



# Seminar Announcement

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## Expanding the Scope of Antimicrobial Peptides: Anti-infectives and Beyond

**Date:** 19 March 2021, Friday  
**Time:** 4pm  
**Venue:** Classroom 1, SBS

The emergence and spread of multi-drug (MRD) resistant bacteria have initiated intense search for new antibiotics. Infections caused by Gram negative bacteria are even more difficult to remove due to low efficacy of several frontline existing antibiotics (vancomycin, novobiocin etc). The outer membrane-LPS protects Gram negative bacteria that limits entry of antibiotics to the cellular targets. Host defense antimicrobial peptides (AMPs) demonstrate high potential in developing anti-infective molecules against MDR pathogens. Apart from killing pathogens, AMPs are also known to be important in other health problems e.g. inflammation, wound healing and septic shock. We are investigating molecular mechanism of outer membrane-LPS disruption of potent and clinically relevant AMPs. In this talk, I will present: (i) NMR structure and interactions of thanatin, an insect derived cell agglutinating AMP, (ii) discovery of novel AMPs of human furin prodomain and (iii) preclinical development of de-novo designed b-boomerang cyclic peptide. In addition, we propose an expanding scope of multifunctional AMPs in inhibiting protein amyloids.



**Speaker:**

**Surajit Bhattacharyya**

Associate Professor  
School of Biological Sciences  
Nanyang Technological University