



The University of Hong Kong

Department of Pharmacology and Pharmacy

Presents

Seminar series – Drug Delivery and Translational Medicine Pharmaceutical Applications of 3D Printing

by



Dr. Lifeng Kang

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Date: 31 January 2024 (Wednesday) Time: 10:00 a.m. – 11:00 a.m. Venue: Zoom Seminar Zoom Link: <u>https://hku.zoom.us/j/93597791732</u> Meeting ID: 935 9779 1732 Password: 079537

Abstract:

The U.S. Food and Drug Administration approved the first 3D-printed drug tablet in 2015, sparking increasing interest in the field of 3D printing (or additive manufacturing) in pharmaceuticals. Apart from being a novel manufacturing method, additive manufacturing offers significant advantages over traditional drug delivery and testing system. These include the ability to create complex geometries for achieving variable drug release kinetics, facilitating personalized drug therapies, and reducing the costs of personalized dosage production. Additionally, additive manufacturing can produce intricate micro-scale tissue scaffolds and models. This lecture provides an overview of the advantages of additive manufacturing in drug delivery and testing, compares it with traditional manufacturing techniques, and discusses the challenges and future directions of additive manufacturing in pharmaceutical applications.

Bio:

Dr. Lifeng Kang is a Senior Lecturer in the School of Pharmacy at the Faculty of Medicine and Health, University of Sydney, Australia. He specializes in the application of microfabrication and 3D printing technologies in drug delivery systems and tissue engineering. He is recognized as one of the top 2% scholars globally, as determined by Stanford University. He has filed 9 patents, with 5 of them granted and 3 licenced.

In 2006, he earned his Ph.D. in the Department of Pharmacy at Faculty of Science, National University of Singapore. He subsequently received the NUS Overseas Postdoctoral Fellowship and undertook 2 years of postdoctoral training at the Massachusetts Institute of Technology in United States. In 2009, he returned to the National University of Singapore as a lecturer (Teaching). In 2017, he joined the University of Sydney as a Lecturer/Senior Lecturer (Research and Teaching). His website is: https://www.kanglab.net.

