Dr. Claudine Gauthier, head of the Laboratory for Imaging Cerebral Vasculature and Oxidative Metabolism of Concordia University and the PERFORM Centre is seeking

MSc/PhD students and Postdoctoral fellows

to join a multidisciplinary team of neuroscientists, physicists and engineers investigating changes in metabolism and hemodynamics with plasticity, aging, lifestyle and stroke.

Available projects involve the development of new vascular and metabolic imaging techniques, as well as application of new and existing techniques to the study of learning-induced plasticity, aging and stroke. Techniques such as Arterial Spin Labeling (ASL), Blood Oxygen Level Dependent (BOLD) functional MRI, calibrated functional MRI (calibrated fMRI) and Quantitative Susceptibility Mapping (QSM) will be used to image vascular shape, blood flow and oxidative metabolism in young and older adults. Projects will make use 3T and 7T data. Opportunities will be provided for pursuing personal research interests if applicable. Applications for independent grants will be strongly encouraged.

The research will take place at the PERFORM Centre and the Physics department of Concordia University. The PERFORM Centre is a multidisciplinary centre for health research on lifestyle management and prevention. It is a new research facility with state of the art imaging, exercise, nutrition and rehabilitation equipment. The imaging suite includes a 3T GE 750 MRI machine, a PET-CT, SPECT, EEG and NIRS equipment. Candidates will have the opportunity to work with other researchers at Concordia, the PERFORM Centre, and investigators in other centres. Most notably, the group has strong collaborative links with the Max Planck Institute for Human Cognitive and Brain Sciences in Leipzig, Germany, where an ultrahigh field 7T MRI machine is available for collaborative projects.

Requirements: PhD and Postdoctoral candidates should hold a degree in physics, physiology, biomedical engineering, neuroscience, or a related field. The candidate is expected to be a talented, enthusiastic, willing-to-learn researcher with a strong technical background, and interest in applying his/her skills to neuroscience. The successful candidate will have good programming skills and some exposure to neuroscience and medical imaging.

To apply, please send a letter of interest, CV and contact information for two references in a single pdf document. Only applicants considered for employment will be contacted.

Contact:
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