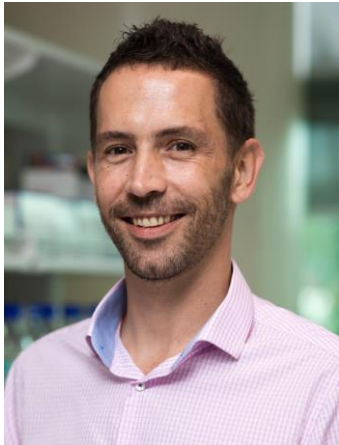




Infectious
Diseases Labs

ID LABS

ID LABS SEMINAR SERIES



Dr. Wilfried Moreira

Senior Research fellow
National University of Singapore



Wednesday 19th May
11am to 12pm

Join zoom meeting [here](#)
Meeting ID: 991 9812 0209
Passcode: 286355



Webinar is open to all
No registration required

From bacteriophages to smelly gases: novel approaches to target bacteria-causing diseases.

In this talk I will share the avenues of research and findings I have been developing over the past few years. My research focuses on 2 themes: the first theme looks at bacteriophages as tools to selectively target bacterial populations. We developed a platform to isolate and engineer bacteriophages to tackle bacteria-causing diseases in human, animals and the environment. I will present examples of bacteriophages applications we are currently pursuing which include microbiome editing, using bacteriophages as a functionalized food ingredient, as well as engineering bacteriophages to express host molecule, or to deliver biofilm-dispersing payload. The second theme looks at novel approaches to manipulate bacterial phenotypes like antibiotic resistance at system's level. For example, we recently showed that the signalling molecule hydrogen sulfide contribute to antibiotic resistance in *Mycobacterium* spp., while it can sensitize *A. baumannii* to multiple antibiotic classes, and was even able to revert acquired resistance in clinical isolates.

Wilfried Moreira holds a joint appointment with the Life Sciences Institute, NUSmed Immunology Translational Research Programme and the Department of Microbiology & Immunology at NUS as a senior research fellow and leads a bacteriophage-based microbiome editing platform. Prior to this current position, Wilfried was a principal investigator and the Director for Research of the Antimicrobial Resistance Program at the Singapore-MIT Alliance for Research and Technology (SMART) centre. Prior to joining the MIT Research Enterprise in Singapore, he worked on in drug discovery projects targeting *M. tuberculosis* as part of the SPRINT-TB program in NUS during his postdoctoral fellowship with Prof Thomas Dick. His current research focuses on 2 themes: i) the isolation and engineering of bacteriophages and ii) system's level mechanisms of resistance in pathogenic bacteria.