

Syllabus SCBC 321 3(3-0-6)
Molecular aspects of human diseases

Course Goals

Students 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 cause 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 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

Class	Date	Topics	Instructors
1	6 Jan	Introduction; Prion disease	SC
2	8 Jan	Viral infection I	TT
3	13 Jan	Viral infection II	TT
4	15 Jan	Immunology	WS
5	20 Jan	Bacterial infection I	SC
6	22 Jan	Bacterial infection II	SC
7	27 Jan	Fungal infection I	SC
8	29 Jan	Fungal infection II	SC
9	3 Feb	Special seminar I	VS
10	5 Feb	Mid-term exam	(SC)
11	10 Feb	Glycobiology and diseases I	SK
12	12 Feb	Glycobiology and diseases II	SK
13	17 Feb	Molecular cancer	WK
14	19 Feb	Molecular angiogenesis I	TK
15	24 Feb	Molecular angiogenesis II	TK
16	26 Feb	Neurological diseases I	MK
17	3 Mar	(Holiday)	-
18	5 Mar	Neurological diseases II	MK

19	10 Mar	Drug resistance	AD
20	12 Mar	Regenerative medicine	AD
21	17 Mar	Special seminar II	CS
22	19 Mar	Final exam	(SC)

Instructors

Dr. Alisa Damnernsawad (AD) – alias.dam_at_mahidol.ac.th
 Dr. Chotiwat Seephetdee (CS) – chotiwat.see_at_mahidol.ac.th
 Dr. Mikhail Khvochtchev (MK) – mikhail.khv_at_mahidol.ac.th
 Dr. Sittinan Chanarat (SC) – sittinan.cha_at_mahidol.ac.th (course coordinator)
 Dr. Sakonwan Kuhaudomlarp (SK) – sakonwan.kuh_at_mahidol.ac.th
 Dr. Thaned Kangsamaksin (TK) – thaned.kan_at_mahidol.ac.th
 Dr. Thiprampai Thamamongood (TT) - thiprampai.tha_at_mahidol.ac.th
 Dr. Vorthon Sawaswong (VS) – vorthon.saw_at_mahidol.ac.th
 Dr. Waraporn Komyod (WK) – waraporn.kom_at_mahidol.ac.th
 Dr. Waradon Sungnak (WS) – waradon.sun_at_mahidol.ac.th

Evaluation of student achievement

Written exam and assignments 100%