

Wednesday, October 29th, 2014

LSC 3 - Life Sciences Centre

2350 Health Sciences Mall

12-1pm



Dr. Brian MacVicar

Co-Director

*Djavad Mowafaghian Centre for Brain Health/
Brain Research Centre*

“Synaptic sensing and modulation by microglia: A role in neurodegeneration?”

Microglia, the immune glia of the brain, are known to be dynamic cells constantly surveying the health of the surrounding nerve cells and responding to damage with rapid process extension. In addition microglia processes are responsible for pruning synapses in a process requiring complement receptor 3 (CR3). Dr. MacVicar will present work from his lab describing how microglia detect the activation of synaptic activity in neurons. In addition he will describe how microglia CR3 activation and ROS generation is a novel trigger for long term depression of synaptic activity when combined with tissue hypoxia. These data suggest how microglia dysfunction could contribute to synaptic impairment during neurodegeneration.

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