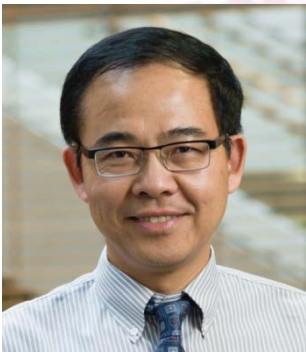


SIgN Immunology Seminar



Prof Lin-Fa Wang

Program in Emerging Infectious Disease
Duke-NUS Graduate Medical School

Viruses and bats: what's special?

Host
Prof Paola
Castagnoli
Singapore
Immunology
Network, A*Star

Date
Wednesday,
20 March 2013

Time
11.30am – 12.30pm

Venue
SIgN Seminar Room
Immunos Building
Level 4
Biopolis

Approximately 75% of emerging infectious diseases are zoonoses. The rate of emergence of zoonotic viruses appears to be increasing and/or our ability to detect new viruses is improving. Bats are being increasingly recognised as an important reservoir of zoonotic viruses of different families, including SARS coronavirus, Nipah virus, Hendra virus and Ebola virus. Several recent studies hypothesized that bats, an ancient group of flying mammals, are the major reservoir of several important RNA virus families from which most (if not all) other known mammalian viruses of livestock animals and human were derived. Although this hypothesis needs further proof, the fact that bats carry a large number of viruses is commonly accepted. The question of whether bats have unique biological features making them ideal reservoir hosts will be the focus of research in my own research group as well as other groups around the world. Our recent published work on comparative analysis of two bat genomes revealed positively selected genes shared by the DNA damage checkpoint pathway and innate immunity, raising the interesting possibility that flight-induced evolutionary selection have had inadvertent effect on bat immune function and possibly also on life expectancy.