

Department of Biological Sciences Faculty of Science

VIRTUAL BIOLOGY COLLOQUIUM

Friday, 16 Oct 2020 | 4pm | Online Zoom Session

Hosted by A/P Lu Gan

Mitochondrial cristae and network remodeling in health and diseases



About the Speaker

My research interests center on understanding how protein assemblies regulate mitochondrial membrane and network remodeling. Mitochondrial function is critical to cell physiology, which builds upon the ultrastructural support and the homeostasis of the mitochondrial network. We tackle the underlying structural mechanisms at cellular and molecular levels by integrative 3D electron microscopy approaches. We combine biological platforms, including Drosophila genetics and cell culture systems, to address related issues

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Meeting ID: 846 1760 5286 Password: 668015

By Chi-yu Fu

Institute of Cellular and Organismic Biology, Academia Sinica, Taiwan

Mitochondria are organelles of energetic, metabolic, and signaling hubs. Vital cellular processes are executed in dedicated subcompartments of mitochondria through the spatial arrangement and coordination of key molecules. Mitochondrial homeostasis is maintained by the coordination of mitochondrial biogenesis, network dynamics, and quality control mechanisms. The unique mitochondrial ultrastructure of the double-membrane and cristae invagination associate intricately with its function. Furthermore, mitochondria operate as an integrated network in cells and the homeostasis is modulated by the fusion and fission processes. The alteration of mitochondrial structure, function, and the network homeostasis including was found in various diseases, neurodegenerative diseases, cancers, and cardiomyopathy. I'll share several key insights into the regulation of cristae and network remodeling response to energetic or physiological alternations in the seminar.

Virtual Seminar Etiquette:

- ✓ Please "mute" upon arrival into the meeting room.
- Questions can be asked after the presentation. You are encouraged to verbally ask questions or submit your questions via chat group.
- By being present at this meeting, information presented is a privilege and you agree that you would <u>NOT UNDERTAKE</u> any forms of recording/photo-taking.