

TransMedTech Principal Investigator in regenerative medicine, Organs-on-chips and Bioprinting

Assistant Research Professor Faculty of Medicine/Department of Pharmacology and Physiology in association with the Research Centre of the Sainte-Justine University Health Center.

Position Description

The Department of Pharmacology and Physiology of the Faculty of Medicine of the Université de Montréal in partnership with the Research Center of the CHU Saint-Justine (CHUSJ), the Institute of Biomedical Engineering of Université de Montréal (UdeM; Montreal, Quebec, Canada) and the TransMedTech Institute is seeking highly competent and motivated candidates for a principal investigator position at the rank of Assistant Research Professor in the field of bioprinting, organs-on-chips and development of 3D organ environments in relation to musculoskeletal diseases, and/or cardiovascular diseases or cancer. The applicant will join a strong and growing team of investigators in a highly collaborative environment in basic and translational research in pediatric health and will play a pivotal role in complementing the research strengths of the Faculty of Medicine, the CHUSJ Research Center, the Institute of Biomedical Engineering of UdeM and the TransMedTech Institute.

Responsibilities

The candidate would have the opportunity to develop collaborations within the Department of Pharmacology and Physiology, with researchers in other departments of the Faculty of Medicine and research centers of affiliated hospitals. The applicant would also benefit from collaborations with members of the Institute of Biomedical Engineering at UdeM and Polytechnique Montréal active in cellular imaging and tissue engineering. As a member of the Department of Pharmacology and Physiology of the Faculty of Medicine, but based at the CHUSJ Research Center, the selected candidate will be expected to:

- Develop an independent research program in the area of regenerative medicine to develop bioprinting or organ-on-chip approaches for modeling and treatment of pediatric diseases;
- Be involved in teaching and supervising graduate students in the biomedical engineering program. Teaching at UdeM is in French*; non-French speakers will be required to be sufficiently proficient to teach in French after a period of three years.
- Actively contribute to the academic life of both the faculty and the research center;
- Participate in Faculty of Medicine research and CHUSJ outreach and dissemination activities, notably through publication of research results in scientific journals and through presentations at scientific conferences and as part of knowledge transfer and exchange opportunities in medical practice settings.

Requirements

Applicants must have a PhD and/or MD or equivalent degree, and sufficient postdoctoral experience to demonstrate independence, creativity and outstanding promise. Candidates are expected to develop a cutting edge and internationally competitive extramurally funded research program focusing

bioprinting strategies, organs-on-chips and other state-of-the art stem cell biology approaches to study and develop new therapeutic entities and tools to address fundamental questions relevant to paediatrics health issues.

Ideal candidates will possess a strong background in bioengineering and cell biology and will actively design, engineer and optimize bioprinting strategies or organ-on-chip approaches to develop constructs and evaluate the effect of the 3D microenvironment and flow conditions on stem cell development, differentiation and disease modelling. The recruitment of a researcher with an expertise in biomaterials and 3D bioprinting capabilities will leverage existing expertise in human induced pluripotent stem cell (iPSC) leading to the development of novel disease models and therapeutic avenues (including drug screening and cell/gene therapy strategies). The expertise of the candidate in a cutting-edge technology will streamline collaborative efforts leading to advances in the field of biomaterials and tissue regeneration that could reduce clinical attrition rates and decrease development costs for therapeutic approaches. The candidate will also develop novel bioprinting methods combining different cellular types to recapitulate the cellular heterogeneity and patterning of the tissues with the aim of producing a more physiologically-relevant model system that enables disease understanding and development of therapeutic approaches.

Information About the Position

Posting no.	MED 09-18/9
Posting period	Applications received by 26 October 2018 will be given priority consideration, but the position will remain open until filled.
Remuneration	Université de Montréal offers a competitive salary along with a full range of benefits.
Start date	To be discussed with the candidate

Submitting an Application

Interested candidates should send their C.V., a letter of intent, describing their goals, research interests, a detailed statement of research interests (3-page limit), copies of up to three significant publications, and along with three letters of recommendation by email no later than 26 October 2018 to:

Dr Janetta Bijl
CHU Sainte-Justine Research Center
Email: janetta.bijl@recherche-ste-justine.qc.ca

About CHU Sainte-Justine Research Centre

CHUSJ is the only mother-child university hospital center in Quebec and the largest in Canada. With more than 1,200 employees, including more than 200 researchers, the dynamic and cutting edge research performed at CHUSJ Research Center aims at deciphering the mechanisms underlying disease as well as developing new diagnostic, therapeutic and preventive tools to improve quality of life and care for children. For more information, please visit us at <http://recherche.chusj.org/en/Home>

About Université de Montréal

The Université de Montréal is one of the leading research universities in Canada. Together with its two affiliated schools, HEC Montréal and Polytechnique Montreal, it constitutes one of the largest centres of higher education in North America. For more information, please visit www.umontreal.ca.

About the Faculty of Medicine

An internationally renowned institution, the Faculty of Medicine has the threefold mission of education, research and the improvement of health in the areas of clinical sciences, basic sciences and health sciences. It has 16 departments, two schools and more than 700 professors (excluding clinical professors), serving more than 6000 students. A third of the physicians in Québec and a large number of health professionals in the province have been trained at the Université de Montréal's Faculty of Medicine.

About the Institute of Biomedical engineering

The Institute of Biomedical Engineering is responsible for the graduate programs in Biomedical engineering, which is common to the University of Montreal and Ecole Polytechnique of Montreal. It brings together more than eighty researchers active in various fields of the discipline

About the Montreal TransMedTech Institute

TransMedTech Institute was established in 2016 after a \$35.6M grant awarded by the Canada First Research Excellence Fund and \$60M contributions from key partners. Its mission is to support the development and validation of next-generation medical technologies for important complex diseases, in order to facilitate their implementation in the health system. The TransMedTech Institute is based on a transdisciplinary and intersectoral open innovation ecosystem (Living Lab), regrouping over 40 partners (universities, hospitals, government and industries). We are global leaders in biomedical engineering and medical devices (nano-robotics, biosensors, micro-devices, biophotonics, imaging, cartilage tissue, biomechanics, design of medical devices, biomaterials, and rehabilitation). www.transmedtech.org

*** Language Policy**

Université de Montréal is a Québec university with an international reputation. French is the language of instruction. To renew its teaching faculty, the University is intensively recruiting the world's best specialists. In accordance with [the institution's language policy](#), Université de Montréal provides support for newly-recruited faculty to attain proficiency in French.

Confidentiality

The Université de Montréal application process allows all regular professors in the Department to have access to all documents unless the applicant explicitly states in her or his cover letter that access to the application should be limited to the selection committee. This restriction on accessibility will be lifted if the applicant is invited for an interview.

Equal Access Employment Program

Through its Equal Access Employment Program, Université de Montréal invites women, Aboriginal people, visible and ethnical minorities, as well as persons with disabilities to apply. During the recruitment process, our selection tools will be adapted to meet the needs of people with disabilities who request it. Be assured of the confidentiality of this information.

Université de Montréal is committed to the inclusion and the diversity of its staff and also encourages people of all sexual and gender identities to apply.

Immigration Requirements

We invite all qualified candidates to apply at UdeM. However, in accordance with immigration requirements in Canada, please note that priority will be given to Canadian citizens and permanent residents.



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