**Weekly Colliquium**

Tuesday, 06/14/2016, 12:30pm, Billings Building – Rosedale Conference Room

“**Illuminating the mechanisms of neural and vascular repair after stroke**”

**Craig E. Brown, PhD**

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**Research Abstract:**

Stroke is the leading cause of disability in adults. A central focus of my laboratory is to understand how stroke disrupts neuronal and glio-vascular circuits and what mechanisms can promote functional recovery. Further, we are testing new experimental approaches to improve stroke recovery in pre-clinical animal models. To do this, we utilize a range of in vivo imaging techniques that allow us to track morphological and functional changes in specific cell types (neurons, microglia and endothelial cells) before, during and after an ischemic event. The first part of my talk will focus on how common stroke co-morbidities such as diabetes disrupt neural and vascular repair after stroke. The second half will focus on our recent work using optogenetic and pharmacogenetic approaches to enhance the recovery of thalamocortical and intracortical circuits after ischemic cortical stroke.

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**Recent Publications:**


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