Organised by

National Centre for Infectious Diseases

NCID MONTHLY RESEARCH MEETING

BRINGING PEOPLE TOGETHER,

BRIDGING SCIENCE AND MEDICINE

17 Jan 2025 | Friday | 11.00am – 12.00pm

About the Meeting

Our research meetings are held every 3rd Friday of the month, with the aim to:

- Inspire research ideas and participation
- Provide guidance on research studies
- Foster research collaborations

Who Should Attend

All who are interested in research are welcome to attend.

Programme

11:00 AM **Genomic Epidemiology of RSV and SARS-CoV-2**

A/Prof Efrem Lim
Principal Scientific Officer
National Centre for Infectious Diseases

11:30 AM **Addressing dosing challenges in untested clinical scenarios – Case studies of physiologically-based pharmacokinetics with Nirmatrelvir/Ritonavir**

Dr Ng Tat Ming
Principal Pharmacist (Specialist)
Tan Tock Seng Hospital

5 to 10 mins Q&A will follow after each talk

To Register

This will be a Zoom meeting.
Visit https://for.sg/jan25researchmeeting or scan QR code.
CME/CNE/CPE points will be awarded.

**Please register and join the meeting using your work email*

for.sg

https://for.sg/jan25researchmeeting

Genomic Epidemiology of RSV and SARS-CoV-2

by **A/Prof Efrem Lim**
Principal Scientific Officer
National Centre for Infectious Diseases

How can pathogen genomics be democratized for diverse public health threats? Here, I will describe our state-level public health surveillance system called the Arizona Health Observatory. This provides early-warning to infectious disease outbreaks and identifies surveillance vulnerabilities. During the 2022-2023 respiratory virus season, there was an unusually early surge of respiratory syncytial virus (RSV). Through genomic epidemiology, we found that this was seeded by multiple extant lineages, rather than a single divergent, highly transmissible strain. Finally, I will demonstrate how this can be applied to understand the unique nature of Singapore's most recent COVID-19 surge that occurred mid-2024.

Addressing dosing challenges in untested clinical scenarios – Case studies of physiologically-based pharmacokinetics with Nirmatrelvir/Ritonavir

by **Dr Ng Tat Ming**
Principal Pharmacist (Specialist)
Tan Tock Seng Hospital

With the use of in vitro data and the techniques of in vitro in vivo extrapolation, physiologically-based pharmacokinetic (PBPK) modelling can be used to address key dosing questions when there is limited a priori clinical pharmacokinetic data. We will review the use of PBPK modelling in evaluation of the optimal doses in unlabelled use of nirmatrelvir/ritonavir in severe renal impairment, what to do if you missed a partial dose and attempt to answer if the current recommendations of nirmatrelvir/ritonavir drug-drug interactions are optimal.

Learning Points

1. Identify the key concepts underlying physiologically-based pharmacokinetic (PBPK) modelling.
2. Differentiate the role of compound files and population files in PBPK modelling