

NCID MONTHLY RESEARCH MEETING

*BRINGING PEOPLE TOGETHER,
BRIDGING SCIENCE AND MEDICINE*

17 May 2024 | 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 **Exploring the Complex Interplay between Glucocorticoids (GCs) and CD151 in Influenza A Virus (IAV) Infections**

Dr Lee Zhao Yong

Research Fellow
National University of Singapore



11:30 AM **Respiratory Viral Infections in 2024 – More Questions than Answers?**

Prof Paul Ananth Tambyah

Professor
National University of Singapore



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

To Register

This will be a Zoom meeting.

Visit <https://for.sg/may2024researchmeeing> or scan QR code.

*CME/CNE/CPE points will be awarded



Exploring the Complex Interplay between Glucocorticoids (GCs) and CD151 in Influenza A Virus (IAV) Infections

by **Dr Lee Zhao Yong**

Research Fellow

National University of Singapore

In severe IAV infections, the delicate balance between protective inflammatory responses and harmful lung damage is crucial. While GCs are considered for their anti-inflammatory potential, their precise impact on IAV infections remain debatable. We identified a novel mechanism in which GC-induced upregulation of CD151 expression intensifies IAV replication, worsening infection severity and outcomes. By delving into this intricate relationship, our study offers valuable insights into optimizing therapeutic strategies for managing severe IAV cases.

Learning Points

1. Our study challenges conventional clinical thinking around using GCs solely for treating inflammation in severe IAV infections.
 2. We demonstrate the contribution of host protein, CD151, in IAV replication.
 3. We offer a novel mechanism to explain how GC may increase IAV replication which may inform GC usage.
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Respiratory Viral Infections in 2024 – More Questions than Answers?

by **Prof Paul Ananth Tambyah**

Professor

National University of Singapore

The last four years have seen an unprecedented investment in research in respiratory viral infections. However, there still remain numerous key questions including susceptibility, transmission, diagnostics and therapeutics. These are fundamental issues and Singapore is uniquely placed to try to answer them. One of the positive side effects of the recent pandemic has been a rise in research capability across Singapore which puts us in a good place to answer some of these questions.

Learning Points

1. Respiratory viral infections are a constant feature of life in Singapore.
2. Their pathogenicity is not well understood – in particular the balance between immunopathogenesis and direct viral pathology.
3. Understanding that balance is the key to safe and effective vaccines and therapeutics.