## **Department of Biomedical Sciences**



# presents the seminar series in Cancer Biology, Professional-Creative Biotherapy and Nanomedicine

# "Engineering Advanced Biomaterials: from synthetic surfaces to lipid libraries"

Dr. Linxian Li
Ming Wai Lau Centre for Reparative Medicine
Karolinska Institute Hong Kong

**Date: 19 July 2018** 

Time: 11:00 am - 12:30 pm

Venue: Meeting Room 2-130, 1/F, Block 2, To Yuen Building

#### **Abstract**

In molecular and cellular therapies, it is crucial that macromolecular drugs and stem cells are manufactured in clinical quality and they can be delivered into proper locations in vivo in order to execute their functions. However, the rational design of cell culture and macromolecular delivery systems is often laborious and inefficient, since the design criteria are difficult to define. Sitting at the interface of materials science and biotechnology, my research aims to develop the synthetic materials for stem cell culture and novel delivery systems for molecular therapies. To accelerate this process, I have developed combinatorial methods that are capable of parallel synthesizing a large number of biomaterials, and combined with high-throughput screening tools to efficiently identify candidates. These efforts have led to an advanced system with great potential in gene therapy, drug discovery, and tissue engineering applications. I continue to focus my efforts on elucidating the mechanism and translating new biomaterials for medical use.

### **About the Speaker**



Dr. Linxian Li is a biomedical engineer with interdisciplinary expertise in organic chemistry, materials science, and biomedical engineering. After obtaining his PhD degree at Ruprecht-Karls-University of Heidelberg in Germany, he pursued postdoctoral research with Prof. Robert S. Langer at Massachusetts Institute of Technology. Committed to translate new materials for medical use, he focuses on developing biomaterials to deliver messenger RNA therapeutics and engineering biointerfaces to control cell

fate. His work has resulted in over 20 publications including papers, patents and patent applications. These patents have been licensed to chemical and biotechnology companies, and several products that have been commercialized. Dr. Li is named to the list of 35 Innovators under 35 in China 2017 by MIT Technology Review.

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All are welcome!