Welcome to TBEP

The Translational Biology and Engineering Program (TBEP) is led by the University of Toronto, as a major component of the Ted Rogers Centre for Heart Research.

The Ted Rogers Centre is a collaboration between three prominent Toronto institutions, working to provide the world with new diagnoses, treatments, and tools to help people prevent, manage, and survive the devastating consequences of heart failure.

TBEP is a multidisciplinary, collaborative program with the mission of understanding the complex mechanisms that underpin heart failure, and finding strategies to treat, repair, and regenerate the heart.

Research

2016-17 HIGHLIGHTS

- Cellular and molecular mechanisms of heart failure, fibrosis, atherosclerosis, and heart valve disease
- Molecular mechanisms of microvascular function in heart failure
- Physical and molecular mechanisms of scarless tissue repair
- Functional and molecular MRI for early detection of cardiac fibrosis
- Proteomic approaches to identify novel biomarkers of heart disease
- Microtissue models for cardiac disease modeling and drug development
- Immunomodulatory biomaterials for cardiovascular tissue engineering and drug delivery
- Stem cell-based regeneration of heart tissue, heart valves, and blood vessels
- MRI technologies to monitor cell-based therapies

The Facility

TBEP is located in the MaRS West Tower. Opened in 2016, this spectacular facility accommodates up to 130 researchers in 26,000 square feet of open concept office and wet laboratory space, with dedicated access to state-of-the-art equipment for:

- Proteomics and genomics
- Advanced in vitro and in vivo model systems
- Animal surgery and physiological monitoring
- Medical imaging and microscopy
- Biomaterials synthesis and characterization
- Microfabrication

8 Principal Investigators
12 Research Staff
66 Trainees
14 Postdoctoral Fellows
52 Graduate Students
$7 Million Total Funding
$1M Scholarships
$6M Research Funding
41 Publications
3 Startup Companies
Our Principal Investigators

TBEP unites researchers from the University of Toronto’s Faculties of Engineering, Medicine, and Dentistry.

Michelle Bendeck
Laboratory Medicine and Pathobiology

Steffen-Sebastian Boiz
Physiology

Anthony Gramolini
Physiology

Scott Heximer
Physiology

Hai-Ling Margaret Cheng
Institute of Biomaterials and Biomedical Engineering

Rodrigo Fernandez-Gonzalez
Institute of Biomaterials and Biomedical Engineering

Paul Santerre
Institute of Biomaterials and Biomedical Engineering

Craig Simmons
Institute of Biomaterials and Biomedical Engineering

Located in the MaRS Discovery District, TBEP is at the nexus for cutting edge heart research and innovation. We are centrally located at the corner of College Street and University Avenue, within a five-minute walk from the University of Toronto, many hospital and academic research institutes, and several commercialization hubs.

Visit 661 University Ave, 14th floor, Toronto, ON
MaRS West Tower

General Inquiries  admin.tbep@utoronto.ca

Web http://tedrogersresearch.ca/TBEP/

If you are interested in joining the team, please visit our website and contact the Investigator you wish to work with.