



## The Department of Pharmacology

Proudly Presents the Seminar Series:

### *Frontiers in Pharmacology*

## "Endothelial K<sub>Ca</sub> channels: Critical mediators of vascular tone in health and disease"

The vascular endothelium exerts both tonic and acute regulation of vascular tone, blood flow distribution and systemic blood pressure via the generation of chemical (e.g. nitric oxide) and electrical signals that directly affect the contractility of small resistance arteries. Calcium-dependent K<sup>+</sup> (K<sub>Ca</sub>) channels expressed in the endothelium play a major role in evoked vasodilation by influencing endothelial Ca<sup>2+</sup> dynamics, electrical signaling and NO synthesis. Endothelial dysfunction is a hallmark feature of Type 2 Diabetes that drives the progression of cardiovascular complications (e.g. hypertension, atherosclerosis, cardiac dysfunction) common in T2D patients. Our recent data indicate that endothelial K<sub>Ca</sub> channel activity is maintained in the setting of T2D and can be exploited to restore endothelium-dependent vasodilation in both rodents and humans. Efforts to examine the physiological impact our cellular and tissue-based mechanisms at the level of the whole animal will be discussed.

**Andrew P Braun, PhD**

**Professor,  
Department of Physiology & Pharmacology  
University of Calgary**

**Tuesday, May 16, 2017**

**4:00 pm**

**GBSF Auditorium  
(Rm. # 1005)**

*Light refreshments will be served.*

*Host : Heike Wulff*

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