

Description:

Graduate student positions (M.Sc. and Ph.D.) are available in the Department of Medicine at the Université de Montréal and the Centre de recherche Centre Hospitalier de l'Université de Montréal (CRCHUM). Little is known of the contributions of molecular scaffolds, which coordinate signaling events in cells, to whole-body metabolism and glucose homeostasis. Furthermore, it is known that perturbations in metabolic signaling pathways can promote the development of cardiometabolic diseases, such as diabetes and obesity. Whether scaffolds are involved in the pathogenesis of these diseases is not well known.

The laboratory of Dr. Gareth Lim is seeking highly motivated students to join a young and vibrant research group to explore the role of molecular scaffolds belonging to the 14-3-3 protein family in glucose homeostasis and metabolism. Studies will focus on elucidating the biological functions of 14-3-3 proteins in insulin-producing pancreatic beta-cells, as well as adipocytes, which are key cell types involved in the development of diabetes and obesity. Traditional biochemical and molecular approaches, mouse genetic models, as well as unbiased proteomic and transcriptomic approaches will be used to address these research goals.

Relevant publications:

1. **Lim GE**, Piske M, Lulo JE, Ramshaw HS, Lopez AF, Johnson JD. (2016). *Ywhaz/ 14-3-3 ζ* deletion improves glucose tolerance through a GLP-1-dependent mechanism. *Endocrinology*. 157(7): 2649-59.
2. **Lim GE**, Albrecht T, Piske M, Sarai K, Lee JT, Ramshaw HS, Sinha S, Guthridge MA, Acker-Palmer A, Lopez AF, Clee SM, Nislow C, Johnson JD. (2015) 14-3-3 ζ coordinates adipogenesis of visceral fat. *Nat Commun*. 6: 7671. doi: 10.1038/ncomms8671
3. **Lim GE**, Piske M, Johnson JD. (2013). 14-3-3 proteins are essential signaling hubs for beta cell survival. *Diabetologia*. 56(4): 825-37.

Qualifications:

- Students with a background in physiology, pharmacology, or biochemistry are encouraged to apply.
- Previous hands-on laboratory experience is preferred, but not essential.
- highly motivated, able to work independently or in a team setting, and critical thinking skills

Application materials:

Please send you Cover letter, CV, transcripts, and contact details of at least two references to:

Gareth Lim, Ph.D.

CRCHUM

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