

Using Flipped Classroom with Recent Research Discovery to Enhance Interactive Teaching and Learning in Protein Trafficking

RGC-AoE Centre for Organelle Biogenesis and Function, Centre for Cell and Developmental Biology, School of Life Sciences, The Chinese University of Hong Kong

Ms. Jenny LAI, Dr. Vivian Chan & Prof. Liwen JIANG

7 Decbmer 2018

Summary

This project aims at developing micro-modules from our recent research findings published in prestigious international journals that are related to protein trafficking for the students taking the course *CMBI4001 Protein Trafficking*. Prof. Jiang coordinated with the first authors to produce online teaching videos explaining the background information and the research data in the publications.

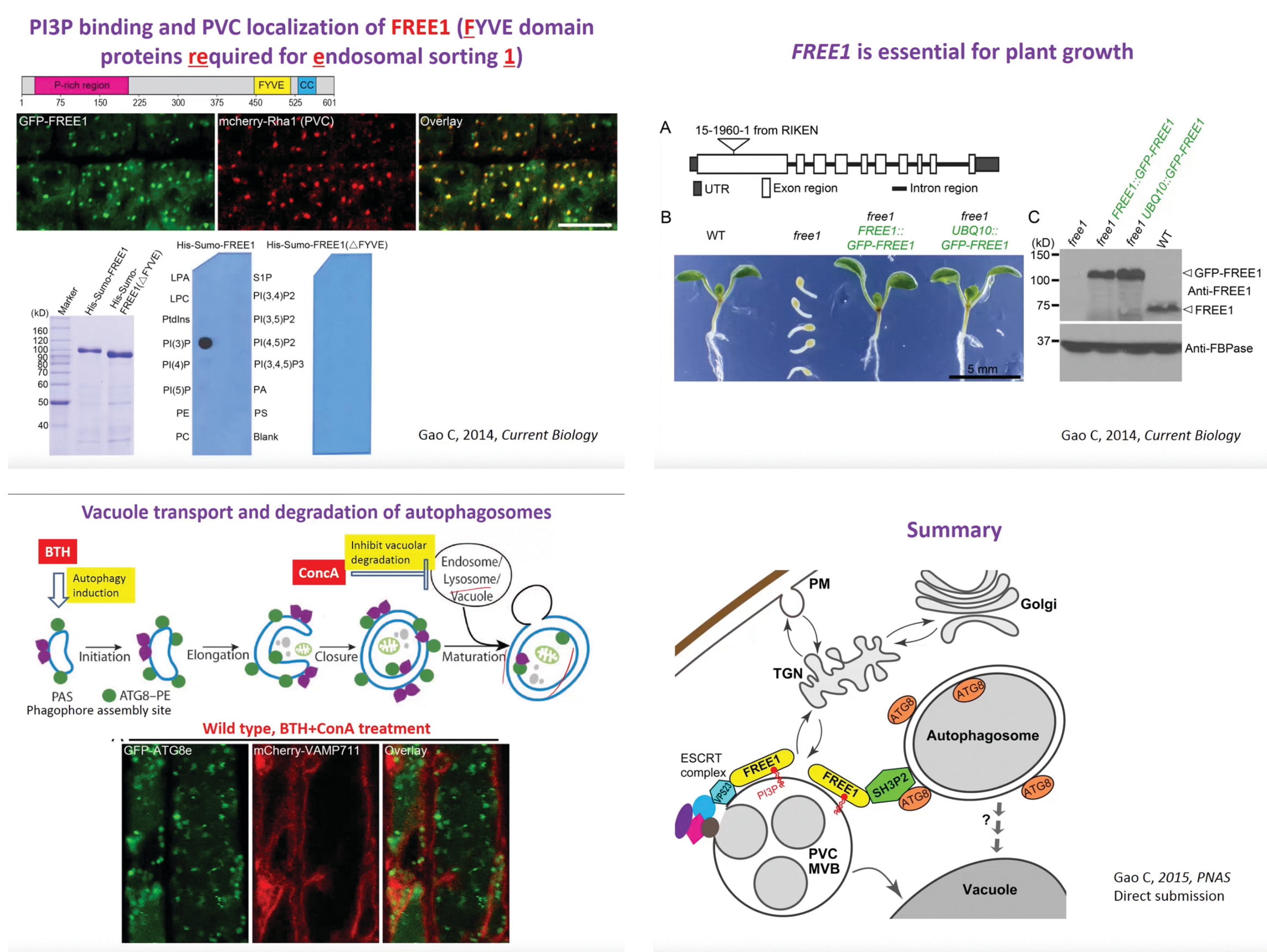


Prof. Jiang and first authors of protein trafficking-related publications having discussion on experimental findings

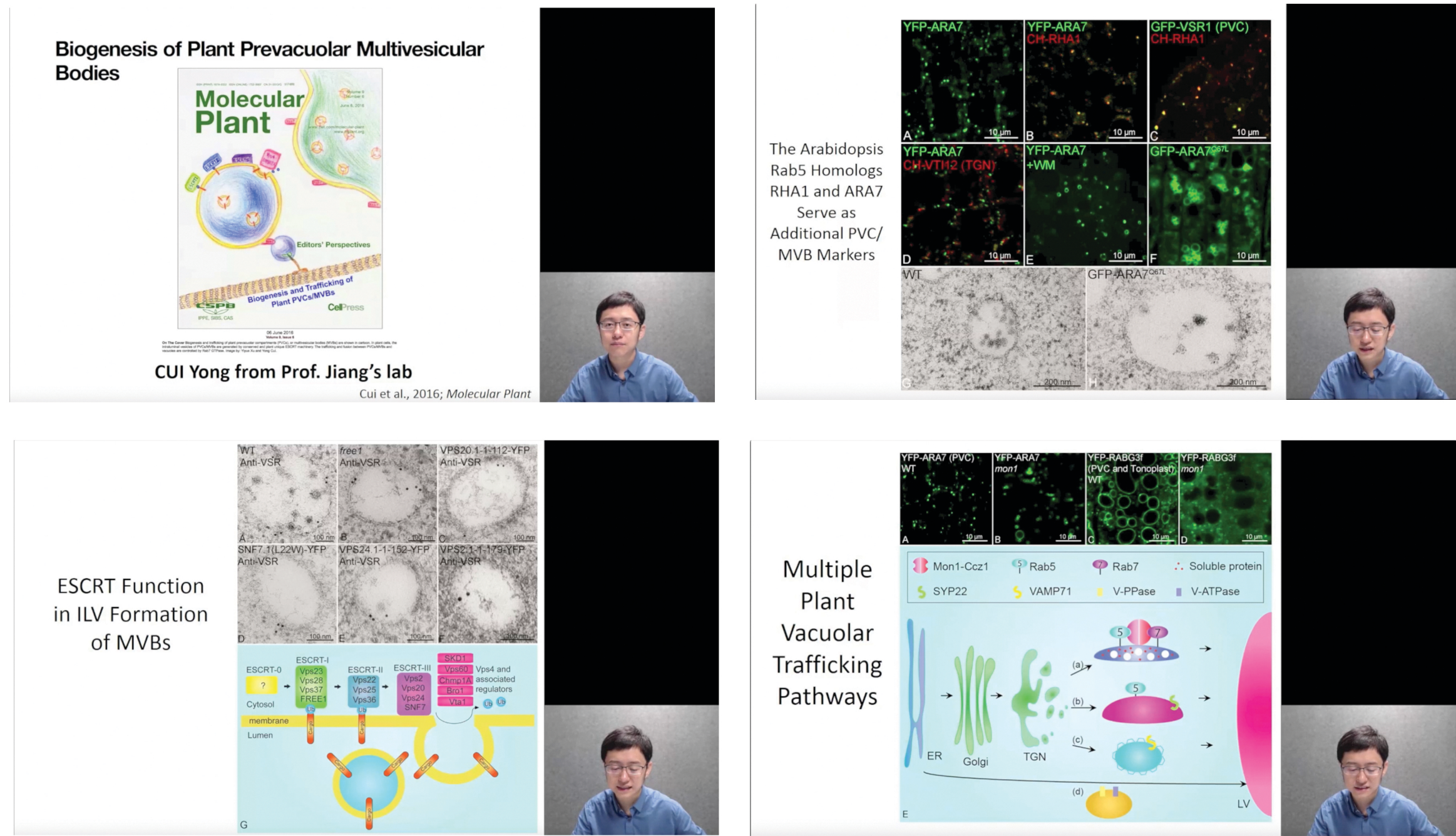
Self-learning Videos

In this project, 18 micro-modules have already been generated. They covered a variety of research findings related to protein trafficking. Examples are included as below:

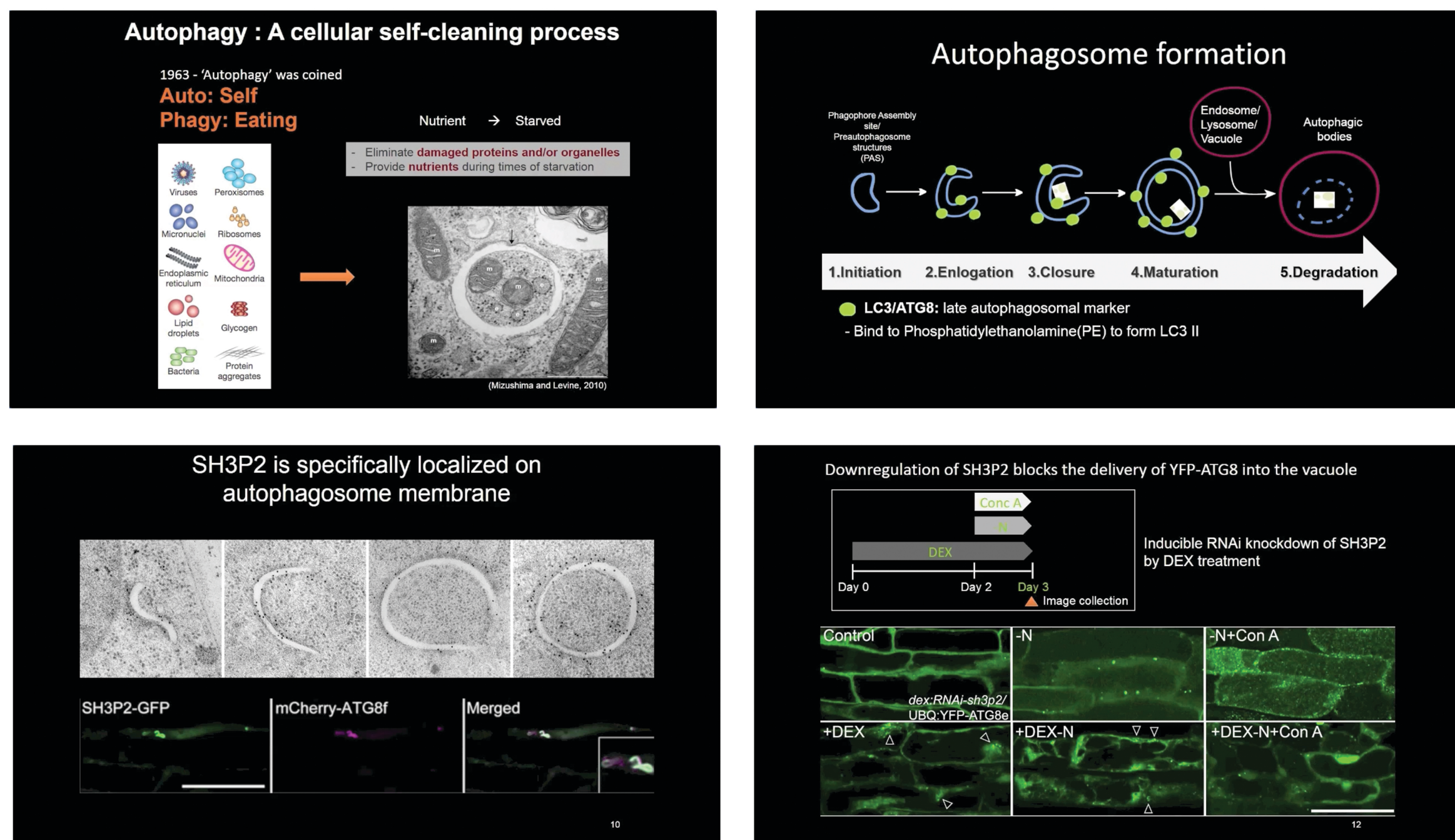
A. FREE1: a magic plant protein



B. Activation of the Rab7 GTPase by the MON1-CCZ1 Complex is Essential for PVC-to-Vacuole Trafficking and Plant Growth in Arabidopsis

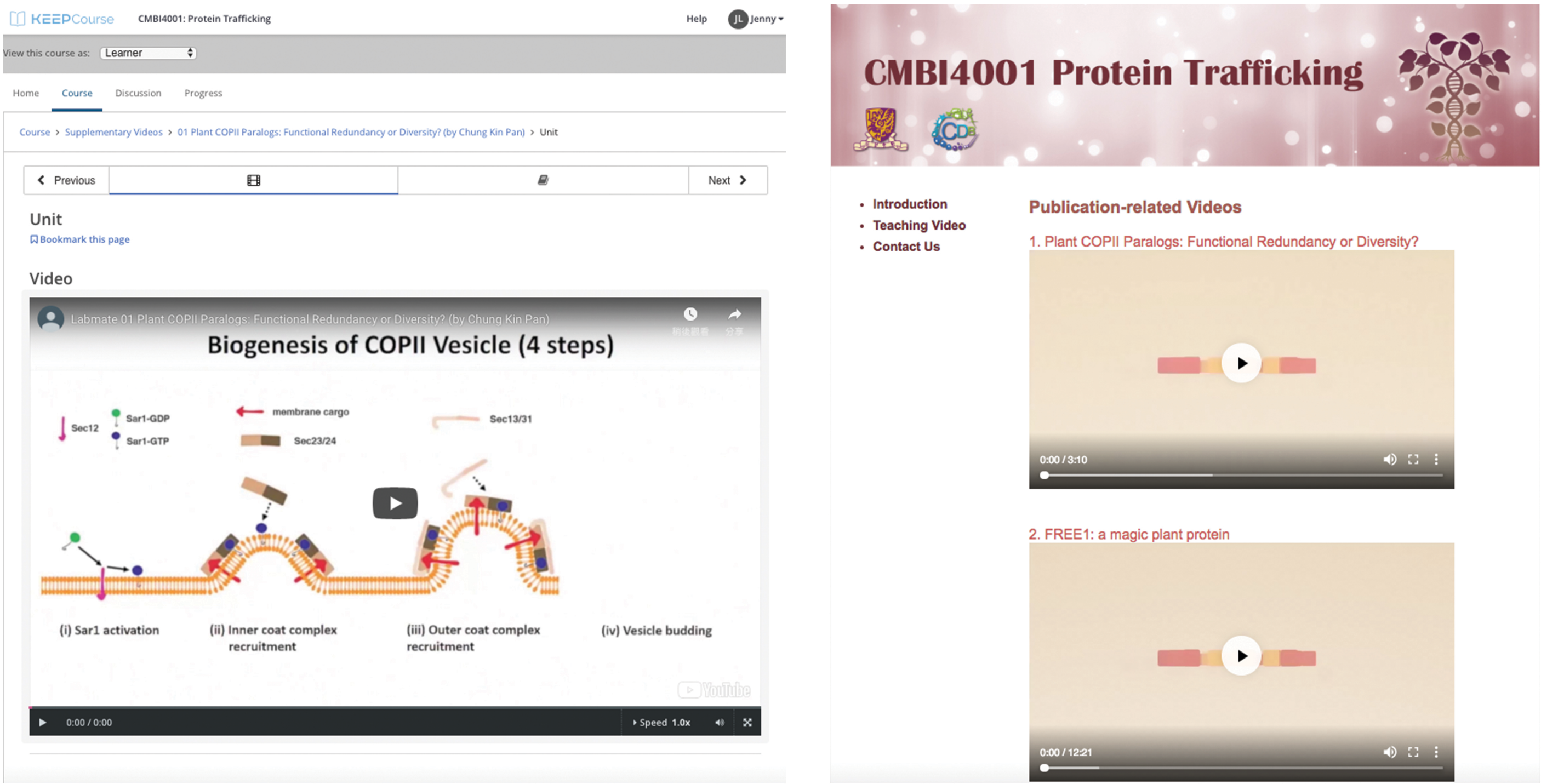


C. A BAR-Domain Protein SH3P2, Which Binds to Phosphatidylinositol 3-Phosphate and ATG8, Regulates Autophagosome Formation in Arabidopsis



Online Learning Platform

The teaching videos and the related publications have been uploaded to the KEEP online platform for students taking *CMBI4001* to view before lectures. During the lecture time, students who have already gained understandings about the research publications can have more intensive and deep discussion regarding the current developments in protein trafficking. The videos were also uploaded to a public-accessible website to share the eLearning resource to other students in CUHK or from other institutions who are interested in the topics.



Interface of the KEEP online platform and public-accessible website