



# SEMINAR SERIES 2017-18

## Controlling blood flow through the brain's pipes: new cell-type and time-scale specific mechanisms



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How neurons and astrocyte either cooperatively or separately regulate local cerebral blood flow at the cellular level is unresolved. Here we show that neurons alone regulate blood flow during brief, phasic increases in activity, and astrocytes are only recruited to help boost blood flow control during periods of prolonged neural activity. We also show how astrocyte provide tonic control of arteriole independent of neurons through their high resting  $Ca^{2+}$  activity, a process which can be regulated neural plasticity and experience.

**MSB 160**

**Thurs. June 14, 2018**

**12:15 – 1:15 PM**

**Host: Dr. Craig Brown**