneed KB** – *US Pharmacist- Vol 30, No. 2, February 2005*<br><br>*2.* **Use and Utility of a Community Health Screening**. Young Y., Jones A, Sneed KB, - *Florida Pharmacy Today- Vol 67, No. 11, November 2004*<br><br>*3.* **Acute Congestive Heart Failure Induced by Rofecoxib.** Robert J. Campbell and **Kevin Sneed**, - *Journal of the American Board of Family Practice- Vol. 17, No. 2, March 2004*<br><br>*4.* **Compliance with Recommendations for Lipid Management among Patients with Type 2 Diabetes in an Academic Family Practice**. Gavin Putzer, Richard Roetzheim, Arnold M. Ramirez, **Kevin Sneed**, H. J. Brownlee, Jr, and Robert J. Campbell. *Journal of the American Board of Family Practice- Vol. 17, No. 2, March 2004*<br><br>*5.* **Prevalence of Patients with Type 2 Diabetes Mellitus Reaching the American Diabetes Association's Target Guidelines in a University Primary Care Setting.** Gavin Putzer, Richard Roetzheim, Arnold M. Ramirez, **Kevin Sneed**, H. J. Brownlee, Jr, and Robert J. Campbell. *Southern Medical Journal- Vol. 97, No. 2, February 2004*<br><br>*6.* **The Research Follies. Sneed KB**, Roetzheim RJ- *Florida Pharmacy Today- Vol 66, No. 11, November 2003*<br><br>*7.* **Enfuvirtide: A Novel Agent for Inhibiting the Entry of HIV-1 into Immune Cells.** Eraikhuemen N, Branch III E, Boston N, Honeywell M, **Sneed KB** - *P&T, Vol. 28 No. 9, September 2003.*<br><br>*8.* **Sneed, KB**, and Gonzalez, E. **Diabetes Mellitus Induced by Atypical Antipsychotics.** *Journal of the American Board of Family Practice, Vol. 16 No.3 May-* |

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| | | | *June 2003.*<br><br>9. Herold A, **Sneed KB**, **Treatment of a Young Adult Taking Gamma Butyrolactone (GBL) in a Primary Care Clinic.** *The Journal of the American Board of Family Practice- Vol. 15 No. 2 Mar-Apr 2002*.<br><br>*10.* **Assessment of the Pharmacist's Knowledge Concerning Herbal Products.** Scrivens J, Clayton R D, Braun W, Branch E, **Sneed K B** *Florida Journal of Health Systems Pharmacy, 18 (4), April 2001*.<br><br>11. **How Prepared are Pharmacists for Counseling Asthma Patients.**<br>Houng H, Ho V, Luong T, ***Sneed K***, Scrivens J *Florida Journal of Health Systems Pharmacy, 18 (2), August 2000.*<br><br>**Text Book:**<br><br>*1.* **A to Z Quick Pocket Guide: Complementary and Alternative Therapies for Primary Care Practitioners.**<br>*Fanning JJ, Haber S, published May 2002 (http://www.gnahec.org/Products.asp)*<br>Handbook- *ISBN# 0-9712143-0-1*<br>*Sneed KB- Editorial Board, Consultant*<br><br>**Manuscripts Accepted: (Peer-reviewed)**<br><br>1. **MRSA Nasal Colonization in Professional Football Athletes.** Coris, E, et al., Sneed, KB- Accepted by Clinical Journal of Sports Medicine, April 2007.<br><br>**Abstracts/ Poster Presentation (Peer-reviewed- Published/ Accepted)**<br><br>1. **An Evaluation of the Utility of PBMC PCR Testing for Chlamydia in Subjects with Suspected Chronic Chlamydia-Induced Reactive Arthritis** Carter JD, Espinoza LR, Inman RD, Sneed K, Ricca L, Valeriano J, Vasey FB, Oszust C, Snelgrove J, Hudson AP; American College of Rheumatology Scientific Meeting, Boston, MA November 2007<br><br>2. **Synovial Tissue PCR Analysis for** |

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| | | | **Chlamydia in Subjects with Suspected Chronic Chlamydia-Induced Reactive Arthritis: An Evaluation of Predictive Factors.**Carter JD, Espinoza LR, Inman RD, Sneed K, Ricca L, Valeriano J, Vasey FB, Oszust C, Snelgrove J, Gerard H, Hudson AP; American College of Rheumatology Scientific Meeting, Boston, MA November 2007<br>3. **Screening of Men for Osteoporosis in a Primary Care Setting.** Zwygart K, Roetzheim R, Sneed KB, Kotun D, Gonzalez E North American Primary Care Research Group (NAPCRG) 2007 Annual Meeting Vancouver, British Columbia, October 2007 (Poster presentation-accepted)<br>4. **Screening of Men for Osteoporosis in a Primary Care Setting.** Zwygart K, Roetzheim R, Sneed KB, Kotun D, Gonzalez E Florida Academy of Family Physicians Annual Meeting, Family Medicine Research Poster Presentation-Florida Academy of Family Physicians Destin, FL November 11, 2006 (Poster presentation)<br>**Presentation of Papers/Major Speeches:**<br>1. Zwygart K, Roetzheim R, Sneed K, Kotun D, Gonzalez EC. Screening of men for osteoporosis in a primary care setting. American Academy of Family Physicians Scientific Assembly 2007. Chicago, Illinois. October 3 – 6, 2007. (accepted) |

**D. Provide evidence that the academic unit(s) associated with this new degree have been productive in teaching, research, and service. Such evidence may include trends over time for average course load, FTE productivity, student HC in major or service courses, degrees granted, external funding attracted, as well as qualitative indicators of excellence.**

This is a new degree program not yet in existence; N/A

**X. Non-Faculty Resources**

**A. Describe library resources currently available to implement and/or sustain the proposed program through Year 5. Provide the total number of volumes and serials available in this discipline and related fields. List major journals that are available to the**

**university's students. Include a signed statement from the Library Director that this subsection and subsection B have been reviewed and approved for all doctoral level proposals.**

The USF Tampa Campus and Health Sciences Center libraries have extensive holdings of books that support the pharmacy professional education. See Appendix F for list of holdings that accompanies original proposal. Additional copies available on request. The Shimberg Library resources include 23,501 books, subscriptions to 2,710 journals of which 65 specifically pertain to Pharmacy. Addendum with detail attached.

**B. Describe additional library resources that are needed to implement and/or sustain the program through Year 5. Include projected costs of additional library resources in Table 3.**

Minimal additional resources are expected to be needed. Current available health sciences resources should be very accommodating for a pharmacy curriculum. There may be a total of less than 10 additional journals, pharmacy-discipline specific, that may be needed. Some additional text may be needed as well, however this is expected to negligible as well. Cost projections for recurring additional journal subscriptions and databases fees resources are estimated to be $20,000 annually with an additional $ $ 3,000 to $ 5,000 for texts and reference materials.

SHIMBERG HEALTH SCIENCES LIBRARY

Founded in 1971, the University of South Florida Shimberg Health Sciences Library serves the students, faculty and staff of the Colleges of Medicine, Nursing, Public Health and School of Physical Therapy. In addition, the library strives to serve affiliated clinical health professionals, health care consumers, and residents of the State of Florida seeking health related information. The library's mission is to support Health Science Center educational and research activities by facilitating access to information and teaching

B.
lifelong learning skills. The Shimberg Library strives for superior quality in all services and programs.

The collection of materials includes 150,709 bound volumes, 23,501 book titles, 2710 journal subscriptions of which 65 pertain to Pharmacy, 315 curriculum-related software and interactive multimedia, and over 400 health related databases of which 47 include pharmacy resources. Currently 85% of journal subscriptions are received in electronic format. New products are reviewed and purchased as funds permit to support new technologies such as PDA devices.

As a result of agreements and consortial arrangements with the USF Libraries System, The State University Library System (SULS), the Consortia of Southern Biomedical Libraries (CONBLS) and the Southern Chapter of the Medical Library Association, students and faculty have access to resources such as Science Direct, Web of Knowledge, thousands of multi-disciplinary e-journals, e-books and electronic thesis. USF Health students and faculty have borrowing privileges and full access to all online resources owned by the 5 libraries in the USF Library System. In addition, holders of USF library cards have borrowing privileges at all 11 state university libraries in Florida.

Library hours are Monday - Friday: 7:30 AM -11PM, Saturday 10AM-11PM, Sunday Noon-11PM. Extended hours are always provided during exam periods and whenever students request additional hours in support of special projects. The library is open and staffed 358 days a year.

The Shimberg Health Science Library Home Page www.hsc.usf.edu/library is the preferred point of entry for off campus students and faculty for 24/7 access to all electronic resources. Instructions for remote access and an F AQ section are on the library web page.

Other library services available online for remote users include online book renewals, interlibrary loan requests and online book hold requests. With the electronic document delivery service all interlibrary loan articles and photocopies can be sent to an email address or delivered as a URL for web based pick up.

_____**See Appendix F Signature Page**_____ _____

Library Director Date

**C. Describe classroom, teaching laboratory, research laboratory, office, and other types of space that are necessary and currently available to implement the proposed program through Year 5.**

Presently, there is not a designated location that could house a USF College of Pharmacy. However, there are several proposed locations that will be very sufficient in housing the USF College of Pharmacy. With the opening of the Centers for Advanced Health Care-South campus, various clinical disciplines will be vacating office space at 17 Davis Islands medical office complex. This comprises approximately 60,000 square feet of possible teaching space for professional students. The space will be sufficient for the first three years of the program; as shown in table 1, the first two classes will comprise approximately 50 students in each class, with a third class increased to approximately 75 students. As the inaugural class enters the fourth year for clinical rotations, it would be expected that the fourth entering class will be approximately 100 students. In an office building next to 17 Davis medical office complex, there is laboratory space that could be used for laboratory teaching of pharmacy professional students. Between these two locations, educational space would be distributed in the following into categories: administrative, faculty offices, large and small classrooms, student resource rooms, and the student lounge. Teaching and laboratory space, and conference rooms will be located in the office space next to 17 Davis. With this location being located adjacent to Tampa General Hospital, library resource services will be available, and students will be able to access USF library resources online.

This location will be sufficient for pharmacy professional students as they enter the inaugural class. With the USF Centers for Advanced Healthcare-South campus, and with Tampa General Hospital being adjacent, pharmacy students will have a full cadre of clinical teaching locations at their disposal. With sufficient access to retail and in-patient pharmacies, this will allow for compliance with introductory pharmacy practice experiences (IPPE) in USF owned and affiliate locations. College of Pharmacy faculty assigned to provide clinical care at the Centers for Advanced Health Care-South campus and at Tampa General Hospital will have easy access to their clinical teaching sites under this proposal.

With the updated ACPE curricular standards, and with paradigm shifts that have occurred within pharmacy curricular education throughout the country, there is less demand on bench research space for research teaching within the pharmacy curriculum. They currently exists more than sufficient laboratory teaching areas for pharmacy professional students of the future. The clinical laboratory teaching space currently available on the main campus of the medical school, and with laboratory space available adjacent to 17 Davis Islands medical complex, either location will prove to be very sufficient for the needs of laboratory teaching of pharmacy professional students.

The medical complex at 17 Davis Islands will provide sufficient office space for administrative and faculty members. The building is currently wired for utilization of online services, which will connect faculty with the main medical campus. Further, online teaching services will be available within the office space. For didactic teaching, large and small

classrooms will be available, and student resource rooms and student lounges, could also be made available.

The office space located at 17 Davis Islands, medical office complex meets all requirements of ADA for accessibility and the provision of bathroom facilities for the expanded number of faculty, staff, and students proposed with the implementation of the college of pharmacy.

It should be clearly stated that this is currently only a proposal for potential space; other physical facilities may be made available, and space allocation would ultimately be decided by the Vice President of USF Health.

**D. Describe additional classroom, teaching laboratory, research laboratory, office, and other space needed to implement and/or maintain the proposed program through Year 5. Include any projected Instruction and Research (I&R) costs of additional space in Table 2. Do not include costs for new construction because that information should be provided in response to X (J) below.**

Beginning in year four of the pharmacy curriculum, the entering class would increase to approximately 100 students. It is proposed at this time that there will possibly be available space on the main medical campus. To accommodate the increased number of pharmacy students, the administration may seek to have the pharmacy faculty and pharmacy students join the health profession students at the main medical campus, located in north Tampa. The currently available teaching laboratories and research laboratories will be sufficient to house the increased number of students. As various clinical disciplines continue to vacate currently available clinical space on the main medical campus, and relocate themselves into the Centers for Advanced Health Care-North campus, additional space will be available to house pharmacy professional students. This has been proposed to current space and project managers of USF Health.

Scheduling of pharmacy students with current teaching laboratories will be necessary for this to be accomplished. Current space could be easily renovated to accommodate pharmacy teaching laboratories, complete with compounding labs, clinical skills, labs, patient interaction teaching space. The current teaching clinical skills lab will easily accommodate pharmacy professional students with their patient counseling activities.

**E. Describe specialized equipment that is currently available to implement the proposed program through Year 5. Focus primarily on instructional and research requirements.**

The current clinical skills laboratory located within USF Health/USF College of Nursing offer state-of-the-art clinical activities teaching laboratory space for professional students. With patient assessment clinical space, and with currently available bench lab space located at the medical school, the only expected limitation for use of these facilities would be scheduling to accommodate all professional students currently using these locations. Currently available specialized equipment the implement the proposed program through year five will accommodate pharmacy professional students.

**F. Describe additional specialized equipment that will be needed to implement and/or sustain the proposed program through Year 5. Include projected costs of additional equipment in Table 2.**

A model pharmacy clinical skills lab could be constructed to further advance the teaching discipline of pharmacy on the Main campus, or at a space designated at the 17 Davis Islands medical complex. A model pharmacy would allow pharmacy professional students to enhance needed clinical skills in a retail and an in-patient pharmacy setting. The specialized equipment necessary will include scales, computers with appropriate pharmacy software, and a mock laminar flow hood.

**G. Describe any additional special categories of resources needed to implement the program through Year 5 (access to proprietary research facilities, specialized services, extended travel, etc.). Include projected costs of special resources in Table 2.**

Many of the faculty that will be needed to implement a college of pharmacy would be expected to be very young clinicians. Travel to pharmacy association meetings, such as the American Association of Colleges of Pharmacy (AACP) annual meeting, will benefit these professors by exposing them to the industry and academic developments and trends in pharmacy-related education.

Resources to provide teaching seminars to the young faculty will also benefit pharmacy faculty. Academicians should be supported in their quest to become better teachers. The USF Health Office of Curricular Medical Education currently offers trained educators that teach the medical school faculty on methods to improve teaching. Similar resources could be used to facilitate teaching seminars for the new College of Pharmacy faculty.

Additional research equipment will be needed and associated with the recruitment of faculty. Specific equipment items cannot be identified at this time, but the College of Medicine and USF have previously worked with other colleges to accommodate the needs of newly recruited faculty. These details are a focus of the search, interview, and appointment process. It is expected that a $5,000 to $10,000 equipment budget will be needed for the recruitment of each new College of Pharmacy faculty member, to relocate and establish their plan for scholarship at USF. This has been identified in the attached program financial proforma as OCO expenditure.

**H. Describe fellowships, scholarships, and graduate assistantships to be allocated to the proposed program through Year 5. Include the projected costs in Table 2.**

The addition of fellowships, scholarships, and graduate assistants to the proposed program will likely be contingent upon grants and contracts awarded to the faculty. This will be defined by the pharmacy administration and the faculty once established.

**I. Describe currently available sites for internship and practicum experiences, if appropriate to the program. Describe plans to seek additional sites in Years 1**

**through 5.**

See Appendix D

Clinical training sites are very important for accreditation purposes for a doctor of pharmacy program. Many of the clinical training sites currently used by the medical school would also be very adequate for use for experiential training of pharmacy students. Not all the clinical training sites currently available for the medical students would be appropriate for use by the pharmacy students; following program approval, experiential director would be hired to secure additional training sites as necessary to meet the needs of the program beginning in the third professional year of the current proposed pharmacy curriculum.

**J. If a new capital expenditure for instructional or research space is required, indicate where this item appears on the university's fixed capital outlay priority list. Table 2 includes only Instruction and Research (I&R) costs. If non-I&R costs, such as indirect costs affecting libraries and student services, are expected to increase as a result of the program, describe and estimate those expenses in narrative form below. It is expected that high enrollment programs in particular would necessitate increased costs in non-I&R activities.**

There currently is not enough information concerning the capital expenditure for instructional or research space to appropriately address this issue. It is expected to be addressed by senior administration at the University of South Florida in the near future.

# Appendix A

# American Association of Colleges of Pharmacy (AACP) Tables

TABLE 53: SUMMARY OF ENROLLMENTS IN FIRST PROFESSIONAL DEGREE (BACCALAUREATE, PHARM.D.1) PROGRAMS BY RACE/ETHNICITY 1984 TO 2005

| | Black or African American[a] | | Hispanic or Latino[a] | | Asian or Native Hawaiian or Other Pacific Islander[a] | | American Indian or Alaska Native[a] | |
|---|---|---|---|---|---|---|---|---|
| Year | N | % Change from Previous Year | N | % Change from Previous Year | N | % Change from Previous Year | N | % Change from Previous Year |
| 1984[b] | 1098 | 7.8% | 763 | -3.0% | 1086 | 17.8% | 37 | -11.9% |
| 1985 | 1664 | NA | 927 | NA | 1410 | NA | 42 | NA |
| 1986 | 1647 | -1.0% | 1018 | 9.8% | 1740 | 23.4% | 39 | -7.1% |
| 1987 | 1729 | 5.0% | 1055 | 3.6% | 2000 | 14.9% | 45 | 15.4% |
| 1988 | 1891 | 9.4% | 1089 | 3.2% | 2362 | 18.1% | 78 | 73.3% |
| 1989 | 1983 | 4.9% | 1096 | 0.6% | 2706 | 14.6% | 81 | 3.8% |
| 1990 | 2103 | 6.1% | 1118 | 2.0% | 3346 | 23.7% | 85 | 4.9% |
| 1991 | 2395 | 13.9% | 1055 | -5.6% | 3540 | 5.8% | 98 | 15.3% |
| 1992 | 2340 | -2.3% | 1088 | 3.1% | 4135 | 16.8% | 96 | -2.0% |
| 1993 | 2380 | 1.7% | 1143 | 5.1% | 4731 | 14.4% | 128 | 33.3% |
| 1994 | 2582 | 8.5% | 1171 | 2.4% | 5408 | 14.3% | 128 | 0.0% |
| 1995 | 2548 | -1.3% | 1150 | -1.8% | 5695 | 5.3% | 151 | 18.0% |
| 1996 | 2529 | -0.7% | 1140 | -0.9% | 6152 | 8.0% | 147 | -2.6% |
| 1997 | 2632 | 4.1% | 1130 | -0.9% | 6451 | 4.9% | 150 | 2.0% |
| 1998 | 2757 | 4.7% | 1157 | 2.4% | 6741 | 4.5% | 160 | 6.7% |
| 1999 | 2697 | -2.2% | 1086 | -6.1% | 6414 | -4.9% | 156 | -2.5% |
| 2000 | 3132 | 16.1% | 1255 | 15.6% | 7392 | 15.2% | 137 | -12.2% |
| 2001 | 3407 | 8.8% | 1322 | 5.3% | 7405 | 0.2% | 179 | 30.7% |
| 2002 | 3826 | 12.3% | 1466 | 10.9% | 8263 | 11.6% | 168 | -6.1% |
| 2003 | 4183 | 9.3% | 1605 | 9.5% | 8991 | 8.8% | 191 | 13.7% |
| 2004[c] | 3784 | --- | 1691 | --- | 9103 | --- | 210 | --- |
| 2005[d] | 3703 | -2.1% | 1778 | 5.1% | 9690 | 6.1% | 234 | 11.4 |

[a] U.S. citizen or permanent resident
[b] Totals for 1980 - 1984 are for enrollments in final three years of program only
[c] Not able to calculate percent change due to change in how data is reported by select institutions
[d] Totals for 2005 include Pharm.D.1 enrollments only

TABLE 54: SUMMARY OF ENROLLMENTS IN FIRST PROFESSIONAL DEGREE (BACCALAUREATE, PHARM.D.1) PROGRAMS BY GENDER 1984 TO 2005

| | Male | | | Female | | | Total Enrollment | |
|---|---|---|---|---|---|---|---|---|
| Year | N | % of Total | % Change from Previous Year | N | % of Total | % Change from Previous Year | N | % Change from Previous Year |
| 1984 | 10345 | 44.4% | -5.8% | 12967 | 55.6% | 7.1% | 23312 | 1.0% |
| 1985 | 10685 | 43.0% | 3.3% | 14135 | 57.0% | 9.0% | 24820 | 6.5% |
| 1986 | 10628 | 41.4% | -0.5% | 15015 | 58.6% | 6.2% | 25643 | 3.3% |
| 1987 | 10907 | 40.0% | 2.6% | 16385 | 60.0% | 9.1% | 27292 | 6.4% |
| 1988 | 11382 | 39.4% | 4.4% | 17509 | 60.6% | 6.9% | 28891 | 5.9% |
| 1989 | 11350 | 38.4% | -0.3% | 18210 | 61.6% | 4.0% | 29560 | 2.3% |
| 1990 | 11198 | 37.6% | -1.3% | 18599 | 62.4% | 2.1% | 29797 | 0.8% |
| 1991 | 11219 | 37.0% | 0.2% | 19095 | 63.0% | 2.7% | 30314 | 1.7% |
| 1992 | 11543 | 36.6% | 2.9% | 19976 | 63.4% | 4.6% | 31519 | 4.0% |
| 1993 | 12117 | 36.8% | 5.0% | 20821 | 63.2% | 4.2% | 32938 | 4.5% |
| 1994 | 12243 | 36.7% | 1.0% | 21110 | 63.3% | 1.4% | 33353 | 1.3% |
| 1995 | 12221 | 36.6% | -0.2% | 21194 | 63.4% | 0.4% | 33415 | 0.2% |
| 1996 | 11966 | 36.2% | -2.1% | 21093 | 63.8% | -0.5% | 33059 | -1.1% |
| 1997 | 11652 | 35.8% | -2.6% | 20877 | 64.2% | -1.0% | 32529 | -1.6% |
| 1998 | 11777 | 35.6% | 1.1% | 21313 | 64.4% | 2.1% | 33090 | 1.7% |
| 1999 | 11411 | 35.1% | -3.1% | 21126 | 64.9% | -0.9% | 32537 | -1.7% |
| 2000 | 11763 | 34.1% | 3.1% | 22718 | 65.9% | 7.5% | 34481 | 6.0% |
| 2001 | 12253 | 34.1% | 4.2% | 23632 | 65.9% | 4.0% | 35885 | 4.1% |
| 2002 | 12815 | 33.0% | 4.6% | 26087 | 67.0% | 9.1% | 38902 | 8.4% |
| 2003 | 14264 | 33.1% | 11.3% | 28783 | 66.9% | 10.3% | 43047 | 10.7% |
| 2004[a] | 14696 | 33.5% | --- | 29212 | 66.5% | --- | 43908 | --- |
| 2005[b] | 16069 | 34.5% | 9.3% | 30458 | 65.5% | 4.3% | 46527 | 6.0% |

[a] Not able to calculate percent change due to change in how data is reported by select institutions
[b] Totals for 2005 include Pharm.D.1 enrollments only

TABLE 1: TOTAL NUMBER OF APPLICATIONS[a] TO FIRST PROFESSIONAL DEGREE PROGRAMS 2003-04 AND 2004-05

| College | Sept '03 - Aug '04 | | | Sept '04- Aug '05 | | | Change '03-'04 to '04-'05 | | |
|---|---|---|---|---|---|---|---|---|---|
| | M | F | Tot[b] | M | F | Tot[b] | M | F | Tot |
| Auburn (1) | 263 | 443 | 714 | 261 | 351 | 620 | -0.76% | -20.77% | -13.17% |
| Samford (1) | 493 | 878 | 1387 | 369 | 684 | 1067 | -25.15% | -22.10% | -23.07% |
| Midwestern-Glendale (1) | 511 | 752 | 1288 | 613 | 848 | 1500 | 19.96% | 12.77% | 16.46% |
| Arizona | 132 | 233 | 365 | 179 | 302 | 481 | 35.61% | 29.61% | 31.78% |
| Arkansas | 75 | 160 | 235 | 77 | 158 | 235 | 2.67% | -1.25% | 0.00% |
| Loma Linda | 115 | 213 | 327 | 98 | 189 | 287 | -14.78% | -11.27% | -12.23% |
| Touro | NA | NA | NA | 143 | 429 | 572 | NA | NA | NA |
| California-San Diego (1) | 331 | 681 | 1043 | 310 | 713 | 1059 | -6.34% | 4.70% | 1.53% |
| California-San Francisco (1) | 362 | 810 | 1214 | 369 | 865 | 1272 | 1.93% | 6.79% | 4.78% |
| Pacific (2) | 655 | 1279 | 1934 | 718 | 1172 | 1890 | 9.62% | -8.37% | -2.28% |
| Southern California (2) | 426 | 860 | 1317 | 412 | 866 | 1278 | -3.29% | 0.70% | -2.96% |
| Western (1) | 341 | 691 | 1054 | 393 | 842 | 1272 | 15.25% | 21.85% | 20.68% |
| Colorado (1) | 312 | 575 | 902 | 400 | 697 | 1130 | 28.21% | 21.22% | 25.28% |
| Connecticut (1) | 271 | 380 | 651 | 173 | 294 | 475 | -36.16% | -22.63% | -27.04% |
| Howard (1) | 290 | 535 | 841 | 378 | 618 | 1016 | 30.34% | 15.51% | 20.81% |
| Florida A&M | NR | NR | NR | NR | NR | NR | NA | NA | NA |
| Nova Southeastern (1) | 492 | 826 | 1347 | 584 | 1018 | 1643 | 18.70% | 23.24% | 21.97% |
| Palm Beach Atlantic (2) | 525 | 841 | 1393 | 561 | 881 | 1473 | 6.86% | 4.76% | 5.74% |
| Florida (1) | 660 | 1138 | 1834 | 705 | 1104 | 1855 | 6.82% | -2.99% | 1.15% |

TABLE 2: DISTRIBUTION OF 2004-05 APPLICATIONS BY GENDER AND RACE/ETHNICITY OF APPLICANT (represents data, some incomplete, submitted by 91 schools)

| Race/Ethnicity | Male | Female | Gender Not Specified | Total | Percent |
|---|---|---|---|---|---|
| White[a] | 12955 | 19084 | 744 | 32783 | 41.4% |
| Black or African American[a] | 1997 | 3139 | 308 | 5444 | 6.9% |
| Hispanic or Latino[a] | 1149 | 1890 | 56 | 3095 | 3.9% |
| Asian, Native Hawaiian or Other Pacific Islander[a] | 8085 | 14299 | 627 | 23011 | 29.1% |
| American Indian[a] | 105 | 177 | 7 | 289 | 0.4% |
| Other[a,b] | 3710 | 6360 | 759 | 10829 | 13.7% |
| Foreign[c] | 1391 | 1996 | 297 | 3684 | 4.7% |
| Total | 29392 | 46945 | 2798 | 79135 | |

[a] U.S. citizen or permanent resident
[b] Includes students for whom ethnic origin is unknown
[c] Nonpermanent resident/citizen of a country other than the U.S.

TABLE 3: DISTRIBUTION OF 2004-05 APPLICATIONS BY GENDER AND STATE OF RESIDENCY OF APPLICANT (represents data, some incomplete, submitted by 89 schools)

| Residency | Male | Female | Gender Not Specified | Total | Percent |
|---|---|---|---|---|---|
| In-State Resident | 13121 | 22178 | 1342 | 36641 | 47.5% |
| Out-of-State Resident | 15275 | 23357 | 1930 | 40562 | 52.5% |

TABLE 4: DISTRIBUTION OF 2004-05 APPLICATIONS BY GENDER AND PREVIOUS POSTSECONDARY EXPERIENCE OF APPLICANT (represents data, some incomplete, submitted by 84 schools)

| Postsecondary Experience | Male | Female | Gender Not Specified | Total | Percent |
|---|---|---|---|---|---|
| 0 Years of College | 4115 | 6114 | 21 | 10250 | 14.6% |
| 1-2 Years of College/No Degree | 3055 | 4962 | 305 | 8322 | 11.8% |
| Associate Degree | 918 | 1451 | 18 | 2387 | 3.4% |
| 3 or More Years of College/No Degree | 6409 | 10415 | 113 | 16937 | 24.0% |
| Baccalaureate Degree | 11217 | 18660 | 687 | 30564 | 43.4% |
| Master's Degree | 689 | 854 | 41 | 1584 | 2.2% |
| Doctoral Degree | 146 | 239 | 8 | 393 | 0.6% |


# PREFACE
## 2004 CAPE Educational Outcomes
## *Supplements*

The 2004 CAPE Educational Outcomes delineated terminal ability outcomes for pharmacy graduates in terms of three practice functions:

- Pharmaceutical Care
- Systems Management
- Public Health
-

General and professional abilities were integrated within this structure to demonstrate that general abilities should be taught and assessed within various professional contexts at multiple points of the curriculum. In previous versions of the CAPE Outcomes, general abilities (thinking, communication, valuing and ethical decision making, social and contextual awareness, social responsibility, social interaction, self learning) were listed separately at the end of the document.

The 2004 CAPE Outcomes were intended to guide curriculum development and assessment and to assist students in making connections between their learning experiences and the practice of pharmacy. Recognizing this, the American Council of Pharmaceutical Education (ACPE) incorporated the 2004 CAPE Outcomes into the 2007 Accreditation Standards and Guidelines.

Compared to the 1998 and 1994 CAPE Outcomes, the 2004 Outcomes were abbreviated to more clearly demonstrate to pharmacy constituents and the public what a pharmacist is able to do during professional practice upon graduation. Detailed enabling outcomes were largely omitted from the document. The development of enabling or developmental outcomes that are discipline- and course-specific may facilitate better understanding of the relationship between all curricular coursework and the terminal outcomes. It is important to demonstrate that achievement of abilities requires more than delivery of content; an ability is composed of knowledge, skills, and attitudes/values/habits. All components of the ability must be taught, practiced, and assessed if the ability is to be achieved.

These *Supplements* were created to provide pharmacy faculty with suggested discipline-specific language that clearly describes the knowledge, skills, and attitudes/values/habits that students should develop to achieve the terminal practice outcomes. The *Supplements* are intended to serve as an additional resource for faculty in developing and assessing assess curricula, courses, and learning experiences directed toward achieving the 2004 CAPE Educational Outcomes. The *Supplements* themselves are not meant to provide teaching strategies or to serve as an assessment tool but to provide a resource with which to develop teaching strategies and assessment instruments. The *Supplements* attempt to clarify outcomes; faculty, curriculum committees, and assessment committees can use the *Supplements* to create practice opportunities, criteria, and assessment tools to ensure that the outcomes are achieved.

George E. MacKinnon III, Ph.D., R.Ph.
Vice President of Academic Affairs
December 2006


AMERICAN ASSOCIATION
OF COLLEGES OF PHARMACY

Center for the Advancement of Pharmaceutical Education

# Educational Outcomes 2004

AACP, the national organization representing and supporting colleges and schools of pharmacy and their faculties, is committed to education and scholarship for improving drug therapy.

## Educational Outcomes

1. **PHARMACEUTICAL CARE** Provide pharmaceutical care in cooperation with patients, prescribers, and other members of an interprofessional health care team based upon sound therapeutic principles and evidence-based data, taking into account relevant legal, ethical, social, economic, and professional issues, emerging technologies, and evolving pharmaceutical, biomedical, sociobehavioral, and clinical sciences that may impact therapeutic outcomes.
    a. Provide patient-centered care.
        i. Design, implement, monitor, evaluate, and adjust pharmaceutical care plans that are patient-specific and evidence-based.
        ii. Communicate and collaborate with prescribers, patients, care givers, and other involved health care providers to engender a team approach to patient care.
        iii. Retrieve, analyze, and interpret the professional, lay, and scientific literature to provide drug information to patients, their families, and other involved health care providers.
        iv. Carry out duties in accordance with legal, ethical, social, economic, and professional guidelines.
        v. Maintain professional competence by identifying and analyzing emerging issues, products, and services that may impact patient-specific therapeutic outcomes.

b. Provide population-based care.
        i. Develop and implement population-specific, evidence-based disease management programs and protocols based upon analysis of epidemiologic and pharmacoeconomic data, medication use criteria, medication use review, and risk reduction strategies.
        ii. Communicate and collaborate with prescribers, population members, care givers, and other involved health care providers to engender a team approach to patient care.
        iii. Retrieve, analyze, and interpret the professional, lay, and scientific literature to provide drug information to other health care providers and to the public.
        iv. Carry out duties in accordance with legal, ethical, social, economic, and professional guidelines.
        v. Maintain professional competence by identifying and analyzing emerging issues, products, and services that may impact population-based, therapeutic outcomes.

2. **SYSTEMS MANAGEMENT** Manage and use resources of the health care system, in cooperation with patients, prescribers, other health care providers, and administrative and supportive personnel, to promote health; to provide,

assess, and coordinate safe, accurate, and time-sensitive medication distribution; and to improve therapeutic outcomes of medication use.

a. Manage human, physical, medical, informational, and technological resources.
    i. Apply relevant legal, ethical, social, economic, and professional principles/issues to assure efficient, cost-effective utilization of human, physical, medical, informational, and technological resources in the provision of patient care.
    ii. Communicate and collaborate with patients, prescribers, other health care providers, and administrative and supportive personnel to engender a team approach to assure efficient, cost-effective utilization of human, physical, medical, informational, and technological resources in the provision of patient care.
    iii. Carry out duties in accordance with legal, ethical, social, economic, and professional guidelines.
    iv. Maintain professional competence by identifying and analyzing emerging issues, products, and services that may impact management of human, physical, medical, informational, and technological resources in the provision of patient care.

b. Manage medication use systems.
    i. Apply patient- and population-specific data, quality assurance strategies, and research processes to assure that medication use systems minimize drug misadventuring and optimize patient outcomes.
    ii. Apply patient- and population-specific data, quality assurance strategies, and research processes to develop drug use and health policy, and to design pharmacy benefits.
    iii. Communicate and collaborate with prescribers, patients, caregivers, other involved health care providers and administrative and supportive personnel to identify and resolve medication use problems.
    iv. Carry out duties in accordance with legal, ethical, social, economic, and professional guidelines.
    v. Maintain professional competence by identifying and analyzing emerging issues, products, and services that may impact medication use systems, to develop use and health policy, and to design pharmacy benefits.

3. **PUBLIC HEALTH** Promote health improvement, wellness, and disease prevention in cooperation with patients, communities, at-risk populations, and other members of an interprofessional team of health care providers.

a. Assure the availability of effective, quality health and disease prevention services.
    i Apply population-specific data, quality assurance strategies, and research processes to develop identify and resolve public health problems.

ii. Communicate and collaborate with prescribers, policy makers, members of the community and other involved health care providers and administrative and supportive personnel to identify and resolve public health problems.
iii. Carry out duties in accordance with legal, ethical, social, economic, and professional guidelines.
iv. Maintain professional competence by identifying and analyzing emerging issues, products, and services that may affect the efficacy or quality of disease prevention services to amend existing or develop additional services.

b. Develop public health policy.
i. Apply population-specific data, quality assurance strategies, and research processes to develop public health policy.
ii. Communicate and collaborate with prescribers, policy makers, members of the community and other involved health care providers and administrative and supportive personnel to develop public policy.
iii. Carry out duties in accordance with legal, ethical, social, economic, and professional guidelines.
iv. Maintain professional competence by identifying and analyzing emerging issues, products, and services that may affect public health policy, to amend existing or develop additional policies.

# Appendix B
# Population Data

**Table 3: Interim Projections: Ranking of States by Projected Percent of Population Age 65 and Older: 2000, 2010, and 2030**

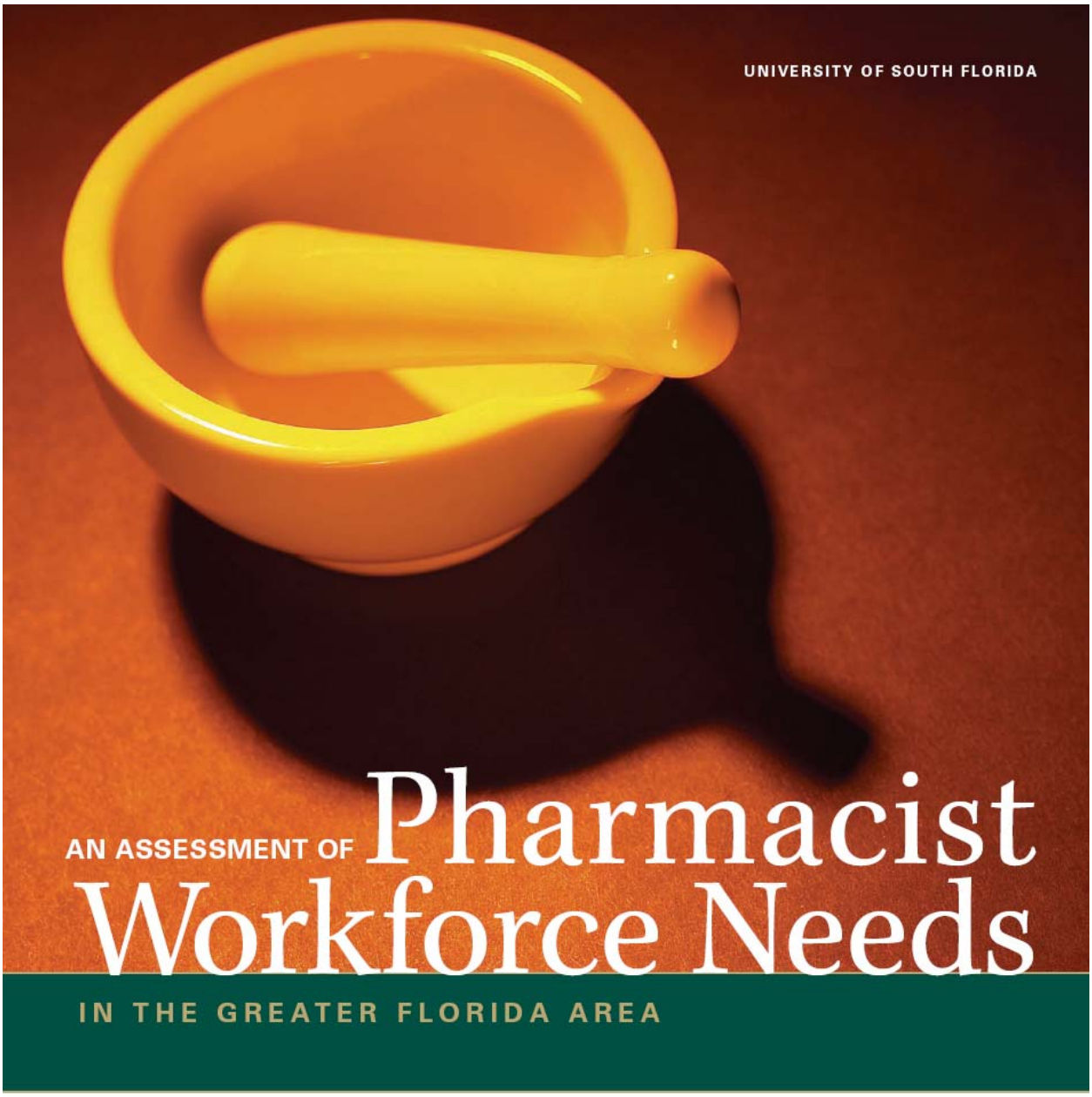
| 2000 State | 2000 Percent | 2000 Rank | 2010 State | 2010 Percent | 2010 Rank | 2030 State | 2030 Percent | 2030 Rank |
|---|---|---|---|---|---|---|---|---|
| **United States** | 12.4 | (x) | **United States** | 13.0 | (x) | **United States** | 19.7 | (x) |
| Florida | 17.6 | 1 | Florida | 17.8 | 1 | Florida | 27.1 | 1 |
| Pennsylvania | 15.6 | 2 | West Virginia | 16.0 | 2 | Maine | 26.5 | 2 |
| West Virginia | 15.3 | 3 | Maine | 15.6 | 3 | Wyoming | 26.5 | 3 |
| Iowa | 14.9 | 4 | Pennsylvania | 15.5 | 4 | New Mexico | 26.4 | 4 |
| North Dakota | 14.7 | 5 | North Dakota | 15.3 | 5 | Montana | 25.8 | 5 |
| Rhode Island | 14.5 | 6 | Montana | 15.0 | 6 | North Dakota | 25.1 | 6 |
| Maine | 14.4 | 7 | Iowa | 14.9 | 7 | West Virginia | 24.8 | 7 |
| South Dakota | 14.3 | 8 | South Dakota | 14.6 | 8 | Vermont | 24.4 | 8 |
| Arkansas | 14.0 | 9 | Connecticut | 14.4 | 9 | Delaware | 23.5 | 9 |
| Connecticut | 13.8 | 10 | Arkansas | 14.3 | 10 | South Dakota | 23.1 | 10 |
| Nebraska | 13.6 | 11 | Vermont | 14.3 | 11 | Pennsylvania | 22.6 | 11 |
| Massachusetts | 13.5 | 12 | Hawaii | 14.3 | 12 | Iowa | 22.4 | 12 |
| Missouri | 13.5 | 13 | Delaware | 14.1 | 13 | Hawaii | 22.3 | 13 |
| Montana | 13.4 | 14 | Alabama | 14.1 | 14 | Arizona | 22.1 | 14 |
| Ohio | 13.3 | 15 | Rhode Island | 14.1 | 15 | South Carolina | 22.0 | 15 |
| Hawaii | 13.3 | 16 | New Mexico | 14.1 | 16 | Connecticut | 21.5 | 16 |
| Kansas | 13.3 | 17 | Wyoming | 14.0 | 17 | New Hampshire | 21.4 | 17 |
| New Jersey | 13.2 | 18 | Arizona | 13.9 | 18 | Rhode Island | 21.4 | 18 |
| Oklahoma | 13.2 | 19 | Missouri | 13.9 | 19 | Wisconsin | 21.3 | 19 |
| Wisconsin | 13.1 | 20 | Oklahoma | 13.8 | 20 | Alabama | 21.3 | 20 |

| Interim Projections of the Total Population for the United States and States: April 1, 2000 to July 1, 2030 | | | | | | | |
|---|---|---|---|---|---|---|---|
| Geographic Area | Census April 1, 2000 | Projections July 1, 2005 | Projections July 1, 2010 | Projections July 1, 2015 | Projections July 1, 2020 | Projections July 1, 2025 | Projections July 1, 2030 |
| **United States** | **281,421,906** | **295,507,134** | **308,935,581** | **322,365,787** | **335,804,546** | **349,439,199** | **363,584,435** |
| Alabama | 4,447,100 | 4,527,166 | 4,596,330 | 4,663,111 | 4,728,915 | 4,800,092 | 4,874,243 |
| Alaska | 626,932 | 661,110 | 694,109 | 732,544 | 774,421 | 820,881 | 867,674 |
| Arizona | 5,130,632 | 5,868,004 | 6,637,381 | 7,495,238 | 8,456,448 | 9,531,537 | 10,712,397 |
| Arkansas | 2,673,400 | 2,777,007 | 2,875,039 | 2,968,913 | 3,060,219 | 3,151,005 | 3,240,208 |
| California | 33,871,648 | 36,038,859 | 38,067,134 | 40,123,232 | 42,206,743 | 44,305,177 | 46,444,861 |
| Colorado | 4,301,261 | 4,617,962 | 4,831,554 | 5,049,493 | 5,278,867 | 5,522,803 | 5,792,357 |
| Connecticut | 3,405,565 | 3,503,185 | 3,577,490 | 3,635,414 | 3,675,650 | 3,691,016 | 3,688,630 |
| Delaware | 783,600 | 836,687 | 884,342 | 927,400 | 963,209 | 990,694 | 1,012,658 |
| District of Columbia | 572,059 | 551,136 | 529,785 | 506,323 | 480,540 | 455,108 | 433,414 |
| Florida | 15,982,378 | 17,509,827 | 19,251,691 | 21,204,132 | 23,406,525 | 25,912,458 | 28,685,769 |
| Georgia | 8,186,453 | 8,925,796 | 9,589,080 | 10,230,578 | 10,843,753 | 11,438,622 | 12,017,838 |
| Hawaii | 1,211,537 | 1,276,552 | 1,340,674 | 1,385,952 | 1,412,373 | 1,438,720 | 1,466,046 |
| Idaho | 1,293,953 | 1,407,060 | 1,517,291 | 1,630,045 | 1,741,333 | 1,852,627 | 1,969,624 |
| Illinois | 12,419,293 | 12,699,336 | 12,916,894 | 13,097,218 | 13,236,720 | 13,340,507 | 13,432,892 |
| Indiana | 6,080,485 | 6,249,617 | 6,392,139 | 6,517,631 | 6,627,008 | 6,721,322 | 6,810,108 |
| Iowa | 2,926,324 | 2,973,700 | 3,009,907 | 3,026,380 | 3,020,496 | 2,993,222 | 2,955,172 |
| Kansas | 2,688,418 | 2,751,509 | 2,805,470 | 2,852,690 | 2,890,566 | 2,919,002 | 2,940,084 |
| Kentucky | 4,041,769 | 4,163,360 | 4,265,117 | 4,351,188 | 4,424,431 | 4,489,662 | 4,554,998 |
| Louisiana | 4,468,976 | 4,534,310 | 4,612,679 | 4,673,721 | 4,719,160 | 4,762,398 | 4,802,633 |
| Maine | 1,274,923 | 1,318,557 | 1,357,134 | 1,388,878 | 1,408,665 | 1,414,402 | 1,411,097 |
| Maryland | 5,296,486 | 5,600,563 | 5,904,970 | 6,208,392 | 6,497,626 | 6,762,732 | 7,022,251 |
| Massachusetts | 6,349,097 | 6,518,868 | 6,649,441 | 6,758,580 | 6,855,546 | 6,938,636 | 7,012,009 |
| Michigan | 9,938,444 | 10,207,421 | 10,428,683 | 10,599,122 | 10,695,993 | 10,713,730 | 10,694,172 |
| Minnesota | 4,919,479 | 5,174,743 | 5,420,636 | 5,668,211 | 5,900,769 | 6,108,787 | 6,306,130 |
| Mississippi | 2,844,658 | 2,915,696 | 2,971,412 | 3,014,409 | 3,044,812 | 3,069,420 | 3,092,410 |
| Missouri | 5,595,211 | 5,765,166 | 5,922,078 | 6,069,556 | 6,199,882 | 6,315,366 | 6,430,173 |
| Montana | 902,195 | 933,005 | 968,598 | 999,489 | 1,022,735 | 1,037,387 | 1,044,898 |
| Nebraska | 1,711,263 | 1,744,370 | 1,768,997 | 1,788,508 | 1,802,678 | 1,812,787 | 1,820,247 |
| Nevada | 1,998,257 | 2,352,086 | 2,690,531 | 3,058,190 | 3,452,283 | 3,863,298 | 4,282,102 |
| New Hampshire | 1,235,786 | 1,314,821 | 1,385,560 | 1,456,679 | 1,524,751 | 1,586,348 | 1,646,471 |
| New Jersey | 8,414,350 | 8,745,279 | 9,018,231 | 9,255,769 | 9,461,635 | 9,636,644 | 9,802,440 |
| New Mexico | 1,819,046 | 1,902,057 | 1,980,225 | 2,041,539 | 2,084,341 | 2,106,584 | 2,099,708 |
| New York | 18,976,457 | 19,258,082 | 19,443,672 | 19,546,699 | 19,576,920 | 19,540,179 | 19,477,429 |
| North Carolina | 8,049,313 | 8,702,410 | 9,345,823 | 10,010,770 | 10,709,289 | 11,449,153 | 12,227,739 |
| North Dakota | 642,200 | 635,468 | 636,623 | 635,133 | 630,112 | 620,777 | 606,566 |
| Ohio | 11,353,140 | 11,477,557 | 11,576,181 | 11,635,446 | 11,644,058 | 11,605,738 | 11,550,528 |
| Oklahoma | 3,450,654 | 3,521,379 | 3,591,516 | 3,661,694 | 3,735,690 | 3,820,994 | 3,913,251 |
| Oregon | 3,421,399 | 3,596,083 | 3,790,996 | 4,012,924 | 4,260,393 | 4,536,418 | 4,833,918 |
| Pennsylvania | 12,281,054 | 12,426,603 | 12,584,487 | 12,710,938 | 12,787,354 | 12,801,945 | 12,768,184 |
| Rhode Island | 1,048,319 | 1,086,575 | 1,116,652 | 1,139,543 | 1,154,230 | 1,157,855 | 1,152,941 |
| South Carolina | 4,012,012 | 4,239,310 | 4,446,704 | 4,642,137 | 4,822,577 | 4,989,550 | 5,148,569 |
| South Dakota | 754,844 | 771,803 | 786,399 | 796,954 | 801,939 | 801,845 | 800,462 |
| Tennessee | 5,689,283 | 5,965,317 | 6,230,852 | 6,502,017 | 6,780,670 | 7,073,125 | 7,380,634 |
| Texas | 20,851,820 | 22,775,044 | 24,648,888 | 26,585,801 | 28,634,896 | 30,865,134 | 33,317,744 |
| Utah | 2,233,169 | 2,417,998 | 2,595,013 | 2,783,040 | 2,990,094 | 3,225,680 | 3,485,367 |
| Vermont | 608,827 | 630,979 | 652,512 | 673,169 | 690,686 | 703,288 | 711,867 |
| Virginia | 7,078,515 | 7,552,581 | 8,010,245 | 8,466,864 | 8,917,395 | 9,364,304 | 9,825,019 |
| Washington | 5,894,121 | 6,204,632 | 6,541,963 | 6,950,610 | 7,432,136 | 7,996,400 | 8,624,801 |
| West Virginia | 1,808,344 | 1,818,887 | 1,829,141 | 1,822,758 | 1,801,112 | 1,766,435 | 1,719,959 |
| Wisconsin | 5,363,675 | 5,554,343 | 5,727,426 | 5,882,760 | 6,004,954 | 6,088,374 | 6,150,764 |
| Wyoming | 493,782 | 507,268 | 519,886 | 528,005 | 530,948 | 529,031 | 522,979 |

**Suggested Citation:**
**Table A1: Interim Projections of the Total Population for the United States and States: April 1, 2000 to July 1, 2030**
**Source: U.S. Census Bureau, Population Division, Interim State Population Projections, 2005.**
**Internet Release Date: April 21, 2005**

# Appendix C

# Pharmacist Workforce Data


UNIVERSITY OF SOUTH FLORIDA
AN ASSESSMENT OF Pharmacist Workforce Needs
IN THE GREATER FLORIDA AREA

USF HEALTH

# AN ASSESSMENT OF Pharmacist Workforce Needs
## IN THE GREATER FLORIDA AREA

## National Trends

Pharmacy, with more than 230,000 practitioners today, is the third-largest health profession in the United States after nurses (2.4 million) and physicians (830,000).

## Projected Shortages and Causes

Research on the national pharmacist workforce points to a continuing shortage of pharmacists, related to the continuing growth in medication use, the aging of the baby boomers, and the emergence of more clinical activities within pharmacies. A 2002 needs analysis projected that there will be a shortage of 157,000 pharmacists by 2020. Surveys that track shortage levels showed that there was a slow downward trend in the severity of shortages up until fall 2005, followed by higher shortage levels during 2006 and a return to lower levels during the last year. Changes in shortage levels appear to parallel the growth rate of prescription medications.

A recent study increased estimates of the current and future pharmacist supply. The higher estimates were based on three trends: older pharmacists remaining in the workforce longer albeit on a part-time basis; an educational expansion involving both the founding of new schools and the expansion of existing programs; and slightly higher estimates of international pharmacy graduates. By contrast, the increasing percentage of pharmacists who are female creates a downward trend in effective supply since female pharmacists work part-time more frequently.

## Expanding Career Options for Pharmacists

Increasing numbers of pharmacists are working in nontraditional positions. For example, career options have emerged with medication-use programs within managed care organizations and health plans; Medicare's adoption of a prescription drug benefit; Medicaid programs' prescription-drug benefit; and any healthcare provision that includes a formulary for medications and outcomes analysis for medication use.

Within traditional pharmacy practice, clinical activities have expanded with the universal adoption of the Doctor of Pharmacy (PharmD) degree as the entry-level educational requirement for pharmacy practice. The growth of postgraduate pharmacy residencies has also had an effect. The PharmD degree includes additional biomedical and clinical training that enables pharmacists to assume more clinical and management responsibilities. Younger pharmacists are trained in providing educational and monitoring services for chronic diseases, administering immunizations, and offering medication management services for Medicare patients.

In institutions, pharmacists are being added to transplant units, critical-care units, emergency departments, oncology services, and other areas where intensive medication therapy management is enhanced by pharmacy expertise. To fill these roles, pharmacists equire advanced training, which is generally acquired through formal postgraduate professional education in pharmacy residencies. The number of accredited pharmacy residencies nationally has expanded from about 1,000 annually 10 years ago to over 1,500 annually; and specialized residencies (a second year with a focus in a specific area such as critical care) have increased concomitantly. The Board of Pharmaceutical Specialties (BPS) offers certification examinations in five practice areas, and board-certified pharmacists are increasing in each of these areas: pharmacotherapy (3,191), oncology (557), nutrition (348), psychiatric pharmacy (463), and nuclear pharmacy (495).

## Multiple Factors Driving Workforce Demand

### GROWING PART-TIME AND FEMALE WORKFORCE

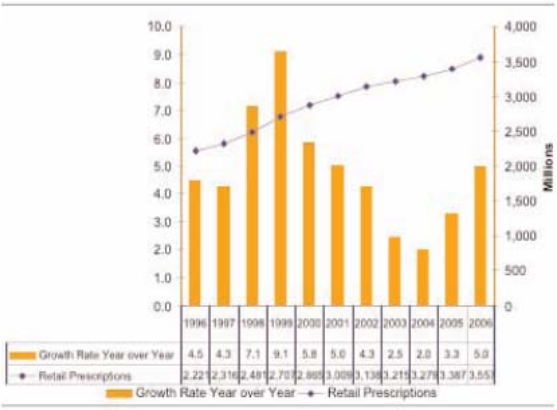
The Bureau of Health Professions' pharmacist supply model estimates that 3,911 pharmacists will retire in 2007. This number will gradually increase to 4,562 in 2020. Recent studies have shown that since 2000, pharmacists are remaining in the workforce longer, and more are working part-time. Retiring pharmacists are predominantly males; this is significant because male pharmacists have traditionally worked more than female pharmacists.

The increasing female pharmacist workforce is an important supply issue because women pharmacists have consistently worked fewer hours than their male counterparts, in order to care for their families. Recent surveys show women pharmacists working 0.81 FTE on average, compared to male pharmacists at 0.91 FTE. The current pharmacy student population is about two-thirds female. In supply modeling it is estimated that the part-time participation will reduce the "headcount" workforce by about 15 percent.

### RECENT INCREASES IN PRESCRIPTION VOLUME

The demand for pharmacists is closely tied to the number of retail prescriptions. Prescription volume continues to grow each year, but the growth rate has varied greatly in the last 10 years, as shown in the table below. The growth rate hit its highest level in 1999 and fell steadily to about 2 percent in 2004. Growth increased again in 2005 and 2006.

**FIGURE 1. ANNUAL GROWTH AND GROWTH RATE OF RETAIL PRESCRIPTIONS:1996-2006.**




*Source: Knapp and Cultice, New pharmacist supply projections: Lower separation rates and increased graduates boost supply estimates. J Amer Pharm Assoc. 2007;47:463-70.*

### BEYOND PRESCRIPTIONS: THE GROWING ROLE OF THE PHARMACIST

When we think of the traditional pharmacist, dispensing medication is the first thing that comes to mind. Pharmacists now help manage medication therapy, work related to Medicare Part D. Many immunization programs are now administered through community pharmacies. Pharmacists are also active in chronic disease medication-management programs and elsewhere, as noted above.

**Florida will be particularly challenged to meet baby boomer health demands—especially medication use management because the elderly consume prescription medications disproportionately.**

### AGING BABY BOOMERS

Counterbalancing the increased supply of pharmacists is the aging baby boomer generation, which will increase the demand for pharmacy services. For example, people under 65 annually consume 10.1 prescriptions on average, while those 65 years and over consume 23.5 prescriptions on average. The oldest baby boomers have not yet reached 65 years, where medication consumption increases significantly.

### FILLING THE GAPS: THE PHARMACY TECHNICIAN

There are approximately 277,600 certified pharmacy technicians in the United States. These allied health workers play an important role in increasing productivity in pharmacies. A 2004 state-level study showed that technicians generally complement pharmacists rather than substitute for them; that is, there are more technicians where there are more pharmacists.

### GROWTH OF THE BIOTECH INDUSTRIES

The number of pharmacists working in drug development is relatively small. Pharmacists sometimes play roles in clinical trials, but not often. The principal relationship between the biotech industry and the pharmacist workforce is that pharmacists are clinically involved in the use of expensive and potentially dangerous biotech drugs in hospitals and elsewhere. Oral dosage forms of biotech drugs, such as oral oncology medications and transplant maintenance medications, are now readily available. The biotech industry acknowledges the significant role that community pharmacies and pharmacists play in helping patients use these medications effectively.

### TECHNOLOGY'S EFFECTS ON PHARMACY DEMAND

Pharmacists play a significant role in medication error reduction. New technologies, for example, electronic prescription generation and transmission, increase pharmacist productivity and reduce medication errors. Generally, where technology is introduced on a large scale, for example, in the Veterans Affairs system and in Kaiser Permanente, pharmacists have been re-deployed to clinical roles in chronic disease clinics where their activities have been shown to be cost effective.

## Expansion of Pharmacy Educational Programs

In the last decade, new pharmacy programs, expansion of existing programs and development of distance-learning campuses have increased the number of pharmacy seats across the nation. The Accreditation Council for Pharmacy Education reports that the expansion of existing programs is generating even more new pharmacists than new schools and colleges are.

## Do Things Look Better or Worse in Florida?

### DEMAND FOR PHARMACISTS IN FLORIDA

Florida is located in the South Atlantic Division of the Southern Region. The table below presents Aggregate Demand Index (ADI) data for the South Atlantic states and compares these data to national averages. The ADI is a monthly, national survey of the unmet demand for pharmacists (www.pharmacymanpower.com). The survey is conducted by having panelists, selected by their direct involvement in hiring pharmacists, submit monthly ratings for each state where they hire pharmacists, based on this five-point scale:

**5 =** High demand; difficult to fill open positions.

**4 =** Moderate demand; some difficulty filling open positions.

**3 =** Demand in balance with supply.

**2 =** Demand is less than the pharmacist supply available.

**1 =** Demand is much less than the pharmacist supply available.

Ratings are aggregated, and a population-weighted average is determined for the month; they are also available at the regional, divisional, and state levels.

### Demand Levels for Pharmacists in South Atlantic States

| REGION | POPULATION 2006 | ADI JUNE 2007 |
|---|---|---|
| United States | 299,398,484 | 4.13 |
| South Region | 109,083,752 | 4.22 |
| South Atlantic Division | 57,143,670 | 4.21 |
| Delaware | 853,476 | 3.80 |
| District of Columbia | 581,530 | 3.71 |
| Florida | 18,089,888 | 4.43 |
| Georgia | 9,363,941 | 3.88 |
| Maryland | 5,615,727 | 4.00 |
| North Carolina | 8,856,505 | 4.57 |
| South Carolina | 4,321,249 | 4.14 |
| Virginia | 7,642,884 | 4.00 |
| West Virginia | 1,818,470 | 3.89 |

*Source: U.S. Census Bureau. 2006 Population Estimates*

The ADI data show that the South generally, the South Atlantic Region and the state of Florida have demand levels higher than national averages. In the South Atlantic states, Florida has the second highest unmet demand for pharmacists behind North Carolina. In June 2007, Florida ranked fifth nationally in the unmet demand for pharmacists.

### AGING BABY BOOMERS POSE A SPECIAL CHALLENGE FOR FLORIDA

Census Bureau projections rank Florida as the highest-ranking state for the percentage of residents 65 years and older in each of the years 2000, 2010 and 2030. The percentage of elderly residents will continue to climb over the period. By 2030, 27.1% of Florida's population will be 65 years or older while across the U.S., the percentage is only 19.7%. Given the higher utilization of all health services by the elderly, Florida will be particularly challenged to meet baby boomer health demands—especially medication use management because the elderly consume prescription medications disproportionately.

## Percentage of Population 65 years or older, U.S. and Florida: 2000, 2010 and 2030


*Source: U.S. Census Bureau, Population Division, Interim State Population Projections, 2005.*

### FLORIDA'S EDUCATIONAL PROGRAMS ARE PRODUCING MORE PHARMACISTS

Florida has four pharmacy schools granting the Doctor of Pharmacy (PharmD) degree: Florida A&M and University of Florida, both publicly supported institutions, and Nova Southeastern and Palm Beach Atlantic, which are private institutions. Data from the American Association of Colleges of Pharmacy show that in 2006, University of Florida had the greatest number of PharmD graduates (371), followed by Nova Southeastern (231), Florida A&M (116) and Palm Beach Atlantic (54).

The table below shows that 9,555 pharmacists earned PharmD degrees in 2006. Of these 9,040 were entering the workforce for the first time; the remainder were already pharmacists who either continued training or returned to school to earn the PharmD degree—now the national standard for entering practice. In Florida, there were 772 PharmD graduates: 602 entry-level PharmDs and 170 pharmacists upgrading their education to the PharmD level.

The table shows that nationally and in the South Atlantic states, there has been substantial growth in graduating pharmacists since 1999. During the 1990s, Florida generated only 17 graduates per million population while the national average was 28. By 2006, Florida's average had grown to 33 graduates per million population, exceeding the national average of 30. An important caveat to graduate growth in Florida and the South Atlantic states generally is that a substantial percentage of graduate growth (28% for Florida and 13% for the South Atlantic states) is attributable to pharmacists upgrading their education and professional skills by going back for PharmD degrees. This percentage compares to 6% nationally.

Unlike many other states, Florida's growth in pharmacy graduates has been primarily due to program expansion. Palm Beach Atlantic University is the only new school in Florida and its class size is relatively small.

## Trends in Pharmacy Graduates: 1999 and 2006

| State | Population Estimate 2006 | Graduates 1999 | Annual Average Number of Graduates per 1,000,000: 1990-1999 | PharmD Graduates 2006 | Annual Average per Number of Graduates 1,000,000: 2006 |
|---|---|---|---|---|---|
| United States | 299,398,484 | 7,080 | 28 | 9,555 | 30 |
| South Atlantic States | 57,143,670 | 1.057 | 24 | 1.933 | 34 |
| Delaware* | 853,476 | 0 | 0 | 0 | 0 |
| District of Columbia | 581,530 | 63 | 98 | 82 | 141 |
| Florida | 18,089,888 | 263 | 17 | 772 | 33 |
| Georgia | 9,363,941 | 214 | 31 | 292 | 31 |
| Maryland | 5,615,727 | 98 | 18 | 158 | 22 |
| North Carolina | 8,856,505 | 179 | 30 | 227 | 22 |
| South Carolina | 4,321,249 | 73 | 35 | 147 | 34 |
| Virginia | 7,642,884 | 93 | 14 | 183 | 22 |
| West Virginia | 1,818,470 | 74 | 42 | 72 | 40 |

**Note: Delaware does not have a school of pharmacy.*

*Source: Cooksey JA, Walton SM, Stankewicz T, Knapp KK. Pharmacy school graduates by state and region: 1990-1999. J Am Pharm Assoc. 2003;43:463-9.*

## Summary

Florida is posed for significant population growth during the next decades and will remain the state with the highest percentage of population over 65. The elderly rely heavily on medications and medication-related services to maintain health and prevent complications from existing chronic conditions. Pharmacists play important roles in medication use and are therefore important to managing Florida's future population health needs.

At present, Florida appears to continue to experience a shortage of pharmacists that is more serious that national averages. This situation is observed despite a significant expansion in pharmacist graduates from Florida colleges of pharmacy. Florida appears to be ahead of other states in growing pharmacy programs prior to the heaviest impact of baby boomer aging and immigration to warmer climates. Florida also appears to be ahead of other states in improving the clinical skills and knowledge of pharmacists through post-graduate attainment of the PharmD degree.

## Appendix D

## USF COM Clinic Teaching Sites

**Teaching Sites and Affiliates of the USF College of Medicine**
**The following locations are sites which are owned, leased or under contract for clinical teaching and research conducted by faculty of the University of South Florida College of Medicine.**

**USF Asthma, Allergy Immunology Clinical Research Unit**
**13801 Bruce B. Downs Blvd.**
**Tampa, FL 33613**

**USF Dialysis Center**
**10770 N. 46th Street, A-100**
**Tampa, FL 33617**

**USF Endoscopy and Surgery Center**
**12901 Bruce B. Downs Blvd., MDC 69**
**Tampa, FL 33612**

**USF Ears, Nose & Throat Center (located at 2020 Laurel Drive)**
**Mail: 12901 Bruce B. Downs Blvd., MDC 73**
**Tampa, FL 33612**

**USF Eye Institute (located at 2020 Laurel Drive)**
**Mail: 12901 Bruce B. Downs Blvd., MDC 21**
**Tampa, FL 33612**

**USF Psychiatry Center and Institute for Research in Psychiatry**
**3515 E. Fletcher Avenue**
**Tampa, FL 33613**

**USF Medical Clinic**
**12901 Bruce B. Downs Blvd.**
**Tampa, FL 33612**

**Harbourside Medical Towers**
**4 Columbia Drive**
**Tampa, FL 33606**

**Hyde Park Pulmonary Center**
**217 South Cedar**
**Tampa, FL 33606**

**17 Davis Professional Building**
**17 Davis Boulevard**
**Tampa, FL 33606**

**Suncoast Gerontology Center**
**10770 North 46th Street**
**Tampa, FL 33617**

**Various clinical facilities as designated by the State of Florida Department of Health pursuant to the services agreements with USF College of Medicine, including but not limited to Children's Medical Services (CMS) approved facilities. Locations of some known/identified CMS facilities include:**

**CMS Fort Myers**
**9981 Health Park Circle**
**Suite #110**
**Fort Myers, FL 33908**

**CMS Lakeland**
**4718 Old Highway 37**
**Lakeland, FL 33813**

**CMS Naples**
**1665 Medical Blvd.**
**Naples, FL 34110**

**CMS North Park**
**6800 N. Dale Mabry**
**Tampa, FL 33614-3984**

**CMS Sarasota (clinics held at All Children's Specialty Care of Sarasota as shown under ACH on following page)**

**CMS St. Petersburg**
**3251 3rd Avenue North**
**Suite #130**
**St. Petersburg, FL 33713**

**University Health Center**
**13601 N. 22nd Street**
**Tampa, FL 33613**

**CMS RPICC/OB satellite clinics include:**

**Joyce Ely Health Center**
**205-14th Avenue S.E.**
**Ruskin, FL 33570**

**Summit Health Care**
**10605 U.S. Highway 301**
**Dade City, FL 33526**

**Polk County Health Department Women's Center**
**950 First Street**
**Bartow, FL 33830**

**The following institutions are affiliated as teaching facilities of the University of South Florida College of Medicine as of November 1, 2007. Three categories of affiliations are identified in written agreements as follows:**

**MAJOR AFFILIATES (principal teaching institutions which usually involve multiple training programs):**

**All Children's Hospital**
**801 6th Street South**
**St. Petersburg, FL 33701**

**All Children's Specialty Care Center**
**5640 Main Street**
**New Port Richey, FL 34652**

**All Children's Specialty Care of Sarasota**
**5881 Rand Boulevard**
**Sarasota, FL 34238**

**All Children's Specialty Care of Tampa & SurgiKid**
**12220 Bruce B. Downs Boulevard**
**Tampa, FL 33612**

**All Children's Specialty Care Center**
**3310 Lakeland Hills Blvd.**
**Lakeland, FL 33805**

**All Children's Specialty Care Center**
**4550 Colonial Blvd.**
**Fort Myers, FL 33912**

**Bay Pines Veterans Administration Hospital**
**VA Medical Center**
**10000 Bay Pines Blvd.**
**Bay Pines, FL 33744**

**James A. Haley Veterans Administration Hospital**
**13000 Bruce B. Downs Blvd.**
**Tampa, FL 33612**

**H. Lee Moffitt Cancer Center and Research Institute**
**12902 Magnolia Drive**
**Tampa, FL 33612**

**Tampa General Hospital**
**2 Columbia Drive**
**Davis Islands**
**Tampa, FL 33606**

**[Includes medical office buildings at One Davis and 17 Davis Boulevard]**

**TGH Ambulatory Clinics**

**Genesis, Family Care Center, Specialty Center at Healthpark all located at**
**5802 30th Street North**
**Tampa, FL 33610**

**Family Care Center-Midtown**
**701 W. Kennedy Blvd.**
**Tampa, FL 33606**

**LIMITED AFFILIATES (institutions which usually involve single training programs or a small number of trainees):**

**Aesthetic Dermatology, P.A.**
**349 North US Highway 27**
**Clermont, FL 34711**

**Allergy, Asthma & Immunology Associates of Tampa Bay**
**13801 Bruce B. Downs Blvd.**
**Suite 502**
**Tampa, FL 33613**

**Ambulatory Surgery Center**
**4500 Fletcher Avenue**
**Tampa, FL 33612**

**Arbors at Tampa**
**2811 Campus Hill Drive**
**Tampa, FL 33612**

**Arthritis Research Institute of America, Inc., The**
**300 South Duncan Avenue**
**Suite #240**
**Clearwater, FL 33755**

**Baycare Health System, Inc.**
**16331 Bay Vista Drive**
**Clearwater, FL 33760**
**Includes the following Hospitals but services can only be rendered through individual Program Agreements. Hospitals**

**are listed separately herein if Program Agreements are in effect.**

**Mease Countryside Hospital**
**Mease Dunedin Hospital**
**Morton Plant Hospital**
**St. Anthony's Hospital**
**St. Joseph's Hospital/St. Joseph's Women's Hospital**
**South Florida Baptist Hospital**

**Bayfront Medical Center**
**701 6th Street South**
**St. Petersburg, FL 33701**

**Bay Health Center**
404 North Alexander St.
**Plant City, FL 33566**

**Bayside Pediatrics, P.A.**
**8370 Hillsborough Avenue**
**Tampa, FL 33615**

**Brandon Ambulatory Surgery Center**
**514 Eichenfeld Drive**
**Brandon, FL 33511**

**Brandon Regional Hospital**
**119 Oakfield Drive**
**Brandon, FL 33511**

**Catholic Charities, Diocese of St. Petersburg, Inc.**

**2021 E. Busch Blvd.**
**Tampa, FL 33612**

**Clearwater Orthopedics, P.A.**
**516 Lakeview Rd.**
**Villa V**
**Clearwater, FL 33756**

**Cleveland Clinic Florida**
**3000 W. Cypress Creek Road**
**Ft. Lauderdale, FL 33309**

**Columbia Center for Special Surgery**
**4650 4th Street North**
**St. Petersburg, FL 33703**

**Communicare, Inc.**
**P.O. Box 18020**
**Clearwater, FL 33762**

**Community Health Centers of Pinellas, Inc.**
**1310 22nd Avenue South**
**St. Petersburg, FL 33705**

**Community Hospital**
**5637 Marine Parkway**
**New Port Richey, FL 34656**

**Comprehensive Occupational Medicine for Business and Industry**
**4 Columbia Drive, Suite 815**
**Tampa, FL 33606**

**Countryside Surgery Center**
**3291 N. McMullen Booth Rd.**
**Clearwater, FL 33761**

**Desoto Memorial Hospital**
**900 N. Robert Avenue**
**Arcadia, FL 33821**

**Edinborough Health Care**
**1061 Virginia Avenue**
**Dunedin, FL 34698**

**Edward White Hospital**
**2323 19th Avenue North**
**St. Petersburg, FL 33713**

Fairwinds Treatment Center
**1569 South Fort Harrison**
**Clearwater, FL 33756**

**Florida Agricultural & Mechanical University (Tallahassee)**
**3500 E. Fletcher Avenue, Suite 234 (local address)**
**Tampa, FL 33613**

**Florida Hospital (Adventist Health Systems)**
**601 E. Rollins**
**Orlando, FL 32803**

**Florida Hospital Zephyrhills, Inc.**
**7050 Gall Blvd.**
**Zephyrhills, FL 33541-1399**

**Florida Medical Clinic**
**38135 Market Square**
**Zephyrhills, FL 33540**

**Florida Orthopedic Institute Surgery Center, LLC**
**13060 Telecom Parkway**
**Temple Terrace, FL 33637**

**Gulf Coast Dermatology, P.A.**
**7547 Jacque Road**
**Hudson, FL 34667**

**Halifax Medical Center**
**303 N. Clyde Morris Blvd.**
**Daytona Beach, FL 32115**

**Health Point Medical Group**
**406 Reo Street**
**Tampa, FL 33609**

**Health Resource Alliance of Pasco, Inc.**
**P.O. Box 2305**
**Dade City, FL 33526**

**Helen Ellis Memorial Hospital**
**P.O. Box 1487**
**1395 South Pinellas Avenue**
**Tarpon Springs, FL 34688-1487**

**Helios Pain & Psychiatry Center**
**3262 Cove Bend Drive**
**Tampa, FL 33613**

**Hillsborough County, Florida**
**Hillsborough County Medical Examiners Office**
**601 East Kennedy Blvd.**
**Tampa, FL 33602**

**Hillsborough County Developmental Center**
**14219 Bruce B. Downs Blvd.**
**Tampa, FL 33613**

**Hillsborough County Health Department (See Attachment 1 for list of all current Hills. County Health Centers)**
**1105 E. Kennedy Blvd.**
**Tampa, FL 33602**

**A. G. Holley Hospital**
**1199 Lantana Road**
**Lantana, FL 33462**

**Infectious Disease Research Institute**
**4620 Habana Avenue N.**
**Suite 203**
**Tampa, FL 33614**

**Judeo Christian Health Clinic**

**4120½ N. MacDill Avenue**
**Tampa, FL 33607**

**Kindred Hospital-Central Tampa (formerly Vencor Hospital-Central Tampa)**
**4801 North Howard Street**
**Tampa, FL 33603**

**Kindred Hospital-Bay Area (formerly Vencor Hospital-Tampa)**
**4555 Manhattan Avenue**
**Tampa, FL 33611**

**Lakeland Regional Medical Center, Inc.**
**1324 Lakeland Hills Blvd.**
**P.O. Box 95448**
**Lakeland, FL 33804**

**Lakeland Surgical and Diagnostic Center, LLP**
**115 South Missouri Avenue**
**Suite #101**
**Lakeland, FL 33815**

**Lakeside Occupational Medical Centers, P.A.**
**1400 East Bay Drive**
**Largo, FL 33771**

**Largo Medical Center**
**201 14th St. SW**
**Largo, FL 33770**

**LifeLink Foundation, Inc.**
**409 Bayshore Blvd.**
**Tampa, FL 33606**

**LifePath Hospice & Palliative Care, Inc.**
**12973 Telecom Parkway**
**Suite 100**
**Tampa, FL 33637**

**Manatee County Rural Health Services, Inc.**
**5600 Bayshore Road**
**Palmetto, FL 34221**

**Manatee Memorial Hospital**
**206 Second Street East**
**Bradenton, FL 34208**

**Medero Medical Caring for Workers**
**1109 SW 10th Street**
**Ocala, FL 34474**

**Memorial Hospital**
**2901 Swann Avenue**
**Tampa, FL 33609**

**Metropolitan Ministries, Inc.**
**2002 N. Florida Avenue**
**Tampa, FL 33602**

**Morton Plant Hospital (part of Baycare Health System, Inc.)**
**300 Pinellas St.**
**Clearwater, FL 33756**

**Program Agreements**
**Family Med. Residency Program**

**Munroe Regional Medical Center**
**131 SW 15th Street**
**Ocala, FL 33474**

**Orlando Regional Healthcare System (includes Arnold Palmer Hospital for Children)**
**86 W. Underwood Street, Suite 100**
**Orlando, FL 32806**

**Palms of Pasadena Hospital**
**1501 Pasadena Avenue South**
**St. Petersburg, FL 33707**

**Pediatric Health Care Alliance**
**P.O. Box 25437**
**Tampa, FL 33622**

**Physician Care Clinical Research, LLC**
**1931 South Tuttle Avenue, Suite 1**
**Sarasota, FL 34239**

**Premier Surgery Center**
**37834 Medical Arts Court**
**Zephyrhills, FL 33541**

**Sarasota Memorial Health Care System (part of Sarasota County Public Hospital Board,**
**1700 S. Tamiami Trail includes Sarasota Memorial Hospital)**
**Sarasota, FL 34239**

**Shriners Hospital for Crippled Children**
**Tampa Unit**
**12502 Pine Drive North**
**Tampa, FL 33612**

**Spring Hill Regional Hospital and Brooksville Regional Hospital (part of Hernando HMA, Inc.)**
**P.O. Box 37**
**Brooksville, FL 34605-0037**

**St. Joseph's Hospital – (part of Baycare Health System, Inc.)**

**<u>Program Agreements</u>**
**3001 W. Dr. Martin Luther King Blvd.**
**Pediatric Nephrology**
**includes St. Joseph's Women's Hospital-3030 W. Dr. MLK Blvd.**
**Tampa, FL 33607**

**St. Joseph Hospital of Port Charlotte, Inc.**
**2500 Harbor Blvd.**
**Port Charlotte, FL 33952**

**St. Petersburg Medical Clinic**
**1099 Fifth Avenue North**
**St. Petersburg, FL 33705**

**St. Vincent's Medical Center**
**2708 St. John's Avenue**

**Jacksonville, FL 32205**

**Suncoast Community Health Centers, Inc. (formerly Ruskin Migrant & Community Health Ctr.)**
**2814 14th Avenue S.E.**
**P.O. Box 1347**
**Ruskin, FL 33570**

**Suncoast Pediatrics, P.A.**
**1395 West Bay Dr.**
**Largo, FL 33770**

**Tallahassee Memorial HealthCare, Inc.**
**1301 Hodges Drive**
**Tallahassee, FL 32308**

**Tampa Community Health Center, Inc.**
**1702 E. 17th Avenue**
**Tampa, FL 33605**

**Town & Country Hospital, L.P.**
**6001 Webb Road**
**Tampa, FL 33615-3291**

Program Agreements

**University Community Hospital, Inc.**
**3100 East Fletcher Avenue**
**Tampa, FL 33613-4688**
**Diseases)**

**OB/Gyn (Reprod. Endo; General)**
**Pediatrics (Audiology; Infectious**

**DIO (Gyn Onc; Radioactive Iodine)**
**Surgery (Orthopaedic; Breast Care)**
**Internal Med./CRISP (Cardiology)**

**University of Florida**
**College of Medicine**
**P.O. Box 100176**
**Gainesville, FL 32610-0176**

**Watson Clinic LLP**
**1600 Lakeland Hills Blvd.**
**Lakeland, FL 33805**

(includes)

**Watson Clinic South**
**1033 N. Parkway Frontage Rd.**
**Lakeland, FL 33803**

**COLLABORATIVE AFFILIATES (institutions for which a unique expertise or service is being provided by faculty and which may or may not involve trainees):**

**Brandon Outreach Clinic**
**517 N. Parsons Avenue**
**Brandon, FL 33510**

**Johnnie B. Byrd, Sr. Alzheimer's Center and Research Institute**
**15310 Amberly Drive, Suite 320**
**Tampa, FL 33647**

**Cardiac Surgical Associates LLP**
**603 7th Street South**
**Suite 450**
**St. Petersburg, FL 33701**

**Corporate Office address**
**6006 49th Street North**
**Suite 310**
**St. Petersburg, FL 33709**

**Comprehensive NeuroScience, Inc. (formerly Clinical Studies Ltd.)**
**9887 4th Street North, Suite 200**
**St. Petersburg, FL 33702**

**Drug Abuse Comprehensive Coordinating Office, Inc. (DACCO)**
**1920 E. Hillsborough Ave., Suite 200**
**Tampa, FL 33610**

**Florida Orthopedic Institute**
**4175 Fowler Avenue**
**Tampa, FL 33617**

**Omni Medical Center for Women**
**706 W. Platt Street**
**Tampa, FL 33606**

**Pediatric Cardiology Associates**
**880 6th Street South, Suite #280**
**St. Petersburg, FL 33701**

**Phoenix Houses of Florida**
**5620 Fowler Ave.**
**Suite 8**
**Temple Terrace, FL 33617**

**Stetson University College of Law (Educational purposes only)**
**1401 61st Street South**
**St. Petersburg, FL 33707**

**Weinberg Village**
**6617 Gunn Highway**
**Tampa, FL 33625**

**Wesley Chapel Women's Care, Inc.**
**2734 Windguard Circle**
**Wesley Chapel, FL 33543**

**Updated: 8/1/06**

**ATTACHMENT 1**

## HILLSBOROUGH COUNTY HEALTH DEPARTMENT CENTERS

### Specialty Care Center
**1105 E. Kennedy Blvd.**
**Tampa, FL 33602**
**PH: (813) 307-8064**
**FAX: 273-3721**
**Mike Wagner, Administrator**

### Plant City Health Center
**302 N. Michigan Ave.**
**Plant City, FL 33566**
**PH: (813) 307-8057**
**FAX: 757-3963**
**Carlos Mercado, Administrator**

**Sulphur Springs Health Center**
**8605 N. Mitchell**
**Tampa, FL 33604**
**PH: (813) 307-8054**
**FAX: 975-2148**
**Ryan Pedigo, Administrator**

**Joyce Ely Health Center**
**205 – 14th Avenue S.E.**
**Ruskin, FL 33570**
**PH: (813) 307-8056**
**FAX: 671-7755**
**Carlos Mercado, Administrator**

**North Hillsborough Health Center**
**9827 N. Sheldon Rd.**
**Tampa, FL 33635**
**PH: (813) 307-8053**
**FAX: 554-5090**
**Ryan Pedigo, Administrator**

**Immunization Department**
**Crosstown Business Center**
**4951-B E. Adamo Drive, Suite 210**
**Tampa, FL 33605**
**PH: (813)307-8077**
**FAX: 274-1940**
**Margaret Ewen, RN, BSN, MSPH**

**TB Center**
**8515 N. Mitchell Ave.**
**Tampa, FL 33604**
**PH: (813) 307-8047**
**FAX: 975-2014**
**Mike Kilcomons, Disease Control Manager**

**Downtown Center**
**1105 E. Kennedy Blvd.**
**Tampa, FL 33602**
**PH: (813)307-8000**

**Floyd Kelton Health Center**
**4704-B West Montgomery Avenue**
**Tampa, FL 33616**
**PH: (813) 307-8055**
**FAX: 272-7172**
**Suzanne Horn, Administrator**

**University Health Center**
**13601 N. 22nd Street**
**Tampa, FL 33613**
**PH: (813)307-8058**
**FAX: (813)975-2119**
**Suzanne Horn, Administrator**

**Vital Statistics**
**PH: (813)307-8002**

**Women, Infants & Children (WIC) PH: (813)307-8074**

# Appendix E

# Financial Tables

**TABLE 1-B**
**PROJECTED HEADCOUNT FROM POTENTIAL SOURCES**
**(Graduate Degree Program)**

| Source of Students (Non-duplicated headcount in any given year)* | Year 1 | | Year 2 | | Year 3 | | Year 4 | | Year 5 | |
|---|---|---|---|---|---|---|---|---|---|---|
| | HC | FTE | HC | FTE | HC | FTE | HC | FTE | HC | FTE |
| Individuals drawn from agencies/industries in your service area (e.g., older returning students) | 5 | 5 | 10 | 10 | 30 | 30 | 50 | 50 | 50 | 50 |
| Students who transfer from other graduate programs within the university** | 5 | 5 | 15 | 15 | 20 | 20 | 25 | 25 | 30 | 30 |
| Individuals who have recently graduated from preceding degree programs at this university | 20 | 20 | 55 | 55 | 90 | 90 | 125 | 125 | 145 | 145 |
| Individuals who graduated from preceding degree programs at other Florida public universities | 10 | 10 | 25 | 25 | 45 | 45 | 65 | 65 | 75 | 75 |
| Individuals who graduated from preceding degree programs at non-public Florida institutions | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Additional in-state residents*** | 10 | 10 | 20 | 20 | 35 | 35 | 50 | 50 | 60 | 60 |
| Additional out-of-state residents*** | 0 | 0 | 0 | 0 | 5 | 5 | 10 | 10 | 15 | 15 |
| Additional foreign residents*** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other (Explain)*** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Totals** | **50** | **50** | **125** | **125** | **225** | **225** | **325** | **325** | **375** | **375** |

* List projected yearly cumulative ENROLLMENTS instead of admissions
** If numbers appear in this category, they should go DOWN in later years.
*** Do not include individuals counted in any PRIOR category in a given COLUMN.

## TABLE 2
## PROJECTED COSTS AND FUNDING SOURCES

| Instruction & Research Costs (non-cumulative) | Year 1 | | | | | | Year 5 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Funding Source | | | | | | Funding Source | | | | |
| | Reallocated Base* (E&G) | Enrollment Growth (E&G) | Other New Recurring (E&G) | New Non-Recurring (E&G) | Contracts & Grants (C&G) | **Subtotal E&G and C&G** | Continuing Base** (E&G) | New Enrollment Growth (E&G) | Other*** (E&G) | Contracts & Grants (C&G) | **Subtotal E&G and C&G** |
| Faculty Salaries and Benefits | 946,772 | 508,768 | 525,000 | 0 | 0 | **$1,980,540** | 2,737,647 | 508,768 | 820,466 | 1,000,000 | **$5,066,881** |
| A & P Salaries and Benefits | 100,425 | 0 | 0 | 0 | 0 | **$100,425** | 209,572 | 0 | 0 | 0 | **$209,572** |
| USPS Salaries and Benefits | 166,205 | 0 | 0 | 0 | 0 | **$166,205** | 528,940 | 0 | 0 | 0 | **$528,940** |
| Other Personnel Services | 31,320 | 0 | 0 | 0 | 0 | **$31,320** | 156,600 | 0 | 0 | 0 | **$156,600** |
| Assistantships & Fellowships | 0 | 0 | 0 | 0 | 0 | **$0** | 0 | 0 | 0 | 0 | **$0** |
| Library | 0 | 0 | 0 | 0 | 0 | **$0** | 0 | 0 | 0 | 0 | **$0** |
| Expenses | 218,216 | 0 | 0 | 194,100 | 0 | **$412,316** | 516,008 | 0 | 0 | 0 | **$516,008** |
| Operating Capital Outlay | 31,500 | 0 | 0 | 225,000 | 0 | **$256,500** | 79,500 | 0 | 0 | 0 | **$79,500** |
| Special Categories | 0 | 0 | 0 | 0 | 0 | **$0** | 0 | 0 | 0 | 0 | **$0** |
| **Total Costs** | **$1,494,438** | **$508,768** | **$525,000** | **$419,100** | **$0** | **$2,947,306** | **$4,228,266** | **$508,768** | **$820,466** | **$1,000,000** | **$6,557,500** |

*Identify reallocation sources in Table 3.

**Includes recurring E&G funded costs ("reallocated base," "enrollment growth," and "other new recurring") from Years 1-4 that continue into Year 5.

***Identify if non-recurring.

**Faculty and Staff Summary**

| Total Positions (person-years) | Year 1 | Year 5 |
|---|---|---|
| Faculty | 16 | 40 |
| A & P | 1 | 2 |
| USPS | 4 | 11 |

**Calculated Cost per Student FTE**

| | Year 1 | Year 5 |
|---|---|---|
| Total E&G Funding | $2,947,306 | $5,557,500 |
| Annual Student FTE | 50 | 375 |
| E&G Cost per FTE | $58,946 | $14,820 |

Worksheet Table 2 Budget

**TABLE 3**
**ANTICIPATED REALLOCATION OF EDUCATION & GENERAL FUNDS**

| Program and/or E&G account from which current funds will be reallocated during Year 1 | Base before reallocation | Amount to be reallocated | Base after reallocation |
|---|---|---|---|
| Development, Carry-forward Funds- USF Health | 0 | 1,494,438 | **-$1,494,438** |
| | 0 | 0 | |
| | 0 | 0 | |
| | 0 | 0 | |
| | 0 | 0 | |
| | 0 | 0 | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| **Totals** | $0 | $1,494,438 | **-$1,494,438** |

**TABLE 4**
**ANTICIPATED FACULTY PARTICIPATION**

| Faculty Code | Faculty Name or "New Hire"<br>Highest Degree Held<br>Academic Discipline or Speciality | Rank | Contract Status | Initial Date for Participation in Program | Mos. Contract Year 1 | FTE Year 1 | % Effort for Prg. Year 1 | PY Year 1 | Mos. Contract Year 5 | FTE Year 5 | % Effort for Prg. Year 5 | PY Year 5 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | PharmD<br>Pharmacy | Professor<br>Dean | Tenure | Fall 2009 | 12 | 1.00 | 100.00% | 1.00 | 12 | 1.00 | 100.00% | 1.00 |
| A | PharmD, PhD<br>Pharmacology | Professor<br>Pharmacologist | Tenure | Fall 2009 | 12 | 1.00 | 100.00% | 1.00 | 12 | 1.00 | 100.00% | 1.00 |
| A | PhD<br>Chemistry | Professor<br>Medicinal Chemist | Tenure | Fall 2009 | 12 | 1.00 | 100.00% | 1.00 | 12 | 1.00 | 100.00% | 1.00 |
| C | PharmD<br>Pharmacy | Professor<br>Assoc. Dean | Tenure | Fall 2009 | 12 | 1.00 | 100.00% | 1.00 | 12 | 1.00 | 100.00% | 1.00 |
| C | PharmD<br>Pharmacy- Geriatric (PSY) | Asst Prof | Tenure | Fall 2009 | 12 | 1.00 | 100.00% | 1.00 | 12 | 1.00 | 100.00% | 1.00 |
| C | PharmD, PhD<br>Pharmacy | Professor<br>Assist. Dean | Tenure | Fall 2009 | 12 | 1.00 | 100.00% | 1.00 | 12 | 1.00 | 100.00% | 1.00 |
| C | PharmD<br>Pharmacy | Assoc Prof<br>Medicine | Tenure | Fall 2009 | 12 | 1.00 | 100.00% | 1.00 | 12 | 1.00 | 100.00% | 1.00 |
| C | PhD<br>Pharmacology | Assoc Prof<br>Pharmaceutics | Tenure | Fall 2009 | 12 | 1.00 | 100.00% | 1.00 | 12 | 1.00 | 100.00% | 1.00 |
| C | MPH, PharmD<br>Public Health | Assoc Prof | Tenure | Fall 2009 | 12 | 1.00 | 100.00% | 1.00 | 12 | 1.00 | 100.00% | 1.00 |
| C | PharmD<br>Pharmacy | Asst Prof<br>Ambulatory Care | Tenure | Fall 2010 | 12 | 1.00 | 100.00% | 1.00 | 12 | 1.00 | 100.00% | 1.00 |
| C | PhD<br>Biochemistry | Assoc Prof<br>Biochemist | Tenure | Fall 2010 | 12 | 1.00 | 100.00% | 1.00 | 12 | 1.00 | 100.00% | 1.00 |
| C | MPH, PharmD<br>Public Health | Asst Prof<br>Biostatistician | Tenure | Fall 2010 | 12 | 1.00 | 100.00% | 1.00 | 12 | 1.00 | 100.00% | 1.00 |
| C | PharmD<br>Pharmacy | Asst Prof<br>Medicine | Tenure | Fall 2010 | 12 | 1.00 | 100.00% | 1.00 | 12 | 1.00 | 100.00% | 1.00 |
| C | PhD<br>Pharmacology | Asst Prof<br>Pharmaceutics | Tenure | Fall 2010 | 12 | 1.00 | 100.00% | 1.00 | 12 | 1.00 | 100.00% | 1.00 |
| C | PhD<br>Pharmacology | Asst Prof<br>Pharmacologist | Tenure | Fall 2010 | 12 | 1.00 | 100.00% | 1.00 | 12 | 1.00 | 100.00% | 1.00 |
| C | PhD<br>Biological Sciences | Asst Prof<br>Physiologist | Tenure | Fall 2010 | 12 | 1.00 | 100.00% | 1.00 | 12 | 1.00 | 100.00% | 1.00 |
| C | PharmD<br>Pharmacy | Asst Prof<br>Medicine | Tenure | Fall 2011 | | | | | 12 | 1.00 | 100.00% | 1.00 |
| C | PharmD<br>Pharmacy | Asst Prof<br>Ambulatory Care | Tenure | Fall 2011 | | | | | 12 | 1.00 | 100.00% | 1.00 |

**TABLE 4**
**ANTICIPATED FACULTY PARTICIPATION**

| Faculty Code | Faculty Name or "New Hire"<br>Highest Degree Held<br>Academic Discipline or Speciality | Rank | Contract Status | Initial Date for Participation in Program | Mos. Contract Year 1 | FTE Year 1 | % Effort for Prg. Year 1 | PY Year 1 | Mos. Contract Year 5 | FTE Year 5 | % Effort for Prg. Year 5 | PY Year 5 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| C | PharmD<br>Pharmacy | Asst Prof<br>Ambulatory Care | Tenure | Fall 2011 | | | | | 12 | 1.00 | 100.00% | 1.00 |
| C | PharmD<br>Pharmacy | Asst Prof<br>Medicine | Tenure | Fall 2011 | | | | | 12 | 1.00 | 100.00% | 1.00 |
| C | PharmD<br>Pharmacy | Asst Prof<br>Ambulatory Care | Tenure | Fall 2011 | | | | | 12 | 1.00 | 100.00% | 1.00 |
| C | PhD<br>Pharmacology | Asst Prof<br>Pharmacologist | Tenure | Fall 2011 | | | | | 12 | 1.00 | 100.00% | 1.00 |
| C | MPH, PharmD<br>Public Health | Asst Prof | Tenure | Fall 2011 | | | | | 12 | 1.00 | 100.00% | 1.00 |
| C | PharmD<br>Pharmacy | Assoc. Dean | Tenure | Fall 2011 | | | | | 12 | 1.00 | 100.00% | 1.00 |
| C | PharmD<br>Pharmacy | Asst Prof<br>Geriatrics | Tenure | Fall 2011 | | | | | 12 | 1.00 | 100.00% | 1.00 |
| C | PharmD<br>Pharmacy | Asst Prof<br>Geriatrics | Tenure | Fall 2011 | | | | | 12 | 1.00 | 100.00% | 1.00 |
| C | PharmD<br>Pharmacy | Assoc Prof<br>Critical Care | Tenure | Fall 2011 | | | | | 12 | 1.00 | 100.00% | 1.00 |
| C | PharmD<br>Pharmacy | Asst Prof<br>Critical Care | Tenure | Fall 2011 | | | | | 12 | 1.00 | 100.00% | 1.00 |
| C | PharmD<br>Pharmacy | Assoc Prof<br>Infectious Disease | Tenure | Fall 2011 | | | | | 12 | 1.00 | 100.00% | 1.00 |
| C | PharmD<br>Pharmacy | Asst Prof<br>Pediatrics | Tenure | Fall 2011 | | | | | 12 | 1.00 | 100.00% | 1.00 |
| C | PhD<br>Genomics | Asst Prof<br>Genomicist | Tenure | Fall 2011 | | | | | 12 | 1.00 | 100.00% | 1.00 |
| C | PharmD<br>Pharmacy | Asst Prof<br>Medicine | Tenure | Fall 2012 | | | | | 12 | 1.00 | 100.00% | 1.00 |
| C | PharmD<br>Pharmacy | Asst Prof<br>Medicine | Tenure | Fall 2012 | | | | | 12 | 1.00 | 100.00% | 1.00 |
| C | PharmD<br>Pharmacy | Assoc Prof<br>Ambulatory Care | Tenure | Fall 2012 | | | | | 12 | 1.00 | 100.00% | 1.00 |
| C | PharmD<br>Pharmacy | Asst Prof<br>Geriatrics | Tenure | Fall 2012 | | | | | 12 | 1.00 | 100.00% | 1.00 |
| C | PharmD<br>Pharmacy | Asst Prof<br>Geriatrics | Tenure | Fall 2012 | | | | | 12 | 1.00 | 100.00% | 1.00 |

**TABLE 4**
**ANTICIPATED FACULTY PARTICIPATION**

| Faculty Code | Faculty Name or "New Hire"<br>Highest Degree Held<br>Academic Discipline or Speciality | Rank | Contract Status | Initial Date for Participation in Program | Mos. Contract Year 1 | FTE Year 1 | % Effort for Prg. Year 1 | PY Year 1 | Mos. Contract Year 5 | FTE Year 5 | % Effort for Prg. Year 5 | PY Year 5 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| C | PharmD<br>Pharmacy | Asst Prof<br>Critical Care | Tenure | Fall 2012 | | | | | 12 | 1.00 | 100.00% | 1.00 |
| C | PharmD<br>Pharmacy | Asst Prof<br>Critical Care | Tenure | Fall 2012 | | | | | 12 | 1.00 | 100.00% | 1.00 |
| C | PharmD<br>Pharmacy | Assoc Prof<br>Heme-Onc | Tenure | Fall 2012 | | | | | 12 | 1.00 | 100.00% | 1.00 |
| C | PharmD<br>Pharmacy | Asst Prof<br>Ambulatory Care | Tenure | Fall 2013 | | | | | 12 | 1.00 | 100.00% | 1.00 |
| | **Total Person-Years (PY)** | | | | | | | **16.00** | | | | **40.00** |

| Faculty Code | | Source of Funding | PY Workload by Budget Classsification Year 1 | Year 5 |
|---|---|---|---|---|
| A | Exisitng faculty on a regular line | Current Education & General Revenue | 3.00 | 3.00 |
| B | New faculty to be hired on a vacant line | Current Education & General Revenue | 0.00 | 17.00 |
| C | New faculty to be hired on a new line | New Education & General Revenue | 13.00 | 20.00 |
| D | Existing faculty hired on contracts/grants | Contracts/Grants | 0.00 | 0.00 |
| E | New faculty to be hired on contracts/grants | Contracts/Grants | 0.00 | 0.00 |

| **Overall Totals for** | **Year 1** | **16.00** | **Year 5** | **40.00** |
|---|---|---|---|---|

# Appendix F

# Library Resources

# USF HEALTH Shimberg Health Sciences Library Data

| | | |
|---|---|---|
| Total user seating | 355 | |
| Number of photocopiers | 4 | |
| Audiovisual services (yes or no) | yes | |
| Number of small-group study rooms | 3 | |
| Number of individual carrels | 74 | |
| Number of public workstations | 34 | |
| Number of computer classrooms | 1 | |
| Total number of seats in computer classrooms | 10 | |

Table showing library holdings as of June 30, 2007

| | | | |
|---|---|---|---|
| Journal Subscriptions | 2,710 | | |
| Book Titles (Print) | 23,501 | | |
| Other Holdings (specify) audiovisuals, DVDs | 319 | | |
| Total Expenditures for Holdings | $980,006 | | |

Submitted by:
Beverly Shattuck, MBA, MS
Assoc. VP of Libraries, USF Health
Director, Shimberg Health Sciences Library

Library Director

9-4-07
Date

Shimberg Library Pharmacy Journals
American Hospital Formulary Service Drug Information
American journal of health-system pharmacy
American journal of pharmaceutical education
Archiv der Pharmazie
Arzneimittel-Forschung. Drug research
Australian prescriber
Biological & pharmaceutical bulletin
Brazilian Journal of Pharmaceutical Sciences
Canadian Pharmacists Journal
Chemist and druggist
Clinical research and regulatory affairs
CPJ: Canadian Pharmaceutical Journal
Current drug delivery
Current pharmaceutical design
Daru: journal of Faculty of Pharmacy, Tehran University of Medical Sciences
Drug benefit trends
Drug Discovery Today
Drug topics
Florida pharmaceutical journal
Florida pharmacy today
Formulary
Indian journal of pharmaceutical sciences
International Journal of Pharmaceutics
International journal of pharmacy education and practice
Journal of biopharmaceutical statistics
Journal of CGMP compliance
Journal of Clinical Pharmacy and Therapeutics
Journal of International Medical Research
Journal of managed care pharmacy
Journal of Oncology Pharmacy Practice
Journal of pharmaceutical sciences
Journal of pharmacy & law
Journal of pharmacy & pharmaceutical sciences
Journal of Pharmacy and Pharmacology
Journal of pharmacy practice
Journal of the American Pharmacists Association
New Community pharmacy
P&T
Pharmaceutical executive
Pharmaceutical Journal
Pharmaceutical Research
Pharmaceutical technology
Pharmacological Research
Pharmacotherapy
Pharmacy and pharmacology communications
Pharmacy education
Pharmacy Management (UK)
Pharmacy News
Pharmacy Post
Pharmacy practice
Pharmacy times

## Pharmacy Related Databases We Provide Access to

Beilstein Crossfire Database
Biological and Agricultural Index
BioMed Central
BIOSIS Previews
Cambridge Scientific Abstracts
CancerLit
CINAHL: Cumulative Index to Nursing & Allied Health Literature
Clinical Evidence (BMJ)
Clinical Trials.gov
Cochrane Library
DailyMed
Entrez: The Life Sciences Search Engine
ENZYME Enzyme Nomenclature Database
Facts and Comparisons
Genome (Entrez)
Genome Reviews
GenomeNet
Health Reference Center-Academic
JSTOR
LexisNexis Academic
MD Consult
National Guideline Clearinghouse
Natural Medicines Comprehensive Database
NIAID Clinical Trials Database
NIOSH Databases
PubChem
PubMed
ScienceDirect
SciFinder Scholar (Online version of Chemical Abstracts)
StatRef
Taxonomy
Thomas Register
TOXNET-

**Toxicology Databases:**

HSDB® (Hazardous Substances Data Bank)
IRIS (Integrated Risk Information System)
ITER (International Toxicity Estimates for Risk)
CCRIS (Chemical Carcinogenesis Research Information System).
GENE-TOX (Genetic Toxicology)
Tox Town
Household Products Database
Haz-Map®
TOXMAP
LactMed (Drugs and Lactation)

**Toxicology Literature**

TOXLINE®
DART®/ETIC (Development and Reproductive Toxicology/Environmental Teratology Information Center)
Toxics Release Inventory (TRI)

**Chemical Information**

ChemIDplus

Web of Science

**Databases We Should Review for Adding**

EMBASE
ChemWeb
ENZYME Enzyme Nomenclature Database?
First Consult
International Pharmaceutical Abstracts (IPA)
Micromedex
Natural Standards

# Appendix G- External Consultant Review

**University of South Florida**
**Program Review of the**
**Doctor of Pharmacy Degree Proposal**

**Submitted By: Dr. Barry Bleidt & Dr. Kenneth Hale**
**January 29, 2008**

In order to become a pharmacist, one must obtain a Doctor of Pharmacy (PharmD) degree from an accredited College of Pharmacy. This college must be independent and under the supervision of a CEO Dean. The professional degree program must be at least four years (eight academic semesters) in length. A pre-pharmacy component of at least two years in length is required to meet the pre-requisites to enter a professional degree program. Before the first students can be admitted, the college must obtain "Pre-Candidate" status with the Accreditation Council for Pharmacy Education (ACPE).

Two outside, independent consultants, with a high degree of expertise in academic pharmacy matters, were invited from comparable institutions. Dr. Kenneth Hale, Assistant Dean for Professional and External Affairs from the College of Pharmacy at the Ohio State University and Dr. Barry Bleidt, Professor and Associate Dean of Academic Affairs from the Texas A&M Health Science Center's Irma Lerma Rangel College of Pharmacy arrived in Tampa on Wednesday, January 16, 2008 and spent the following day reviewing documents, touring facilities, and meeting key personnel associated with the University of South Florida's proposed new College of Pharmacy. Our report on the feasibility of the University of South Florida opening a new College of Pharmacy follows.

## Background

A key factor in determining the need for opening a new College of Pharmacy is the demand for its graduates. A study was commissioned by USF Health to perform an assessment of pharmacist workforce needs in the greater Florida area. The report covered several key points relating to the need for a pharmacy program in the Tampa Bay area affiliated with the University of South Florida.

The report described multiple factors driving the increase in the demand for pharmacists. Among the reasons cited for the current and projected workforce shortage of pharmacists were:

- Growth in the number of part-time practitioners. The number of pharmacists retiring annually is projected to increase 16% to about 4,562/year by 2020. The retiring pharmacists will predominately be male (who have traditionally worked more hours per week than their female counterparts), and the majority of new pharmacy graduates are women.
- The expanding role of the pharmacist. Over the past several decades, pharmacists have begun to perform many other functions beyond that which is traditionally understood in community and institutional practice settings. Pharmacists are involved in public health activities (e.g., immunizations), active in chronic medication therapy management programs, and practice in non-traditional settings in growing numbers (e.g., pharmaceutical industry, Food and Drug Administration and other governmental agencies, and as clinical pharmacists in a variety of recognized specialties).

Another key factor in the rising demand for pharmacists is the projected increase in the volume of prescription drugs dispensed. Some of the causes of this growth are:

- Recent increases in prescription volume. The demand increased 5% in 2006 to about 3.5 billion prescriptions.
- Aging baby boomers. As this generation ages, the number of people over 65 will grow tremendously. Patients 65 and older consume an average of 23.5 prescriptions per year as compared to a 10.1 average for those under 65. The aging of the U.S. population will significantly increase consumption of prescription drugs.

The report also indicated that Florida has the second highest demand level for pharmacists in the South Atlantic states, just behind North Carolina. These factors, combined with the projections for Florida's population growth, especially in the percentage of those over 65 (27.1% of the population in 2030), help fuel an expected increase in demand for pharmacists over the coming decades.

Florida's population demographics support the need for additional professional programs in pharmacy. As an example, Ohio, a smaller state in population, has six Colleges of Pharmacy, with a seventh being proposed. With only four pharmacy programs in Florida currently producing graduates, it is evident that another program is needed in the state. Initiating a program in a large metropolitan region like Tampa makes sense. There is no doubt about the workforce demand for the graduates of the proposed program.

**Curriculum**

The proposed professional curriculum constitutes four years and about 145 semester credit hours of study, and it includes a full year devoted to Advanced Pharmacy Practice Experiences (APPE's) in compliance with current accreditation standards. It is designed in an integrated fashion, contains the necessary foundations in the biomedical and clinical sciences, has a good mix of public health classes, and includes robust Introductory Pharmacy Practice Experiences (IPPE's) to give students practical experience early in their studies.

Admissions standards and requirements are in place that promote student progression through the curriculum to build the knowledge, skills, attitudes, and values required of a pharmacist. Given the support evident at USF, we believe that students should be able to graduate on time and pass the national licensing exam. There appears to be no reason why a student should have difficulty making it through the program. There are many cooperative resources and support programs on campus, and the outside affiliated institutions appear eager and able to meet the needs of the College of Pharmacy for early and advanced practice experiential sites.

The curriculum is based upon expanded pre-pharmacy requirements so that students would begin the program with a stronger science base and be better prepared to start an intensive professional program. Additionally, the way in which the pre-pharmacy requirements are designed opens up additional hours within the professional curriculum for students to "track" into specialty areas and take courses that would apply toward dual degrees. This model is forward thinking and is uniquely designed to attract the next generation of college students (the Millennials) into the program. These factors should make USF very competitive with other programs in the state and could make the College stand out as a center of excellence in pharmacy education.

**Clinical Training Sites**

Contemporary pharmacy practice and education are inherently patient-centered. Practices such as "pharmaceutical care" and "medication therapy management services" have recently evolved to transform this profession in institutional as well as community settings

toward practices that entail more intense interactions with other health professionals, the education of patients, monitoring and modification of medication therapies, and helping to ensure optimal health outcomes. Therefore, pharmacy education in the 21st Century requires (by accreditation standards as well as societal need) a substantial amount of experiential training in various practice settings (e.g., hospital/institutional, community/ ambulatory, managed care, etc.). Approximately 25% of PharmD curricula are consumed by part-time Introductory Pharmacy Practice Experiences during the first three years of a four-year program and full-time Advanced Pharmacy Practice Experiences during the final year. This need for high-quality experiential training sites is one of the most challenging issues in pharmacy education as the number of colleges of pharmacy increases.

USF appears to be well positioned in this regard. We are impressed by the breadth and depth of existing health care facilities in the Tampa Bay area, as well as the potential to develop new innovative training sites. The eight area teaching hospitals provide a rich base for the required and elective clinical rotations for students. We met with pharmacy directors from Tampa General Hospital and the Moffitt Cancer Center and were specifically told that both institutions would consider USF as their primary affiliations if a new College of Pharmacy is initiated. This will be important for establishing a protected and committed experiential core for the new college. The area pharmacy residency network is also an important driver of practice innovation and provides another critical frame in the experiential teaching heuristic.

We believe the existing and developing clinical training sites in the area to be one of the primary reasons that the development of a College of Pharmacy at USF makes sense. It would not be prudent to attempt such an endeavor if these sites were not available.

**Financial Resources Review**

During the visit, we were furnished with an estimated funding summary. This document presented financial projections based on an enrollment of 50 students for the first two years and 100 thereafter. Faculty salary costs were established at the fiftieth percentile of the American Association of Colleges of Pharmacy Annual Survey of Faculty Salaries. Thirty-six faculty members were projected to be hired in both the clinical and basic biomedical sciences.

It should be noted that hiring faculty will be a primary focal point of the ACPE accreditation visits as more new schools open and the faculty shortage is exacerbated. The faculty salary figures may need to be adjusted in the next year or so, but at present they are representative. The collaborative environment that exists at USF will be an excellent selling point in attracting high quality faculty.

Costs are well estimated and the revenues conservatively projected. The budget included infrastructure expenses for library resources and information technology support. It also included funds for faculty recruiting, building up the research infrastructure, and instructional laboratory and distance learning equipment. The projected breakeven point is in the third year of student enrollment in the program. One potential weakness of USF's budget projections for the new program is the failure to include the costs for experiential training. These costs will not be substantially incurred until the fourth year of the curriculum, but it will be important to take then into consideration.

The financial plan is solid, based on conservative estimates, and provides a strong basis for opening a College of Pharmacy at USF. The budget projections were impressive for a state program with mostly in-state tuition, and the proposed pharmacy program appears to be a high priority in USF Health's development efforts. Both consultants would urge USF to ask for professional tuition authority as it moves forward with opening its pharmacy program. It was quite apparent that a similar funding request has been

advantageous to the Physical Therapy program, even during periods of low state funding. This model makes logical sense for the pharmacy program as well.

**Health Sciences Center Infrastructure/Program Readiness**

Health care in the United States has transitioned toward a much more cooperative culture, and future health practices are likely to be increasingly collaborative in nature. Therefore, it makes the most sense to establish new pharmacy education programs in universities where other health profession students are trained as well. The existence of Colleges of Medicine, Nursing, and Public Health, as well as a School of Physical Therapy and Rehabilitation Sciences at USF provides the interdisciplinary teaching and scholarly context necessary for a progressive College of Pharmacy in today's health environment. We were struck by the passion and innovative thinking exhibited by the leaders of the existing colleges in USF Health. You are lucky to have this type of academic health leadership on your campus. We were also struck by their enthusiasm for the establishment of a College of Pharmacy. Each existing unit seemed to be eager for the collaborative possibilities posed by the addition of a College of Pharmacy in USF Health. In fact, they considered the lack of a College of Pharmacy to be a liability.

Pharmacy practitioners in the area seem supportive of the prospect of establishing the new College of Pharmacy as well. Every representative we encountered from the practice community seemed genuinely excited about engaging with USF's new program as a clinician, instructor, or researcher. This will bode well for your educational enterprise, it will help attract innovative practitioners to the area, and it is critical for the ultimate success of your programs and students.

**Doctor of Pharmacy Program Innovativeness**

We are intrigued by the opportunity at USF to develop an innovative Doctor of Pharmacy program that could differentiate it from other programs in the region. USF's research strengths, area practice sites, preexisting professional colleges, pharmacy graduate program aspirations, plans to use cutting-edge educational technology, and a perceived culture of collaborative/interdisciplinary learning provide an exciting context for the education of pharmacy students. Other resources in specific areas such as pharmacogenomics and public health could also make significant contributions to the new college if utilized in innovative ways. The program proposal incorporates both disciplines as core curricular components. We would also encourage strong connections to the research and clinical practice expertise in pharmacogenomics at the James A. Haley VA Hospital, as well as taking advantage of the opportunity to integrate public health principles throughout the new doctoral curriculum. It is clear that pharmacogenomics/ pharmacogenetics will change the practice of medicine and pharmacy, and some of the most pressing issues in our field relate to medication safety and the staggering evidence relating to the incidence of adverse drug events in our health care system. The latter concerns are also among the most important public health dilemmas of our time. USF has the opportunity to integrate related training for PharmD students to allow them to better understand these public health needs at the same time they acquire the pharmaceutical knowledge base to help solve them.

These phenomena are laid against an institutional emphasis on interdisciplinary scholarship and learning, as well as a "longitudinal passion" in USF Health for innovation. Other phrases used by those we met to describe this climate included: "we are walking the walk, not talking the talk" (referring to interprofessional education and practice) and "USF doesn't want to build 'me too' professional programs." This attitude is infectious, and we perceive it to be sustainable.

## Interdisciplinary Collaborations

One of the most impressive things we encountered on the site visit to USF was the forward thinking attitude relating to interdisciplinary activities. The Department of Chemistry has a critical mass of medicinal chemists eager to collaborate with a College of Pharmacy, several of whom work with natural products in drug development. They also have established a Center for Molecular Diversity, Drug Design, Discovery and Delivery, and they have expressed a desire to work with the Clinical Pharmacy Division in bringing possible drug products into clinical trials.

The College of Nursing also expressed a strong need in their program for collaborations with a College of Pharmacy. They have a state-of-the-art patient simulation lab, currently work collaboratively with the College of Medicine and Physical Therapy program, and wondered aloud why a College of Pharmacy was not opened fifteen years ago. The positive attitude of the nursing program toward collaborations with a College of Pharmacy in an interdisciplinary approach to educating both nurses and pharmacists is another positive prognostic for a pharmacy program at USF.

The College of Public Health spoke highly of potential collaborations with a new pharmacy program. They discussed their ability to help teach in certain disciplines (including health policy and management) and the desire to offer joint degrees. Possible research collaborations were also mentioned. The College of Medicine also spoke positively of the need for a College of Pharmacy at USF. It was very refreshing to hear from young as well as seasoned medical faculty members about the new paradigm of interdisciplinary teams to treat patients and their desire to work with a College of Pharmacy so that students and faculty alike can work together.

The increasingly interdisciplinary nature of medical, nursing, and pharmaceutical education and practice make the addition of a College of Pharmacy a natural evolution in USF Health's growth. Existing interdisciplinary collaborations appear to be positive, real, and viable. These partnerships will enable a new College of Pharmacy at USF to attract good students and high quality faculty, make it a much stronger and viable program, and adds to the "it makes sense" philosophy toward starting a Doctor of Pharmacy degree program at the University of South Florida.

## External Programs

Several other external programs provide additional opportunities for innovation and programmatic distinction. For example, the implementation of graduate programs in the new college would be facilitated by existing programs in related disciplines such as chemistry, pharmacology, public health, and nursing, in what was described as the second fasted growing research medical center in the country. The proposed combined Masters of Healthcare Administration (MHA) with an administrative residency is an excellent example of a needed resource for impacting pharmacy's emerging leadership crisis in a way that combines pharmacy faculty, interest among the practice community and an academic structure in public health. Developments in clinical research constitute another external resource of interest. College of Pharmacy expertise could be married to developing programs in investigational drug services and clinical research in ways that could generate research opportunity, a potential revenue stream, and student training sites. The USF Health vision for building combined degree program options for students in the College of Pharmacy is yet another predictor of success. Progressive students will be attracted by the possibility of combining PharmD training with PhD or Masters programs in chemistry (drug discovery) and public health, as well as in the pharmaceutical sciences.

## Conclusion

Each and every person we met, within and outside of the University, was enthusiastic and highly supportive of opening this new program. We heard, on more than one occasion, the sentiment that USF should have established a pharmacy program years ago. Looking at all of the factors, facilities, and outside partnerships, the University of South Florida is poised and prepared to open a new College of Pharmacy. It appears to be a natural fit with established programs at the University and a “no brainer” in the context of the interdisciplinary mindset we found during our visit. USF is forward thinking, especial in the health disciplines, and the future bodes well for a College of Pharmacy that would be a part of USF Health.