## 107 學年度 老化研究特論(Special Topics on Aging Research)

這門課程的目標,是期望將老化研究領域中的重要文獻背景做回顧,並探討最近的突破與發現。並希望藉由介紹老化研究領域的研究模式,讓學生能從單一細胞老化、到生物體的衰老及與老化相關疾病如癌症、神經退化疾病的產生的已知機制與模式能有廣泛的認知。

時 間: Friday AM 10:10-12:00

地 點:醫學院 303D 教室

協調人: 蔣輯武老師 (分醫所) Tel: 3637 陳昌熙老師 (生化所) Tel: 5548

助教: 陳詩旻 (分醫所) Tel:3591

| 週次<br>Week | 進度說明 Progress Description                                  | 日期   | 教師  |
|------------|------------------------------------------------------------|------|-----|
| 1          | Introduction to aging                                      | 2/22 | 蔣輯武 |
| 2          | The molecular genetics of aging                            | 3/8  | 蔣輯武 |
| 3          | Aging in model organisms I                                 | 3/15 | 陳昌熙 |
| 4          | Aging in model organisms II                                | 3/22 | 蔣輯武 |
| 5          | From cell dividing to cell senescence                      | 3/29 | 蔣輯武 |
| 6          | Cell senescence, oncogene, and cancer                      | 4/12 | 吳梨華 |
| 7          | Mitochondria, Oxidative stress, and aging I                | 4/19 | 莊季瑛 |
| 8          | Mitochondria, Oxidative stress, and aging II               | 4/26 | 莊季瑛 |
| 9          | Calorie restriction and aging                              | 5/3  | 蔣輯武 |
| 10         | Discussions on aging research (PBL)                        | 5/10 | 蔣輯武 |
| 11         | The molecular pathogenesis of Alzheimer's disease in aging | 5/17 | 郭余民 |
| 12         | Drosophila as a model for human neurodegenerative disease  | 5/24 | 姜學誠 |
| 13         | Reproductive aging                                         | 5/31 | 郭保麟 |
| 14         | Discussions on aging research (PBL)                        | 6/14 | 陳昌熙 |
| 15         | The keys to longevity                                      | 6/21 | 蔣輯武 |

## **Class format**

The class will include lectures and journal club in some of the topics. Each student is required to present a paper assigned by the instructor.

<sup>~</sup>The grade for this class will be given by evaluating participations (including

attendance) in the class (20%) and performances in the oral presentation (40%) and a final written report (40%). Turn in the final written report no later than 5 pm on June 28, 2019

## **Guidelines for the final report**

The written report should be typed in A4 paper with 6-page limit, including cover page

Please find a topic related to the topics lectured in the course and prepare a report following the guidelines as follows.

- 1. Abstract, a half page
- 2. Background and significance, 2 pages
- 3. Unsolved issues to be addressed, a half page
- 4. Goals (aims) to be pursued, less than a half page
- 5. Experimental rationale, strategy, and methods, 3 pages
- 6. Expected results, 2 pages
- 7. References