

## Excellence

IMSD Training Modules are active learning experiences of 12 contact hours each which occur throughout the academic year. Module topics have been specifically designed to build skills complementary to students' discipline-specific training, and prepare confident, successful, and well-rounded graduates able to work in team settings. Although available to all PhD students in Biology and Public Health, IMSD students have first preference in registration. Each module is led by one or two Brown faculty in partnership with an IMSD Senior Scholar who is 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 Grad School”

The objective of this module is to ensure that all students are aware of, possess and fully utilize the academic and non-academic skills required to succeed in graduate school.

#### “Reading Scientific Publications”

The objectives of this module are to develop skills in reading, interpreting, critiquing, understanding, and appreciating scientific publications.

#### “Beyond the Hypothesis: Experimental Design & Critical Analysis”

The objective of this module is to ensure that students understand the meaning of mechanistic hypothesis and mechanistic experimental design.

#### “Professionalization, Interviewing, & Networking: Looking and acting the part”

The objective of this module is to recognize and acquire behaviors that promote career success in biology and public health.

#### “Designing & Delivering Effective Scientific Presentations”

The objective of this module is to instill basic knowledge of how to effectively communicate scientific results.

#### “Scientific Writing: Abstracts & Proposals”

The objective of this module is to learn how to effectively communicate the what, why, how, and outcomes of experimental aims and write effective proposals.

#### “Defending Your Research Proposal & Critiquing Those of Others”

The objective of this module is to have a greater understanding of how to select a strong thesis topic, how to evaluate your progress, and how to get and give advice.

#### “Finding & Using Internet Resources”

The objective of this module is to learn basic methods for literature search with particular focus on genomics and proteomics.

#### “Graphic Presentation of Biological Data”

The objective of this module is to learn how to construct effective graphics that maximize meaningful content while simultaneously minimizing distractions.



### IMSD Seminar Series

Monthly events for the IMSD community of faculty mentors and students include workshops, panel discussions and prominent guest speakers. Several events will be in conjunction with IMSD programs from other institutions, forming an advanced network of support for our trainees.

### Community

The Graduate School at Brown University is composed of some 1700 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](http://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>)

### Collaboration

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

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.



BROWN

## Initiative to Maximize Student Diversity (IMSD) Program



#### Co-Directors:

**Andrew G. Campbell, Ph.D.**

Associate Professor of Medical Science, Department of Molecular, Microbiology & Immunology

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# Join Those Who Share Your Passion for Discovery

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

Brown University is dedicated to ensuring a diverse and inclusive scholarly community. The 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 is funded by a four year R25 grant awarded by the National Institutes of Health (NIH) in April 2008. The IMSD 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.



Brown University is located in Providence, RI, itself a “Renaissance” city of arts and cross-culturalism. Over 14% of the city’s nearly 175,000 residents are African American; about 30% are Hispanic or Latino; and about 6% are Asian. Visitors & new residents find a welcoming community with a rich history of celebrating cultural traditions & ethnic diversity.

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 nine Graduate Programs within the Division of Biology and Medicine:

### **Biomedical Engineering:**

Exploits biological molecules and organisms to develop new technologies and manipulates living cells to produce replacement organs and novel therapies.

### **Biostatistics:**

The graduate program trains students to develop novel quantitative methods and to apply these to substantive problems in public health, biomedical and social science research.

### **Ecology and Evolutionary Biology:**

Seeks to understand biological patterns and processes ranging from DNA to dinosaurs, using integrative approaches with genetic models, functional analyses of whole organisms, and natural experiments in the field.

### **Epidemiology:**

A public health discipline that 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:**

Analyzes 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 Biology, Cell Biology and Biochemistry:**

Studies cellular, molecular, and biochemical mechanisms of biological processes in development, growth, and disease.

### **Molecular Pharmacology and Physiology:**

Studies the underlying mechanisms of basic physiological processes, their structural components, and how drugs affect these processes to develop cures for diseases.

### **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:**

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



Each student receives a unique advising plan and support structure that continues throughout their graduate career at Brown. Students receive a generous stipend, and benefits including full tuition, health fee and health insurance. IMSD students are appointed as graduate Research Assistants during their 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.

