Program Highlights

- More than 325 internationally renowned scientists. Annual recruitment of 45-70 students.
- Current student body stands at 390.
- More than 550 graduates who have published over 3,000 research articles en route to graduation.
- Weekly seminar series by and for students.
- Annual scientific retreat.
- Fellowship writing opportunities.
- Thesis research guidance by a mentor plus a carefully selected team of expert scientists.
- Professional development program.

Eligibility

US citizens and international applicants with excellent pre-doctoral or doctoral academic achievements in the biological and/or physical sciences, and who have significant experience in laboratory research are eligible for admission to the Basic Biomedical Sciences doctoral programs of the Graduate School of Biomedical Sciences.

Financial Support

PhD students will receive a stipend ($31,212 for academic year 2017-18), health and dental insurance and tuition waiver. Basic Biomedical Sciences curriculum fees are paid by the Graduate School of Biomedical Sciences in year 1 and by the thesis mentor in year 2 and beyond. The institution guarantees support to all students for the duration of their graduate career.

Application Procedures

Candidates for the PhD program begin the application process on the Graduate School of Biomedical Sciences web site (see below). Requirements include transcripts from all undergraduate and graduate institutions attended (only scanned copies are needed for our initial review), 3 letters of reference, and GRE scores (Graduate Record Examination) in verbal, quantitative and analytical areas. No GRE subject tests are required. International applicants whose instruction was not in English must supply TOEFL (Test of English as a Foreign Language) or IELTS (International English Language Testing System) scores.

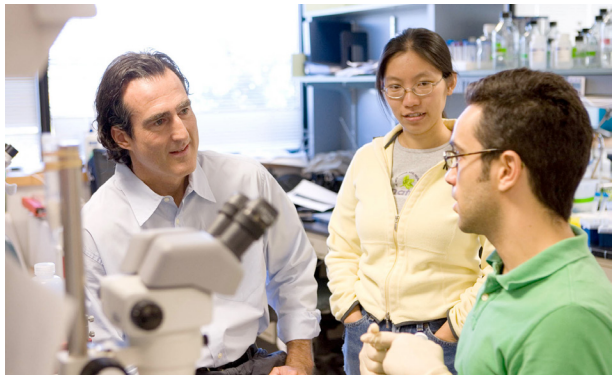
www.umassmed.edu/gsbs

Basic Biomedical Sciences Research at UMass Medical School

The Graduate School of Biomedical Sciences (GSBS) is committed to providing the best and most exciting research training experiences to our students and to serving the citizens of the Commonwealth of Massachusetts and beyond through outstanding bio-medical research education.

Basic Biomedical Sciences research at the University of Massachusetts Medical School is ranked in the top 20 of the nation's 133 medical schools in extramurally funded research according to the Association of American Medical Colleges (AAMC). Federal and private research grants and contracts rose from $2 million in 1977 to over $275 million in 2016, making us one of the fastest growing research institutions in the U.S.

This growth is exemplified by the opening of the Albert Sherman Center in early 2013, a 500,000 ft^2 research and educational building that houses more than 80 research faculty and over 700 staff. The new research programs include the RNA Therapeutics Center, the Gene Therapy Center and the Quantitative Health Sciences Program.



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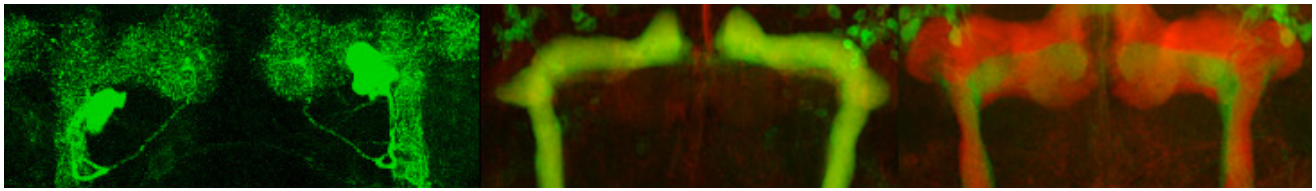
University of Massachusetts Medical School

Graduate School of Biomedical Sciences

PhD Studies
Basic & Biomedical Sciences



Curriculum

All Basic Biomedical Sciences (BBS) students undertake a core curriculum in the fall of year 1. The "Foundations in Biomedical Science" course is designed to reinforce and apply fundamental concepts in biochemistry, cell biology, genetics, molecular biology, pathology and bioinformatics, such that students are prepared to initiate specialization in the broad spectrum of research areas represented by UMMS faculty research groups. The core curriculum also includes the course "Communicating Science", which is offered in the fall of year 2. In the spring of year 1, students take advanced elective courses selected from a slate of courses offered by individual BBS programs.

Students must do a minimum of 3 rotations in different laboratories and can rotate in up to 6 different laboratories before committing to a thesis research laboratory at the beginning of year 2. Students then engage in pre-thesis research in their selected laboratory and take additional advanced electives in fall and spring of year 2. Thesis research begins after passing the qualifying examination in year 2. Formal course requirements are normally complete at this stage but students may audit any GSBS, School of Medicine or Graduate School of Nursing course relevant to their research interests. A mandatory Research Ethics course is taken in year 3. Additionally, a Career Development co-curriculum and refinement of an Individual Development Plan (IDP) runs throughout all years.

All GSBS programs offer an integrated program of laboratory research, advanced coursework and participation in seminar programs to provide students a rigorous foundation in modern biomedical science. Once the student is engaged in thesis research, each program appoints a Thesis Research Advisory Committee (TRAC), which includes faculty with specific expertise in the student's field of study, to guide the student through the coming years of research. Each year, the student presents their findings and proposed follow-up plans to their TRAC and to their program's faculty, students and research staff. Students normally complete their thesis research between years 4 and 7. The typical student publishes 3-4 research articles during their doctoral studies, see:
http://escholarship.umassmed.edu/gsbs_sp/

PhD Programs in the Basic Biomedical Sciences

For students planning a career in biomedical research, the 8 programs of the Basic Biomedical Sciences Division of the Graduate School of Biomedical Sciences offer the broadest exposure to contemporary biomedical sciences.

Students are first admitted into an umbrella program in which they undertake a common core curriculum and as many as 6 laboratory rotations in year 1. This allows students to refine their research interests, to select a thesis research laboratory that reflects these interests and to design an advanced curriculum that best matches their anticipated area of research.

Programs for PhD Study

Biochemistry & Molecular Pharmacology
Bioinformatics & Computational Biology
Cancer Biology
Cell Biology
Immunology & Microbiology
Interdisciplinary Graduate Program
Neuroscience
Translational Science

A Time-line for Doctoral Studies in the Basic & Biomedical Sciences