DukeNUS Medical School | Cancer & Stem Cell Biology

CSCB Seminar Series

Balancing Lipid Metabolism and Epithelial Resilience: Insights from Intestinal Autophagy

Date: 9 December 2026 (Wednesday)
Time: 12:00pm – 1:00pm

Format : In-person
Amphitheatre, Level 2
Duke-NUS Medical School

Abstract:

The intestinal epithelium plays a central role in systemic metabolic homeostasis by coordinating dietary nutrient absorption, lipid processing, and epithelial renewal. As a major interface between dietary nutrients and the host, the intestine must balance efficient nutrient utilization with the maintenance of epithelial integrity, particularly under metabolic stress. The autophagy machinery is essential for cellular homeostasis, yet its roles in intestinal lipid metabolism and systemic metabolic regulation remain incompletely understood. Our recent studies investigate how intestinal autophagy-related pathways influence lipid handling, epithelial homeostasis, and whole-body metabolism. Using genetic mouse models and omics approaches, we explore how changes in intestinal lipid processing influence systemic metabolic adaptation and epithelial responses to dietary stress. These studies provide new insights into the interplay between intestinal lipid metabolism, systemic metabolic homeostasis, and epithelial stress resilience, highlighting the broader significance of intestinal autophagy in metabolic health.

Speaker:



Prof. Guang-Chao CHEN

Research Fellow and Professor
Institute of Biological Chemistry
Academia Sinica

Dr. Chen received his Ph.D. from the University of Texas at Austin and completed postdoctoral training at the MGH Cancer Center, Harvard Medical School. He is a Research Fellow at Academia Sinica and a Professor at National Taiwan University. His lab combines Drosophila and mammalian models with multi-omics to study how autophagy, ubiquitin signaling, and protein tyrosine phosphatases regulate development, tissue homeostasis, metabolism, and disease.

Host:

Dr. Hong-Wen TANG
Assistant Professor,
Programme in Cancer & Stem Cell Biology,
Duke-NUS Medical School

No registration is required.
All are welcome.

Any enquiries, please contact Jayden:
jayden.c@duke-nus.edu.sg