DEPARTMENT OF BIOMEDICINE
HEALTH
AARHUS UNIVERSITY

Dear Colleagues,

This is an invitation to a broad seminar within the "*Membranes*" research theme with Dr. Phillipp Kaldis, Department of Biochemistry, Yong Loo Lin School of Medicine, National University of Singapore and Institute of Molecular and Cell Biology (IMCB), Agency for Science, Technology and Research (A*STAR).

The seminar will be of interest to those in Biomedicine working in metabolism, cell division and the cell cycle.

Talk title: Mouse models to study metabolism and meiosis
Time: Thursday, May 2nd, 2.15–3.15pm
Place: Store Anatomisk auditorium (Bygning 1232, lok. 115)
Host: Robert A. Fenton, Department of Biomedicine, AU

Abstract

Human diseases are often context-dependent and therefore reductionist approaches do not always work. Cell cycle progression and division is essential for organ development, tumor growth and metastasis. We study proliferative and developmental diseases using genetically modified mouse models. This allows us to study cells within tissues, where several cell types interact with each other. Our main aim is to understand how cell division and metabolism regulate each other during tissue repair, regeneration, and development. In this talk I will focus on how we are using mouse models to study metabolism in liver and kidney to understand how cell division is coupled to metabolic pathways. To do this, we employ metabolomic approaches using mass spectrometry. When combined with RNAseq, functional assays, and biochemical experiments, this provides us with a comprehensive picture of pathways that are important in human diseases. Furthermore, we are interested in how cell cycle regulators control male meiosis. CDK2 is a central regulator in meiosis with multiple functions that are difficult to deconvolute. We have developed point mutants of CDK2 that help us to distinguish between the different functions at various stages of meiosis.

Best wishes,
Søren Brandt Poulsen, *Membranes*