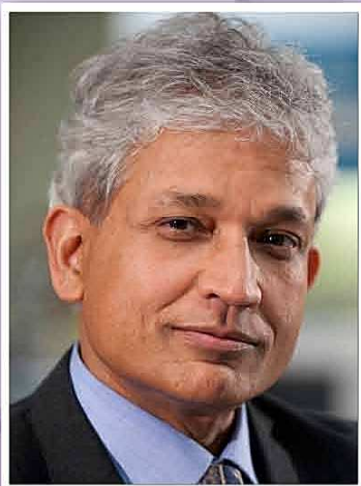


IMCB Invited Speaker



Speaker : Prof. Sharad Kumar
NHMRC Senior Principal Research Fellow and co-Director,
Centre for Cancer Biology, Adelaide, Australia

Date : 19 December 2013, Thursday

Time : 11:00AM - 12:00PM

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

Host : Prof. Wanjin Hong

Seminar :

Cell death: Mechanisms and functions

Programmed cell death is essential for animal development and for maintaining cellular homeostasis in the adult. As aberrations in cell death are linked to many human diseases, understanding the molecular mechanisms of cell death has been an area of intense research activity during the past 3 decades. Most physiological cell death is mediated by apoptosis, a tightly controlled, evolutionarily conserved process that involves the activation of caspases, a family of cysteine proteases. Previously unknown forms of non-apoptotic cell deaths are now also coming to light. We utilize mouse and *Drosophila* model systems to uncover the regulation of cell death and to understand the roles of the cell death machinery in cancer. This seminar will cover some of the recent work from my laboratory.

About the Speaker :

Professor Sharad Kumar is a NHMRC Senior Principal Research Fellow and co-Director of the Centre for Cancer Biology in Adelaide. His laboratory discovered, named and characterised a number of key regulatory genes, including the developmentally regulated Nedd genes, such as Nedd1- a key centrosomal protein required for gamma-tubulin recruitment, Nedd2 (caspase-2)- the first known apoptotic mammalian caspase, Nedd4 - the first WW-HECT type of ubiquitin-protein ligase, Nedd5 (Sept2)- the first characterised mammalian septin, and Nedd8- a ubiquitin-like protein involved in a protein modification pathway, now widely known as *neddylolation*. The laboratory also discovered a large part of the *Drosophila* cell death machinery and a number of proteins that regulate the function of Nedd4 ubiquitin ligases. His group now studies caspase biology and functions in tumour suppression, mechanisms of developmentally programmed cell death, and the physiological functions and regulation of the Nedd4 family members.

He is a Fellow of the Australian Academy of Science, the 2013 ASBMB Lemberg Medallist and winner of the 2013 FAOBMB Research Excellence Award. He has published over 190 articles, with >13,500 citations and an *H*-index of 65.

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