



Infectious
Diseases Labs

A*STAR IDL

Dr Ooi Yaw Shin

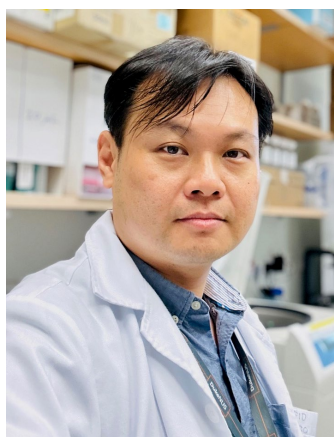
Assistant Professor
Program in Emerging Infectious Diseases
Duke-NUS Medical School



Thursday 12th June 2025

11:00 AM to 12:00 PM (SGT)

Venue: Codon A & B, Matrix Level 5



Decoding Cellular Vulnerabilities to Viral Infection: From Human to Bat

Host cellular factors play a pivotal role in determining viral susceptibility, permissiveness, and disease outcome. Systematic identification and characterization of these factors are key to unraveling the molecular basis of virus-host interactions and developing innovative antiviral strategies. In this seminar, Yaw Shin will share recent insights into the discovery and mechanistic understanding of host factors critical for the infection of clinically important RNA viruses—including arboviruses and respiratory viruses—using unbiased, genome-scale CRISPR screening and other functional genomic approaches. His research spans both human and bat cellular systems, offering unique comparative perspectives on viral pathogenesis, host adaptation, and cross-species transmission.

Dr Ooi Yaw Shin earned his undergraduate degree in Genetic and Molecular Biology and postgraduate degree in Microbiology from the University of Malaya in Malaysia. He completed his Ph.D. degree from Albert Einstein College of Medicine in New York under the tutelage of Margaret Kielian, where he studied host factors involved in alphavirus entry and exit. He then pursued postdoctoral training in Jan Carette lab at Stanford University School of Medicine, focusing on the discovery of host factors critical for flavivirus and enterovirus infections. In late 2019, Yaw Shin joined the Emerging Infectious Diseases Program of Duke-NUS Medical School as a tenure-track assistant professor. He is also an adjunct investigator of A*STAR Infectious Diseases Labs of Singapore. Yaw Shin has a long-established interest in the discovery and mechanistic studies of host genetic determinants essential for virus infections. His research leverages genome-wide CRISPR screens and complementary functional genomic tools to identify and dissect host factors in both human and bat cells, with an emphasis on viruses of bat and mosquito origin—such as alphaviruses, flaviviruses, coronaviruses, and paramyxoviruses. Yaw Shin's work aims to deepen our understanding of host biology in viral infection and inform the development of novel antiviral interventions.

Hosted by: Dr Stefan Oehlers

Seminar is open to all. No registration required.

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

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