

Postdoctoral fellowship

CHU Sainte-Justine Research Center

Principal Investigator(s) Alexey V. Pshezhetsky, Ph.D.

Project duration

Start date As soon as possible

Research laboratory presentation

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.

Research project description

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>

Required training and profile

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



CHU Sainte-Justine
Research Center

Mother and Child
University Hospital Center

Université
de Montréal

Postdoctoral fellowship

CHU Sainte-Justine Research Center

Submit your application

Interested candidates must submit the following documentation to Prof. Alexey Pshezhetsky at alexei.pchejetski@umontreal.ca.

- ✓ Curriculum vitae
- ✓ Transcripts
- ✓ Cover letter
- ✓ References

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How is it like to study or make a fellowship at the CHU Sainte-Justine Research Center?

Pursue your [graduate or postdoctoral studies](#) at the CHU Sainte-Justine Research Center, and be one of the 385 students, fellows and interns who are helping to fast track the development of knowledge in the field of mother, child and adolescent health. Under the supervision of prominent scientists, especially in leukemia, rare pediatric diseases, genetics, perinatology, obesity, neuropsychology and cognition, scoliosis and rehabilitation, you will have the opportunity to work with multidisciplinary scientific teams and collaborators from all over the world.

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 450 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 research.chusj.org

