

## Research Tools of Basic Medical Sciences – Fall 2019

### 基礎醫學研究技術

**Room: 601**

**Time: Monday, AM 10:10-12:00**

9/9	Introduction	Po-Hsien Huang
9/16	Start a research project: Internet resources (dry lab work)	Ming-Derg Lai
9/23	Transgenic animal	Shang-Hsun Yang
9/30	Virus-based techniques	Shang-Hsun Yang
10/7	Methods for optical imaging	Wen-Tai Chiu
10/14	Application of fluorescence protein	Wen-Tai Chiu
10/21	Demonstration	Wen-Tai Chiu
10/28	Analyze RNA expression (Single gene level)	Chang-Shi Chen
11/4	Analyze RNA expression (Systematic analysis) & Demonstration	Chang-Shi Chen
11/11	Digital pathology	Po-Hsien Huang
11/18	Analyze protein expression (western, IHC, proteomics)	Po-Hsien Huang
11/25	Analyze protein expression (Core facility in Hospital)	Po-Hsien Huang
12/2	Cell separation & analysis (Flow sorting, magnetic)	Hung-Chi Cheng
12/9	Signal transduction (shRNA, inhibitor, gene pulser)	Hung-Chi Cheng
12/16	Demonstration	Hung-Chi Cheng
12/23	Animal imaging	Yau-Sheng Tsai
12/30	Term report	Po-Hsien Huang

**Objective:** The purpose of this course is to provide the knowledge of basic biomedical techniques in modern medical research and how to use the core facility in Medical College and Hospital. The virtual experiment or demonstration may be included in the class.

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#### Course instructors:

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Shang-Hsun Yang	楊尚訓
Chang-Shi Chen	陳昌熙
Wen-Tai Chiu	邱文泰
Po-Hsien Huang	黃柏憲
Hung-Chi Cheng	鄭宏祺
Yau-Sheng Tsai	蔡曜聲

To the students enrolled in the class "Research Tools of Basic Medical Sciences"

The course grade will be evaluated by the "term report"

Please write a report on any two different biochemical tools

The report includes:

- (1) The principle of research technique
- (2) The advantages of research technique
- (3) The disadvantages of research technique
- (4) The application of research techniques.

Page limit: 5 pages

Language: English

deadline: 12/31