College of Graduate Health Sciences
2007 - 2008
Annual Report

Dr. Edward G. Schneider, Interim Dean
Dr. David Armbruster, Associate Dean
Dr. Don Thomason, Associate Dean
Rebecca Brown, Assistant Dean
Patsy A. Campbell, Administrative Services Asst.
This document represents the First Annual Report prepared by the College of Graduate Health Sciences (CGHS) and its seven diverse programs. The following two spreadsheets present a summary of the factual data collected from the programs and from the CGHS database. This is the initial attempt by the CGHS to develop what is planned to be an annual report that presents to the University, the Faculty Senate, and other individuals and institutions that may have an interest in or need to understand the importance of the CGHS to this University and to our Community in general.

The first spreadsheet summarizes the financial impact of the CGHS. It shows the funding sources that support our graduate students. For the uninitiated, “E accts” refer to state-established university accounts, “NIH” represents stipends paid to students from NIH grants to individual faculty, “R accts” represents other external sources of funding (Non-NIH grants, contracts and endowments). St Jude has a special relationship to the CGHS, especially the IPBS program. The funding received from St Jude is included in this spreadsheet. The total financial impact of the CGHS is $7.7 million, a substantial impact. With $3.5 M being the cost of student’s stipends and $3.9 M being the value of the tuition that was incurred by the students. Note the University waived $3.3 M of the tuition charges, which represents a tremendous level of institutional support for our programs that is universally appreciated by the individual programs.

The second spreadsheet summarizes the scholarly activity of the students by presenting several indices of this activity: number of meeting attended by students, number of external presentations, number of publications, and the number of travel awards received by students. This spreadsheet is an evolving document that will be revised as the programs attempt to developed strategies to capture the scholarly activity of it students. However, it is clear that our students have made a major impact on the external scientific community, making 163 scientific presentations at external scientific meetings and publishing 172 papers. This activity also is of great importance to our research community, as presentations and publications by students are extremely important for the faculty that sponsors our student.

The final section presents an abridged version of the annual report submitted to the Chancellor as part of my evaluation. This serve as an overview of the highlights for the CGHS during the 2007/2008 academic year.

Sincerely
Interim Dean
## Overview of CGHS Financial Impact
*(based on Program submitted data for stipends and tuition)*

<table>
<thead>
<tr>
<th>Program</th>
<th># students</th>
<th>UT-E accts</th>
<th>UT-NIH</th>
<th>UT-R accts</th>
<th>St. Jude *</th>
<th>Totals</th>
<th>† Tuition Wavied For</th>
<th>Tuition Collected</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>COM</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IPBS†</td>
<td>107</td>
<td>$937,784</td>
<td>$723,404</td>
<td>$186,590</td>
<td>$456,274</td>
<td>$2,304,052</td>
<td>74</td>
<td>$541,236</td>
<td></td>
</tr>
<tr>
<td>EPI</td>
<td>28</td>
<td>$0</td>
<td>$0</td>
<td>$0</td>
<td>$0</td>
<td>$0</td>
<td>28#</td>
<td>$0</td>
<td>$0</td>
</tr>
<tr>
<td>BMEI</td>
<td>24</td>
<td>$149,103</td>
<td>$33,023</td>
<td>$141,875</td>
<td>$0</td>
<td>$324,001</td>
<td>23</td>
<td>$18,672</td>
<td></td>
</tr>
<tr>
<td><strong>Total COM</strong></td>
<td>159</td>
<td>$1,086,887</td>
<td>$756,427</td>
<td>$328,465</td>
<td>$456,274</td>
<td>$2,628,053</td>
<td>125</td>
<td>$559,908</td>
<td></td>
</tr>
<tr>
<td><strong>COP</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PharmSci</td>
<td>47</td>
<td>$384,275</td>
<td>$294,868</td>
<td>$66,292</td>
<td>$0</td>
<td>$745,435</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HOPR</td>
<td>17</td>
<td>$123,728</td>
<td>$16,913</td>
<td>$16,764</td>
<td>$0</td>
<td>$140,641</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total COP</strong></td>
<td>64</td>
<td>$508,003</td>
<td>$311,781</td>
<td>$83,056</td>
<td>$0</td>
<td>$886,076</td>
<td>64</td>
<td>$0</td>
<td></td>
</tr>
<tr>
<td><strong>CON</strong></td>
<td>31</td>
<td>$53,040</td>
<td>$29,486</td>
<td>$6,000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>$0</td>
</tr>
<tr>
<td><strong>COD</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ortho</td>
<td>11</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>11</td>
</tr>
<tr>
<td>Perio</td>
<td>6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>6</td>
</tr>
<tr>
<td>Prostho</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>5</td>
</tr>
<tr>
<td><strong>CGHS</strong></td>
<td>276</td>
<td>$1,311,930</td>
<td>$1,097,694</td>
<td>$417,521</td>
<td>$2,827,145</td>
<td>$3,301,984</td>
<td></td>
<td>$18,672</td>
<td>$6,147,801</td>
</tr>
<tr>
<td>St Jude</td>
<td></td>
<td>$336,000</td>
<td></td>
<td>$456,274</td>
<td>$792,274</td>
<td>$3,301,984</td>
<td></td>
<td>$541,236</td>
<td>$1,333,510</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td>$1,647,930</td>
<td>$1,097,694</td>
<td>$417,521</td>
<td>$456,274</td>
<td>$3,619,419</td>
<td></td>
<td>$559,908</td>
<td>$7,481,311</td>
</tr>
</tbody>
</table>

### Notes:
- COM UT-E accts includes $336,000 from St Jude Contract
- † THEC submitted waiver
- ° of St Jude $238,520 is from NIH
# Overview of Student Activity and Impact On The CGHS & UTHSC

<table>
<thead>
<tr>
<th>Program</th>
<th>Meetings Attended</th>
<th>Presentations Made</th>
<th>Publications</th>
<th>Travel Awards</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>College of Medicine</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IPBS</td>
<td>26</td>
<td>40</td>
<td>39</td>
<td>12</td>
</tr>
<tr>
<td>EPI</td>
<td>22</td>
<td>31</td>
<td>41</td>
<td>1</td>
</tr>
<tr>
<td>BMEI</td>
<td>144</td>
<td>22</td>
<td>39</td>
<td>9</td>
</tr>
<tr>
<td><strong>Total COM</strong></td>
<td><strong>192</strong></td>
<td><strong>93</strong></td>
<td><strong>119</strong></td>
<td><strong>22</strong></td>
</tr>
<tr>
<td><strong>College of Pharmacy</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pharm Sci</td>
<td>28</td>
<td>28</td>
<td>33</td>
<td>4</td>
</tr>
<tr>
<td>HOPR</td>
<td>9</td>
<td>8</td>
<td>8</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total COP</strong></td>
<td><strong>37</strong></td>
<td><strong>36</strong></td>
<td><strong>41</strong></td>
<td><strong>7</strong></td>
</tr>
<tr>
<td><strong>College of Nursing</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>33</strong></td>
<td><strong>9</strong></td>
<td></td>
<td><strong>6</strong></td>
</tr>
<tr>
<td><strong>College of Dentistry</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ortho</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Perio</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prosthodontics</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total COD</strong></td>
<td><strong>2</strong></td>
<td><strong>1</strong></td>
<td><strong>3</strong></td>
<td><strong>0</strong></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>231</strong></td>
<td><strong>163</strong></td>
<td><strong>172</strong></td>
<td><strong>35</strong></td>
</tr>
</tbody>
</table>
Annual Report from the Interim Dean

The CGHS went through an interesting year since Richard Peppler resigned in the summer of 2007 and I was asked to return as Interim Dean starting on July 15th. Before I accepted the position I had met with the key personnel of the college and to make sure that they would be comfortable working with me as the “Interim Dean”. This was important and has proven to be very helpful for I have received an unbelievable level of support and encouragement from the staff of the CGHS. My goal for this year was to help the CGHS continue to develop, to modernize, to evaluate, and to start preparing for the search for a Dean.

Early on I meet with the faculty and leadership of each of the seven programs. This allowed us to exchange ideas about the college and about what they felt were issues important to their program. This was an excellent, sometimes heated, but always with the intent of improving their program and enhancing what we as the college do for them. Based on these meeting the Deans Advisory Committee which is composed of the Program chairs of our programs was established. Programs chairs are the individuals who have the financial responsibility for the program. It was during this time that I became increasingly aware of the conflict of interest that I had with my duties as 'Dean' vs. those I had as 'Chair of the Integrated Program in the Biomedical Sciences'. This later title, a de facto title, was associated with the position of Dean. This has perpetuated the image of the CGHS being 'primarily a College of Medicine driven enterprise.'

The college successfully oriented a class of 61 students in August, and graduated a record 66 students (27 students at the December graduation and 39 students in May). The May graduates were the first group of students in our history to submit their thesis/dissertation in an electronic format. This was successful done under the outstanding leadership of our Associate Dean, David Armbruster, Ph.D. We have continued to work closely with our students and faculty, Don Thomason, Ph.D. or myself continuing to attend the first committee meeting of all student (~50/year). We also have begun to attend the dissertation/thesis defenses. Thus, we are now involved in both the initial and final committee meeting of all our students. Finally, we are anticipating that we will have a class of ~55+ students matriculating (not including the 7 MS/MD students who will matriculate in 2010) into the CGHS in August of 2008.

Several highlights have occurred. We have assisted David Mirvis in getting the MS/MD Health Policy program approved at the College and University level. It is ready to be reviewed by THEC for finally approval. Seven students have been accepted into the program (presently a track under the Epidemiology program). I attended the orientation for the initial class on May 22, 2008 and welcomed them as the first group of students to matriculate into the MS/MD program. [Regretfully, the university had to inform the students that they could not continue in the program because of the financial start up cost exceeded what the university could manage at this time]. We have worked with the CTSI task force and help them with getting their program approved by the GSC. Based on the NIH pink sheets, this program is being re-evaluated and revised before it is submitted to THEC for approval at the state level. Both of these programs directors have been brought into the Graduate Studies Council that is now composed of the nine
program directors, two representatives from St. Jude and a representative from the College of Allied Health (only college at this time that does not have a program within the CGHS).

The CGHS has requested that each program prepare an Annual Report that will summarize its activities during 07/08 academic year. Since this is a critical time in the history of the college I have also asked them to consider the following issues:

1. How many students should you recruit each year?
2. What additional resources do you need to enhance your program (faculty, stipends, grants, etc.)?
3. How can you interact across traditional college boundaries to enhance the interdisciplinary nature of your/our program(s)?
4. Each of the programs were asked to consider having a ~day retreat it involve as many of their faculty as possible but that was left up to the individual programs.

A summary of these reports will be presented to the university and to the task force. This document should be helpful for the search committee for the Dean of the CGHS when it is established.

Shortly after I became Interim Dean, the TIPS program was transferred to the CGHS. Dr. Isaac Donkor (Associate Dean) and Ms. Constance Tucker (coordinator of TIPS) were hired and began working in early April. These individuals have a done a remarkable job of reinstituting the TIPS program. Over forty qualified individuals will be arriving on campus the first week of June to participate in the three TIPS programs. The staff has done this in a very short period of time. They plan on preparing a major summary report by the end of this summer that should capture data for the last few years. We believe we can then begin to systematically evaluate the success of these programs (TIPS level one, TIPS level two, and TIPS level three).

We have obtained office space for the college (suite 407 in the 920 Madison Bldg.) that is independent of all other colleges. This has allowed us to consolidate our staff into one area. We have hired a receptionist/secretary who formerly worked for the Health Career Program area. We are remodeling one area of this new space to accommodate a smart conference room for CGHS meetings and seminars.

Under the leadership of Don Thomason, Ph.D. (Associate Dean) the CGHS has developed an linkage between our graduate student data base and our graduate faculty data base allowing the CGHS required forms to be electronic generate via our college website. This is saving an enormous amount of time for both students and faculty. With the help of Ms. McDonald in Cheryl Scheid, Ph.D. office papers published by our graduate students can be access via our website. Thus, students are now able to accomplish most of requirements via accessing our College website.

To remain competitive with our cohorts, we have increased our stipend ~$2000/yr and added health insurance coverage for Graduate Students that receive a stipend.
Integrated Program in Biomedical Sciences (Ph.D.) 2007 - 2008 Annual Report

Dr. J. Patrick Ryan, Program Director
Janie Van Prooijen, Administrative Aide
Annual Report to the Dean

Integrated Program in Biomedical Sciences
Pat Ryan, Ph.D., Director

July 2008
## Table of Contents

Introduction......................................................................................................................

Matriculating Students...................................................................................................

Student Stipends................................................................................................................

Survey of Total Student Population..................................................................................

Student Presentations......................................................................................................

Student Publications......................................................................................................

Graduating Students......................................................................................................

Events Affecting Students and Faculty...........................................................................

Students Receiving Tuition Waivers..............................................................................

Students Receiving External Support.............................................................................

Long-Term Issues...........................................................................................................

Appendix.........................................................................................................................
Introduction

The Integrated Program in Biomedical Sciences (IPBS) began in fall 2004. It replaced graduate programs housed in the five basic science departments of the College of Medicine (Anatomy and Neurobiology, Molecular Sciences, Pathology, Pharmacology, and Physiology) and the Interdisciplinary Program, an independent program started in 2000. In 2006, faculty in the Department of Clinical Pharmacy also joined the IPBS. Currently, there are 160 IPBS faculty members based at UTHSC, St. Jude Children’s Hospital, and the VA Medical Center. The faculty is distributed among seven research tracks: Cancer and Developmental Biology; Cell Biology and Biochemistry; Genetics, Functional Genomics, and Proteomics; Molecular, Cellular, and Systems Physiology; Microbial Pathogenesis, Immunology, and Inflammation; Molecular Therapeutics and Cell Signaling; and Neurosciences.

This report tabulates student information for the 2007-08 school year, not only for the IPBS, but also for the remaining students in the programs that preceded the IPBS. Where possible, the specific program will be indicated in the presentation of the data.

Matriculating students

Originally, the IPBS targeted a class size of 30 students each year. This number was based on available stipend funds and on the historical number of students that entered the pre-existing programs. In any given year, up to 10 of the students may join labs at St. Jude Children’s Research Hospital, a limit set by the Hospital. Since its inception, the IPBS has recruited classes of 24 (2004), 27 (2005), 21 (2006), and 21 (2007) students. The smaller class size in 2007 was a conscious decision made by the recruitment committee after considering the funding climate at NIH and other granting agencies. Twenty-one students have once again been recruited for the 2008-09 school year.

The table below summarizes the matriculating class and application pool of 2007-08. A total of 83 completed applications were received. Thirty-three offers were made, and of these, 21 enrolled. The average GRE scores for the class were 495 (V), 678 (Q), and 3.8 (AW).

<table>
<thead>
<tr>
<th>Previous University</th>
<th>Verbal</th>
<th>Quant</th>
<th>AW</th>
<th>GPA</th>
<th>Citizenship</th>
<th>Offer</th>
<th>Enroll</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 U. Tennessee-Knoxville</td>
<td>460</td>
<td>580</td>
<td>4.5</td>
<td>2.53</td>
<td>US</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>2 College of Wooster</td>
<td>440</td>
<td>480</td>
<td>5.0</td>
<td>2.54</td>
<td>US</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>3 Tennessee Tech</td>
<td>550</td>
<td>790</td>
<td>3.5</td>
<td>3.04</td>
<td>US</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>4 U. of Alabama-Huntsville</td>
<td>520</td>
<td>660</td>
<td>4.0</td>
<td>3.19</td>
<td>US</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>5 U. of South Florida</td>
<td>600</td>
<td>610</td>
<td>5.0</td>
<td>3.21</td>
<td>US</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>6 Freed-Hardeman U.</td>
<td>410</td>
<td>520</td>
<td>5.0</td>
<td>4.0</td>
<td>US</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>7 Allegheny College</td>
<td>460</td>
<td>680</td>
<td>3.5</td>
<td>2.64</td>
<td>US</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>8 Ohio State U.</td>
<td>420</td>
<td>710</td>
<td>3.5</td>
<td>2.91</td>
<td>US</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>9 Alcorn State U.</td>
<td>400</td>
<td>400</td>
<td>3.5</td>
<td>3.45</td>
<td>US</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>10 UTHSC</td>
<td>530</td>
<td>640</td>
<td>650</td>
<td>3.10</td>
<td>US</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>11 Tulane School of Pub. Health</td>
<td>530</td>
<td>640</td>
<td>4.5</td>
<td>3.62</td>
<td>US</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>12 U. of Memphis</td>
<td>450</td>
<td>640</td>
<td>3.5</td>
<td>3.06</td>
<td>US</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>13 U. of Memphis</td>
<td>300</td>
<td>650</td>
<td>550</td>
<td>3.44</td>
<td>US</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Avg 1-13 (US enrolled)</td>
<td>467</td>
<td>615</td>
<td>4.0</td>
<td>3.13</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

9
<table>
<thead>
<tr>
<th></th>
<th>Institution</th>
<th>MMI</th>
<th>SAT</th>
<th>GPA</th>
<th>Country</th>
<th>Offered</th>
<th>Region</th>
</tr>
</thead>
<tbody>
<tr>
<td>14</td>
<td>U. of Mumbai</td>
<td>520</td>
<td>740</td>
<td>5.5</td>
<td>INDIA</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>15</td>
<td>Peking Union Medical</td>
<td>620</td>
<td>790</td>
<td>3.5</td>
<td>CHINA</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>16</td>
<td>Ainshams U.</td>
<td>570</td>
<td>780</td>
<td>4.0</td>
<td>EGYPT</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>17</td>
<td>Nanjing U.</td>
<td>570</td>
<td>800</td>
<td>3.5</td>
<td>CHINA</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>18</td>
<td>U. of Missouri-Columbia</td>
<td>470</td>
<td>800</td>
<td>3.5</td>
<td>CHINA</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>19</td>
<td>Obafemi Awolowi U.</td>
<td>620</td>
<td>650</td>
<td>4.5</td>
<td>NIGERIA</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>20</td>
<td>Hokkaido U.</td>
<td>250</td>
<td>780</td>
<td>2.0</td>
<td>JAPAN</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>21</td>
<td>Shenzhen U.</td>
<td>540</td>
<td>780</td>
<td>1.5</td>
<td>CHINA</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>Avg. 14-21 (Foreign enrolled)</td>
<td>520</td>
<td>765</td>
<td>3.5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>22</td>
<td>Rhodes College</td>
<td>610</td>
<td>680</td>
<td>5.0</td>
<td>US</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>23</td>
<td>U. of Tennessee-Chattanooga</td>
<td>400</td>
<td>720</td>
<td>4.0</td>
<td>US</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>24</td>
<td>U. of CO-Colorado Springs</td>
<td>520</td>
<td>720</td>
<td>4.0</td>
<td>US</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>25</td>
<td>Michigan State U.</td>
<td>470</td>
<td>640</td>
<td>5.0</td>
<td>US</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td></td>
<td>Avg. 22-29 (US offered)</td>
<td>543</td>
<td>664</td>
<td>4.81</td>
<td>US</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>26</td>
<td>Hendrix College</td>
<td>730</td>
<td>770</td>
<td>5.5</td>
<td>US</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>27</td>
<td>Humboldt State U.</td>
<td>620</td>
<td>620</td>
<td>5.5</td>
<td>US</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>28</td>
<td>Western State College</td>
<td>590</td>
<td>660</td>
<td>4.5</td>
<td>US</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>29</td>
<td>Emory U.</td>
<td>400</td>
<td>500</td>
<td>5.0</td>
<td>US</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td></td>
<td>Avg. 22-29 (US offered)</td>
<td>543</td>
<td>664</td>
<td>4.81</td>
<td>US</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>30</td>
<td>Christian Brothers U.</td>
<td>440</td>
<td>690</td>
<td>4.5</td>
<td>PAKISTAN</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>31</td>
<td>Arizona State U.</td>
<td>280</td>
<td>590</td>
<td>3.0</td>
<td>JAPAN</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>32</td>
<td>Nanjing U.</td>
<td>570</td>
<td>790</td>
<td>4.5</td>
<td>CHINA</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>33</td>
<td>Nanjing U.</td>
<td>510</td>
<td>800</td>
<td>4.0</td>
<td>CHINA</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td></td>
<td>Avg. 30-33 (Foreign offered)</td>
<td>450</td>
<td>718</td>
<td>4.0</td>
<td>US</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>34</td>
<td>U. of Mississippi</td>
<td>520</td>
<td>510</td>
<td>4.0</td>
<td>US</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>35</td>
<td>Tuskegee U.</td>
<td>330</td>
<td>510</td>
<td>3.5</td>
<td>US</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>36</td>
<td>Dillard U.</td>
<td>480</td>
<td>470</td>
<td>5.0</td>
<td>US</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>37</td>
<td>Jackson State U.</td>
<td>300</td>
<td>270</td>
<td>3.5</td>
<td>US</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>38</td>
<td>U. of Tennessee-Knoxville</td>
<td>520</td>
<td>470</td>
<td>5.0</td>
<td>US</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>39</td>
<td>College of Wooster</td>
<td>540</td>
<td>580</td>
<td>5.5</td>
<td>US</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>40</td>
<td>Vanderbilt U.</td>
<td>640</td>
<td>610</td>
<td>5.5</td>
<td>US</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>41</td>
<td>Delta State U.</td>
<td>280</td>
<td>260</td>
<td>5.0</td>
<td>US</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>42</td>
<td>U. of Illinois</td>
<td>460</td>
<td>710</td>
<td>4.0</td>
<td>US</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>43</td>
<td>Illinois College of Podiatry</td>
<td>560</td>
<td>550</td>
<td>4.0</td>
<td>US</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>44</td>
<td>Transylvania U.</td>
<td>560</td>
<td>660</td>
<td>4.0</td>
<td>US</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>45</td>
<td>Bucknell U.</td>
<td>630</td>
<td>710</td>
<td>4.5</td>
<td>US</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>46</td>
<td>U. of Tennessee-Martin</td>
<td>400</td>
<td>490</td>
<td>4.0</td>
<td>US</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>47</td>
<td>Alcorn U.</td>
<td>480</td>
<td>540</td>
<td>4.0</td>
<td>US</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>48</td>
<td>Tougaloo College</td>
<td>380</td>
<td>590</td>
<td>3.0</td>
<td>US</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>49</td>
<td>Duquesne U.</td>
<td>540</td>
<td>570</td>
<td>4.5</td>
<td>US</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>50</td>
<td>New York U.</td>
<td>440</td>
<td>530</td>
<td>620</td>
<td>US</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>51</td>
<td>Eastern Kentucky U.</td>
<td>340</td>
<td>760</td>
<td>3.5</td>
<td>SYRIA</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>52</td>
<td>U. of Jordan</td>
<td>280</td>
<td>750</td>
<td>2.5</td>
<td>JORDAN</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>53</td>
<td>Tehran U.</td>
<td>580</td>
<td>740</td>
<td>4.0</td>
<td>IRAN</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>54</td>
<td>Foreign College</td>
<td>430</td>
<td>490</td>
<td>2.5</td>
<td>INDIA</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>55</td>
<td>Alcorn State U.</td>
<td>400</td>
<td>620</td>
<td>4.5</td>
<td>CAMEROON</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>56</td>
<td>U. of Utah</td>
<td>570</td>
<td>670</td>
<td>5.5</td>
<td>INDIA</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>57</td>
<td>U. of West Indies</td>
<td>300</td>
<td>430</td>
<td>5.5</td>
<td>BARBADOS</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>58</td>
<td>Seoul National</td>
<td>350</td>
<td>760</td>
<td>3.0</td>
<td>KOREA</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>---</td>
<td>----------------</td>
<td>-----------</td>
<td>-------------</td>
<td>------------</td>
<td>-------------</td>
<td>---------------</td>
<td>------------------</td>
</tr>
<tr>
<td>59</td>
<td>500</td>
<td>700</td>
<td>3.0</td>
<td>4.0</td>
<td>INDIA</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>60</td>
<td>520</td>
<td>710</td>
<td>3.0</td>
<td>3.86</td>
<td>KOREA</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>61</td>
<td>340</td>
<td>750</td>
<td>3.5</td>
<td>?</td>
<td>CHINA</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>62</td>
<td>190</td>
<td>750</td>
<td>4.0</td>
<td>3.81</td>
<td>EGYPT</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>63</td>
<td>530</td>
<td>660</td>
<td>2.0</td>
<td>3.82</td>
<td>INDIA</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>64</td>
<td>450</td>
<td>630</td>
<td>3.5</td>
<td>3.71</td>
<td>INDIA</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>65</td>
<td>610</td>
<td>740</td>
<td>3.5</td>
<td>4.0</td>
<td>INDIA</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>66</td>
<td>350</td>
<td>570</td>
<td>3.5</td>
<td>3.45</td>
<td>KENYA</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>67</td>
<td>520</td>
<td>800</td>
<td>4.0</td>
<td>3.96</td>
<td>CHINA</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>68</td>
<td>650</td>
<td>750</td>
<td>4.0</td>
<td>3.52</td>
<td>INDIA</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>69</td>
<td>330</td>
<td>710</td>
<td>2.5</td>
<td>3.92</td>
<td>INDIA</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>70</td>
<td>370</td>
<td>790</td>
<td>3.0</td>
<td>3.10</td>
<td>CHINA</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>71</td>
<td>600</td>
<td>800</td>
<td>4.0</td>
<td>3.92</td>
<td>INDIA</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>72</td>
<td>670</td>
<td>750</td>
<td>5.0</td>
<td>3.98</td>
<td>INDIA</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>73</td>
<td>490</td>
<td>790</td>
<td>4.5</td>
<td>3.99</td>
<td>INDIA</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>74</td>
<td>450</td>
<td>700</td>
<td>3.0</td>
<td>3.17</td>
<td>INDIA</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>75</td>
<td>570</td>
<td>630</td>
<td>3.0</td>
<td>3.97</td>
<td>INDIA</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>76</td>
<td>430</td>
<td>730</td>
<td>3.5</td>
<td>3.85</td>
<td>TAIWAN</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>77</td>
<td>460</td>
<td>730</td>
<td>3.5</td>
<td>1.61</td>
<td>INDIA</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>78</td>
<td>310</td>
<td>650</td>
<td>4.0</td>
<td>3.26</td>
<td>INDIA</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>79</td>
<td>480</td>
<td>790</td>
<td>4.5</td>
<td>?</td>
<td>CHINA</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>80</td>
<td>470</td>
<td>750</td>
<td>4.5</td>
<td>3.10</td>
<td>CHINA</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>81</td>
<td>450</td>
<td>800</td>
<td>3.0</td>
<td>3.52</td>
<td>CHINA</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>82</td>
<td>450</td>
<td>800</td>
<td>4.0</td>
<td>3.70</td>
<td>CHINA</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>83</td>
<td>560</td>
<td>790</td>
<td>3.5</td>
<td>?</td>
<td>CHINA</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

* 11 minority students applied to the program, 3 were offered acceptance, and 2 enrolled.

**Student stipends**

Stipends for 2007-08 were $21,360, raised from $21,000 to allow for student fees incurred by the students. The IPBS pays the stipend for the first two years of a student’s program; these amounts are not included in the totals. Stipend payments are listed below, broken down by program and funding source (details may be found in the Appendix).

<table>
<thead>
<tr>
<th>Program</th>
<th>Stipend Dollars</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>IPBS</td>
<td>$500,280</td>
<td>NIH</td>
</tr>
<tr>
<td></td>
<td>21,360</td>
<td>NSF</td>
</tr>
<tr>
<td></td>
<td>21,360</td>
<td>NIH Training Grant (Pharmacology)</td>
</tr>
<tr>
<td></td>
<td>21,360</td>
<td>Gross Foundation Grant</td>
</tr>
<tr>
<td></td>
<td>21,360</td>
<td>Phillip Morris USA Research Grant</td>
</tr>
<tr>
<td></td>
<td>21,360</td>
<td>Whitehall Foundation Grant</td>
</tr>
<tr>
<td></td>
<td>21,360</td>
<td>CGHS Funds</td>
</tr>
<tr>
<td></td>
<td>128,160</td>
<td>St. Jude Funds</td>
</tr>
<tr>
<td></td>
<td><strong>Total $756,600</strong></td>
<td></td>
</tr>
<tr>
<td>Interdisciplinary</td>
<td>$171,474</td>
<td>NIH</td>
</tr>
<tr>
<td></td>
<td>21,360</td>
<td>CGHS Funds</td>
</tr>
<tr>
<td></td>
<td>89,594</td>
<td>St. Jude Funds</td>
</tr>
<tr>
<td></td>
<td><strong>Total $282,428</strong></td>
<td></td>
</tr>
<tr>
<td>Anatomy</td>
<td>$92,560</td>
<td>NIH</td>
</tr>
<tr>
<td>Molecular Sciences</td>
<td>$158,450</td>
<td>NIH</td>
</tr>
<tr>
<td></td>
<td>12,460</td>
<td>NSF</td>
</tr>
<tr>
<td></td>
<td>20,570</td>
<td>Lupus Foundation</td>
</tr>
<tr>
<td></td>
<td>UT Genomics Center</td>
<td>CGHS Funds</td>
</tr>
<tr>
<td>----------------</td>
<td>---------------------</td>
<td>------------</td>
</tr>
<tr>
<td>Pathology</td>
<td>$3,560</td>
<td>NIH</td>
</tr>
<tr>
<td>Pharmacology</td>
<td>$14,240</td>
<td>NIH</td>
</tr>
<tr>
<td>Physiology</td>
<td>$21,360</td>
<td>NIH</td>
</tr>
<tr>
<td>Grand Total</td>
<td>$1,426,308</td>
<td></td>
</tr>
</tbody>
</table>

**Survey of total student population**

As of August 2007, 107 students were enrolled in the IPBS and preceding programs. A breakdown by program follows.

<table>
<thead>
<tr>
<th>Program</th>
<th>Students</th>
<th>Committees</th>
<th>Committee Meetings</th>
<th>Admitted to Candidacy</th>
</tr>
</thead>
<tbody>
<tr>
<td>IPBS</td>
<td>71</td>
<td>42</td>
<td>34</td>
<td>25</td>
</tr>
<tr>
<td>Interdisciplinary</td>
<td>9</td>
<td>9</td>
<td>16</td>
<td>9</td>
</tr>
<tr>
<td>Anatomy</td>
<td>7</td>
<td>7</td>
<td>7</td>
<td>7</td>
</tr>
<tr>
<td>Molecular Sciences</td>
<td>15</td>
<td>15</td>
<td>15</td>
<td>15</td>
</tr>
<tr>
<td>Pathology</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Pharmacology</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Physiology</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>107</strong></td>
<td><strong>78</strong></td>
<td><strong>77</strong></td>
<td><strong>61</strong></td>
</tr>
</tbody>
</table>

**Student Presentations**

All students in the IPBS must present twice during their first year in IP 810 IPBS Seminars, and must present in a journal club during their second year. Many tracks require additional years of participation in journal clubs or seminar series. The data below indicate that formal IPBS students have been very successful in presenting at external meetings with 12 students accounting for 20 presentations. Of the 22 meetings attended by IPBS students, travel costs were offset about one-third of the time with travel awards.

<table>
<thead>
<tr>
<th>Program</th>
<th>Students Making Internal Presentations*</th>
<th>Students Making External Presentations</th>
<th>External Meetings Attended</th>
<th>Meeting Presentations</th>
<th>Travel Awards</th>
</tr>
</thead>
<tbody>
<tr>
<td>IPBS</td>
<td>33</td>
<td>12</td>
<td>22</td>
<td>20</td>
<td>8</td>
</tr>
<tr>
<td>Interdisciplinary</td>
<td>13</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Anatomy</td>
<td>5</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Molecular Sciences</td>
<td>14</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Pathology</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pharmacology</td>
<td>2</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Physiology</td>
<td>2</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>69</strong></td>
<td><strong>16</strong></td>
<td><strong>26</strong></td>
<td><strong>24</strong></td>
<td><strong>12</strong></td>
</tr>
</tbody>
</table>

*Includes presentations by first-year students in IP 810 IPBS Seminars*
**Student Publications***

<table>
<thead>
<tr>
<th>Program</th>
<th>2000</th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
</tr>
</thead>
<tbody>
<tr>
<td>IPBS</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interdisciplinary</td>
<td>4</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anatomy</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Molecular Sciences</td>
<td>1</td>
<td></td>
<td></td>
<td>3</td>
<td></td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Pathology</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pharmacology</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Physiology</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>1</td>
<td>8</td>
<td>10</td>
<td>4</td>
<td>8</td>
<td>5</td>
<td>3</td>
</tr>
</tbody>
</table>

*Data collected from the CGHS website

**Graduating Students**

<table>
<thead>
<tr>
<th>Program</th>
<th>1999</th>
<th>2000</th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
</tr>
</thead>
<tbody>
<tr>
<td>IPBS</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Interdisciplinary</td>
<td>1</td>
<td>2</td>
<td></td>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anatomy</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Molec. Sciences</td>
<td>1</td>
<td>1</td>
<td></td>
<td>3</td>
<td>1</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pathology</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pharmacology</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Physiology</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>1</td>
<td>5</td>
<td>5</td>
<td>9</td>
<td>1</td>
<td>3</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

These students have gone on to the following positions:

<table>
<thead>
<tr>
<th>Student</th>
<th>New Position</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cao, Fei</td>
<td>Staff Scientist, Medarex, Inc., San Diego, CA</td>
</tr>
<tr>
<td>Chappell, Tyson</td>
<td>Asst. Professor, College of Eastern Utah</td>
</tr>
<tr>
<td>Jin, Shi</td>
<td>Postdoc, UTHSC</td>
</tr>
<tr>
<td>Khandelwal, Payal</td>
<td>Postdoc, Harvard Medical School</td>
</tr>
<tr>
<td>Kim, Sun-Hong</td>
<td>Postdoc, John Hopkins University</td>
</tr>
<tr>
<td>Lamba, Vishal</td>
<td>Postdoc, University of Minnesota</td>
</tr>
<tr>
<td>Lancaster, Cynthia</td>
<td>Postdoc, St. Jude</td>
</tr>
<tr>
<td>Liao, Nan (MS)</td>
<td>Staff Scientist, Amylin Pharmaceuticals, San Diego CA</td>
</tr>
<tr>
<td>Liu, Teresa</td>
<td>Postdoc, Carnegie-Mellon University</td>
</tr>
<tr>
<td>Liu, Wei</td>
<td>Postdoc, University of Alabama</td>
</tr>
<tr>
<td>Marrs, Kevin</td>
<td>Lieutenant, Navy, Silver Spring, MD</td>
</tr>
<tr>
<td>Moisini, Ioana</td>
<td>Resident, Albert Einstein Institute</td>
</tr>
<tr>
<td>Nawazi, Salar</td>
<td>Postdoc, UTHSC</td>
</tr>
<tr>
<td>Nooh, Mohammed</td>
<td>Postdoc, UTHSC</td>
</tr>
<tr>
<td>Sarva, Sivatej</td>
<td>Resident, UTHSC Pathology Program</td>
</tr>
<tr>
<td>Shanmunganathan, Karthik</td>
<td>Postdoc, University of Iowa</td>
</tr>
<tr>
<td>Shen, Jun</td>
<td>Millipore, St. Louis, MO</td>
</tr>
<tr>
<td>Shour, Mohammad Reza (MS)</td>
<td>Returned to Iran</td>
</tr>
<tr>
<td>Taylor, Daniel (MS)</td>
<td>Asst. Professor, Southern College of Optometry</td>
</tr>
<tr>
<td>Vandermerwe, Marie</td>
<td>Postdoc, St. Jude</td>
</tr>
</tbody>
</table>
Events Affecting Students and Faculty

Events have been mixed this past year. On the upside, new grants in participating departments out number lost grants 21 to 4 and faculty numbers have remained stable. On the downside, the cost of a graduate student has increased significantly due to a $2000 stipend increase, the addition of $600 in fees, and the addition of health insurance (approximately $1750). These added expenses will reduce the attractiveness of a student when compared to the cost of a full-time postdoctoral position in the lab.

Students Receiving Tuition Waivers

Almost all students in the IPBS and preceding programs receive a waiver of tuition. Exceptions include those students in years three or higher that are training at St. Jude Children’s Research Hospital and a few students enrolled under special circumstances (one M.S. student is an employee of the Southern College of Optometry and one Ph.D. student is employed by Medtronic; their employers pay tuition). As a result, a total of 75 students received tuition waivers for the 2007-08 school year.

Students Receiving External Support

Four IPBS and one Physiology student received additional support for their research:

**IPBS**
- Mitzi Dunagan, Mort and Myra Friedman Scholarship, $3000 annually
- Robin Krueger, Johnson Alumni Scholarship, $1000
- Himabindu Penmatsa, AHA Pre-doctoral fellowship, $21,770 annually for 2 years
- Mekel Richardson, NIH Diversity Supplement Grant

**Physiology**
- E Shuyu, Gerwin Scholarship

Long-Term Issues

In 2004, the IPBS originally was designed to accommodate 30 new students each year. Now with the addition of fees and health insurance, the cost per student runs $25,350 annually. The addition of health insurance is a critical component, as its absence hurt our ability to attract top students over the last few years. However, as a result of these additions, the program can only bring in 19 students each year if it continues to pay stipends for the first two years after matriculation. If faculty at St. Jude continue to attract the maximum 10 students each year, this leaves only 9 students for the entire UTHSC and VAMC campuses. Compare this number to the number of faculty typically requesting a student at the start of the year: 35-40. The dwindling number of students in IPBS labs on the UTHSC campus is diminishing student and faculty morale, and is having a negative effect on recruiting as the limited number of students is dispersed over many buildings, giving the impression that even fewer students are present.

To restore a “critical mass” of students to the program, 30 students should again be targeted. Shortening the amount of time in which the program supports the student stipend to one year would allow an increase in the number of matriculating students, but as the cost of a student increases, it is imperative that the program maintain incentives for faculty to participate.
A compromise would be to reduce the program’s support to 18 months, but this will require an infusion of money by the University. If UTHSC’s goal of becoming a top quartile health science center is to be realized, a strong graduate research program is an essential component and must be considered a financial priority along with other research endeavors. Recovering tuition from all students would seem to be a way to raise money for the program, but it is the strong opinion of the IPBS Director and Track Heads that charging tuition to grants would be a grave mistake. Such a move would effectively kill the program as investigators would opt exclusively for more highly skilled postdoctoral trainees for the same expense as untrained graduate students. Most researchers at UTHSC have a strong commitment to training students, as this is the future of science, but will not sacrifice their research productivity to do so. This is a time of severe economic hardship for scientists as NIH is funding at a low percentile. Researchers will always opt for the easiest and most productive solution for staffing their laboratories.

The IPBS has been very successful at attracting a very diverse student population. However, it is the same diversity of undergraduate majors that represents a strong challenge to the program. The core curriculum has at times been too rigorous for some students, but generally has been designed to cater to the lowest common denominator. It has become overly broad and perhaps lacks the depth necessary to prepare students for research in basic science disciplines. One of the strengths of the IPBS has been its ability to attract “undecided” students. These are often outstanding candidates from strong, yet small, liberal arts colleges. Their undergraduate curriculum may have had limited specialization compared to a large state school major, and this prevents them from identifying a specific research discipline upon entering graduate school. The multiple options provided by the IPBS are particularly appealing to this group. There are concerns, however, that the broad core curriculum has steered away those students who would like to enter a track from day one and participate in a more specialized curriculum. As this report is being completed, the chairs of the basic science departments in the College of Medicine are reevaluating the core concept of the IPBS, and this process may lead to a return to some form of department-based programs.

Mindful of these and other issues, the core curriculum has been redesigned for fall 2008. The two large core courses, Systems Biology and Cellular and Molecular Biology, have been downsized to fit in the fall semester. Systems Biology has been reduced from 10 to 3 credit hours, and will now draw on some example systems to illustrate key concepts rather than attempt to be more comprehensive in areas such as neuroscience, physiology, immunology, pharmacology, and pathology. This will allow more detailed elective courses to be offered in the spring semester for the specialization students will need. Cellular and Molecular Biology has been split into its three components: biochemistry, cell biology, and molecular biology. Each 3 credit hour course will provide fundamental knowledge from which students can draw upon regardless of the track they eventually enter.

There are many advantages to the revised core curriculum. As of now, all IPBS students will be required to take all four courses, but an overall reduction in lecture time should allow more time for student reflection of the material and more in-depth learning. The increased flexibility of four rather than just two courses can also accommodate a revised program in which students mix some core courses with discipline-specific electives in their first semester. Consequently, students may select tracks early in their programs and tailor their curricula to their specific needs and interests. The more flexible core curriculum will also allow students in other programs, perhaps notably the proposed CTSI Ph.D. program, to select specific core courses to remediate deficiencies or to introduce interdisciplinary studies to their graduate curriculum.
As with any program, the IPBS has suffered through growing pains in its first 4 years. The program has many more positives than negatives, and is making improvements each year. It attracts a diverse group of students who offer different perspectives to their peers in the classroom. The class size each year provides an opportunity for peer collegiality and a sense of importance on campus that cannot be achieved in small, department-centered recruitment classes. If a way can be found to increase the class size to original intentions, the collegiality will be readily maintained in the lab setting and will be a boost to future recruitment. There is no reason why the IPBS cannot continue to grow and attract outstanding “undecided” and track-interested students in the future, especially if given the financial backing it and other graduate programs on campus merit.
Biomedical Engineering and Imaging (M.S. or Ph.D.)
2007 - 2008 Annual Report

Dr. Steven J. Bares, Interim Chair
Dr. Denis J. DiAngelo, Program Director
Cynthia McGee, Coordinator
Introduction

The Biomedical Engineering & Imaging Program (BMEI) is the educational component of the University of Memphis / University of Tennessee Joint BME Graduate Program that was established in 1996 under authority of the Tennessee Higher Education Commission (THEC). The program offers MS and PhD degrees that are awarded jointly by the two universities at their separate commencement exercises. Students apply and matriculate to either university and become administratively associated with the university of their faculty advisor, transferring between universities if necessary. BMEI program courses are offered jointly at one campus or the other, and students may also take courses outside the program at either university. Faculty have their primary appointment in their home academic unit (Biomedical Engineering Department at UM and School of Biomedical Engineering & Imaging at UT) and a secondary appointment at the other university.

Summary

1. Matriculating Students—Data for the UM / UT Joint BME Graduate Program

43 students applied
  28 UT
  15 UM

 26 USA
  8 China
  8 India
  1 Romania

11 students will enroll Fall 2008
  5 UT
  6 UM

See attached chart for details: Applicant Pool for Fall 2008

2. Total Dollars Spent for Student Stipends—Data for 24 UT students only; 21 received stipends during time period

  $270,961 Total stipends (Excluding $53,040 CGHS Dean’s stipends)
  96,063 SBMEI State budget
  96,000 Industrial contracts
  33,023 NIH grants
  18,000 Foundation grants
  27,500 SBMEI Chair of Excellence
  375 SBMEI Endowment
3. Number of Students—Data for 24 UT students only
   See attached chart for details: SBMEI Graduate Student Summary
   July 2007 – June 2008
   24   Total students
   22   Students with committees (2 students transferred from UM in May 2008)
   38   Total committee meetings
   13   Students admitted to candidacy

4. Student Presentations—Data for 24 UT students only
   See attached chart for details: SBMEI Graduate Student Summary
   July 2007 – June 2008
   16   Students made internal presentations
   14   Students made external presentations
   85   Total internal presentations given
   22   Total external presentations given
   246  Total internal presentations attended
   144  Total external presentations attended
   9    Total student travel awards received

5. Student Publications—Data for 24 UT students only
   See attached chart for details: SBMEI Graduate Student Summary
   July 2007 – June 2008
   39   Total student publications
   9    Students submitted publications

6. Students Graduating—Data for 24 UT students only
   See attached chart for details: SBMEI Graduate Student Summary
   July 2007 – June 2008
   3    MS degrees conferred
   1    PhD degree conferred

7. Alumni Positions—Data for 24 UT students only
   See attached chart for details: SBMEI Graduate Student Summary
   July 2007 – June 2008
   Engineer  2 students
   Military   1 student
   Education  1 student (Instructor in SBMEI)

8. Unique Events

   The academic unit responsible for the BMEI program has been subjected to considerable
   administrative and structural changes during the past two years, and this has had a
significant impact on the program. Starting in the spring of 2006, the unit has undergone transitions from an independent college reporting to the Chancellor to a department reporting to the Dean College of Medicine-Memphis to a threat of extinction and then elevated to the School of Biomedical Engineering & Imaging reporting to the Executive Dean College of Medicine.

External recruiting of new faculty has been suspended for over two years, and the most recent hire of an outside experienced faculty member occurred over four years ago. During this period, two senior faculty members retired and a third resigned to become a department chair at another university. The gap left by these three faculty was partially mitigated by internal appointments to two tenure-track assistant professor positions and one instructor position.

Primary impacts of these events on the BMEI Program have been reduced student recruiting efforts, fewer matriculating students, smaller class sizes and some limitations on course offerings.

9. Student Tuition Waivers—Data for 24 UT students only
   See attached chart for details:  SBMEI Graduate Student Summary
   July 2007 – June 2008
   23 Students received tuition waivers
   1 Student paid tuition

10. Student External Support—Data for 24 UT students only
    See attached chart for details:  SBMEI Graduate Student Summary
    July 2007 – June 2008
    3 Students received external support
    1 American Heart Association pre-doctoral fellowship
    1 Tuition scholarship from employer (St Jude Children’s Research Hospital)
    1 MD/PhD student in 4th year of Med School

Long-term Issues

A five-year strategic plan for the School of Biomedical Engineering & Imaging was developed, reviewed and approved by the Executive Dean of the College of Medicine in April, 2008. The goals of the strategic plan are:

Goal 1: Improve academic program to a distinctive, high quality level greatly valued by students and the community.

Goal 2: Create a cost effective recruitment and retention program for graduate students.

Goal 3: Re-establish a nationally competitive research and discovery program that leverages
strengths in the UT Health Science Center, the University of Memphis, and key partners and that reaches deeply into the regional industry and clinical arenas.

Goal 4: Provide sound stewardship of the UT SBMEI and the UM/UT Joint BME Graduate Program through high-performance leadership and governance.

Goal 5: Build a stable and diversified revenue base through sustained, comprehensive community outreach and development of an integrated program in biomedical engineering among institutions in the Memphis metropolitan area.

Growth is a key element of the strategy with:

1. UT tenured / tenure-track faculty growing from the current number of 6 to 14.
2. UT graduate student body doubling from the current size of 23.
3. Annual research expenditures increasing from $0.5 million to $3.5 million.

Achieving the desired growth in the student body will require an increase in matriculating students from current levels of 3 – 5 per year to 12 – 15 per year. Recruiting activities will need to increase significantly to create a sufficient pool of qualified applicants. The objective is to support first-year students through a combination of State and SBMEI endowment funds and then transition their stipends to extramural grants and contracts. Funds provided by the CGHS for student stipends have been fixed at $50,000 for many years, and with the most recent increase in the value of the individual stipends, these funds now support only two first-year students. It would be helpful if the CGHS funding could be increased in sync with the growth in matriculating students.

Comparable growth in tenured / tenure-track faculty and student body are planned by the University of Memphis Biomedical Engineering Department resulting in an overall projected doubling of the of the UM / UT Joint BME Graduate Program faculty and student body.

Biomedical engineering and imaging are, by their very natures, interdisciplinary and collaborative disciplines utilizing and applying scientific methods and engineering practices to understand and solve problems in the clinical domain. The NIH working definition of biomedical engineering states: "Biomedical engineering integrates physical, chemical, mathematical, and computational sciences and engineering principles to study biology, medicine, behavior, and health. It advances fundamental concepts; creates knowledge from the molecular to the organ systems level; and develops innovative biologics, materials, processes, implants, devices and informatics approaches for the prevention, diagnosis, and treatment of disease, for patient rehabilitation, and for improving health."

This interdisciplinary and collaborative characteristic is evidenced by the large number of secondary appointments within SBMEI. Currently there are 14 joint faculty members from other UTHSC academic units representing the Colleges of Medicine, Dentistry, Pharmacy and Allied Health Sciences. An additional 14 people hold adjunct appointments in SBMEI including 8 from the BME Department at UM. A key element of the SBMEI strategic plan is to continue to grow the number of joint and adjunct faculty appointments by 50% or more in order to encourage quality growth of the SBMEI research enterprise. An emphasis will also be placed on increasing the number of collaborative research projects between SBMEI primary faculty members and joint / adjunct faculty as well as other faculty from various UTHSC departments.
<table>
<thead>
<tr>
<th>Student</th>
<th>Country</th>
<th>UT</th>
<th>UM</th>
<th>Matriculating</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Amoozmand, Alireza</td>
<td>USA</td>
<td>x</td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>2 Arikapudi, Sowseelya</td>
<td>India</td>
<td></td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>3 Booker, DeAnna</td>
<td>USA</td>
<td>x</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4 Brunger, Jonathon</td>
<td>USA</td>
<td>x</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5 Buzzo, John</td>
<td>USA</td>
<td>x</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6 Chen, Xuening</td>
<td>USA</td>
<td></td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>7 Chikkam, Swarntanya</td>
<td>USA</td>
<td>x</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8 Devisetti, Kishore</td>
<td>USA</td>
<td>x</td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>9 Du, Qiuyue</td>
<td>USA</td>
<td>x</td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>10 Ghotge, Rahul</td>
<td>China</td>
<td>x</td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>1 Gumma, Ravikanth</td>
<td>China</td>
<td></td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>2 Hammonds, Ryan</td>
<td>USA</td>
<td>x</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3 Harris, Hillary</td>
<td>USA</td>
<td>x</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4 Hartsell, Zane</td>
<td>USA</td>
<td>x</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5 Heng, Gena</td>
<td>USA</td>
<td>x</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6 Herringshaw, Michael</td>
<td>USA</td>
<td>x</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7 Hu, Fei</td>
<td>USA</td>
<td>x</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8 Huang, Enyi</td>
<td>India</td>
<td>x</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9 Jayaraman, Siddaerth</td>
<td>India</td>
<td>x</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10 Jella, Pavan</td>
<td>USA</td>
<td>x</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 Kale, Santosh</td>
<td>USA</td>
<td>x</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 Katabathula, Kedar</td>
<td>India</td>
<td>x</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3 Kekedy Nagy, Laszio</td>
<td>India</td>
<td>x</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4 Kisiel, Greggory</td>
<td>USA</td>
<td>x</td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>5 Kloby, John</td>
<td>USA</td>
<td>x</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6 Kumar, Nagmesh</td>
<td>USA</td>
<td>x</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7 Laxmipiya, Mahek</td>
<td>China</td>
<td></td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>8 Liu, Yuan</td>
<td>USA</td>
<td>x</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9 Lucas, Esther</td>
<td>USA</td>
<td>x</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10 Maclin, Alexander</td>
<td>USA</td>
<td>x</td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>1 1 Meoto, Emile</td>
<td>USA</td>
<td>x</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 Messina, Adam</td>
<td>USA</td>
<td>x</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Name</td>
<td>Country</td>
<td></td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>---------------</td>
<td>------------</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>3</td>
<td>Nagy, Laszlo</td>
<td>Romania</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>4</td>
<td>Noblett, Andrew</td>
<td>USA</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>5</td>
<td>Patel, Nikul</td>
<td>India</td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>6</td>
<td>Potluri, Manhar</td>
<td>India</td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>7</td>
<td>Ren, Peng</td>
<td>China</td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Shi, Jun</td>
<td>China</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>9</td>
<td>Sinkala, Elliyana</td>
<td>India</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>10</td>
<td>Stubbs, Jessica</td>
<td>USA</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>1</td>
<td>Tan, Jinwang</td>
<td>China</td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Wang, Xueying</td>
<td>China</td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Zhou, Wenda</td>
<td>China</td>
<td>x</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Country</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>USA</td>
<td>26</td>
</tr>
<tr>
<td>China</td>
<td>28</td>
</tr>
<tr>
<td>India</td>
<td>15</td>
</tr>
<tr>
<td>Other</td>
<td>11</td>
</tr>
<tr>
<td>China</td>
<td>8</td>
</tr>
<tr>
<td>India</td>
<td>8</td>
</tr>
<tr>
<td>Other</td>
<td>1</td>
</tr>
<tr>
<td>Student</td>
<td>Faculty Committee Established</td>
</tr>
<tr>
<td>--------------</td>
<td>-------------------------------</td>
</tr>
<tr>
<td>Clemens, Matt</td>
<td>x</td>
</tr>
<tr>
<td>Dahi, Bahram</td>
<td>x</td>
</tr>
<tr>
<td>Dhillon, Brahman</td>
<td>x</td>
</tr>
<tr>
<td>Fraysur, Kyle</td>
<td>0</td>
</tr>
<tr>
<td>Gogula, Bharathi</td>
<td>x</td>
</tr>
<tr>
<td>Hussain, Ishtiaq</td>
<td>x</td>
</tr>
<tr>
<td>Kim, Sungwoo</td>
<td>2</td>
</tr>
<tr>
<td>Kimball, Braden</td>
<td>2</td>
</tr>
<tr>
<td>Kumar, Saurabh</td>
<td>3</td>
</tr>
<tr>
<td>Maghsoodpour, A</td>
<td>2</td>
</tr>
<tr>
<td>Melnyk, Roman</td>
<td>1</td>
</tr>
<tr>
<td>Phillips, Nick</td>
<td>10</td>
</tr>
<tr>
<td>Rendon, David</td>
<td>1</td>
</tr>
<tr>
<td>Roberson, Jason</td>
<td>3</td>
</tr>
<tr>
<td>Sander, Elizabeth</td>
<td>1</td>
</tr>
<tr>
<td>Sedacki, Karen</td>
<td>1</td>
</tr>
<tr>
<td>Simmons, John</td>
<td>2</td>
</tr>
<tr>
<td>Wido, Daniel</td>
<td>x</td>
</tr>
<tr>
<td>Wilson, Christy</td>
<td>1</td>
</tr>
<tr>
<td>Wong, Peter</td>
<td>3</td>
</tr>
<tr>
<td>Young, Daniel</td>
<td>0</td>
</tr>
<tr>
<td>Zawaski, Janice</td>
<td>0</td>
</tr>
<tr>
<td>Zhang, Sizhong</td>
<td>3</td>
</tr>
<tr>
<td>Zufelt, Nephi</td>
<td>3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th><strong>Total</strong></th>
<th><strong>22</strong></th>
<th><strong>38</strong></th>
<th><strong>13</strong></th>
<th><strong>22</strong></th>
<th><strong>85</strong></th>
<th><strong>246</strong></th>
<th><strong>144</strong></th>
<th><strong>9</strong></th>
<th><strong>39</strong></th>
<th><strong>3</strong></th>
<th><strong>1</strong></th>
<th><strong>23</strong></th>
<th><strong>3</strong></th>
<th><strong>14</strong></th>
</tr>
</thead>
</table>

24
Dental Science
(M.D.S.)
2007 - 2008
Annual Report

Dr. Sidney H. Stein, Program Chair
Program Directors:
Dr. James L. Vaden
Dr. Martin E. Donaldson
Dr. Swati Rawal
Dr. David R. Cagna
Annual report of the Master’s of Dental Science (MDS) Program July 2008

1. New students

Orthodontics
- Lina Kulkarni  U. of Col  DDS in May 2004  GPA Fem, Asian
- Mark Owens  UT-Mem  DDS in May 2001  GPA Male, Cauc
- Austin Rahaim  Nova SE  DMD in May 2008  GPA Male, Cauc
- Ryan Streight  U. of Ok  DDS in May 2008  GPA Male, Cauc

Periodontology
- Andrew Gray  Howard  DDS in May 2008  GPA Male, Afr/Am

Prosthodontics
- Norman L. Egbert  Creighton  DDS in May 2008  GPA Male, Cauc
- Mark J. Hopkins  U. of Saskat.  DDS in May 2004  GPA Male, Cauc

2. Total $: All MDS students receive tuition waivers from the College of Graduate Health Sciences.

3. Student committees

Orthodontics
- Mike Agenter  2005  Drs. Harris (M), Robinson, DeWood
- Kortne Frederick  2005  Drs. Harris (M), Wicks, Williams (PR Dec 07)
- Kelly Gwynne-Fergus  2005  Drs. Harris (M), Wasson, Yates (PR Dec 07)
- Daniel Sawrie  2005  Drs. Harris (M), Grimes, Wasson
- Brian Anderson  2006  Drs. Harris (M), Grimes, Williams
- David Sander  2006  Drs. Harris (M), Grimes, Wasson (PR Dec 07)
- John Zang-Bodis  2006  Drs. Harris (M), Robinson, Williams
- KC Dyer  2007  Drs. Harris (M), Sandusky, Vaden
- Nathan Hamman  2007  Drs. Harris (M), Tipton, Robinson
- Lisa Ku  2007  Drs. Harris, (M), Vaden, Sandusky
- Tiffany McClaren  2007  Drs. Harris (M), Wasson, Grimes
- Linda Kulkarni  2008
- Mark Owens  2008
- Austin Rahaim  2008
- Ryan Streight  2008

Periodontology
- George Hilal  2005  Drs. Thomas (M), Babu, Tipton
- Brett Seshul  2005  Drs. Tipton (M), Bland, Dabbous, Thomas, Weeda
- Jason Primm  2006  Drs. Babu (M), Adatrow, Stein, Tipton, Thomas
4. Student presentations and awards

Orthodontics

Periodontology
Dr. David Pond came in second place in the basic science category of the Billy M. Pennel Research competition (May 2005). He was a finalist in the Balint Orban Research Competition where he presented in San Diego, CA (9/16/06). He received a research grant from the UTCOD alumni foundation. His mentor was Dr. David Tipton.

Dr. Brett Seshul came in third place in basic science category of the Billy M. Pennel Research competition (May 2007). He is a finalist in the Balint Orban Research Competition where he will present in Seattle, WA (Sept 2008). He received a research grant from the UTCOD alumni foundation. His mentor was Dr. David Tipton.

Dr. George Hilal received a research grant from the UTCOD alumni foundation. His mentor was Dr. Ed Thomas.

Dr. Owais Farooqi received a research grant from the UTCOD alumni foundation. His mentor is Dr. David Tipton.

Dr. Jason Primm received a research grant from the UTCOD alumni foundation. His mentor is Dr. Jeg Babu.

Prosthodontics
Dr. Jonathon Hart had a poster presentation entitled “Antifungal Activities of Amine Oxide against Candida albicans” at the American Academy of Dental Research in Dallas, TX on 4/4/08.
5. Student publications

**Periodontology**


6. Graduating students and degrees

**Orthodontics**

<table>
<thead>
<tr>
<th>Name</th>
<th>Degree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mike Agenter</td>
<td>MDS</td>
</tr>
<tr>
<td>Kortne Frederick</td>
<td>MDS</td>
</tr>
<tr>
<td>Kelly Gwynne-Fergus</td>
<td>MDS</td>
</tr>
<tr>
<td>Daniel Sawrie</td>
<td>MDS</td>
</tr>
</tbody>
</table>

**Periodontology**

<table>
<thead>
<tr>
<th>Name</th>
<th>Degree</th>
</tr>
</thead>
<tbody>
<tr>
<td>George Hilal</td>
<td>MDS</td>
</tr>
<tr>
<td>Brett Seshul</td>
<td>MDS</td>
</tr>
</tbody>
</table>

**Prosthodontics**

<table>
<thead>
<tr>
<th>Name</th>
<th>Degree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Suzanne Coco</td>
<td>MDS</td>
</tr>
</tbody>
</table>

7. Position of graduating students

Orthodontics: all went into private practice

Periodontology: all went into private practice

Prosthodontics: all went into private practice

8. Unique events

9. Students receiving tuition waivers

All MDS students have received tuition waivers

10. Students receiving external support
Epidemiology (M.S.)
2007 - 2008
Annual Report

Dr. Pamela D. Connor, Program Chair
Elizabeth Webb, Coordinator
Annual Report for 2007-2008 Academic Year
Master of Science in Epidemiology Program

1. Applicant Pool and Matriculating Students

The program received 17 complete applications for fall 2007 and accepted 12 of these. In the fall, 11 students matriculated while 1 deferred enrollment to 2008. Of the 11 matriculating (10 female, 1 male), there were 3 African-American, 1 Asian, 1 Hispanic, and 6 Caucasian students. Upon matriculation, this group had an overall grade-point average of 3.24 and an overall Graduate Record Examination (GRE) score average of 500 verbal, 557 quantitative, and 4.1 analytical. The GRE requirement was waived for 8 students who already had M.D. degrees upon enrolling in this program.

2. Total Dollars Spent on Student Stipends

This program does not provide stipends. Therefore, students must cover their own expenses through other means, as described below in sections #9 and #10.

3. Number and Status of Students

Total enrollment in the program was 28 (including 11 matriculating students and 17 continuing students). Of the 17 continuing students, all but 2 had established their faculty committees by the end of the spring 2008 semester; the remaining 2 are part-time students who will establish their faculty committees in the fall 2008 semester. Students met with their committees at least once annually but typically conferred with their research advisor or committee members individually during each semester. Of the 17 continuing students, all but 5 had been admitted to candidacy by the end of the spring 2008 semester. Of the overall total 28 students in the program by the end of the spring 2008 semester, there were 7 graduates and 1 dropout (a physician who decided to pursue clinical practice rather than clinical research after a semester in the program).

4. Student Presentations and Awards

At least 11 students had at least 41 presentations during the academic year. Of these presentations, at least 10 were internal; at least 31 were external. At least 22 external conferences were attended by various students, and at least 1 student had a travel award to an external conference. Also, at least 3 students had research-grant awards from local sources, and at least 1 student had a K23 grant award from the National Institutes of Health.

5. Student Publications

At least 14 students were authors or coauthors on publications during the academic year. Overall number of publications reported was 41 as of mid-July 2008.

6. Number of Students Who Graduated

For this academic year, there were 7 graduates by the end of the spring 2008 semester.

7. Position of Graduates

Of the 7 graduates, status was as follows:

- resident physician, Department of Pediatrics, Harvard Medical School, Massachusetts General Hospital for Children, Boston, MA;
- resident physician, Department of Surgery, UT Health Science Center, Memphis, TN;
- assistant professor, Department of Neurology, UT Health Science Center, Memphis, TN;
- postgraduate fellow, Department of Hematology-Oncology, St. Jude Children’s Research Hospital, Memphis, TN;
- assistant professor, Department of Pediatrics, UT Health Science Center, Memphis, TN;
• postgraduate fellow, Department of Hematology-Oncology, St. Jude Children’s Research Hospital, Memphis, TN;
• physician, Department of Internal Medicine, St. Luke’s Hospital, Kansas City, MO.

8. Events or Situations Affecting Program’s Students or Faculty

Positive influences include K30-grant funding that has supported development of new courses and resources for clinical-research training, including a new computer lab with 6 workstations and a central conference area to promote mentoring sessions as well as hands-on training in the use of SAS and R statistical software. K30 funding has also provided tuition assistance for at least 2 students in the program, as described below in section #10. Another positive influence is the availability of a UTHSC employee benefit of educational assistance, which helps cover tuition for some students in the program, as described below in section #9.

On the other hand, negative influences include state funding cuts; technological issues (e.g., SAS software acquisition, IT infrastructure); difficulty in balancing heavy clinical workload with academic courses and research; difficulty of obtaining in-state tuition rates for international fellows at St. Jude Children’s Research Hospital who seek clinical-research training through the UTHSC epidemiology program; lack of Educational Assistance Fee Waivers for some UTHSC residents; lack of smooth integration among multiple offices handling student business at UTHSC.

9. Number of Students Receiving Tuition Waivers

None of the students in the program received a tuition waiver through the College of Graduate Health Sciences because this program does not customarily provide graduate assistantships. However, of the overall total 28 students in the program during this academic year, 14 used a UTHSC employee benefit called “Educational Assistance Fee Waiver Authorization,” which helps to cover tuition for up to 9 credit hours a semester for those who qualify for that benefit. Unfortunately, resident physicians and UTHSC fellows who do not have an appointment as junior faculty do not qualify for that benefit, a lack which prevents some of them from applying to our program if they have no other financial resources to cover their tuition.

10. Number of Students Receiving External Support

Of the overall total 28 students in the program, 14 used the UTHSC employee benefit of educational assistance described above; another 7 used an employee benefit from St. Jude Children’s Research Hospital to cover their tuition in the program; 2 were supported by local funding from the 21st Century Scholars grant; 2 others received support from the K30 grant to cover their tuition, and the remaining 3 paid their own way.

11. Program Outlook

The outlook for this program should be favorable in view of the program’s success since its inception a decade ago. The program has been able to admit 7-12 students each fall and has not had difficulty with recruitment thus far. Long-term issues facing this program include matters of institutional funding; faculty recruitment and retention; interdisciplinary and interinstitutional initiatives; ethnic diversity among program faculty and students; curricular development to meet various needs, including needs for online education.
1. Applicant Pool and Matriculating Students

The program received 14 complete applications for fall 2007 and accepted all 14. In the fall, 12 students matriculated whereas 2 decided not to enroll. Of the 12 matriculating (7 female, 7 male), there were 4 Asian, 2 Hispanic, 1 African-American and 5 Caucasian students. Upon matriculation, this group had an overall grade-point average of 3.51. The Graduate Record Examination was not required for these students. Upon matriculating, 5 students already had an M.D. degree; 2 had a Pharm.D. degree; 2 had a Ph.D. degree, 1 had an M.S. degree, and 2 had a B.S. degree.

2. Total Dollars Spent on Student Stipends

This program does not provide stipends. Therefore, students must cover their own expenses through other means, as described below in sections #9 and #10.

3. Number and Status of Students

Total enrollment in the program was 12. By the end of the spring 2008 semester, there were 9 graduates, 1 student who had not yet met graduation requirements, and 2 dropouts (those 2 already had a Ph.D. degree and decided not to continue in the certificate program after the first semester).

4. Student Presentations and Awards

These were not expected for students in the online certificate program as they would be for students in a graduate-degree program.

5. Student Publications

These were not expected for students in the certificate program as they would be for students in a graduate-degree program.

6. Number of Students Who Graduated

For this academic year, there were 9 graduates by the end of the spring 2008 semester.

7. Position of Graduates

Of the 9 graduates, status was as follows:
- assistant professor, College of Pharmacy, UT Health Science Center, unit in Knoxville, TN;
- chief fellow, Department of Hematology-Oncology, UT Health Science Center, Memphis, TN;
- research specialist, Department of Pharmacy, UT Health Science Center, Memphis, TN;
- assistant professor, Department of Surgery, UT Health Science Center, Memphis, TN;
- associate professor, Department of Clinical Pharmacy, UT Health Science Center, Memphis, TN;
- manager, Department of Preventive Medicine, UT Health Science Center, Memphis, TN;
- fellow, Department of Infectious Diseases, St. Jude Children’s Research Hospital, Memphis, TN;
- research nurse, Department of Obstetrics-Gynecology, UT Health Science Center, Memphis, TN;
- associate professor, Department of Obstetrics-Gynecology, UT Medical Center, Knoxville, TN.

8. Events or Situations Affecting Program’s Students or Faculty

Positive influences include K30-grant funding that has supported development of new courses and resources for clinical-research training. Another positive influence is the availability of the online Blackboard system at UTHSC, with technical support and training coordinated by a full-time Blackboard administrative specialist. In addition, a UTHSC employee benefit of educational assistance helps cover tuition for some students in the program, as described below in section #9.
In contrast, negative influences include concerns about future funding; technological issues involved with accessibility and use of online educational tools; difficulty in balancing heavy clinical workload with academic courses and research; difficulty of obtaining in-state tuition rates for international fellows at St. Jude Children’s Research Hospital who seek clinical-research training at UTHSC; lack of smooth integration among multiple offices handling student business at UTHSC.

9. Number of Students Receiving Tuition Waivers

None of the students in the program received a tuition waiver through the College of Graduate Health Sciences. However, of the 12 students in the program during this academic year, 8 used a University of Tennessee employee benefit called “Educational Assistance Fee Waiver Authorization,” which helps to cover tuition for up to 9 credit hours a semester for those who qualify for that benefit. Unfortunately, resident physicians and UTHSC fellows who do not have an appointment as junior faculty do not qualify for that benefit, a lack which prevents some of them from applying to the Certificate in Clinical Research program if they have no other financial resources to cover their tuition.

10. Number of Students Receiving External Support

Of the 12 students in the program, 8 used the UT employee benefit of educational assistance described above; another 3 used an employee benefit from St. Jude Children’s Research Hospital to cover their tuition in the program, and 1 student paid his own tuition but received some reimbursement from his UT fellowship program.

11. Program Outlook

The outlook for this program should be favorable as interest in online education and in clinical-research training continues to be generated at UTHSC. The program is just starting its second year in fall 2008. Long-term issues facing this program include matters of funding; faculty recruitment and retention; interdisciplinary and interinstitutional initiatives; curricular development to meet various needs, and changes in information technology.
Health Outcomes and Policy Research (M.S. or Ph.D) 2007 - 2008 Annual Report

Dr. Max D. Ray, Interim Program Chair
Felicia Martin, Administrative Aide
Annual Report for the 2007-2008 Academic Year
Health Outcomes and Policy Research (HOPR) Programs

The Health Outcomes and Policy Research (HOPR) Division (a unit of the Department of Pharmaceutical Sciences in the College of Pharmacy offers M.S. and Ph.D. programs in health outcomes/policy research and an M.S. program in health-system pharmacy administration. A PharmD/PhD option is also offered.

1. Applicant pool and matriculating students

During the 2007-2008 academic year we admitted two new M.S. students, both of whom are from the U.S. Their GPA’s were 2.51 and 2.79, respectively, and their GRE scores were 970 and 1010, respectively.

2. Total amount spent on student stipends

State funding = $123,728
NIH funding = $16,913
Private/Foundation funding = $16,764

Total HOPR stipends = $157,405

3. Number and status of students

A total of 17 students were enrolled in HOPR programs during 2007-2008. Of these, 8 had thesis committees, and 7 were admitted to candidacy.

4. Student presentations and awards

Fifteen students gave a total of approximately 30 internal presentations this year (in a required seminar course). Nine students attended external meetings, and 8 students gave presentations at external meetings. Three students received travel awards to offset some or all of their travel expenses.

5. Student publications

Eight students were authors or co-authors on five publications during the 2007-2008 academic year. One student was co-author of two of these papers.

6. Number of students graduating

There were no HOPR graduate students who graduated in the Fall term, 2007. In the Spring term, three students graduated with the Ph.D. degree.

7. Positions of graduates

Kennard Brown, Ph.D.—Assistant Chancellor, UTHSC
Mark Tankersley, Ph.D.—Director of Health Outcomes, Accredo Health
Joyce Addo-Atuah, Ph.D. – Assistant Professor, Couro College of Pharmacy

8. Unique events or situations affecting program’s students or faculty

Dr. Max Ray was appointed Interim Director of the HOPR graduate program in June, 2007, replacing Dr. Shelley White-Means. It is expected that a decision will be made in the near future regarding a permanent director for the program.

Internal funding for GRA stipends was discontinued at the end of the 2007-2008 academic year. Faculty members will be responsible hereafter for providing funding for their graduate students through external funding sources.

9. Number of students receiving tuition waivers.

Eight students in the HOPR programs received tuition waivers during 2007-2008.

10. Number of students receiving external financial support

Two students received partial support from external sources this year: one from a Department of Defense grant received by LeMoyne-Owen College, and one from a minority supplement to an NIH grant received by Dr. Robert Klesges.

A third student received an NSF summer internship this summer (2008).

Planning for the future of the HOPR programs

The faculty of the HOPR Division are currently engaged in a strategic planning process, with an eye to setting goals for the next five years of the program. We have completed a “SWOT” (strengths, weaknesses, opportunities, threats) analysis and have identified a set of goals based on the results of that analysis. Those goals are currently being reviewed and rated based on (1) their relevance to the mission of the Division, the College of Pharmacy, the CGHS, and UTHSC; (2) their feasibility; and (3) their relation to the results of the SWOT analysis.

One of the major challenges to the HOPR Division is to generate additional external financial support (primarily through grants and contracts). As part of our strategic planning process, we are exploring a variety of opportunities for collaborative research, involving the CTSI program, other departments within the College of Pharmacy and other academic units on campus, other universities, and corporate partners.
Nursing (Ph.D.)
2007 - 2008
Annual Report

Dr. Donna K. Hathaway Program Chair
Dr. Carolyn Graff, Program Director
I. Matriculating students

<table>
<thead>
<tr>
<th>Entering students</th>
<th>August 2007 N=6</th>
<th>August 2008 N=7*</th>
</tr>
</thead>
<tbody>
<tr>
<td>GRE**</td>
<td>1078/4.25</td>
<td>940/4.3</td>
</tr>
<tr>
<td>GPA</td>
<td>3.36</td>
<td>3.62</td>
</tr>
<tr>
<td>Gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Female</td>
<td>4</td>
<td>6</td>
</tr>
<tr>
<td>• Male</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Race</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• African American</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>• Asian</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>• Caucasian</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>• Hispanic</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

*Includes one student admitted in January 2008.

**Mean score for verbal and quantitative/mean analytical score for students whose scores were available.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>GRE*</td>
<td>1142/4.0</td>
<td>932.8/4.2</td>
</tr>
<tr>
<td>GPA</td>
<td>3.35</td>
<td>3.51</td>
</tr>
<tr>
<td>Gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Female</td>
<td>15</td>
<td>7</td>
</tr>
<tr>
<td>• Male</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Race</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• African American</td>
<td>7</td>
<td>3</td>
</tr>
<tr>
<td>• Asian</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>• Caucasian</td>
<td>11</td>
<td>6</td>
</tr>
<tr>
<td>• Hispanic</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

*Mean score for verbal and quantitative/mean analytical score for students whose scores were available.
II. Total dollars spent on paying for students’ stipends including a summary of sources (do not include UT initial stipend dollars)

<table>
<thead>
<tr>
<th>Academic Year (2007-2008)</th>
<th>Source</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>NIH</td>
<td></td>
</tr>
<tr>
<td></td>
<td>USPHS F31</td>
<td>$29,486.00</td>
</tr>
<tr>
<td></td>
<td>NSF</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Foundation</td>
<td></td>
</tr>
<tr>
<td></td>
<td>RO1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>USPHS – RO1 Minority Supplement (through Dr. Pam Hinds at St. Jude)</td>
<td>??amt.</td>
</tr>
<tr>
<td></td>
<td>Programs and Other</td>
<td></td>
</tr>
<tr>
<td></td>
<td>UTHSC General Clinical Research Center</td>
<td>$6,000.00</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>$35,486.00∗</td>
</tr>
</tbody>
</table>

III. Total number of students, number of students with committees, number of committee meetings, number of students admitted to candidacy

<table>
<thead>
<tr>
<th>Academic Year (2007-2008)</th>
<th>1st year</th>
<th>2nd year</th>
<th>3rd year</th>
<th>4th year</th>
<th>&gt;5th</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total number of students</td>
<td>7</td>
<td>8</td>
<td>10</td>
<td>3</td>
<td>3</td>
<td>31</td>
</tr>
<tr>
<td>Number of students with committees</td>
<td>1</td>
<td>6</td>
<td>9</td>
<td>3</td>
<td>3</td>
<td>21</td>
</tr>
<tr>
<td>Number of initial committee meetings held</td>
<td>1</td>
<td>5</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>6</td>
</tr>
<tr>
<td>Number of committee meetings held**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of students admitted to candidacy</td>
<td>0</td>
<td>3</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>5</td>
</tr>
</tbody>
</table>

*One student admitted in January 2008.
**Number of meetings held was not tracked in our Program.

IV. Number of students making presentations and number of presentations and travel awards.

<table>
<thead>
<tr>
<th>Academic Year (2007-2008)</th>
<th>3rd year</th>
<th>4th year</th>
<th>&gt;5th</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of students making internal presentations</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of students making external presentations</td>
<td>33</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total students making presentations</td>
<td>36</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of students receiving travel awards</td>
<td>6</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total number of travel awards</td>
<td>$7855.37</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

V. Number of publications by students

<table>
<thead>
<tr>
<th>Academic Year (2007-2008)</th>
<th>6+</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of publications submitted</td>
<td>6+</td>
</tr>
<tr>
<td>Number of publications accepted</td>
<td>6</td>
</tr>
<tr>
<td>Number of published manuscripts</td>
<td>3</td>
</tr>
</tbody>
</table>
VI. Number of students who graduated with Ph.D. in Nursing

<table>
<thead>
<tr>
<th></th>
<th>December 2007</th>
<th>May 2008</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of graduates</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>Mean length of time in program (range)</td>
<td>3.5 yr (3.5 yr)</td>
<td>4.5 yr (3-7 yr)</td>
</tr>
</tbody>
</table>

VII. Position of graduates (postdoc, faculty, others – be as descriptive as possible)

<table>
<thead>
<tr>
<th>Graduates</th>
<th>Position held</th>
</tr>
</thead>
<tbody>
<tr>
<td>D. Byers</td>
<td>Full-time faculty member at Murray State University in Kentucky.</td>
</tr>
<tr>
<td>B. Mandrell</td>
<td>Advanced Practice Nurse Researcher within the Division of Nursing Research at St. Jude Children’s Research Hospital, works as PI and co-investigator within Division.</td>
</tr>
<tr>
<td>D. Manley</td>
<td>Full-time faculty member at Murray State University in Kentucky.</td>
</tr>
<tr>
<td>A. Mary</td>
<td>Faculty position at Baptist School/College of Nursing. Teaches didactic (research and clinical coursework) and supervises students in clinical.</td>
</tr>
<tr>
<td>N. Sublette</td>
<td>Nurse Practitioner at UT Medical Group in Memphis, TN.</td>
</tr>
<tr>
<td>J. Tidwell</td>
<td>Pediatric Nurse Practitioner in private practice group in Memphis and part-time staff nurse at St. Jude Children’s Research Hospital</td>
</tr>
</tbody>
</table>

VIII. Summarize any unique events or situations that have affected your students or faculty, e.g., change in policy, recruitment cost covered by program, addition of new faculty, loss or gain of grant funding, etc.

The Twenty-Year Evaluation of the Ph.D. Program in Nursing Report was completed in January 2008. The American Association of Colleges of Nursing’s Indicators of Quality in Research-Focused Doctoral Programs in Nursing (2001) was used as the guide for this evaluation. Faculty helped generate this report by providing data and reviewing the Report during its development. In January 2008, current students participated in one of two focus groups during which they shared useful information and insights about their experiences in the program. Faculty retreats were held in the SAC on February 6, February 12, and March 4 to discuss the Report. Outcomes of these retreats include a Mission Statement and a Vision Statement for the Ph.D. Program in Nursing, and formation of five Ad Hoc Committees to address issues critical for the future of the Ph.D. Program. One important area to be addressed is the curriculum of the Ph.D. Program in Nursing. Thoughtful examination of the curriculum and proposal for changes will be a goal for this coming academic year.

Orientation sessions were held in December and January for faculty newly credentialed to serve as dissertation committee members or chairs. These sessions focused on the role of faculty in supporting and facilitating student progress through the Program.
Ph.D. Faculty Meetings were held on the following dates: August 6, October 1, November 19, February 18, March 17, May 19, and June 16. Open Discussion with Dr. Edward Schneider, Interim Dean of the College of Graduate Health Sciences, was held during the October 1st meeting. Attendance at Ph.D. Faculty meetings has increased over the past year. The format for Ph.D. Faculty meetings is

I. Review and approve agenda and prior meeting minutes
II. Students
III. Courses
IV. Program
V. Faculty
VI. Graduate Studies Council

IX. Number of students receiving tuition waivers

<table>
<thead>
<tr>
<th></th>
<th>Fall 2007</th>
<th>Spring 2008</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students receiving tuition waivers</td>
<td>26</td>
<td>22</td>
</tr>
</tbody>
</table>

X. Number of students receiving external support (fellowships, grant-in-aide, etc.)

<table>
<thead>
<tr>
<th>External support (Academic Year 2007-2008)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Fellowships</td>
<td></td>
</tr>
<tr>
<td>National Student Nurse Promise of Nursing Fellowship</td>
<td>7,500.00</td>
</tr>
<tr>
<td>Promise of Nursing for Tennessee Faculty Fellowship</td>
<td>4,000.00</td>
</tr>
<tr>
<td>Grant-in-aid</td>
<td></td>
</tr>
<tr>
<td>University of South Alabama Dean’s Grant</td>
<td>5,000.00</td>
</tr>
<tr>
<td>Other</td>
<td></td>
</tr>
<tr>
<td>American Cancer Society Doctoral Scholarship</td>
<td>15,000.00</td>
</tr>
<tr>
<td>American Psychiatric Nurses Association Janssen Scholarship</td>
<td>??amt.</td>
</tr>
<tr>
<td>Kentucky Board of Nursing Incentive Scholarship</td>
<td>6,000.00</td>
</tr>
<tr>
<td>Margaret Gould Dyson Fund</td>
<td>4,000.00</td>
</tr>
<tr>
<td>Maternal Child Health Bureau LEND Traineeship</td>
<td>9,000.00</td>
</tr>
<tr>
<td>Sigma Theta Tau International</td>
<td>1,200.00</td>
</tr>
<tr>
<td>St. Jude Tuition Assistance</td>
<td>??amt.</td>
</tr>
<tr>
<td>Tennessee Board of Regents</td>
<td>2,064.00</td>
</tr>
<tr>
<td>Tennessee Graduate Nurse Loan Forgiveness Program</td>
<td>14,000.00</td>
</tr>
<tr>
<td>UTHSC General Clinical Research Center</td>
<td>6,000.00</td>
</tr>
<tr>
<td>Total</td>
<td>$73,764.00^</td>
</tr>
</tbody>
</table>

“Finally, since we will be searching for a new Dean in the very near future, I would recommend that you consider what you believe are the long-term issues you are facing. Questions such as

1. How many students should you recruit each year?
   - “This is determined by the number of faculty and stipends available to students.”
   - “I would like to recruit 1-2 students each year until I have a compliment of 4-5 students but no more and not all at the dissertation phase at the same time.”
• “Maximum would be one incoming Ph.D. student each year for each faculty member eligible to accept students. Based on my ‘guess’ that would be about 8-10 students each year.”
• “5-7 students”

2. Do you need additional resources (faculty, stipends, etc.) to recruit?
   • “To increase the number of students, additional faculty and increased number and amount of stipends are needed.”
   • “I think having additional stipends would be very useful to encourage those students who can give up full-time employment to do so. Often this will be a few students for our program. We would also benefit from additional faculty who have programs of research as we rapidly become saturated given that we are a small Ph.D. faculty with active programs of research. Additional travel monies and competitive dissertation grants from the College of Graduate Health Sciences would also be beneficial.”
   • “Maintain the tuition waiver. I believe that students who immerse themselves by working in the faculty member’s program of research AND by being present to observe other scholars and interact with them, gain so much more than those who simply attend classes. It fits with our model. So, I would very much like to see stipends for students who are involved in faculty research and ‘present’ [i.e., it is their ‘job’].”
   • “In terms of faculty—we would benefit from having College of Nursing faculty with a community participatory focus. This would facilitate research in the community setting and also be one mechanism to interact across traditional college boundaries [CTSI joint appointment].”
   • “To recruit 5-7 students/year may take additional resources. For example, strategically sending faculty to meetings to recruit students. Currently, we do that in a very informal manner.”

3. How can you interact across traditional college boundaries to enhance the interdisciplinary nature of your/our program(s)?
   • “Participation on campus-wide committees is one strategy to build interdisciplinary relationships and potential collaborations as communicating with new faculty in each college who share our research interests.”
   • “We routinely have faculty from other Colleges serve as Ph.D. committee members. The committee may be the stepping stone toward future collaborative research among faculty members. Having students write their dissertation as manuscript chapters, would also be one way for faculty to be involved across disciplines in helping the student get manuscripts published…and provide evidence of researchers (faculty) publishing together with the student.”
   • “Through collaborative courses, specifically through the CTSI initiative.”
   • “Isn’t that what CTSI/CTSA is doing? Why not explore their ideas for working across disciplines and programs and either (a) build on those ideas or (b) advance ideas they have not included in their program?”
Pharmaceutical Sciences (Ph.D.)
2007 - 2008
Annual Report

Dr. Duane D. Miller, Program Chair
Dr. Isaac O. Donkor, Program Director
Felicia Martin, Administrative Aide
Annual Report (FY 2008) of the Pharmaceutical Sciences Graduate Program

The Pharmaceutical Sciences Graduate Program of the College of Graduate Health Sciences is housed in the College of Pharmacy at the University of Tennessee Health Science Center (UTHSC). The program has a total student enrolment of 47, which includes 7 students that matriculated into the program this academic year. The demographics of the current year’s enrolment is as follows: one white US male; One male and two females from China, one male from India, one male from Nepal, and one male from Ghana. The average GPA for this year’s entering class was 3.15 and the average GRE score was 1254.

Student Financial Support

The source of student support is summarized in Figure 1 and narrated below. Our students have consistently attracted external support. This year four students received competitive fellowship/scholarship awards from the following sources: UT Alumni Association Joe & Pat Johnson Scholarship; American Foundation for Pharmaceutical Education Pre-Doctoral Fellowship; AAPS-AFPE Pre-Doctoral Fellowship in Pharmaceutical Sciences; and Reagan Fellowship.

Tuition waivers and stipend were paid to 47 students. State funding of the program was $384,275. Non-UT funds for student stipends were obtained from a variety of sources including NIH ($294,868); Continuing Education (CE) ($85,368); Private/Foundation (P/F) ($66,292); and Gifts ($16,344). Thus, the program paid a total of $847,147 in graduate student support. Of this amount the program raised $462,872 (non-UT dollars) to support graduate education, which represents 54.6% of the grand total program support of graduate student stipends.

Student Scholarly Activities

This is summarized in Figure 2. Faculty committees are in place for 24 students (51.1%). Fourteen students (29.8%) have been admitted to PhD candidacy. Our students have actively participated in local, regional and national scientific meetings and have presented their research at these meetings. The students made 49 presentations (21 internal presentations plus 28 external presentations). One of the students received the AAPS Southern Regional Discussion Group – PharmForum 2008 award for Outstanding Podium Presentation. Four travel awards were won by the students to help pay for the cost of participation in these scientific meetings. The students published 33 articles in peer-reviewed scientific journals this year.
Student Graduation and Job Placement

The program graduated 12 PhD candidates and 2 MS candidates. The PhD graduates have found employment in the Pharmaceutical Industry (6) and in academia as Faculty (4) or as Postdoctoral Fellows (2). The two MS graduates have decided to pursue the PhD degree, one at UT (Pharmaceutics) and the other in Geneva, Switzerland.

Long-term plans

The program will like to increase student enrolment to about 10 per year. A major goal is to attract more US citizens into the program. We hope to accomplish this through increasing enrolment in our PharmD/PhD program. We also plan to aggressively recruit students from regional institutions. The availability of additional resources (faculty and stipends) will facilitate this effort. The program will aggressively seek funding from the NIH to support its PharmD/PhD program. Continuation of graduate student tuition waiver by the university is critical to the growth of our program.