

**1999-2000**  
**GRADUATE PROGRAM IN BASIC MEDICAL SCIENCES**

**Administration -- Basic Medical Sciences**

The administrative structure of the graduate program will function for the 2000-2001 academic year under the leadership of Dr. Joseph N. Benoit, Professor in the Department of Physiology, and the Senior Associate Dean, Dr. Samuel Strada. Dr. Benoit assumed his rotation as Director on July 1, 2000.

The Graduate Program expresses appreciation to Dr. Nathan N. Aronson, Jr., Chair and Professor in the Department of Biochemistry and Molecular Biology, for serving as Director of Graduate Studies for the 1999-2000 academic year.

**Recruitment Activities**

Several Basic Medical Science Graduate Faculty members from the Department of Physiology and Mark Scott, Director of Admissions for the College of Medicine, participated in the fifth annual statewide Graduate and Professional School Alabama Circuit October 11-15, 1999. Twenty-four Alabama colleges and universities joined together to host this event, allowing representatives the opportunity to discuss graduate and professional school programs with undergraduate students from across the state. Though student participation was not outstanding, the event was deemed worthy of the expense as it provided an opportunity for our faculty to establish contacts with other faculty at the various Alabama institutions for future recruitment of potential graduate students.

The Basic Medical Sciences Ph.D. Graduate Program hosted its sixth Graduate Student Open House on January 21, 2000. (There was no recruitment day event held in 1999). Following the Graduate Executive Committee's review of the November 1998 event, a majority of the membership favored returning the event to January, and Dr. Aronson, Director of the Program, elected to follow the committee's recommendation. Approximately 2,500 invitations were mailed and/or distributed to students, faculty, and advisors at various 4-year colleges and universities across the southeastern region (Alabama, Florida, Georgia, Louisiana, Mississippi, South Carolina, Tennessee, and Texas). Additionally, announcement ads were placed in the USA's campus newspaper, "The Vanguard," and the student newspapers at the University of Alabama, Auburn, and University of Southern Mississippi.

The Graduate Office received a total of seventy reservations for this event, which was held in the College of Medicine Conference Room. Thirty-six students (from Alabama, Florida, Georgia, Louisiana, Mississippi, and Tennessee) attended. Dr. Nathan Aronson welcomed visiting students and made a few introductory remarks. Faculty from the Basic Medical Science departments made individual presentations, highlighting their respective departmental requirements for admission and degree requirements. Cathy Webb, President of the Basic Medical Sciences Student Organization, gave a graduate student's perspective of the program. Graduate students joined guests for lunch and a question-and-answer session. The afternoon session allowed visiting students an opportunity to participate in poster viewing and interact with graduate faculty and students in the Conference Room prior to a move to the Medical Science Building for departmental laboratory tours.

Nine of the twenty-seven completed U.S. applications received for the 2000-2001 class were from students who registered for and/or attended the Open House. Of the twelve U.S. students accepted and matriculating into the Graduate Program, three attended the forum.

Plans are now being made for the next Basic Medical Sciences Graduate Program Open House, which will be held on Thursday, January 25, 2001.

In an effort to increase exposure for the program and improve the quantity and quality of students applying to the program, an ad was placed in the August 11, 2000, issue of *Science Magazine*.

#### **Admission Statistics for the 2000-2001 Academic Year**

<u>Applications:</u>	<u>U.S.</u>	<u>International</u>	<u>Total</u>
Completed applications received	27	101	128
Applicants interviewed	20	0	20
Applicants accepted	16	8	24
Applicants matriculating	12	3	15

Average GPA of Students Matriculating 2000-2001 (N = 14): 3.05

Average GRE of Students Matriculating 2000-2001 (N = 14): 1815

### **New Programs/Policies/Requirements**

The Department of Structural and Cellular Biology's request to have their name changed to the Department of Cell Biology and Neuroscience was approved by the President and Board of Trustees.

At the annual graduate faculty meeting held in February 2000, the faculty requested that a committee be established to review the governance of the graduate program. Dr. Aronson appointed Dr. Glenn Wilson to Chair the committee. The committee conducted a survey among graduate faculty, and the results of the survey were presented to the Executive Committee at their May meeting. The results indicated that a majority of the faculty did favor a rotating directorship, rather than a permanent one. The majority of faculty also favored giving consideration to possibly increasing the length of the term that a rotating director serves.

The application and evaluation form for the graduate program was revised. There are plans to place the forms on-line on the University web site in the next year.

In June, the Executive Committee voted to hold a half-day faculty retreat to discuss recruitment, curriculum, student performance, and governance matters of the graduate program. Plans are currently underway to hold that retreat at Brookley on October 21, 2000.

New chairs and members were appointed to the committees on curriculum, student evaluations, and admissions. Additionally, committees dealing with directorship and governance issues and recruitment and funding were established. The respective members for each of these committees were announced at a semi-annual graduate faculty meeting held in August.

Noymi Ramey, the first student admitted and matriculating into the Cancer Biology Interdepartmental Graduate Program, began her studies in August 2000. Miss Ramey completed her undergraduate studies at the University of Southern Mississippi. She received information for and attended the Open House in January.

Several graduate students received notification of grant and/or travel awards:

Inna Shokolenko, from the Department of Cell Biology and Neuroscience (Major Professor: Glenn Wilson, Ph.D.), was awarded a Department of Defense Breast Cancer Research Program Concept Award, entitled "Altering Cell Survival by Modulating Levels of Mitochondrial DNA Repair Enzymes." She also received a travel award to attend the Gordon Research Conference on Mechanisms of Toxicity, July 23-28, 2000, in Plymouth, NH.

Allison Dobson, also from the Department of Cell Biology and Neuroscience (Major Professor: Glenn Wilson, Ph.D.), was the recipient of an American Federation for Aging Research Scholarship for Research in the Biology of Aging. She also received a travel award to attend the Gordon Research Conference on Mechanisms of Toxicity July 23-28, 2000, in Plymouth, NH.

John Rodriguez, a student in the Department of Biochemistry and Molecular Biology (Major Professor: Richard Honkanen, Ph.D.), received a National Institutes of Health Predoctoral Individual National Research Service Award which provides 5 years of support for his research on "The Role of Protein Phosphatase 5 in Glucocorticoid Signaling."

Natalie Norwood was awarded the 2000 Proctor & Gamble Professional Opportunity Award for Meritorious Research by the Council of the American Physiological Society for her presentation entitled "Distinct Regulation of Endothelial Cell Permeability by Proteolytic and Direct Activation of the Thrombin Receptor." Natalie is a student in the Department of Pharmacology, and her Major Professor is Troy Stevens, Ph.D.

Jonothan Audia, a student in the Department of Microbiology and Immunology (Major Professor: John Foster, Ph.D.), received an ASM 100<sup>th</sup> General Meeting Student Travel Grant.

Stipends for all Basic Medical Sciences Graduate Students increased to \$14,688 per year, effective June 1, 2000.

### **BMSSO-Basic Medical Sciences Student Organization**

The Basic Medical Sciences Student Organization sponsored a third BMSSO T-shirt design and sale and hosted several social events. Members participated in several community activities, including the Relay-for-Life in April. Also in April, the organization hosted a Distinguished Scientist Seminar presented by Nobel Laureate Dr. Arthur Kornberg, an influential figure for beginning scientists in the area of research. Dr. Kornberg's lecture, "Biotechnology: Impact on Science, Medicine and Industry," was held in the Medical Sciences Building Auditorium.

**Graduates**

Eight students officially graduated upon completing all requirements for the Ph.D. degree during September 1999-August, 2000. They are:

**Arindam Bhattacharjee**

DISSERTATION TITLE: "Functional Characterization of T-type Calcium Channels in Pancreatic Beta-Cells"  
 MAJOR PROFESSOR: Ming Li, Ph.D.  
 DEPARTMENT: Pharmacology  
 CURRENT POSITION: Post Doctoral Fellow; Yale University School of Medicine, Department of Pharmacology

**Emily Elizabeth Burke**

DISSERTATION TITLE: "The Role of Host Cell Factors in Respiratory Syncytial Virus Transcription"  
 MAJOR PROFESSOR: Sailen Barik, Ph.D.  
 DEPARTMENT: Biochemistry and Molecular Biology  
 CURRENT POSITION: Post Doctoral Fellow; The Scripps Research Institute, Department of Neuropharmacology, Division of Virology

**Christopher Leroy Cubitt**

DISSERTATION TITLE: "Characterization of the Differential Responsiveness of Human Corneal Epithelial Cells and Keratocytes to the Pro-inflammatory Cytokine Interleukin-1 $\alpha$ "  
 MAJOR PROFESSOR: John E. Oakes, Ph.D.  
 DEPARTMENT: Microbiology and Immunology  
 CURRENT POSITION: Post Doctoral Fellow; National Institutes of Health, Neurotoxicology Section

**Amy Elizabeth Ferry**

DISSERTATION TITLE: "Identification of Stage Specific Transcription Factors that Regulate the  $\gamma$  to  $\beta$  Globin Gene Switch During Erythroid Maturation"  
 MAJOR PROFESSOR: Betty S. Pace, M.D.  
 DEPARTMENT: Cell Biology and Neuroscience  
 CURRENT POSITION: Post Doctoral Fellow; University of Rotterdam, Amsterdam Hemoglobin Laboratory

**Brian Scott Hollensworth**

DISSERTATION TITLE: "CNS Cell-Specific Responses to Oxidative mtDNA Damage"  
 MAJOR PROFESSOR: Susan P. LeDoux, Ph.D.  
 DEPARTMENT: Cell Biology and Neuroscience  
 CURRENT POSITION: COM I student; University of South Alabama College of Medicine

**David William Killilea**

DISSERTATION TITLE: "Oxidative Stress in Hypoxic Signal Transduction"  
 MAJOR PROFESSOR: Mark N. Gillespie, Ph.D.  
 DEPARTMENT: Pharmacology  
 CURRENT POSITION: Post Doctoral Fellow; Oakland Research Institute Children's Hospital

**Mau T. Tran**

DISSERTATION TITLE: "Characterization of the Role of the Neuropeptides Calcitonin-Gene Related Peptide and Substance P in Chemokine Production from Human Corneal Epithelial Cells"  
 MAJOR PROFESSOR: John E. Oakes, Ph.D.  
 DEPARTMENT: Microbiology and Immunology  
 CURRENT POSITION: Post Doctoral Fellow; National Cancer Institute, Laboratory of Experimental Carcinogenesis

**Xiaotian Yan**

DISSERTATION TITLE: "Characterization of Macrophage Inflammatory Protein-2 in HSV-1 Induced Corneal Inflammation"  
 MAJOR PROFESSOR: Robert N. Lausch, Ph.D.  
 DEPARTMENT: Microbiology and Immunology  
 CURRENT POSITION: Post Doctoral Fellow; Houston VA Medical Center

To date, 122 students have received their Ph.D. degree in Basic Medical Sciences. The breakdown of graduates by department is as follows:

Biochemistry and Molecular Biology	24
Microbiology and Immunology	32
Pharmacology	27
Physiology	19
Structural/Cellular Biology-Cell Biology and Neuroscience	20