**110 學年度 老化研究特論(Special Topics on Aging Research )**

2022/1/5

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: 陳宜馨 簡妏樺 (分醫所) Tel:3591

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| **週次 Week** | **進度說明 Progress Description** | **日期** | **教師** |
| 1 | Introduction to aging | 2/18 | 蔣輯武 |
| 2 | The molecular genetics of aging | 2/25 | 蔣輯武 |
| 3 | Aging in model organisms I | 3/4 | 蔣輯武 |
| 4 | Aging in model organisms II | 3/11 | 陳昌熙 |
| 5 | From cell dividing to cell senescence | 3/18 | 蔣輯武 |
| 6 | Cell senescence, oncogene, and cancer | 3/25 | 蔣輯武 |
| 7 | Mitochondria, Oxidative stress, and aging I | 4/1 | 莊季瑛 |
| 8 | Mitochondria, Oxidative stress, and aging II | 4/8 | 莊季瑛 |
| 9 | The molecular pathogenesis of Alzheimer’s disease in aging | 4/15 | 郭余民 |
| 10 | Discussions on aging research (PBL) I | 4/22 | 蔣輯武 |
| 11 | Calorie restriction and aging | 4/29 | 蔣輯武 |
| 12 | Molecular basis of neurodegeneration | 5/6 | 張南山 |
| 13 | Drosophila as a model for human neurodegenerative disease | 5/13 | 姜學誠 |
| 14 | Reproductive aging | 5/20 | 郭保麟 |
| 15 | Discussions on aging research (PBL) II | 5/27 | 陳昌熙 |
| 16 | The keys to longevity | 6/10 | 蔣輯武 |
| 17 | Final reports | 6/17 | 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.

~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 18, 2022

**Guidelines for the final report**

The written reportshould 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