CUMMING SCHOOL OF MEDICINE, UNIVERSITY OF CALGARY

TRAINING OPPORTUNITY: PhD STUDENT AND POST- DOCTORAL FELLOW

TITLE OF STUDY: Impact of exercise on brain and cognitive health in older adults.

INVESTIGATORS: University of Calgary (Dr Marc J Poulin, Dr Christine Friedenreich, Dr Michael D Hill, Dr David B Hogan, Dr Stewart Longman) and Dalhousie University (Dr Gail Eskes).

We are looking for a **doctoral student** and a **postdoctoral fellow** in **human vascular or cognitive neurosciences** who are interested in completing a studentship/fellowship as part of a grant-funded project investigating the effects of exercise on cerebrovascular function and cognition in older adults.

These positions will be based in the Laboratory of Human Cerebrovascular Physiology (PI is Professor Marc Poulin) at the University of Calgary. Research activities will take place within the Cumming School of Medicine at the University of Calgary. Responsibilities will include being part of an interdisciplinary research project that is enrolling healthy human volunteers aged 55-75 years old, measurement of several physiologic, sleep, genetic cognitive and other factors and completion of an exercise intervention. The successful candidates will be involved with laboratory-based experiments, helping coordinate the exercise training intervention, and in presentations of the research at local and international scientific meetings and preparation of manuscripts that emerge from this research.

Candidates should have some or all of the following attributes: i) a strong background in integrative human physiology or psychology, ii) good communication skills (written/spoken English), iii) an excellent academic record, iv) a keen desire to learn, and v) previous research experience working with human volunteers and/or patients in a physiology or psychology research environment. Prior experience with ultrasound imaging, exercise training programs, biochemistry laboratory techniques (e.g., blood sampling, centrifugation, storage, and assay analyses) and/or cognitive aging or neuropsychology will be major assets. However, additional training will be provided to ensure that the successful applicants have the skills required to meet the objectives of the project.

More information about our research is located on our website: http://www.ucalgary.ca/poulin

Sample publication leading up to this project:

- Tyndall AV et al. The Brain-in-Motion study: effect of a 6-month aerobic exercise intervention on cerebrovascular regulation & cognitive function in older adults. *BMC Geriatrics* 2013. PMID: 23448504.
- Davenport MH et al. Cerebrovascular reserve: an important between fitness and cognitive function. *Exercise and Sport Sciences Reviews* 2012. PMID: 22504726.
- Eskes GA et al. Contribution of physical fitness, cerebrovascular reserve and cognitive stimulation to cognitive function in postmenopausal women. *Frontiers in Aging Neuroscience* 2010. PMID: 21048898.
- Pialoux V et al. Effect of cardiorespiratory fitness on vascular regulation and oxidative stress in postmenopausal women. *Hypertension* 2009. PMID: 19786647.
- Brown AD et al. Effects of Cardiorespiratory Fitness and Cerebral Blood Flow on Cognitive Outcomes in Older Women. *Neurobiology of Aging* 2010. PMID: 19111937.

Candidates should submit a letter of intent outlining their qualifications and career objectives, an unofficial transcript of academic record, complete list of publications and awards, along with names of 3 referees who have agreed to be contacted. Applications will be accepted until the position is filled. Funding is secured for 2-years with the possibility of extension for an additional 3 years. Salary will be commensurate with University of Calgary policies.

Send your complete application package to:

Professor Marc Poulin, PhD DPhil
Department of Physiology & Pharmacology,
University of Calgary
HMRB-210, 3330 Hospital Drive NW
Calgary, Alberta, T2N 4N1, CANADA
or by email to: poulin@ucalgary.ca

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