

Postdoctoral Opportunity in Mouse Brain Cancer MRI

We are seeking a qualified post-doctoral candidate for brain tumor research projects conducted in Dr. Sheila Singh's lab at the McMaster Stem Cell and Cancer Research Institute (SCCRI) at McMaster University in Hamilton, Ontario, Canada. SCCRI is a leader in human stem cell research in Canada and is committed to providing a dynamic training environment and unrivaled infrastructure that includes *in vivo* transplantation facilities.

We are offering an exciting two-year postdoctoral fellowship opportunity to develop a personalized medicine platform based on evaluating mouse models of brain cancer with MRI. The candidate will establish protocols on a new 7 Tesla small animal MRI system to track brain tumours over time in mice to stage and monitor treatment, and will research how to best convey relevant MRI findings to a cancer biology audience. The candidate will be co-supervised by Dr. Sheila Singh, and Dr. Nicolas Bock, who is an expert in animal neuroimaging.

The ideal candidate will hold a Ph.D. in a relevant field such as medical physics, biophysics, physics, or biomedical engineering and will have ample experience in small animal MRI. The candidate will be tasked with establishing an existing neuroanatomical screening protocol on the new MRI system, which will include optimizing existing pulse sequences and implementing an image post-processing pipeline to register images into a common stereotaxic space and automatically identify tumours based on deformations in the underlying neuroanatomy. Experience in MRI pulse programming, Bruker MRI systems (including Paravision), the Linux operating system and scripting, and image processing software including FSL is ideal. Further project directions include investigating unique contrast mechanisms for detecting tumors and sophisticated image analysis routines for automatically assessing tumour burden in preclinical mouse models.

The position will begin on January 1st, 2020 and salary is commensurate with experience and accomplishments. Please email your CVs to ssingh@mcmaster.ca and bockn@mcmaster.ca

