SIgN Immunology Seminar



Prof Mihai G. Netea

Radboud University Medical Center,
Nijmegen, The Netherlands

Trained Immunity: a memory for the innate immune responses

Host
Dr Norman Pavelka
Singapore Immunology Network,

Date
Monday 27 February 2017

Time
11am – 12pm

Venue
SIgN Seminar Room
Immunos Building
Level 4
Biopolis

The inability of innate immunity to build an immunological memory, considered one of the main characteristics differentiating it from adaptive immunity, has been recently challenged by studies in plants, invertebrates, and mammals. The increasing evidence for immunological memory within innate immunity is the focus of intense investigation. Long-term reprogramming of innate immunity, that induces adaptive traits and has been termed "trained immunity," characterizes prototypical innate immune cells such as natural killer cells and monocytes, and provides protection against reinfection in a T/B-cell-independent manner. Both specific signaling mechanisms and non-specific epigenetic effects have been implicated in mediating these effects: the role of epigenetic changes and of metabolic reprogramming towards aerobic glycolysis will be discussed. This concept represents a paradigm change in immunity and its putative role in resistance to reinfection may represent the next step in the design of future vaccines.