



Professor Suresh Mahalingam, PhD  
FASM, FAAM, FFSc (RCPA)  
NHMRC Senior Research Fellow B (SRFB),  
Menzies Health Institute Queensland (MHIQ),  
Griffith University

 12 March 2024/ Tuesday

 3:00 P.M. - 4:00 P.M. (SGT)

 MD4 Seminar Room (02-03E)

Chairperson: Associate Professor Justin Chu

*All are  
welcome!*

## ADVANCEMENTS IN UNDERSTANDING AND COMBATING EMERGING VIRAL DISEASES: PATHOGENESIS, THERAPEUTICS, AND VACCINE DEVELOPMENT.

### Abstract:

Dengue, Zika, and chikungunya, well-known arboviruses, have caused significant mosquito-transmitted disease outbreaks. Since 2006, the chikungunya virus has caused ongoing global outbreaks, affecting millions of people across 114 countries, with symptoms ranging from mild arthralgia to chronic arthritis that can persist for months or years. The 2015-2016 Zika outbreak was declared a Public Health Emergency of International Concern by the WHO due to its association with a significant increase in the number of babies born with microcephaly. More recently, the respiratory virus SARS-CoV-2 caused the COVID-19 pandemic, with far-reaching impacts on global public health and economies. Over the past decade, my laboratory has focused on the pathogenesis of arthritogenic alphaviruses and Zika infections, and more recently, on SARS-CoV-2. Using animal model systems combined with clinical studies, we have identified key host factors that determine disease outcomes. This research has led to the development of new drugs and vaccines, which are now licensed to pharmaceutical and biotech companies. Some of these have already been tested in clinical trials and received TGA approval for clinical use, while others are soon to undergo testing. An overview of these studies will be presented.

### Biography:

Suresh Mahalingam obtained his PhD in Viral Immunology from the John Curtin School of Medical Research at ANU. He is a Professor of Viral Immunology, specialising in the pathogenesis and treatment of emerging viral diseases. Since 2000, he has maintained continuous fellowships with the NHMRC and ARC, including the Doherty, RD Wright, CDA2, Future Fellow, SRFA, and SRFB. Currently, he leads the Emerging Viruses, Inflammation & Therapeutics research program at the Menzies Health Institute and is the Director of the Global Virus Network Arbovirus Centre of Excellence. His research focuses on understanding how emerging viruses, such as arboviruses and respiratory viruses, instigate inflammatory diseases. Through bridging fundamental and clinical research, he has achieved significant breakthroughs, leading to the commercialisation of two drugs and three vaccines. He is a Fellow of the American Academy of Microbiology, a Fellow of The Royal College of Pathologists of Australasia and serves as a member of the WHO Advisory Group on Arboviruses.