



**Jockey Club**  
**College of Veterinary Medicine**  
**and Life Sciences**  
in collaboration with Cornell University

**Department of Infectious Diseases and Public Health**

**From understanding of bacterial resistance, virulence  
and persistence to novel antibacterial drug  
development**

**By**

**Professor Sheng Chen**

**Professor in Microbiology**

**Department of Applied Biology and Chemical Technology**

**The Hong Kong Polytechnic University**

**Date:** 24 January 2019 (Thursday)  
**Time:** 2:15pm – 3:15pm  
**Venue:** Room 2-130, 1/F, Block 2, To Yuen Building

**Abstract**

Clinical and public health problems due to multidrug-resistant bacterial infections have been further aggravated in recent years following the emergence of *bla*<sub>NDM-1</sub>, a mobile element that can mediate development of carbapenem resistance in the host strain, and possesses the ability to disseminate rapidly among various classes of bacterial pathogens worldwide. Current descriptions such as “superbug”, “nightmare bacteria” and “post-antibiotic era” reflect the seriousness of the antimicrobial resistance problem. My lab is working on understanding the mechanisms of bacterial antimicrobial resistance, bacterial virulence and persistence with an aim to develop novel intervention measures to combat the clinical infections caused by these superbugs. In this seminar, I would like to share with you research in these areas that have been done in my lab in the past few years in Hong Kong.

## Biography

Professor Sheng CHEN is a Professor at the Department of Applied Biology and Chemical Technology in the Hong Kong Polytechnic University and Director of Shenzhen Key Lab on Food Biological Safety Control. He obtained his DVM degree from China Agriculture University in 1997, PhD degree in Food Microbiology from the University of Maryland at College Park in 2004 and conducted Postdoctoral training at the Medical College of Wisconsin during 2004~2009. He joined the Hong Kong Polytechnic University in 2009 and works in the Department of Applied Biology and Chemical Technology as an Assistant Professor, Associate Professor and Professor since then. His current research covers studies on bacterial antimicrobial resistance, virulence and persistence in Veterinary, Food and Medical Microbiology areas. His research lies on the interface of clinical study and basic science using multi-disciplinary approaches with an ultimate goal to develop novel therapies to combat bacterial antimicrobial resistance.

Prof. Sheng Chen participates in the Hong Kong government's policy making through an ad-hoc working group on microbial guidelines for ready-to-eat food, under the Department of Food and Environmental Hygiene of Hong Kong Government. Prof. Chen is also a member of the Shenzhen Expert Committee to help Shenzhen government's decision on the biotechnology development. He is currently the Director of Shenzhen Key Laboratory for Food Biological Safety Control and past Chairman of Animal Ethic Committee and member of the Central Animal Facility Management Committee at PolyU. He has authored over 140 publications on areas of bacterial pathogenesis and antimicrobial resistance including several publications in *The New England Journal of Medicine*, *The Lancet Infectious Diseases*, *Nature Communication* and *PNAS*.

ALL ARE WELCOME

Enquiries: Mr Hency Poon (3442 6393; [hency.poon@cityu.edu.hk](mailto:hency.poon@cityu.edu.hk))