

SgN Immunology Seminar



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Recent advances in type 2 immunity:
Damage-associated host DNA and
Protective immunoglobulin E

Host
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Date
Monday
17 November
2014

Time
11 am – 12pm

Venue
SgN Seminar
Room
Immunos
Building
Level 4
Biopolis

A common feature of allergic disorders, helminth infections and aluminium-adjuvanted vaccination is the type of immune response that is induced, called "type 2 immunity". The research I am undertaking aims to understand *how* type 2 immune responses are induced, and *what* physiological functions they have.

The first part will be dedicated to recent findings indicating that self DNA released from damaged cells can be sensed by the immune system and can act as a potent inducer of type 2 immunity during aluminium-adjuvanted vaccination or rhinovirus-induced asthma exacerbations.

During the second part, I will present you experimental evidence showing that immunoglobulin E antibodies, which are mainly known in the context of deleterious allergic reactions, also enhance host protection against venoms. This novel, beneficial function of IgE supports the "toxin hypothesis", which suggests that allergic reactions represent immunological defense mechanisms against noxious substances.