

Postdoctoral position supported by Elisa Linton Postdoctoral Scholarship for Sanfilippo Research is available immediately for highly motivated individual with a strong interest in neuroscience, cell biology 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.

Mucopolysaccharidosis type III (MPS III, Sanfilippo disease) is one of the most prevalent lysosomal disorders causing progressive and severe neurological manifestations. The aim of the research project is to understand why Sanfilippo syndrome causes problems with behaviour, learning and memory in affected children. Our preliminary results provide strong evidence that hippocampal neurons show specific alterations of excitatory glutamatergic synapses. To test this hypothesis, the candidate will study glutamatergic synapse formation and function in the MPS IIIA, MPS IIIB and MPSIIID mice as well as in the other mouse models of neurological lysosomal diseases. The study should clarify CNS pathophysiology of MPS III and suggest novel therapeutic approaches. It may also provide a paradigm for treating other neurodegenerative lysosomal diseases affecting synaptic transmission.

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>

