

## **Evaluation of Injury and Repair in Multiple Sclerosis Using MRI**

Several research positions are available at the group of Dr. Yunyan Zhang at the University of Calgary, including graduate/summer students and research associate/postdoc fellows.

Our research is focused on the development, evaluation, and application of new imaging methods to assess tissue injury and repair in neurological diseases, particularly multiple sclerosis (MS). Significant advances have been made in the use of magnetic resonance imaging (MRI) to evaluate MS. However, while gadolinium-enhancing activity is a standard measure of inflammatory pathology, there is still lack of an objective measure of remyelination, a critical repair process in MS. The lack of a marker of remyelination confounds the translation of potential remyelination agents to clinical practice. We have started new clinical trials to evaluate the potential of several remyelination therapies for patients and initiated new experiments to establish novel MRI methods using postmortem MS brains and animal models. The candidates will learn about MRI, image processing and analysis methods, and pathological/clinical outcomes of MS. Experience with MRI would be an asset.

The candidates will be associated with the Alberta MS Network and the MS NeuroTeam of Hotchkiss Brain Institute, with numerous translational research and collaborative opportunities. Many other research and educational programs offered at the Cumming school of Medicine are also open to participate. The candidates will be registered in the Department of Neuroscience or Medical Sciences, or the Biomedical Engineering Program depending on the background and expertise. Focus of the project will be tailored accordingly.

In addition to the outstanding research opportunities, the candidates can also enjoy the many cultural and sporting amenities provided in the city of Calgary, and unparalleled skiing, hiking and other outdoor activities in the Rocky Mountains that are less than one hour of driving away.

Candidates must be academically competitive and are expected to apply for external funding. Interested personnel need to contact Dr. Zhang directly at [yunyzhan@ucalgary.ca](mailto:yunyzhan@ucalgary.ca) along with the following information:

- Short statement of research interest
- Resume
- A copy of transcripts
- Names and contact information for at least two referees

Deadline: Available until the positions are filled.