Department of Physiology & Pathophysiology
Division of Neuroscience and Spinal Cord Injury
Visiting Scientist Lecture

Dr. Jeremy Chopek, PhD
Dalhousie University
Department of Medical Neuroscience
Halifax, Nova Scotia

"Dissecting Chx10 brainstem and V3 spinal microcircuits involved in movement initiation and production, one cell at a time"

Friday, September 15, 2017
12:00 – 1:00pm
Physiology Seminar Room 431
Basic Medical Sciences Building

Research Profile: Dr. Jeremy Chopek received his MSc (2009) in Kinesiology and PhD (2014) in the Department of Physiology & Pathophysiology, University of Manitoba under the supervision of Dr. Phillip Gardiner, in the Spinal Cord Research Centre. His work examined how motor circuits were affected following spinal cord injury and exercise by examining alterations in motoneuron biophysical properties, stretch reflexes, gene expression and sensitivity to pharmacological agents. Currently, he is a post-doctoral fellow at Dalhousie University (2014-), Department of Medical Neuroscience working with both Dr. Zhang and Dr. Brownstone at University College London. His work has begun to characterize and understand microcircuit formation in both the medulla reticular formation, a centre vital for the initiation of movement and the lumbar spinal cord, the area in which movement is produced. To achieve this, he uses a combination of transgenic mouse lines, optogenetic or photo-manipulation of single cell or whole cell populations, in-vitro electrophysiology, viral tracers and 2P and confocal microscopy. To date, he has subdivided the chx10 neuronal population in the brainstem into two distinct cell populations based on their morphology, biophysical properties, connectivity and projection patterns. In addition, he has also found a novel connectivity pattern of the spinal V3 interneuron population, which in addition to forming commissural connections also synapse locally with ipsilateral motoneurons.

All are Welcome to Attend

For more information contact Dr. Brent Fedirchuk, 204-789-3762

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