

IMCB Invited Speaker



Speaker : **Assoc. Prof. Wayne Phillips**
Surgical Oncology Research Laboratory, Peter MacCallum Cancer Centre, Australia

Date : 29 August 2012 (Wednesday)

Time : 11:00AM - 12: 00 PM

Venue : Level 3, IMCB Seminar Room 3-46, Proteos, Biopolis

Host : Prof. Wanjin Hong

Seminar :

Exploring the biological consequences of *Pik3ca* mutations in vivo

Mutations in the p110 α subunit of phosphoinositide 3-kinase (PI3K) (encoded by the gene *PIK3CA*) are frequent in human cancers. To better understand the role of mutant *PIK3CA* in the initiation or progression of tumourigenesis in vivo, we have generated a conditional (Cre recombinase-inducible) knock-in mouse model of the common activating mutation, *Pik3ca*^{H1047R}, expressed from the endogenous locus. We have used a targeted approach to express the *Pik3ca*^{H1047R} mutation in specific tissues including the mammary gland, gastrointestinal tract, and the ovary. This novel mouse is proving to be a fascinating model with which to explore the biological consequences and clinical significance of *Pik3ca*^{H1047R} mutation in diverse tissue types.

About the Speaker :

Associate Professor Wayne Phillips is a cellular and molecular biologist with a long-standing interest in the role of the phosphoinositide 3-kinase signalling pathway in cancer. His laboratory was one of the first to identify somatic mutations in the phosphoinositide 3-kinase family genes in human tumours and now studies the biological consequences and clinical significance of these mutations. Currently his work is focussed on using a novel *Pik3ca* knock-in mouse model to investigate the role, function, and mechanism of action of *Pik3ca* mutations in a physiologically relevant context in a number of different tumour types.

A/Prof. Phillips' laboratory also has a major interest in the pathogenesis of Barrett's oesophagus and is developing novel 3D cell culture systems and pre-clinical models with which to explore cellular and molecular mechanisms underlying development of Barrett's metaplasia and its progression to oesophageal adenocarcinoma.

A/Prof. Phillips is currently a Principal Research Fellow and Head of the Surgical Oncology Research Laboratory at the Peter MacCallum Cancer Centre in Melbourne and is an Associate Professor in the Sir Peter MacCallum Department of Oncology, and the Department of Surgery (SVH), University of Melbourne.