

## AVAILABLE POSITION FOR MSC OR PHD STUDENT

Poitout Laboratory  
[www.poitoutlab.ca](http://www.poitoutlab.ca)

Centre de recherche du centre hospitalier de l'Université de Montréal (CRCHUM)  
900 Saint-Denis St., Montréal, QC, Canada

A position for an MSc or PhD student is available in the Poitout laboratory at the University of Montreal Hospital Research Center to conduct a project on the molecular mechanisms of fatty acid-induced pancreatic beta-cell proliferation.

Our laboratory is studying pancreatic beta-cell biology and its perturbations in type 2 diabetes. In two recent studies, we have shown that the fatty acid oleate stimulates pancreatic beta-cell proliferation via intracellular generation of very long-chain sphingolipids [1] and the production of reactive oxygen species [2].

The objectives of this postdoctoral project are to decipher the mechanisms whereby very long-chain sphingolipids lead to reactive oxygen species production and cell-cycle activation in rodent and human beta-cells. Methodologies to be employed include rat and mouse islet isolations, adenoviral transduction of rodent and human islets, measurements of beta-cell proliferation by flow cytometry, assessment of hormone secretion, and islet transplantation in rodents.

### Requirements:

- BSc or MSc in health sciences (physiology, pharmacology, cell biology, biochemistry, etc.)
- Previous laboratory experience
- Highly motivated, autonomous, and ready to work in a team

Employment conditions and stipend according to CRCHUM policies.

The Research Center of the University of Montreal Hospital offers a world-class scientific environment and many state-of-the-art core facilities in the heart of downtown Montréal.

Interested candidates should send a curriculum vitae, letter of motivation, and the names of 2 references, to: [vincent.poitout@umontreal.ca](mailto:vincent.poitout@umontreal.ca)

### References:

1. Castell, A.L., et al., *Very-Long-Chain Unsaturated Sphingolipids Mediate Oleate-Induced Rat beta-Cell Proliferation*. *Diabetes*, 2022. **71**(6): p. 1218-1232.
2. Vivoli, A., et al., *Single-Cell RNA Sequencing Reveals a Role for Reactive Oxygen Species and Peroxiredoxins in Fatty Acid-Induced Rat beta-Cell Proliferation*. *Diabetes*, 2023. **72**(1): p. 45-58.

For a full list of the Poitout lab publications, please click [here](#)