IMCB Invited Speaker



Speaker : **Dr. Matthew Sweet**
Group Leader, Institute of Molecular Science, University of Queensland, Australia

Date : 28 August 2012 (Tuesday)

Time : 11:00AM - 12: 00 PM

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

Host : Prof. Wanjin Hong

Seminar :

Blame It on Innate Immunity

The innate immune system plays an essential role in protecting all multicellular organisms from microbial challenge. Successfulpathogens must overcome innate immunity, so knowledge of this system is critical for understanding how infectious agents cause disease. The innate immune system also contributes to pathology in an ever-increasing list of other disease states, for example autoimmune diseases, neurodegenerative diseases, cardiovascular diseases and cancer. Cells of the innate immune system such as macrophages respond to invading microbes through families of pattern recognition receptors such as the Toll-like Receptors (TLRs). TLRs detect microbial products to activate host defence, but also respond to endogenousligands present in inflammatory disease conditions, and in so doing, drive pathology. My group, based at the Institute for Molecular Bioscience (University of Queensland), studies TLR signalling pathways and TLR target genes in the context of both host defence to Gram-negative bacterial pathogens (e.g. Salmonella typhimurium, Uropathogenic E. coli) and inflammatory diseases. This talk will focus on our efforts to define novel TLR-inducible antimicrobial pathways in human macrophages, as well as inflammatory signaling pathways that may represent potential targets for therapeutic intervention.

About the Speaker :

Matt Sweet completed his PhD on transcriptional control mechanisms in macrophages in 1996 at the University of Queensland. He then undertook a post-doctoral CJ Martin training fellowship at the University of Glasgow in Scotland, characterizing interactions between Th2 cells and macrophages. Since 2001, he has been based at the Institute for Molecular Bioscience at the University of Queensland, and was appointed as a Group Leader at this institute in 2007. His research interests in the last several yearshave focused on characterizing Toll-like Receptor (TLR) signalling pathways and the functions of TLR target genes in host defence.

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