



MASTER'S OR PH.D. STUDENT

Site: Centre de recherche du CHUM
Marie-Josée Hébert, MD, FRCPC
Full Professor, Department of Medicine, Université de Montréal
Researcher, CRCHUM
Nephrologist-transplanter - CHUM
Shire Chair in Nephrology and Renal Transplantation and Regeneration
Co-Director, Canadian Donation and Transplantation Research Program (CDTRP)

Mélanie Dieudé, PhD
Associate Professor, Department of Microbiology, Immunology and Infectiology
Faculty of Medicine, Université de Montréal
Principal Scientific Officer, Canadian Donation and Transplantation Research Program (CDTRP)

Presentation of the laboratory and research interests: The laboratory conducts research on the characterization of molecular pathways that govern renal vascular remodeling leading to chronic renal failure in transplant recipients and patients with renal disease. Our research team is also interested in the characterization of endothelial cell death biomarkers for better prediction of renal allograft rejection and loss of renal function. We aim at determining the impact of tissue injury on autoimmune responses of importance in solid organ rejection.

References:

- Hardy MP, Audemard E, Migneault F, et al. Apoptotic endothelial cells release small extracellular vesicles loaded with immunostimulatory viral-like RNAs. *Sci Rep.* 2019; 9(1):7203
- Padet L, Dieudé M, et al. New insights into immune mechanisms of antiperlecan/LG3 antibody production: Importance of T cells and innate B1 cells. *Am J Transplant.* 2019; 316 (1):F9-F19
- Yang B, Lan S, Dieudé, M, et al. Caspase-3 Is a Pivotal Regulator of Microvascular Rarefaction and Renal Fibrosis after Ischemia-Reperfusion Injury. *J Am Soc Nephrol.* 2018; 29 (7):1900-1916
- Dieudé M, Bell C, Turgeon J, et al. The 20S proteasome core, active within apoptotic exosome-like vesicles, induces autoantibody production and accelerates rejection. *Sci Transl Med.* 2015; 7 (318):318ra200n. *Sci Transl Med.* 2015; 7 (318):318ra200

Training conditions: The student must apply to the Université de Montréal for admission to the Master's or Doctoral program in Molecular Biology, Immunology or Biomedical Sciences at the Faculty of Medicine.

Requirements and skills:

- Have a bachelor's or master's degree in molecular biology, biochemistry, immunology, biomedical sciences or other relevant basic science fields.
- Experience in a "wet" laboratory in molecular and cellular biology is an asset.
- Have an interest in transplantation research.
- Attention to detail and rigor.
- Have an excellent academic record.

Scholarship: The student will be paid according to the conditions in effect at the CHUM research Centre. The candidate will have to apply for external awards (FRQS, CIHR, etc.).

Submit your application: Interested candidates should send the following documents to Francis Migneault by email at: francis.migneault.chum@ssss.gouv.qc.ca

- Curriculum vitae
- Transcript of notes
- Letter of motivation
- References