

Department of Physiology & Pathophysiology  
Division of Neuroscience and Spinal Cord Injury  
ASSISTANT PROFESSOR CANDIDATE  
RESEARCH LECTURE

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**Dr. Jeremy Chopek, PhD**  
University College London  
Sobell Department of Motor Neuroscience  
and Movement Disorders

**“What goes down, must come up: understanding cellular communication between spinal cord and brainstem circuits during movement”**

**Thursday, May 31, 2018**

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.

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***All are Welcome to Attend***

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



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