

# The 62<sup>nd</sup> iCeMS SEMINAR

CeMI Seminar Series 17

**Sat 27 Nov 2010**  
**9:00-11:00**

**As it is a Saturday, a lab staff member will be at the building main entrance to admit guests only for 10 minutes beginning at 8:45. Please be punctual.**

Venue: The 1st Meeting Room, 1F of the West Building  
Institute for Frontier Medical Sciences, Kyoto University

1<sup>st</sup> Lecturer: **Ivan Robert Nabi, Ph.D.**  
Department of Cellular and Physiological Sciences  
University of British Columbia

## **“Endoplasmic Reticulum Domains: Degradation, Stress and Mitochondrial Coupling”**

Gp78 is an E3 ubiquitin ligase involved in endoplasmic associated degradation (ERAD) that is also the receptor for the extracellular cytokine, autocrine motility factor (AMF). Gp78 is localized to a mitochondrial-associated ER domain and its ubiquitin ligase activity localized to a peripheral ER domain. Its ligand, AMF, protects against ER stress associated apoptosis via regulation of ER calcium release. It also promotes uncoupling of the ER and mitochondria, a process linked to gp78 ubiquitin ligase activity. These studies support a role for AMF regulation of gp78 ER function in the established roles of these proteins in cancer progression and metastasis.

2<sup>nd</sup> Lecturer: **Christian Soeller, Ph.D.**  
Department of Physiology, University of Auckland

## **“Advanced Imaging Approaches to Investigate Cardiac Structure and Function at the Nano-Scale”**

The contraction of cardiac muscle relies critically on calcium regulation and it is becoming increasingly clear that important aspects of the calcium signaling occur in nanoscopic domains, the dyadic junctions. Prof. Soeller's group has investigated cardiac calcium handling at cellular and sub-cellular scales using a combination of confocal microscopy, computer modelling and super-resolution microscopy. Prof. Soeller will show how the various signaling components in sub-cellular nano-domains give rise to a complex system that enables control at various levels.

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**Hosted by:** iCeMS (Institute for Integrated Cell-Material Sciences), Kyoto University

