The College of Graduate Studies at the Medical University of South Carolina is committed to the graduate training of biomedical research scientists, providing them with the critical thinking skills and experimental expertise that prepare them to work at the interface of the basic sciences and human health and disease. We believe that the single most important experience a University can offer is the opportunity to make exciting new discoveries through research.

Ph.D. students are provided with competitive stipends, paid tuition, health insurance, and travel awards to allow them to present their work at scientific conferences. The time to Ph.D. averages 5.4 years in our graduate program. M.S. and combined degree programs are also offered. (M.D./Ph.D., D.M.D./Ph.D., and Pharm.D./Ph.D.) Most of our graduates pursue postdoctoral work at prestigious institutions, and move forward to successful careers in academic research, the biotechnology and pharmaceutical industries, private foundations, government laboratories, grants management, higher education, patent law and intellectual property, and other diverse careers.

INTERFACING BASIC SCIENCE AND HUMAN HEALTH

As a Ph.D. student in the Biomedical Sciences, you will take an interdisciplinary first year curriculum that allows exposure to all departments and programs before a research area and mentor are selected. The Fall core curriculum provides a strong, contemporary foundation in the disciplines of biochemistry, molecular biology, genetics and cell biology, as well as discussion of experimental design and a broad range of experimental techniques.

In the Spring, students will either choose an intensive program in Neuroscience or will choose 3 of 6 mini-courses focused on a variety of areas of contemporary biomedical science and participate in an interactive course focused on learning from the literature. Students will also receive training in the ethical conduct of research, scientific rigor, reproducibility and transparency, and professional development. Three self-selected, 9-week laboratory rotations allow students to gain experience with a range of scientific topics, experimental approaches, and mentoring styles.

After the first year, we encourage you to define your own schedule of courses to complete your educational plan. Students at MUSC will perform research in well-equipped, successful laboratories supported by state-of-the-art core facilities; participation in departmental seminar series and journal clubs rounds out the scope of your scientific exposure. For many of our students, the research experience culminates in publications in high impact peer-reviewed journals. Opportunities are also available to participate in teaching and professional development activities.

THE CURRICULUM
Research at MUSC is supported by over $247 million in extramural funding. The success rate of our Ph.D. students at obtaining their own individual NIH fellowships is significantly higher than the national average.

Currently, 27 extramurally funded training grants or individual fellowships support 68 pre-doctoral students.

**COMPETITIVE IN NATIONAL FUNDING**

These include the following programs:

- Alcohol Research (NIAAA)
- Bioenergetics, Oxidative Stress, and Metabolic Syndromes (NIDDK)
- Cardiovascular Disease (NHLBI)
- Clinical and Translational Research (NCATS)
- Craniofacial and Oral Health Research (NIDCR)
- Drug Abuse (NIDA)
- Graduate Assistance in Areas of National Need (GAANN) - (DOE)
- Initiative for Maximizing Student Development (IMSD program, NIGMS)
- Medical Scientist Training Program (M.D./Ph.D. program, NIGMS)
- Otolaryngology and Communication Sciences (NIDCD)
- Addiction Science
- Biochemistry
- Bioengineering
- Biomedical Imaging
- Biostatistics
- Cancer Biology
- Cardiovascular Biology
- Cell Biology
- Cellular Signaling Pathways
- Developmental Biology
- Drug Discovery
- Epidemiology
- Genetics & Genomics
- Immunology
- Lipidomics
- Microbiology
- Mitochondrial Biology
- RNA and DNA structure and function
- Neuroscience
- Oral Health Sciences
- Pathology
- Pharmacology
- Regenerative Medicine
- Stem and iPS cell biology
- Structural Biology
- Virology
CONTACT INFORMATION - DEPARTMENTS & PROGRAMS

* Biochemistry & Molecular Biology: Contact: David Long, PhD, 843.792.6949 <longdt@musc.edu>
  Bioengineering: Contact: Thomas Gallien, 843.876.2409 <gallient@musc.edu>
* Biomedical Imaging: Contact: Truman Brown, PhD, 843.876.2462 <brotn@musc.edu>
* Cell & Molecular Pharmacology: Contact: Jennifer Isaacs, PhD, 843.792.8393 <isaacsj@musc.edu>
  Drug Discovery and Biomedical Sciences: Contact: Shernie Chan, PhD, 843.792.6095 <chans@musc.edu>
* Microbiology and Immunology: Contact: Bei Liu, MD, 843.792.8994 <liube@musc.edu>
Molecular and Cellular Biology and Pathobiology: (MCBP) Contact: Donald Menick, PhD, Director
  843.876.5045 <menickd@musc.edu>
  Training tracks include: Cancer Biology, Cardiovascular Biology, Molecular Cell Regulation,
  and Oral Health Sciences.
* Neurosciences: Contact: Antonieta Lavin, PhD, 843.792.6799 <lavina@musc.edu>
* Pathology & Laboratory Medicine: Contact: Victoria Findlay, PhD, 843.792.7889 <findlay@musc.edu>
* Public Health Sciences: Contact: Betsy Hill, PhD, 843.876.1115 <hille@musc.edu>
* Regenerative Medicine and Cell Biology: Contact: Russell Norris, PhD, 843.792.3544 <norrisr@musc.edu>
Medical Scientist Training Program: (combined M.D./Ph.D. program) Contact: Perry Halushka, PhD, MD, Director
  843.876.2411 <halushpv@musc.edu>
Dental Medical Scientist Training Program: (combined D.M.D./Ph.D. program) Contact: Keith Kirkwood, DDS, PhD, Director,
  843.792.0969 <kkirk@musc.edu> or Michael Kern, PhD, Co-Director 843.792.1774 <kernmj@musc.edu>
Pharm.D./Ph.D. combined program: Contact: Patrick Woster, PhD, 843.876.2453 <woster@musc.edu>
* Offer the Master of Science in addition to the Ph.D.

MUSC COLLEGE OF GRADUATE STUDIES - AT A GLANCE

- INTERDISCIPLINARY FIRST-YEAR CURRICULUM
- $247 MILLION IN EXTRAMURAL FUNDING
- STATE-OF-THE-ART CORE FACILITIES (OVER 1 MILLION SQ. FEET)
- CENTERED IN SOUTH CAROLINA’S LARGEST HEALTH COMPLEX
The Charm of Charleston Living

It would be hard to imagine a place offering a more enjoyable environment in which to pursue an advanced degree. Charleston combines the best that life has to offer: the historic charm of centuries-old homes, lively arts festivals, dozens of first-rate restaurants, miles of sandy Atlantic beaches, and a variety of year-round outdoor activities.

The historic district, in which the MUSC campus is located, presents a cosmopolitan, European style of living with quiet, winding streets and a varied range of historic architecture that is aggressively protected by local preservation organizations. More than four million visitors come to Charleston each year to sample the historic flavor and enjoy the area's many attractions.