

SCBE 214 Biochemistry and Molecular Biology Laboratory

Course time: Wednesday 9:30 am - 12:30 pm MDL-4, K Building, Phayathai Campus

(briefing starts at **9:45 am**, and attendance is checked at **10:00 am**)

Date		Topic	Instructors	TA in Lab 9.30 – 12.30	TA for Lab Prep
Jan	7	Orientation (lab safety) and lab briefing (part cloning)	Pagkapol, Alisa		
	14	Serial dilution and buffers preparation	Pagkapol, Alisa	Thada	
	21	Miniprep for vectors	Thitinun, Dowrung	Thada	
	28	PCR for insert and digestion of vector	Thitinun, Dowrung	Thada	
Feb	4	Gel electrophoresis check of PCR product and vector	Pagkapol, Alisa	Thada	
	11	Ligation and bacterial transformation	Thitinun, Dowrung	Thada	
	18	Colony analysis, streak plate and Midterm Revision	Thitinun, Pagkapol	Thada	
	25	Laboratory skill practices (I)	Pagkapol, Alisa, Dowrung	Thada	
Mar	2-6	Midterm Exam Week (no exam)			
	11	(Culture from colonies before) induction of bacteria for 3 hr to spin down. Cell lysis and protein extraction (sonicate vs no sonicate)	Surang, Phurt	Thada	Thada (3 hr)
	18	Protein quantification	Surang, Phurt	Thada	
	25 (morning)	Gel casting	Surang, Phurt	Thada	
	25 (afternoon)	Sample preparation, SDS-PAGE, stain, and take picture	Surang, Phurt	Thada	
Apr	1	Discussion for protein part and final revision	Surang, Phurt	Thada	
	8	TBO (no class)			
	15	Sonkran Holiday (no class)			
	22	Laboratory skill practices (II)	Pagkapol, Alisa, Downrung	Thada	
May	Apr 27 - May 8	Final Exam Weeks (no exam)			

Course Coordinators

Dr. Pagkapol Pongsawakul

Department of Biology

Faculty of Science, Mahidol University

Telephone number: 02-201-5488 E-mail: pagkapol.pon@mahidol.edu

Dr. Alisa Damnernsawad

Department of Biology

Faculty of Science, Mahidol University

Telephone number: 02-201-5380 E-mail address: alisa.dam@mahidol.edu

Instructors

Dr. Pagkapol Pongsawakul	pagkapol.pon@mahidol.edu
Asst. Prof. Dr. Alisa Damnernsawad	alisa.dam@mahidol.edu
Asst. Prof. Dr. Thitinun Sumranwanich	thitinun.sum@mahidol.edu
Dr. Dowrung Namoon	dowrung.nam@mahidol.ac.th
Assoc. Prof. Dr. Surang Chankhamhaengdech	surang.cha@mahidol.edu
Asst. Prof. Dr. Phurt Harnvoravongchai	phurt.har@mahidol.ac.th

TA for Laboratory Session

Mr. Thada Wangsahnga (คุณธาดา หวังสง่า)

TA for Laboraroty Preparation

Mr. Thada Wangsahnga (คุณธาดา หวังสง่า)

Texts

- 1) Green, M.R. and Sambrook, J. 2012. Molecular Cloning: A Laboratory Manual. 4th ed. Cold Spring Harbor Laboratory Press. New York.
- 2) Class handouts

Assessment

Attendances	10% (3 unexcused lab sessions disqualify from taking exams / F grade)
Safety skills	5%
Laboratory notebook	20%
Laboratory skill practices	50% (Midterm 25% and Final 25%)
Assignments/Mini Reports	15%