



Infectious
Diseases Labs

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Friday 17th Oct 2025

3:00 PM to 4:00 PM (SGT)

Venue: Codon A & B, Matrix Level 5

The Immune Impact of Viral Infections in Pregnancy

Viral infections during pregnancy pose significant risks to both maternal and fetal health, with effects that can extend beyond the acute phase. Prenatal viral exposure disrupts the delicate immunological balance required for maternal-fetal homeostasis, causing lasting changes in immune function that may predispose the developing child to congenital disorders, neurodevelopmental impairments, or altered responses to infections and vaccinations. This seminar will explore the viral and host mechanisms driving maternal and fetal immune reprogramming during prenatal virus infections. Fundamentally, lessons from past outbreaks of Zika virus and SARS-CoV-2 provide crucial insights to inform future research and public health strategies.

Dr. Foo is a viral immunologist studying how viral infections in pregnancy influence maternal-fetal immune interactions. During her predoctoral training at University of Western Australia and Griffith University, Australia, she investigated innate immune responses to mosquito-borne alphaviruses, including Chikungunya virus and Ross River virus. After earning her PhD in 2015, she pursued her postdoctoral training at the University of Southern California and Cleveland Clinic, which shaped her focus on pregnancy infectious diseases. In 2022, Dr. Foo established her independent laboratory to examine (i) the long-term effects of prenatal viral infections on the maternal and fetal immunity and (ii) the host and viral factors that drive maternal-fetal immune alterations. Her research emphasizes on epidemic-potential viruses, including arboviruses (Dengue, Zika, Chikungunya) and SARS-CoV-2, and is conducted in collaboration with clinician-researchers at leading international institutions such as Cleveland Clinic (US), UCLA (US), and FIOCRUZ (Brazil).

Hosted by: Prof Marco Vignuzzi

Seminar is open to all. No registration required.

Questions? Contact us at seminars@idlabs.a-star.edu.sg

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