SIgN Immunology Seminar



Dr Reinout van Crevel

Radboud University Medical Centre, Nijmegen, The Netherlands

Mycobacterium tuberculosis and the human host; mycobacterial genomes, disease phenotype and immunology

Host
Dr Norman Pavelka
Singapore Immunology Network, A*Star

Date
Wednesday 4 November 2015

Time
11am – 12pm

Venue
SIgN Seminar Room
Immunos Building
Level 4
Biopolis

A key question in tuberculosis is what determines the outcome of exposure to *Mycobacterium tuberculosis*. Some individuals exposed to an infectious patient remain uninfected, some become latently infected, while others progress and develop pulmonary or even disseminated (life-threatening) tuberculosis.

This talk will focus on the role of host and mycobacterial genotypes in determining these clinical phenotypes. Reinout van Crevel, clinician-scientists, has collaborated with Indonesian universities in TB and HIV for over 15 years. Patient cohorts were used for genetic association studies – also with researchers from GIS, and infecting *M. tuberculosis* strains were genotyped, and linked with disease phenotypes.

In the Netherlands, convergent evolutionary analysis was done on sequenced *M. tuberculosis* genomes, and independently fixed mutations associated with transmission, and *M. tuberculosis* strains with or without these mutations were used for cytokine stimulation and neutrophil studies. Similar studies linking host and *M. tuberculosis* genomes in Indonesia are ongoing.

The talk will start with a brief introduction of the Dutch-Indonesian collaboration on TB and HIV, highlighting some of the results in public health, diagnostics, clinical trials, and basic sciences, and some of the translation of research to clinical practice.