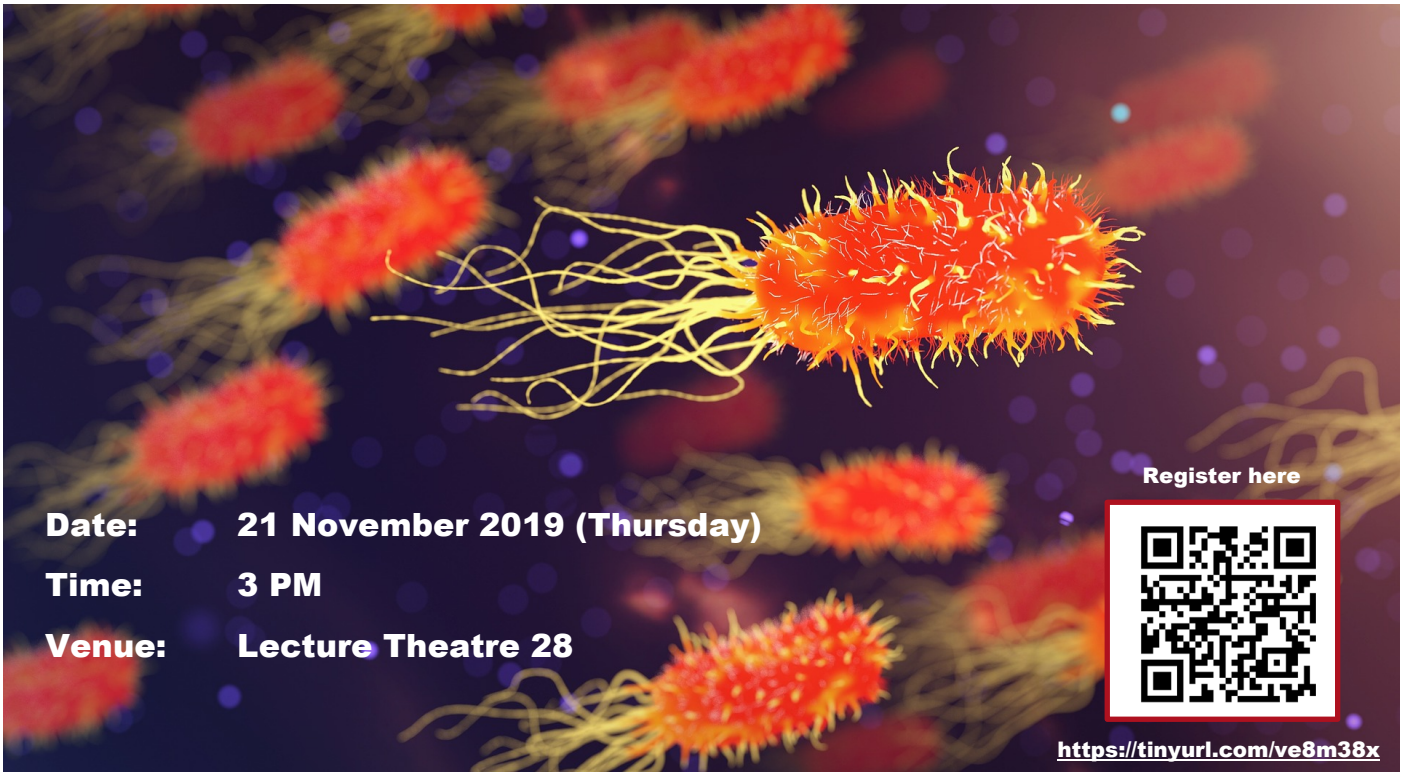

BACTERIAL STRESS RESPONSES DURING CHRONIC INFECTION

Guest Lecture by Dr Stephen Kidd University of Adelaide

When bacteria enter a human anatomical niche, they are assaulted with physical and chemical stresses. Even when colonising as commensals, the conditions are non-optimal and the bacteria need strategies to survive and grow. This pressure becomes further complicated when the bacteria are within a niche for prolonged periods of time. In these cases, the bacteria have uniquely adapted to persist and the bacterial cells are different to their original type. During infectious disease, medical intervention such as antibiotic treatment will target and largely, successfully remove the original cell types. It is the alternative cell types that tolerate the treatment and remain and thereby cause chronic and relapsing infections. Understanding how the bacteria switch to these cell types and the mechanisms that they are able to tolerate antibiotics is important and complex.

Dr Kidd is a Senior Lecturer in Microbiology and Immunology at The University of Adelaide in Australia. His research group studies the gene regulation used by pathogenic bacteria in response to the various assaults from host cells. This includes how bacteria persist despite the immune system and antibiotic treatment. His research is mainly focused on chronic infections by Staphylococcus aureus. After completing his PhD he worked for five years on different projects at The University of Birmingham in the UK. At The University of Adelaide, he is also the Program Coordinator for the Bachelor of Science (Biotechnology), and he is the lead academic for the Internship Program within the Faculty of Sciences.



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