Graduate Studies in Physiology at the University of Toronto

Physiology
UNIVERSITY OF TORONTO

Our students

GASP, the Graduate Association of Students in Physiology, represents graduate students in the Department

GASP's mission is to enhance the experience of students in the physiology graduate program. We encourage interaction between graduate students and faculty members through the following social events and academic activities.

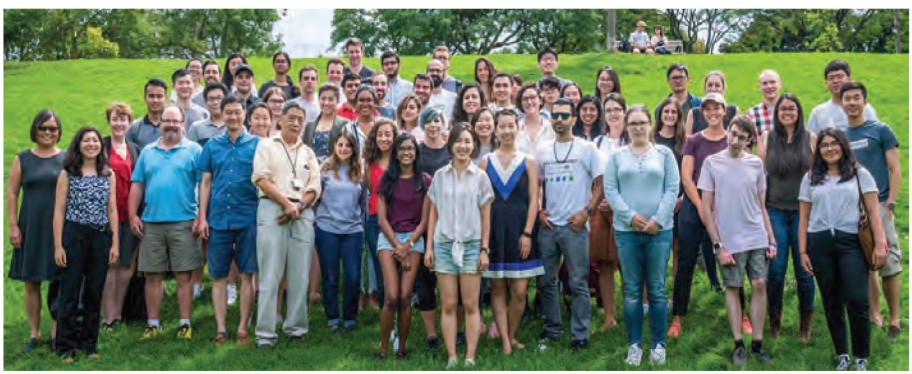

- Annual Research Symposium on Frontiers in Physiology (FIP)
- Physiology BBQ Picnic
- Monthly Pub Nights
- Annual Christmas Luncheon
- Annual Contest for the best Physiology T-Shirt design
- Community Volunteer Work






GASP Website

http://www.physiology.utoronto.ca/gasp



PHYSIOLOGY

UNIVERSITY OF TORONTO

RESEARCH PLATFORMS

Physiology investigators located at the University of Toronto and affiliated teaching hospitals and research institutes have access to world-class facilities. They have highly developed international scientific collaborative networks and participate in one or more of our four research platforms.

Cardiovascular and Respiratory Platform: Research programs within this platform, span from basic science to clinically applied sciences, and systematically translate molecular findings to the patients' bedside with a focus on improving cardiovascular health. Primary areas of concentration are the cardiovascular/renal and respiratory systems. Investigative techniques employed range from the molecular through isolated tissue and organ preparations to the whole animal or human, and the investigators themselves conduct a wide range of programs from the clinically applied to the basic sciences.

The Endocrinology and Diabetes Research Platform continues the tradition of cutting-edge diabetes research inspired by Banting and Best's discovery of insulin at the Department of Physiology in 1921. This group comprises a host of outstanding internationally recognized researchers who are at the forefront of their respective fields in the study of endocrine disorders. Areas of study include metabolic dysregulation in diabetes and obesity, diabetes complications, secretory dynamics, neuroendocrine communication, regulation of food intake, pancreatic development, and gut-based signalling.

Neuroscience Platform: The laboratories comprising this platform study all aspects of neurophysiology, from biophysical mechanisms of ion channel and synaptic function to network-level phenomena imaged in the intact brain. This involves a broad range of electrophysiological, optical, molecular and computational techniques. Beyond studying normal brain function, many labs address clinically important topics like chronic pain, neurodegenerative diseases, and neurodevelopmental disorders.

Reproduction and Development Platform: Research in this platform is focused on important clinical and basic research questions, with goals to advance understanding of reproductive physiology, pregnancy, as well as embryonic and fetal development. Synergy across scientific disciplines applied to study questions from pre-conception to adulthood is employed because prenatal and postnatal health is not independent.

Each platform hosts educational events and seminars featuring leading experts from around the world working on basic and translational research related to human diseases and disorders. These events provide invaluable learning opportunities for graduate trainees and postdoctoral fellows to thrive in a challenging and highly rewarding environment. Our programs offer virtually unparalleled potential for innovation and collaboration in research and education, encouraging work that ultimately translates into tomorrow's breakthroughs.

The Department of Physiology

The Department of Physiology offers graduate programs leading to the Master of Science and Doctor of Philosophy degrees. Research ranges from the gene level to the organism level in areas including endocrinology and diabetes; reproduction endocrinology; fetal physiology, pregnancy, and parturition; neuroendocrinology; cardiorespiratory regulation; gastrointestinal motility; sensory physiology; motor control; brain development and aging; ionic channels and synaptic transmission; excitability, ultra-structure and plasticity of the brain.

- Master of Science
- MD/PhD Program
- Doctor of Philosophy
- Collaborative Specializations

The Department of Physiology welcomes outstanding domestic and international candidates to apply to our PhD program and strongly encourages highly qualified candidates holding an appropriate Bachelor's degree, or its equivalent, from a recognized university to apply to our PhD (direct entry) program.

The suggested length of our thesis-based programs is 2 years for MSc and 4-5 years for PhD. Students will receive stipends during these periods.

What do our students do after graduation

After MSc

Medical students
PhD students
Dental students
Research-related positions
Executive or senior management
Lab assistants
Pharmaceutical positions
Genetic specialist
Teachers
Sales
Chiropractors
Pharmacy students

After PhD

Postdoctoral fellows
Academic positions
Practicing physicians
Medical students
Medical residents
Executive or senior management
Pharmaceutical positions
Administrators
Teachers
Consultants
Research-related positions
Data scientists

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