

SlgN Immunology Seminar



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Inflammasomes: activation of caspase-8, and role in autoimmunity

Host
Dr Alessandra
Mortellaro
Singapore
Immunology
Network, A*Star

Date
Monday
16 June 2014

Time
11am – 12pm

Venue
SlgN Seminar
Room
Immunos Building
Level 4
Biopolis

Inflammasomes are large protein complexes that are well known as platforms for activation of caspase-1. Inflammasome activation is a response to a wide variety of infectious and environmental stresses. Caspase-1 cleaves precursors of IL-1 β and IL-18 as well as initiating pyroptotic cell death. We have shown that procaspase-8 is also recruited to the inflammasome and in parallel initiates apoptotic death. The activation of several pathways of death simultaneously may be an adaptation to pathogen evasion of host defence. We are investigating heterotypic death domain interactions in recruitment of procaspase-8 to the inflammasome. On a separate topic, inflammasomes have been suggested to play a role in initiation or progression of various autoimmune diseases. In contrast, our work suggests that inflammasome deficiency may be part of an innate immune imbalance that can contribute to autoimmunity.