

SIgN SEMINAR



Dr Florian Winau

Associate Professor, Dept of Pediatrics,
Harvard Medical School

Investigator,
Program in Cellular & Molecular Medicine,
Boston Children's Hospital

Lipid Immunology Reveals Novel Targets for Treatment of Disease

This seminar introduces two examples of Dr Florian Winau's work on Lipid Immunology, involving the study of lipids as antigens, adjuvants, and regulators of immune responses.

Topic 1: Antigen processing and tumor immunity

In the first part, the role of saposins in lipid interaction led to the current studies that explore the impact of saposins on processing of vesicles derived from tumor cells. These new discoveries reveal a vital function of saposins in tumor immunity and introduce a novel mechanism of immune escape, in which prosaposin hyperglycosylation in tumor-associated dendritic cells prevents efficient antigen presentation and T cell activation. Treatment with recombinant prosaposin targeted to dendritic cells helps to overcome immune escape and restores potent anti-tumor responses. Thus, prosaposin-based drugs could pave the way for novel immunotherapeutic approaches against cancer.

Topic 2: The lipid Gb3 in infection and autoimmunity

The second part of the seminar will briefly summarize previous studies on the lipid globotriaosylceramide (Gb3) in B cell responses and antiviral vaccination, followed by new experiments describing Gb3 in autoimmunity. We will learn that Gb3 regulates type I interferon receptor assembly and promotes autoantibody responses. Treatments designed to modulate Gb3 levels represent a novel therapeutic approach, introducing this lipid as a promising target in autoimmune disease.



16th September 2025 (Tuesday)
10 AM – 11 AM (Singapore Time)
SIgN Seminar Room

[8A Biomedical Grove, Immunos, #04-06, S138648](#)

***Seminar
open for all
to attend.***

***Registration
not required.***

