Department of Biomedical Sciences, CityU

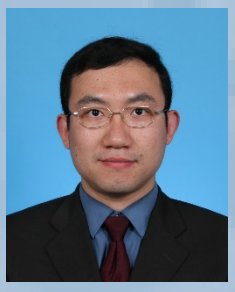
presents

香港城市大學
City University of Hong Kong

Title:	**Receptor-Mediated Lipid Transport in Metabolic Homeostasis and Viral Defense**
Speaker:	**Prof. Xiao-Wei Chen, Professor, Center for Life Sciences**
Date:	**13 November 2023 (Monday)**
Time:	**10:00- 11:30**
Venue:	**B5-307, Level 5 (blue zone), YEUNG Academic Building, CityU**

Abstract: The encapsulation of selective substances within the phospholipid bilayer is the defining feature of life, even extending to the semi-autonomous viruses. In particular, cells evolve complex mechanisms to ensure the proper production and transport of bulk lipids across the lipid membranes. Dyslipidemia, resulted from dysregulation of lipid transport, represents the leading cause of the prevalent cardiometabolic diseases. We recently uncovered a specialized program that couples the biogenesis and transport of lipid-ferrying lipoproteins, operated by a high-capacity cargo receptor SURF4. The receptor also partners with metabolic enzymes including the long-sought biogenic phospholipid scramblase TMEM41B and fundamental machineries such as the COPII coats. Intriguingly, such program could be hijacked by viruses including the recently ramping coronavirus, paving new avenues to understand lipid transport and homeostasis across kingdoms of life.

Biography:



Dr. Xiao-Wei Chen obtained his BS and BA from the Peking University, and completed his Ph.D. training on metabolic biology at the University of Michigan. He then pursued postdoctoral study on genetics and cardiovascular biology in the laboratory of Dr. David Ginsburg, prior to being recruited back to the Peking University in 2014. His group focuses on the genetics and cell biology of lipoprotein biology and lipid homeostasis, particularly by elucidating a receptor-mediated export program for the lipoproteins. His work has recently uncovered the long-sought biogenic lipid scramblase, which also functions as an essential host factor for coronaviruses. He is the recipient of the Young Investigator Award from the Chinese American Diabetes Association and Special Recognition Award from the Society of Heart and Vascular Metabolism, as well as the Earl Stadtman Scholar finalist from the National Institute of Health, USA and the Distinguished Young Scholar Award from the National Natural Science Foundation, China. He serves as an associate editor of *Biochemical Journal*, and on the editorial board of *Life Metabolism*, *Journal of Lipid Research* and *Cell Metabolism*.

ALL ARE WELCOME!

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