



Infectious
Diseases Labs

ID LABS



Dr Ooi Yaw Shin

Programme in Emerging Infectious Diseases
Duke-NUS Medical School



Wednesday, 27 July 2022
4:00pm to 5:00pm (SGT)

Seminar is open to all
No registration required

Venue: Creation@Matrix Level 4

Genetic Dissection of Cellular Factors Critical for Viral Infections

Cellular host factors are the keys to determining viral susceptibility, tropism, and pathogenesis. Therefore, identification and characterization of host factors are crucial to illuminating the underlying molecular mechanism of virus infection, which may innovate novel antiviral strategies. In this talk, Yaw Shin will discuss discovering and mechanistic dissections of host factors using unbiased functional genomic approaches, such as genome-scale CRISPR screens.

Dr Ooi Yaw Shin received his B.Sc. and M.Sc. degrees from the University of Malaya, Malaysia. He later earned his M.S. and Ph.D. degrees from Albert Einstein College of Medicine in New York under the tutelage of Margaret Kielian, discovering novel host factors that impact alphavirus (e.g., Chikungunya virus, Semliki Forest virus) entry and exit. After that, he pursued his postdoctoral research in the laboratory of Jan Carette at Stanford University School of Medicine, California, focusing on the discovery of host factors critical for several biomedically important RNA viruses, such as flaviviruses (e.g., Dengue virus, Zika virus) and enteroviruses (e.g., Enterovirus D68, Rhinovirus C). In late 2019, he joined the Emerging Infectious Diseases (EID) Program of Duke-NUS Medical School as a tenure-track assistant professor. Yaw Shin has a long-established interest in discovering and mechanistic studies of host genetic determinants essential for RNA virus infections using functional genomic approaches. Through collaborative research efforts, he has contributed to the discovery of several key host factors, such as TSPAN9, which facilitates alphavirus membrane fusion, SETD3, which governs enterovirus replication and pathogenesis, and a catalog of the endoplasmic reticulum-associated proteins, e.g., Vigilin and RRBP1, that are essential for Dengue virus infection. His research at Duke-NUS has focused on the bat- and mosquito-borne viruses of medical importance.

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