

SCBM 303
Aging of Central Nervous System

Semester 2/2018

Department of Pathobiology
Faculty of Science
Mahidol University

Course Syllabus

(Lecture-Lab-Self study)

SCBM 303 Aging of Central Nervous System

2(2-0-4)

Course description

Aging Neurobiology of Central Nervous System is a branch of medical science, which is focused at aging mechanism. The topic will include anatomy, physiology and pathology of neuron system. Advance Aging Neurobiology of Central Nervous System will explain about conditions those destroy or impair neuron systems and current standard medical treatment options and advance medical sciences which can be delay or convert the process. The end of topics will review about update research and technologies in Aging Neurobiology of Central Nervous system.

Prerequisite: SCBM 304 Biological science of aging
SCBM 215 Medical Neuroscience

Type of course: required course

Session: 2nd semester, 3rd year student

Course class size: none

Course objectives

By the end of this course the students are able to understand the aging mechanism in central nervous system, the etiology, pathogenesis and pathology of aging-associated diseases in central nervous system. Understand current standard medical treatment and update research and technologies in aging neurobiology of central nervous system.

Course outline

Date	Time	Topic		Instructor
27 Feb.	9.00-12.00	Course introduction and general background in aging of the nervous system	L1	WP
1 March	9.00-12.00	Nervous system intrinsic changes associated with aging	L2	NC
6 March	9.00-12.00	Environmental factors and their effect on the aging nervous system	L3	WJ
8 March	9.00-12.00	Protein homeostasis and aging	L4	PS
13 March	9.00-12.00	Aging's effects on regeneration and repair	L5	NC
20 March	9.00-12.00	Midterm Examination (L1-L5)		
22 March	9.00-12.00	Alzheimer's disease	L6	PD
27 March	9.00-12.00	Parkinson's disease (PD)	L7	SN
3 April	9.00-12.00	Huntington's disease	L8	NK
5 April	9.00-12.00	Amyotrophic lateral sclerosis (ALS)	L9	LTJ
10 April	9.00-12.00	Update research and technologies in aging neurobiology	L10	WP
17 April	9.00-12.00	Final Examination (L6-L10)		
			30 hr	

Teaching Method

Lectures in class 30 hours

Teaching Media

1. Class handouts, Powerpoint presentation
2. Textbooks

Measurement and Evaluation of Students Achievement

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| 1. Class attendance | 10% |
| 2. Assignments/ in class activity/ quiz | 40% |
| 3. Written Examination (short answer) | 40% |
| 4. Presentation (research article) | 10% |
| 5. Student Examination Grade = A, B+, B, C+, C, D+, D, F | |

Reference

Catherine A. Wolkow, Sige Zou, and Mark P. Mattson. Comparative Biology of Aging. Springer, 2010.

Jean M. Lauder. Molecular Aspects of Development and Aging of the Nervous System. Springer, 2013.

Instructors

1. LTJ = Associate Professor Laran T. Jensen, Ph.D.
2. NC = Nisamanee Charoenchon, Ph.D.
3. NK = Niwat Kangwanransan, Ph.D.
4. PD = Associate Professor Permphan Dharmasaroja, Ph.D.
5. PS = Associate Professor Prasit Suwannalert, Ph.D.
6. SN = Somphong Narkpinit, M.D.
7. WJ = Associate Professor Wannee Jiraungkoorskul, Ph.D.
8. WP = Witchuda Payuhakrit, Ph.D.

Course Coordinator:

Witchuda Payuhakrit, Ph.D.

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Requesting an appeal:

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