

**Graduate student or postdoctoral fellow position with Dr. Anastassia Voronova
(University of Alberta)**

Neural precursor cells in adult mammalian brain, such as subventricular zone (SVZ) neural stem cells and oligodendrocyte precursors in brain parenchyma, form oligodendrocytes throughout life. The purpose of oligodendrocytes is to produce myelin, an insulating material that performs vital functions in efficient neural information transmission and constitutes the brain white matter. Demyelinating disorders occur when myelin, a protective substance that coats nerve projections and ensures efficient neuronal signalling, is damaged. This leads to nerve dysfunction and neurological impairments. Demyelination occurs in neurological disorders such as multiple sclerosis (MS), in which myelin is attacked and damaged by the body's own immune cells. Current MS treatments only target inflammation but not central nervous system (CNS) remyelination, which could be achieved by stimulating the production of new oligodendrocytes.

Postdoctoral fellow or Ph.D. candidate will investigate how developmentally important neuronal chemokines (Voronova et al. 2017 Neuron) affect precursor-microglia cell-to-cell interactions for enhanced remyelination. The production of oligodendrocyte lineage cells and/or new myelin will be investigated using transgenic animals. Other techniques will include live imaging, flow cytometry, phagocytosis assays, brain slice and primary cell culture, intracerebroventricular injections (live animal surgery), RNA-sequencing and in situ hybridization, cytokine analysis, immunohistochemistry as well as confocal and electron microscopy. The resulting information may lead to development of novel remyelination therapies for demyelinating disorders such as multiple sclerosis.

An ideal candidate will be highly motivated and can work as a team player and a leader. Preference will be given to applicants with previous rodent experience and/or extensive cell or developmental biology expertise. Highly motivated Ph.D. and postdoctoral fellow candidates ready to learn live animal surgeries and work collaboratively and responsibly are encouraged to apply. Salary for potential postdoctoral fellow with commensurate with experience. Position will be open until filled.

Candidates should submit:

- i) cover letter including research interests including a brief summary of previous graduate thesis and/or post-doctoral research (if applicable);
- ii) complete CV;
- iii) transcripts (unofficial is suitable); and
- iv) the names and contact information of at least two academic referees.

E-mail applications to voronova@ualberta.ca. **Only applicants selected for an interview will be contacted.**