Prel Schedule 2015
Masters Course in Chemistry and Biology: *Signal transduction* (KN8002)
HT15 (151102-160114)

Week	Day	Time	Activity	Lecturer
45	Mo 2/11	9.30-12	Roll call (*upprop*) & Overview, chemical neurotransmission in PNS and the development of the second messenger concept	ALS/JN
	Tu 3/11	9.30-12	Presentation of the course Overview, chemical neurotransmission in CNS & general aspects of signal transduction	KI
	We 4/11	9.30-12	Signal transduction pathways, G-prot. coupl. rec Choice of project	ND KI
		13.00	**Start of project**	*ALS/ND/ JN/KI/ EH/AU/ MC/ŰL TB/AÖ*
	To 5/11	9.30-12	G-prot. coupl. receptors – structural aspects, etc	ÜL
		13-15.30	Receptor kinetics	ÜL
	Fr 6/11	9.30-12		
46	Mo 9/11	9.30-12	Overview, evolutionary conserved neuronal components	HD
	Tu 10/11	9.30-12	Neuropeptides and peptide hormone receptors	ÜL
	We 11/11	9.30-12	"Journal Club 1" group I	KI
		13-15.30	"Journal Club 1" group II	KI
	Th 12/11	9.30-12	MAPK signaling in general terms	KI
	Fr 13/11		*Preparation for Dugga*	
47	Mo 16/11	9.30-11.30	*Dugga* (short test; part of course book, specified)	*MG,TL*
		13-15.30	Signal transduct. of rec. tyrosine kinases, in general	ND
	Tu 17/11	9.30-12	Endocrinology	ND
	We 18/11	9.30-12	Chemoreception	MC
	Th 19/11	9.30-12	Vision	KI
	Fr 20/11	9.30-12	Effects of toxins on signal transduction	AF
48	Mo 23/11	9.30-12	"Journal Club 2" group I	KI
		13-15.30	"Journal Club 2" group II	KI
	Tu 24/11	9.30-12	Notch, Wnt, TGFβ, etc, signaling	TA
	We 25/11	9.30-12	InsR signaling & effects on signal transduction in diabetes	TB
	Th 26/11	9.30-12	Effects on signal transduction in cancer	SH
	Fr 27/11	9.30-12	Signals in the innate immune system	ESv
49	Mo 30/11	9.30-12	Neuroimmunology and the NF-kappaB module	KI
	Tu 1/12	9.30-12	LTP in mammalian systems	KI
	We 2/12	9.30-12	Learning and memory	MC
		12-15.30	*("Arbetsmarknadsdag Naturvetare"*Aula Magna at SU in the afternoon*)*	
	Th 3/12	8.30-14.30	**Presentation of projekt, poster presentation**	*ALS/ND/ JN/KI/ TB/MC/*

	Fr 4/12	9.30-12	Targeting of intracellular signaling, gene silencing	*EH/AU/ AÖ* ÜL
50	Mo 7/12 Tu 8/12 We 9/12 Th 10/12 Fr 11/12	9.30-12 - - 9.30-10.30 11-12 -	Use of transgenic expression in transgenic animals for studies on signal transduction *Preparation for exam* *Preparation for exam* "Tool box" for live cell imaging of signal transduction Optogenetics *Preparation for exam*	ESe EH KI
	Mo 14/12 Tu 15/12 We 16/12 Th 17/12 Fr 18/12	- - 9.30-13.30 - -	*Preparation for exam* *Preparation for exam* **Written Exam** *Work on project part II* *Work on project part II*	 *AM,KA*
52,1			*X-mas & New Year*	
2	Mo 4/1 Tu 5/1 We 6/1 To 7/1 Fr 8/1		*Work on project part II* *Work on project part II* *Work on project part II* *Work on project part II* *Work on project part II*	
3	Mo 11/1 Tu 12/1 We 13/1 Th 14/1	16.00 9.30-16.30	Deadline for hand-in of written project plan *(to kerstin@neurochem.su.se)* *Preparation for oral presentation* *Preparation for oral presentation* **Oral presentation of the project plans (power point) & discussion**	 *ALS/ND/ JN/KI/ MC/TB/ AU/EH/ AÖ*

Teachers

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MG	*Maxime Gestin*	
TL	*Tönis Leto*	

Seminar room
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Literature
Signal Transduction (Eds. BD Gomperts, IM Kramer, PER Tatham), Elsevier Academic Press 2009, (online http://www.sciencedirect.com/science/book/9780123694416), also review articles, other material handed out by the teachers and your own search in PubMed

Independent project
1. Choice of project: The teachers (supervisors) suggest different possible research fields
2. Presentation of project in poster format: independent and in-depth penetration of the literature and design of poster that in general terms describes the specific research area. Poster presentations.
3. Hand-in of project plans. Independent work where the initial task is to identify a specific question to ask/problem to solve within the research area. The written report should include suggestions how to approach this question in a scientific and experimental way (Project plan; possible problem/question related to what is being discussed during the course, description of background, aims, experimental design, like a typical application for research funding)
4. Discussions with the supervisors/teachers: The teacher (and other students in the same group) read the project plan. This is followed by a discussion and if applicable suggestions how to improve the project plan. Hand-in of project plan that will then be distributed to teachers and all students.
5. PowerPoint presentations & discussion: 20 min presentation/person.
Note, it is very important to interact with supervisor throughout the course

Journal Club 1
A specific scientific article (handed out by teacher(s)) is analyzed and discussed in-depth with regard to why the study was performed, why the methods were chosen, on what bases conclusions were drawn and if there could be alternative conclusions of results or alternative approaches to answer the most relevant questions. *(Mandatory)*

Journal Club 2
Each student selects an article of importance for the project and presents for the rest of the group. *(Mandatory)*

Short test (“dugga”)
Short test will cover part of the course book (as specified) and the results can improve the final grade.