國立清華大學_107_學年第_2_學期新開課程課程大綱

科號		組別		學分	2	人數限制	Offered in English/須與老師討論後加簽選課
修課年級							
上課時間	TaTb			教室			
科目中文名稱	植物細胞生物特論						
科目英文名稱	Special Topics on Plant Cell Biology						
任課教師	劉姿吟						
擋修科目				擋修			

一、課程說明	To explore the newest discoveries and the current methodology in research of plant cell biology
二、教學方式	1. A series of updated research papers related to the field of plant cell biology will be selected for reading and discussion 2. Two-way interaction in this class; students have to read the paper before class and actively participate in discussions in the class.
三、教學進度	1. Transport from the endoplasmic reticulum to the Golgi in plants: Where are we now? Semin Cell Dev Biol. 2018 Aug;80:94-105 2. Advances in Plant ER Architecture and Dynamics. Plant Physiol. 2018 Jan;176(1):178-186. doi: 10.1104/pp.17.01261. 3. From shaping organelles to signalling platforms: the emerging functions of plant ER-PM contact sites. Curr Opin Plant Biol. 2017 Dec;40:89-96. 4. Formation and Maintenance of the Golgi Apparatus in Plant Cells. Int Rev Cell Mol Biol. 2014;310:221-87. 5. Vesicles versus Tubes: Is Endoplasmic Reticulum-Golgi Transport in Plants Fundamentally Different from Other Eukaryotes? Plant Physiol. 2015 Jun;168(2):393-406 6. ER Import Sites and Their Relationship to ER Exit Sites: A New Model for Bidirectional ER-Golgi Transport in Higher Plants. Front Plant Sci. 2012 Jul 2;3:143

	7. Dancing with the Stars: Using Image Analysis to Study the Choreography of the Endoplasmic Reticulum and Its Partners and of Movement Within Its Tubules. Methods Mol Biol. 2018;1691:75-102. 8. Quantitation of ER Structure and Function. Methods Mol Biol. 2018;1691:43-66 9. ER Microsome Preparation in *Arabidopsis thaliana.* Methods Mol Biol. 2018;1691:117-123 10. Fluorescence Imaging of Autophagy-Mediated ER-to-Vacuole Trafficking in Plants. Methods Mol Biol. 2018;1691:239-249 11. BY-2 Cells: Culture and Transformation for Live Cell Imaging. Curr Protoc Cell Biol. 2003 Aug;Chapter 1:Unit 1.7
	Final Oral Presentation
四、學習評量	In-class discussion: 40% Final oral presentation: 60%