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

Project Title:
Understanding the link between vascular dysfunction and brain energy metabolism

We are seeking a postdoctoral fellow to join a multidisciplinary research team investigating the interrelationship between cerebrovascular disease, cerebral energy metabolism, and cognitive function. This project will use magnetic resonance imaging MRI perfusion methods, arterial spin labelling and dynamic susceptibility contrast (DSC), to image cerebral capillary function, while concurrently imaging oxygen metabolism by $^{15}$O-PET. For the latter, our team has developed a non-invasive PET/MR method that retains PET’s ability to directly measure cerebral oxygen extraction, while incorporating MRI methods to reduce the complexity and duration of $^{15}$O-PET imaging.

Using these technologies, our goal is to investigate the impact of capillaries dysfunction 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 that include a hybrid 3T PET/MRI scanner (Siemens Biograph mMR system) and a GE PETtrace 880 cyclotron capable of generating $^{15}$O tracers. The position will also provide opportunities for collaborative research at Lawson, Western University, and colleagues at the University of Pennsylvania and Aarhus University.

Applicants should hold a PhD in a field related to medical imaging or biomedical engineering. 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 of research interests, and the names of two individuals who could provide reference letters:

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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.