PhD or Postdoctoral Position in Hybrid PET/MR
Lawson Health Research Institute, and Western University

Project Title:
Understanding the link between brain energy metabolism and cognitive decline

We are seeking a PhD student or postdoctoral fellow to join a research team investigating the interrelationship between cerebrovascular disease, cerebral energy metabolism, and cognitive function. This project will use dynamic susceptibility contrast (DSC) magnetic resonance imaging (MRI) to map capillary morphometry and ^{15}O-PET to image oxygen metabolism. The latter will be performed using a PET/MR method known as PMROx that retains PET's advantage to measure cerebral oxygen extraction directly, while incorporating MRI methods to avoid invasive arterial sampling and reduce scan times to 5 min.

Using these technologies, we will investigate the impact of capillaries dysfunction, as characterized by increased capillary transit-times heterogeneity, on cerebral oxygen consumption at rest and when performing a cognitively demanding task. The project will provide the applicant with access to state-of-the-art research facilities at Lawson, including a hybrid PET/MRI scanner (Siemens Biograph mMR system) and a GE PETtrace 880 cyclotron capable of generating ^{15}O tracers.

Applicants should either hold a PhD in a field related to medical imaging (PDF level) or be interested in obtaining a PhD in this field. The project will involve image processing (MRI or PET) and programming (e.g., Matlab).

Funding is up to five years, and salary will be in line with Canadian Tri-Council stipend levels.

To apply, please send a CV, a statement describing research interests, and the names of two individuals who could provide reference letters:

Dr. Keith St Lawrence
Lawson Health Research Institute
268 Grosvenor St
London, Ontario N6A 4V2
Tel: 519-646-6100 (65737)
kstlaw@lawsonimaging.ca

Applicants should have fluent written and oral communication skills in English. All qualified applicants are encouraged to apply. The University of Western Ontario is committed to employment equity and welcomes applications from all qualified women and men, including visible minorities, aboriginal people and persons with disabilities.