



Structural insight into host-pathogen interactions

Thursday 3 April 1 – 2pm

Speaker

Dr Marc Kvansakul

ARC Future Fellow, La Trobe University

Location

Slatyer Seminar Room

R.N. Robinson Building (Bldg 46),
Cunningham Close, ANU

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This lecture is free and open to the public

BSB event information:

biology.anu.edu.au/News/events-bsb.php



Our lab is interested in certain host-pathogen interactions, in particular those that mediated viral hijacking of cellular suicide programs during viral infection. Viruses must evade host apoptotic defences to ensure their own survival. Despite the complexity of mammalian cell death processes, viruses have evolved successful mechanisms for subverting the apoptotic machinery, including encoding for homologs of the mammalian pro-survival protein Bcl-2. We are particularly interested in inhibitors of the Bcl-2 pathway from poxviruses, and are combining structural and functional analysis to investigate their mechanism of action.

A second area of investigation in our lab is the mechanism of action of small innate defense molecules. We have shown that defensins, a ubiquitously found class of host defense proteins, recognises phospholipids in target membranes. Again using structural and functional analysis we are currently defining the molecular basis underlying the defensins' ability to attack target cells by recognising particular phospholipids.

Biography: Marc is currently an ARC Future Fellowship at La Trobe University. He graduated from Imperial College London with a BSc in Biochemistry, before continuing there with a PhD in Crystallography with Erhard Hohenester. Peter Colman convinced him to join the Walter & Eliza Hall Institute in Melbourne as a postdoctoral fellow on a Leukemia & Lymphoma Society of America Fellowship towards the end of 2004, where he developed his interest in viruses and cell death regulation. He then moved to La Trobe University to start an independent laboratory as an NHMRC Career Development Fellow at the start of 2010, where he expanded his research interest to investigate the mechanism of action of small innate defence proteins.

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