



New Master's Student Positions Now Available to Study the Basic Mechanisms of Multiple Sclerosis

Join a dynamic, world-class, generously funded basic and translational science team. The laboratory of Dr. Michael Levin offers personalized mentorship, state of the art laboratory facilities, customized coursework, highly competitive compensation, and the opportunity for basic scientists to work hand-in-hand with clinicians in Saskatoon City Hospital and the University of Saskatchewan.

The laboratory of Dr. Michael Levin in the Department of Anatomy, Physiology, and Pharmacology at the University of Saskatchewan has positions currently available for Master's students to study the role of abnormalities in the immune and nervous systems and how these abnormalities contribute to the pathogenesis of Multiple Sclerosis (MS). The laboratory is located in Saskatoon City Hospital, as part of the Cameco MS Neuroscience Research Center. For more information about the lab and Dr. Levin, please visit <http://research-groups.usask.ca/skms-office/>.

The long-term goal of research in the Levin Lab is to better understand the cause of neurodegeneration, a salient feature and cause of permanent disability in progressive multiple sclerosis (MS) patients. For more than 20 years, we have studied the function of the RNA binding protein heterogeneous nuclear ribonuclear protein A1 (hnRNP A1 -'A1'), with a focus on 'M9'. M9 is A1's nucleocytoplasmic transport domain and is required for transport of A1 between the nucleus and cytoplasm. Our lab has discovered that MS patients make antibodies to M9 and the brains and lymphocytes of MS patients contain somatic DNA mutations within M9. Using a number of molecular, in vitro and in vivo techniques, our data indicate that DNA mutations within M9 and autoimmunity to M9 result in A1 dysfunction and subsequent neuronal and axonal degeneration. Using this model, we examine potential mechanisms of neurodegeneration in MS resulting from A1 dysfunction.

The applicant should have a Bachelor's degree in molecular cellular biology, biochemistry, neurology, neuroscience or a related field. Familiarity in research using one or more of the following will be considered an asset; mouse models, imaging techniques (immunocytochemistry and immunohistochemistry), protein analyses, molecular biology techniques (PCR, cloning, etc.) and human tissue analyses. Knowledge of data analysis and interpretation using statistical software is required.

The individual should be independent, self-motivated and should be able to perform tasks with modest supervision after receiving appropriate training. Applicants must have the ability to adhere to tight deadlines, be detail oriented, possess organizational skills, and keep meticulous records. As the laboratory is a shared space, strong interpersonal skills are necessary. Successful applicants will be encouraged to apply for external funding opportunities. Applicants should send the following documents to the Office of the Saskatchewan MS Clinical Research Chair via email to Ms. Catherine Hutchinson, c.hutchinson@usask.ca :

- Current CV with list of laboratory experience
- Transcripts (unofficial, accepted)
- Names and detailed contact information of three referees, one of whom should be your undergraduate research supervisor

Applicants are required to apply and be admitted to the Anatomy, Physiology, and Pharmacology graduate program, at the University of Saskatchewan in order to fill the position. Candidates whose first language is not English may be required to provide a certificate of English proficiency. The English language requirements for a foreign candidate can be found at the CGPS website (www.usask.ca/cgps/).