

Syllabus

SCBC 321 Molecular aspects of human diseases

Course Goals

Student will be able to link the key concepts in molecular biology to physiological function of human body, to explain how infections and the dysregulation of these processes causes specific diseases or abnormalities and to recognize critical importance of the knowledge in cell and molecular biology for diagnosis and treatment of particular diseases.

Course Objectives

This course aims to provide knowledge and abilities as follows:

- molecular basis of pathogenic organisms–host interaction that underlie infectious diseases
- the fundamental cellular processes, dysfunction of which are implicated in disease development at the molecular level
- key concepts in cellular and molecular biology linked to particular diseases and discuss how the dysregulation of such processes leads to disease development and progression.
- the importance of cellular and molecular biology in understanding body function and evidence-based medicine.

Pre-requisite: None

Study Site Location: B301

Schedule: 13:00-15:00

Date	Topics	Instructors
16 Jan 2024	Introduction; Prion disease	SC
18 Jan 2024	Viral infection I	TT
23 Jan 2024	Viral infection II	TT
25 Jan 2024	Immunology	WS
30 Jan 2024	Bacterial infection I	SC
1 Feb 2024	Bacterial infection II	SC
6 Feb 2024	Fungal infection I	SC
8 Feb 2024	Fungal infection II	SC
13 Feb 2024	Paper discussion (Infectious diseases)	SC

15 Feb 2024	Mid-term exam	(SC)
20 Feb 2024	Molecular biology of cancer	WK
22 Feb 2024	Molecular angiogenesis I	TK
27 Feb 2024	Molecular angiogenesis II	TK
29 Feb 2024	Glycobiology and diseases I	SK
5 Mar 2024	Glycobiology and diseases II	SK
7 Mar 2024	Neurological diseases I	MK
12 Mar 2024	Neurological diseases II	MK
14 Mar 2024	Drug resistance	AD
19 Mar 2024	Regenerative medicine	AD
21 Mar 2024	Paper discussion (Non-infectious diseases)	SC
26 Mar 2024	(Self-study)	(SC)
28 Mar 2024	Final exam	(SC)

Instructors

Dr. Alisa Damnernsawad (AD) – alias.dam_at_mahidol.ac.th
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Evaluation of student achievement

Written exam and assignments 100%