



## Microglia-neuron communication in diseased brain

### SEMINAR & VISITING SPEAKER SERIES

#### DATE

Friday, October 13th, 2017  
12:00 Noon

#### LOCATION

Theatre C  
Bannatyne Campus

#### SPEAKER

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#### BIO:

Microglia are the principal immune response cells in the central nervous system. Resting microglia constantly survey the microenvironment in the normal brain. Upon brain dysfunction, microglia are activated and exert detrimental or beneficial effects on the surrounding neurons. However, the molecular mechanisms for microglial activation and function in brain diseases are still controversial. The long-term goal of my lab is to understand microglia-neuron communication in the brain. We are interested in fundamental questions on: (1) How microglia sense neuronal activities? (2) How microglia regulate neuronal and synaptic function? (3) What are the molecular mechanisms and functional consequences of microglia activation in brain diseases? To address these questions, we use the combination of two photon deep-brain imaging, electrophysiology, mouse genetics to dissect the role of microglia in neuronal circuits and in brain disorders. These results provide a novel insight on microglial function in brain hemostasis and suggest microglia as a potential therapeutic target for the treatment of brain diseases such as epilepsy, pain and stroke.

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