

Postdoctoral position is available immediately for highly motivated individual with a strong interest in neuroscience, cell biology, immunology and medical genetics in the lab of Prof. Alexey Pshezhetsky, Sainte-Justine University Hospital Research Centre (CHU Ste-Justine). The Pshezhetsky Lab merges glycobiology, neuroscience, physiology and genetic methods to decipher pathophysiology of genetic metabolic disorders and develop novel therapeutic approaches.

Recent data from our lab demonstrated that human enzyme, neuraminidase 1 (NEU1) desialylates and activates receptors for diverse pathways including phagocytosis, pro-inflammatory response, cell migration, adhesion, proliferation, and glucose metabolism. Genetic deficiency of neuraminidase 1 in humans causes multi-systemic lysosomal disease sialidosis which pathology is not yet understood. In turn, increased levels of neuraminidase 1 in monocytes and macrophages are associated with autoimmune diseases including immune thrombocytopenia purpura (ITP) an autoimmune condition characterized by a low platelet count. To clarify the mechanisms of both disorders the candidate will study the pathophysiological consequences of deficiency or supraphysiological levels of Neu1 in mouse models. This will identify novel pharmacological targets and strategies to treat ITP using Neu1 inhibitors and sialidosis via transplantation of gene-modified hematopoietic stem cells.

The candidate will benefit from both the outstanding lab environment and the highly collaborative communities of CHU Ste-Justine, Department of Anatomy and Cell Biology McGill University and Department of Biochemistry and Molecular Medicine, University of Montreal. The lab uses an extensive set of resources at CHU Ste-Justine Research Center including state of the art imaging and animal facilities.

More information is available at the website

<https://www.chusj.org/Bio?id=7b55f7d1-b8ac-41af-b3a6-f3edeba8e146&lang=en>

Candidates should have a Ph.D. or M.D. degree and should have experience and publication record in biochemistry, cell biology, or neuroscience.

**TO APPLY:**

Interested individuals should send a current CV and a letter of motivation to Prof. Alexey Pshezhetsky at [alexei.pchejetski@umontreal.ca](mailto:alexei.pchejetski@umontreal.ca)

**About the CHU Sainte-Justine Research Center**

CHU Sainte-Justine Research Center is a leading mother-child research institution affiliated with Université de Montréal. It brings together more than 200 research investigators, including over 90 clinician-scientists, as well as 385 graduate and postgraduate students focused on finding innovative prevention means, faster and less invasive treatments, as well as personalized approaches to medicine. The Center is part of CHU Sainte-Justine, which is the largest mother-child center in Canada and second most important pediatric center in North America. More on: <https://research.chusj.org/en/Home>