



Plasticity of Pain and Pleasure

SEMINAR & VISITING SPEAKER SERIES WORLD WIDE NEURO PLATFORM

DATE

Monday, February 1, 2021
12:00 PM (noon) CST

WORLD WIDE NEURO LINK

<https://www.crowdcast.io/e/manitobaneuro-3>

MEETING ID & PASSCODE

None required

SPEAKER

Robert Bonin, Ph.D.

Assistant Professor, Leslie Dan Faculty of Pharmacy,
University of Toronto; Canada Research Chair in
Sensory Plasticity and Reconsolidation

BIO

Rob Bonin is an Assistant Professor in the Leslie Dan Faculty of Pharmacy at the University of Toronto. He holds the Canada Research Chair in Sensory Plasticity and Reconsolidation and is Co-Director of the University of Toronto Centre for the Study of Pain. Dr. Bonin is exploring the synaptic changes in the spinal cord that contribute to abnormal sensory processing and is developing new models to study natural pain behaviour of animals.

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RESEARCH

What happens when the nervous system fails to adapt? Our perception of the world relies on a nervous system that learns and adapts to sensory information. Based on our experience we can predict what a wooden surface will feel like, that fire is hot, and that a gentle caress from a partner can be soothing. But our sensory experience of the world is not static – warm water can feel like fire on sunburned skin and the gentle brush of our clothes can be excruciating after an injury. In pathological conditions such as chronic pain, changes in nervous system function can cause normally innocuous sensory stimuli to be perceived as aversive or painful long after the initial injury has happened. These changes can sometimes be similar to the formation of a pain 'memory' that can modulate and distort our perception of sensory information. Our research program seeks to understand how fundamental processes that govern the formation and maintenance of plastic changes in the nervous system can lead to pathological conditions and how we can reverse engineer these changes to treat chronic conditions.

OBJECTIVES

1. To learn how our senses of touch and pain are altered by physiological and environmental conditions
2. To gain an understanding of spinal cord processing of sensory information
3. To learn how animal models can be used to study sensory processing.