POSTDOCTORAL POSITION AVAILABLE

Poitout Laboratory
www.poitoutlab.ca

University of Montreal Hospital Research Center
900 Saint-Denis St., Montréal, QC, Canada

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 in static incubations and perifusions, and islet transplantation studies.

The successful applicant will hold a PhD or equivalent. Experience in islet biology and assessment of glucose homeostasis is required. Salary will be determined based on previous experience. The position is available as of April 1, 2023.

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

Please send a cover letter and curriculum vitae, including the names of three references, to Dr. Vincent Poitout at: 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