

## 108-1

### The molecular mechanisms of apoptosis

#### 細胞凋亡的分子機轉

2019/5/10 製作

**Course Goals:** This course covers the topics of molecular mechanisms that regulate apoptosis, also known as the programmed cell death. Topics include an overview of apoptosis; the role of mitochondria in apoptosis; the Bcl-2 protein family; the caspases; the death receptors; and apoptosis in diseases. The primary goal of this course is to let students gain insights and learn recent findings in the apoptosis field.

**Course Format:** This course will incorporate lecture, discussion, and student report

**Course Materials:** Review articles and recent published research articles on apoptosis-related field

**Grading Criteria:** Student's performance will be evaluated throughout the course by attendance (10%), participation (10%), presentation in the class (40%), and a final essay (40%).

**Class format:** The class will include lectures and paper discussions in some of the topics (will be announced in the first class). Each student is required to present a report assigned by the instructor.

**Grading: (1)** The grade for this class will be given by evaluating attendance, participations, and performances in the class (60%) and a final report (40%). **(2)** Turn in the final report no later than 5 pm on January 11, 2019.

**(3)** The final report should be typed in A4 paper with 8-page limit, not including references page

Please find a topic related to the topics lectured in the course and prepare a report following the guidelines as follows. : (a). Abstract, a half page (b). Background and significance, 2 pages (c). Unsolved issues to be addressed, a half page (d). Goals (aims) to be pursued, less than a half page (e). Experimental rationale, strategy, and methods, 3 pages (f). Expected results, 2 pages (g). References

Class Time: Friday 10:10 am~12:00 pm

Classroom: 303D

Coordinator(s): Dr. Chi-Wu Chiang (蔣輯武), ext. 3637, 3591

Teaching assistant(助教): ext. 3591

Date	Topic	Lecturer
9/13	Moon Festival	no class
9/20	The programmed cell death in <i>C. elegans</i>	陳昌熙
9/27	Apoptosis in murine development	蔣輯武
10/4	Apoptosis in development of <i>Drosophila</i>	姜學誠
10/11	Mitochondria and apoptosis (to be rescheduled)	張南山
10/18	The prosurvival Bcl-2 protein family	蔣輯武
10/25	The pro-apoptotic Bcl-2 protein family	蔣輯武
11/1	The biochemistry of apoptosis	蔣輯武
11/8	Caspases: the central executioners of apoptosis	蔣輯武
11/15	The extrinsic pathway of apoptosis	蔣輯武
11/22	PBL on apoptosis	蔣輯武
11/29	Apoptosis in the nervous system	莊季瑛
12/6	Entosis, pyroptosis, and other non-apoptosis PCD	蔣輯武
12/13	Pathogens, cell death, and diseases	蔣輯武
12/20	Application of apoptosis in therapeutics	吳梨華
12/27	Autophagy and apoptosis	張志鵬
1/3/2020	PBL on apoptosis	蔣輯武