

## **M.Sc./Ph.D. STUDENT / POST-DOC POSITION – MELOCHE LAB**

Two research positions are available in the Laboratory of Signaling and Cell Growth headed by Dr Sylvain Meloche and located at the Institut de Recherche en Immunologie et Cancérologie (IRIC) affiliated to Université de Montréal (<http://www.irc.ca/>).

The laboratory uses an interdisciplinary approach that combines molecular and cellular biology, functional genomics/proteomics, mouse genetics and chemical biology to understand how signal transduction pathways control cell fate of normal and cancer cells. Defining the importance and interconnection of these signaling events will further our understanding of the malignant transformation process and aid in the identification of new cancer targets for preclinical validation. Current research of the laboratory is focused on understanding the regulation and pathophysiological functions of members of the MAP kinases and SRC-family kinases, which are essential regulators of cell proliferation and differentiation. Several members of these protein kinase families have been shown to play causative roles in developmental disorders and various cancers. The laboratory has developed several models of genetically-engineered mice and chemical tools to study the role of these enzymes in cancer.

Specific projects include:

- 1) system-level analysis of the role of ubiquitination and sumoylation in regulating the stability and function of ERK3
- 2) defining the role of ERK3/ERK4 signaling in cellular invasion and metastatic progression using cellular and mouse models of cancer
- 3) defining the interactome and substrate repertoire of YES tyrosine kinase
- 4) analysis of the role of SRC-family kinases in immunogenic cell death and anti-tumor immunity

Candidates should have a degree in biochemistry, molecular biology, or related fields. Experience in molecular biology, protein biochemistry, omics research or somatic cell genetics is desirable. Interested individuals should send their full CV, a letter of motivation and the names of two references to:

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