

# SIgN Immunology Seminar



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### Interleukin -25: An innate cytokine involved in Th2 cell development and type 2 responses?

*Host*

Dr Maria Lafaille  
Singapore Immunology  
Network, A\*Star

*Date*

Wednesday,  
06 June 2012

*Time*

11am – 12pm

*Venue*

SIgN Seminar Room,  
Immunos Building  
Level 4  
Biopolis

A keenly sought therapeutic approach for the treatment of allergic disease is the identification and neutralization of the cytokine that regulates the differentiation of Th2 cells. Th2 cells are exciting new targets for asthma therapies due to the key role they play in allergic airway diseases. Recently the cytokine IL-25 has been shown to enhance Th2 cell activity and play important roles in mediating allergic inflammatory responses. To investigate this further we crossed IL-25 deficient mice with GFP-IL-4 reporter mice and developed an assay of *in vitro* and *in vivo* IL-4 independent Th2 differentiation. These assays were used to determine whether IL-25 was critical for the formation of Th2 cells. We found there was no physiological role for IL-25 in either the differentiation of Th2 cells or their development to effector or memory Th2 subsets. In the strong Th2 setting of a helminth infection the absence of IL-25 resulted in no defects in typical type 2 responses including mucous hyperplasia, class switching to IgE and protection against challenge infections. Importantly this data challenges the newly found and growing status of the cytokine IL-25 and its proposed role in promoting Th2 responses.