McGill University - Imperial College London Student Exchange

Training opportunity within the Kania Laboratory at the Institut de recherches cliniques de Montreal

Background

In the developing nervous system neurons are born in excess and subsequently many of them die an apoptotic death. How such programmed death is regulated remains a very important question in the context of understanding neuronal survival and neurodegenerative disorders. Mice lacking the Munc18 secretory vesicle protein, have a defect in regulated secretion of neurotransmitters and neuronal survival factors, accompanied by embryonic spinal cord degeneration. We are working to unravel the molecular mechanism underlying this degeneration and how it relates to the epileptic encephalopathy diagnosed in humans with Munc18 mutations.

Opportunity

By staining spinal cords from wild-type and mutant mice for various neuronal markers, the student will be able to assess if there is preferential sparing of certain types of motor neurons and interneurons, and gain insights into the mechanisms underlying the apoptosis in dying neurons.

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