

TRANSMEDTECH EXCELLENCE SCHOLARSHIP

The TransMedTech Institute is currently seeking four candidates (research-based master's and postdoctoral fellowships) for student/researcher twinning as part of its next research excellence scholarship Program.

DISCIPLINES INVOLVED

For information about the student profiles sought, refer to the list of projects with awards available in the attached document.

LEVELS

Master's
Postdoctoral

STATUS IN CANADA

With study permit
Permanent resident
Canadian citizen

APPLICATION DEADLINE

February 15, 2018

DESCRIPTION AND OBJECTIVES

The goal of the TransMedTech Excellence Scholarship Program is to train the next generation of researchers and professionals in an open-innovation ecosystem (living-lab approach), enabling them to acquire the skills required and understand the challenges involved in development of medical technologies: from idea to final product implementation in the healthcare system.

It is aimed at master's and PhD students as well as postdoctoral fellows seeking to become university faculty members and researchers (academic profile), highly qualified employees working for medtech companies (industry profile), or heads of medtech companies (entrepreneur profile).

The mission of the [TransMedTech Institute](#) is to support development, validation and implementation of innovative medical technologies for diagnosis, prognosis, treatment, and rehabilitation of cancer, cardiovascular illnesses and neuromusculoskeletal disorders.

The cornerstone of the TransMedTech Institute is its transdisciplinary, intersectoral Living Lab. This approach collectively and jointly involves researchers, engineers, students, physicians, caregivers, industry partners, policy-makers, and patients in rapidly and effectively responding to user needs.

ELIGIBILITY CONDITIONS

Research-based master's

You must be a student on track for enrolment no later than the fall 2018 semester. Please review the eligibility conditions on the [Polytechnique Montréal](http://www.polytechnique-montreal.ca) website.

Postdoctorate

You must be a postdoctoral fellow (or on track to become one, starting no later than the fall 2018 semester) and meet the criteria of the Ministère de l'Éducation et de l'enseignement supérieur along with those in effect at Polytechnique Montréal.

Note: Canadian and international students as well as permanent residents are eligible to enter the competition.

NUMBER AND VALUE

- Two research-based master's awards: \$20,000/year (two years)
- Two postdoctoral fellowships: \$50,000/year + benefits (if fellow has employment status) + \$10,000 start-up fund (two years)

INFORMATION

If you are interested in applying as a candidate for one of these projects, please send your résumé and most recent academic transcript to bourses.transmedtech@polymtl.ca. You will be contacted if your profile corresponds to our criteria.

If you have any questions, you may also write to us at bourses.transmedtech@polymtl.ca.



OFERTA DE BECA

Fecha de publicación:

15-12-2017

OFICINA DE PRÁCTICAS

HASTA 15-02-2018



TRANSMEDTECH EXCELLENCE SCHOLARSHIP

List of projects – students not identified

LEVEL	FIELD OF STUDY	RESEARCH AREA	PROJECT DETAILS
Research-based master's	Mechanical engineering	Musculoskeletal disorders Biosensors and medical microdevices	The selected student will collaborate on the proof-of-concept phase, targeting improvements to software and instrumentation for a product already commercialized by an international medical-technology (medtech) company. Under the supervision of a Polytechnique Montréal researcher, the student will contribute to design of the mechanical instruments, transfer to production, and mechanical testing.
Research-based master's	Computer engineering Biomedical engineering	Musculoskeletal disorders Biosensors and medical microdevices	The selected student will collaborate on the proof-of-concept phase, targeting improvements to software and instrumentation for a product already commercialized by an international medical-technology company. Under the supervision of a Polytechnique Montréal researcher, the student will contribute to software development, system design, risk management relative to products under development, as well as product verification and validation, including clinical testing.
Postdoctorate	Chemical engineering Biomedical engineering Biology	Cancer Biosensors and medical microdevices	The project aim is to evaluate the therapeutic potential for cancer treatment of nanoparticles emitted by erosion of electrodes used in plasma generation. The selected student, a PhD graduate in biomedical engineering, chemical engineering or biology, will receive four months' training in cellular biology techniques. Under the supervision of a Université de Montréal researcher, the student will work primarily in the in-vitro cellular testing laboratory of the CHUM. Prior experience in in-vitro cell culture, assessment of cell death by clonogenic assay and flow cytometry, and fluorescence imaging techniques would be an asset.
Postdoctorate	Nanomaterials science Biomedical engineering Biochemistry	Cancer Biosensors and medical microdevices	The goal of this postdoctoral research project is to develop a full protocol for synthesis, biochemical functionalization, live-cell and tissue labelling, and optical detection for novel nanoplasmonic biophotonic sensors. Potential applications include diagnosis of various types of cancer, including prostate cancer, intraductal carcinoma of the prostate, and ovarian cancer, as well as laser treatment of skin cancer and retinoblastoma. Under the supervision of a Polytechnique Montréal researcher, the project will be conducted in close collaboration with biologists, pathologists and physicians. Candidates must have experience in surface functionalization of metallic materials, including nanoparticles; experience in use of nanoparticles in biological milieus is an asset.



December 11th, 2017