



Infectious
Diseases Labs

A*STAR IDL



Asst Prof Weiqiang (Javier) Chen

Assistant Professor of Viral Immunopathogenesis
Respiratory & Infectious Diseases Programme
Lee Kong Chian School of Medicine, NTU



Friday, 4 September 2026

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

Venue: Matrix, Level 5, Codon A & B

Molecular Insights into Viral-Induced Inflammation and Calcification

Viral proteins often function beyond their roles in replication by directly manipulating host signalling pathways to drive disease. In this seminar, I will present our work uncovering the molecular mechanisms by which viral proteins contribute to pathogenesis. First, I will discuss the discovery that the SARS-CoV-2 accessory protein ORF8 acts as a viral cytokine mimic that activates IL-17 receptor signalling, promoting inflammatory responses associated with severe COVID-19. I will then present our studies showing that the Zika virus NS3 protease induces pathological brain calcification during congenital infection by activating bone morphogenetic protein (BMP) signaling in human brain pericytes. Together, these findings demonstrate how viral proteins hijack conserved host pathways to promote tissue-specific pathology and provide new insights into potential host-directed therapeutic strategies for viral diseases.

Dr Weiqiang (Javier) Chen is an Assistant Professor in the Respiratory & Infectious Diseases Programme at the Lee Kong Chian School of Medicine, Nanyang Technological University, Singapore. Prior to joining NTU, he was Assistant Staff at the Cleveland Clinic Lerner Research Institute and Assistant Professor at Case Western Reserve University School of Medicine. He has received research support from the U.S. National Institutes of Health, including K99/R00 and R01 awards, and was a recipient of the F. Merlin Bumpus Junior Investigator Award. His laboratory combines virology, immunology, and disease models to investigate the mechanisms underlying acute and long-term consequences of viral infections. His research focuses on emerging viral infections and viral immunopathogenesis, with particular interests in understanding how viral infections contribute to neurological and musculoskeletal diseases.

Hosted by: Dr Stefan Oehlers

Seminar is open to all. No registration required.

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

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