**Initiative to Maximize Student Development (IMSD) Program**

The Brown IMSD program partners with the following institutions in preparing students from underrepresented groups for careers in biomedical and public health research:

- St. John’s University
- York College of the City University of New York
- North Carolina A&T State University
- The College of Mount Saint Vincent

Research presentations, collaborations, faculty and student visits and co-advising are encouraged as students prepare for graduate school and careers in biomedical and behavioral research.

**Community**

The Graduate School at Brown University is composed of just under 2000 masters and doctoral students from all states and many foreign countries engaged in a wide range of scholarship and inquiry. The diversity of this community is a recognized strength of the University. Commitment to diversity is visible via the structural support and breadth of services offered at Brown to ensure an inclusive learning environment. These include an Institutional Office of Diversity (www.brown.edu/Administration/diversity/programs_struct.html), recruitment and retention programs as well as student activities sponsored by The Graduate School (http://gradschool.brown.edu/) and within the Division of Biology and Medicine (http://biomed.brown.edu/grad-postdoc).

**Co-Directors:**

Andrew G. Campbell, Ph.D.
Associate Professor of Medical Science, Department of Molecular Microbiology & Immunology

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Associate Dean for Graduate and Postdoctoral Studies
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**Program Coordinator:**

Karen Z. Ball

**Further information:**

http://biomed.brown.edu/imsd/training/

**IMSD Seminar Series**

Gatherings of the IMSD community of faculty mentors and students include workshops, panel discussions and prominent guest speakers.

**Collaboration**

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Direct inquiries to: IMSD@Brown.edu

**Excellence**

IMSD Training modules are short, non-credit, active learning experiences that occur throughout the year. Module topics have been specifically designed to build complementary skills to students’ discipline-specific training, and prepare confident, successful and well-rounded graduates able to work in team settings. These modules are available to all PhD students in Biology and Public Health as part of their professional development; however, first registration preference will be given to IMSD students. Each module is led by Brown faculty in partnership with an IMSD Senior Scholar, an advanced PhD student in one of our graduate programs. IMSD Senior Scholars serving in these roles receive valuable teaching and mentoring experience.

**Training Module Topics**

- “Demystifying the PhD Experience: Strategies for Academic & Personal Success in Graduate School”
  Develop strategies to implement and fully integrate the academic and non-academic skills required to succeed in Graduate School.

- “Reading Scientific Publications”
  Develop skills in interpreting, critiquing, understanding and appreciating journal articles in your field.

- “Essential Laboratory Calculations”
  Learn and review basic mathematical concepts and calculations commonly utilized in the laboratory setting and how to apply them.

- “Navigating a Successful Graduate Career: Professionalism & Etiquette”
  Recognize and acquire behaviors that promote career success in biology and public health.

- “Professionalism & Career Development: Preparing for the Postdoc Experience”
  Gain insights and information to help you prepare for the next phase of your career.

- “Graphic Presentation of Scientific Data”
  Learn how to construct effective figures and graphs that maximize meaningful content and interpretation while minimizing distractions.

- “Beyond the Hypothesis: Experimental Design and Critical Analysis”
  Develop skills in mechanistic hypothesis setting and experimental design.

- “Designing and Delivering Scientific Presentations”
  Gain insight and practice in effective oral communication of scientific results.

- “Defending Your Research Proposal and Critiquing Those of Others”
  Strategies in selecting a strong thesis topic; evaluating your progress; giving and receiving advice.

- “Resources, Tools and Basic Techniques in Molecular Biology”
  Gain insight into when to apply particular methods and resources for genomic/proteomic approaches.

- “Scientific Writing: Key Principles”
  Learn strategies to effectively communicate in writing the what, why, how and outcomes of your work.

- “Introduction to Statistical Analysis of Data”
  Gain familiarity with statistical software and when to apply them in analyzing your data.

Further information:

http://biomed.brown.edu/imsd/training/
Brown University is dedicated to ensuring a diverse and inclusive scholarly community. IMSD is a predoctoral research training initiative that aspires to significantly increase the number of PhDs from groups underrepresented in biomedical and behavioral research. Brown’s program was awarded a four-year grant (R25GM083270) by the National Institutes of Health in April 2008. A 5-year renewal grant (2R25GM083270) was awarded in April 2012. The IMSD program provides a multidimensional and personalized training experience featuring; cutting edge research opportunities, continuous to degree advising, innovative training modules to complement curriculum, a strong peer-network, and professional development.

Join Those Who Share Your Passion for Discovery

“Advancing the Culture of PhD Learning and Scholarship in Biology and Health Sciences”

Our program strives for Excellence, Community and Collaboration in an innovative, interactive learning environment. Participants are US citizens or permanent residents who are members of a group traditionally underrepresented in the biomedical and behavioral sciences. Selection of IMSD students is made in consultation with graduate program directors and based on student academic preparation, research experience and recommendations. They are identified from incoming PhD cohorts spanning these eleven Graduate Programs within the Division of Biology and Medicine and Graduate School:

**Biomedical Engineering**
Creates new knowledge and improves human health through cross-disciplinary research and educational activities that integrate the engineering and physical sciences with the life sciences and clinical practice.

**Biostatistics**
Trains students to develop theory and methods for study design, data analysis, and statistical inference; and to apply the methods to address research questions in public health, biology, medicine, and social sciences.

**Biotechnology**
Studies a range of topics related to the field of biotechnology such as regenerative medicine, drug delivery, stem cells, nerve guidance, and drug discovery to allow students to conduct translational research, from conceptual design through in vivo testing with an eye toward clinical implementation.

**Computational Biology**
Seeks to make breakthrough discoveries in the life sciences through the development and application of novel computational, mathematical, and statistical techniques. Research in the Computational Biology program aims to exploit opportunities emerging from rapid technological advances in genomics and proteomics.

**Ecology & Evolutionary Biology**
Seeks to understand biological patterns and processes ranging from DNA to dinosaurs, using integrative approaches with genetic models, phylogenetics and biogeography, functional analyses of whole organisms, and the dynamics and conservation of natural ecosystems.

**Epidemiology**
Studies the distribution and determinants of disease in populations to generate new discoveries regarding disease causation and to develop community and individual based preventive activities.

**Health Services Research**
Analyses the organization, policies, and economic forces affecting health care delivery systems, providers, and consumers with the goal of improving services and creating more equitable health outcomes by influencing health policy at all levels.

**Molecular Pharmacology & Physiology**
Seeks to understand biological patterns and processes ranging from DNA to dinosaurs, using integrative approaches with genetic models, phylogenetics and biogeography, functional analyses of whole organisms, and the dynamics and conservation of natural ecosystems.

**Molecular Biology, Cell Biology, and Biochemistry**
Studies cellular, molecular, and biochemical mechanisms of biological processes in development, growth, and disease.

**Neuroscience**
Unites experimental and theoretical scientists who study the molecules, cells, and networks of the brain to advance understanding of nervous system function, disease, and treatment.

**Pathobiology**
Unveils the mechanisms of disease initiation, progression and resolution by working in the thematic areas of immunology & infectious disease, toxicology & environmental pathology, and cancer biology.

For complete information about each of these graduate programs (including admission requirements, affiliated faculty, research facilities and centers, degree completion requirements, etc) go to: [http://biology.brown.edu/graduate](http://biology.brown.edu/graduate) and click on the program that interests you.

Each student receives a unique advising plan and support structure that continues throughout their graduate career at Brown. Students receive a generous 12-month stipend, and benefits including full tuition, health fee and health insurance. IMSD students are appointed as graduate Research Assistants during their IMSD doctoral research training. They will often go on to apply for and receive prestigious individual fellowships or be appointed to an NIH Training Grant. Time to PhD degree averages approximately 5.5 years within graduate programs of the Division of Biology and Medicine.