



Infectious
Diseases Labs

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EPIDEMIC PREPAREDNESS



Dr Joshua Tan

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Friday 6th September 2024

2:00 PM to 3:00 PM (SGT)

Venue: Codon A & B, L5 Matrix
Building

Human antibody responses to global infectious pathogens

Monoclonal antibodies are coming of age as powerful tools for the prevention and treatment of infectious disease. Here, I will discuss recent work on the human antibody response to two pathogens: SARS-CoV-2 and the malaria parasite *Plasmodium falciparum*. The first section of the talk focuses on the characterization of broadly neutralizing antibodies against coronaviruses that target the spike fusion peptide and stem helix. The next section focuses on rare human antibodies that target *P. falciparum*. After pivotal clinical trials showing that a single monoclonal antibody can provide sterile protection against malaria, there is increasing interest in the direct use of antibodies to prevent malaria in humans. I will describe our efforts to identify potent antibodies against key parasite targets, which are useful for vaccine design and the development of next-generation interventions against malaria.

Dr Joshua Tan, Ph.D., is Chief of the Antibody Biology Unit at the Laboratory of Immunogenetics and a Stadtman Investigator at the National Institute of Allergy and Infectious Diseases, National Institutes of Health. He received his Ph.D. from the University of Oxford. His research focuses on dissecting the human antibody response to infectious pathogens at the monoclonal level, with pathogens studied including *Plasmodium falciparum*, SARS-CoV-2 and *Mycobacterium tuberculosis*. His recent work includes the discovery of broadly neutralizing antibodies targeting cryptic coronavirus epitopes and the isolation of rare neutralizing antibodies that target the malaria sporozoite.

Hosted by: Prof Lisa Ng

Seminar is open to all. No registration required.

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

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