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Dr Li Dak-Sum Research Centre  
李達三博士研究中心

**The University of Hong Kong**

**Department of Pharmacology and Pharmacy  
& Dr. Li Dak-Sum Research Centre**

**Present**

**Seminar series – Drug Delivery and Translational Medicine**

**Rapid antimicrobial susceptibility testing for precision therapy of  
bacterial infection**

**by**

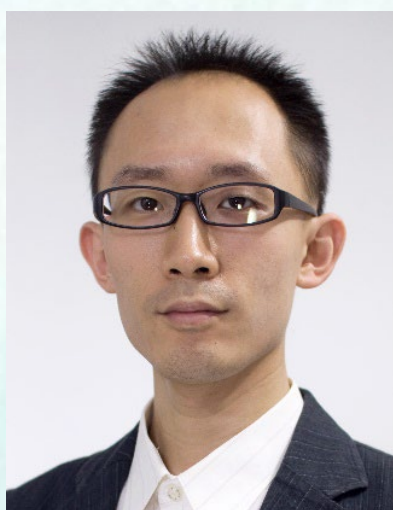
**Prof. Kangning Ren**

Associate professor  
Department of Chemistry  
Hong Kong Baptist University

**Date:** 22 November 2024 (Friday)

**Time:** 10:00 a.m. – 11 a.m.

**Venue:** Seminar Room 4, G/F, Laboratory Block,  
LKS Faculty of Medicine, 21 Sassoon Road,  
Pokfulam



**Abstract:**

Traditional antimicrobial susceptibility testing (AST) methods are too slow to guide timely, individualized prescriptions, resulting in a reliance on empirically prescribed broad-spectrum antibiotics. This limits the treatment efficacy, disrupts the microbiota, and accelerates antibiotic resistance. We are developing rapid ASTs that complete the entire process from sampling to results within hours, aiming to provide diagnostic tools for shifting from empirical to precision therapy, which improves treatment outcome and mitigates antimicrobial resistance.

**Bio:**

**Prof. Ren** is serving as associate professor, Associate Head, and Director of Taught Postgraduate Programme, Department of Chemistry, Management Committee Member of the State Key Laboratory of Environmental and Biological Analysis at HKBU, co-founder and Associate Director of the HKAP, and the founder and Director of biomimicking microfluidics translational research center at Tsinghua Research Institute, Pearl River Delta. His research centers on micro/nanotechnologies and their applications in materials and healthcare. Prof. Ren invented several key technologies for microfabrication of inert thermoplastics, which addressed the key challenges in structure robustness and surface fouling, and thus introduced important new materials for bio-inspired functional surfaces and new materials for microfluidic device fabrication. Meanwhile, Prof. Ren has developed some microfluidic technologies based on innovative hydrodynamic designs, which are employed to address various demands in health-related applications. Some of the technologies his group created are on the track of translation and commercialization.

**Moderator:** Prof. Weiping Wang, Associate Professor, Department of Pharmacology and Pharmacy & Dr. Li Dak-Sum Research Centre, The University of Hong Kong  
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