

Principles of Pharmacology and Physiology

Spring 2018

MWF 10:30-11:30 AM Room 229 B (Pharmacology Conference Room)

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Text: Kenakin, T., A Pharmacology Primer 4th edition. Elsevier Academic Press 2014*

(*not required, but recommended for Pharmacology students)

#	Date	Day	Subject	Instructor
1	8-Jan	Mon	Course Intro -The Development of the Discipline of Pharmacolog	Frazer
2	10-Jan	Wed	Drug Disposition 1	Lam
3	12-Jan	Fri	Drug Disposition 2	Lam
	15-Jan	Mon	Holiday - no class!	
4	17-Jan	Wed	Pharmacogenetics and Pharmacogenomics 1	Lam
5	19-Jan	Fri	Pharmacogenetics and Pharmacogenomics 2	Lam
6	22-Jan	Mon	Pharmacogenetics and Pharmacogenomics 3 & Toxicology I	Lam
7	24-Jan	Wed	Toxicology I	Lam
8	26-Jan	Fri	Toxicology II	Lam
9	29-Jan	Mon	Toxicology III	Lam
	31-Jan	Wed	Exam 1	
10	2-Feb	Fri	Ligand-receptor interactions, Clark's occupancy equation	Clarke
11	5-Feb	Mon	Saturation and Competition Binding	Clarke
12	7-Feb	Wed	Agonist binding curves	Clarke
13	9-Feb	Fri	occupancy vs response - Clark, Ariens, Stephenson models	Clarke
14	12-Feb	Mon	occupancy vs response - Furchgott, Black and Leff	Clarke
15	14-Feb	Wed	Agonism - affinity, Furchgot method; efficacy	Clarke
16	16-Feb	Fri	Agonism - efficacy - full vs partial agonists	Clarke
17	19-Feb	Mon	Antagonism - competitive, Schild analysis, partial agonists	Clarke
18	21-Feb	Wed	Antagonism - non competitive	Clarke
19	23-Feb	Fri	Allosteric modulators	Clarke
20	26-Feb	Mon	Inverse agonism - constitutive activity, 2-state model	Clarke
21	28-Feb	Wed	Multi-active state models and functional selectivity of ligands	Clarke
			Application of the operational model to quantify pathway-dependent efficacy	
22	2-Mar	Fri		Clarke
	5-Mar	Mon	Exam 2	
23	7-Mar	Wed	7-TMS receptors & signaling molecules (G-proteins, Arrestins, Adenylyl cyclase 1)	Clarke
24	9-Mar	Fri	7-TMS receptors & signaling molecules (G-proteins, Arrestins, Adenylyl cyclase 2)	Clarke
	12-Mar	Mon		
	14-Mar	Wed	Spring Break - no class!	
	16-Mar	Fri		
25	19-Mar	Mon	7-TMS receptors & signaling molecules (G-proteins, Arrestins, Adenylyl cyclase 3)	Clarke
26	21-Mar	Wed	7-TMS receptors - oligomers 1	Clarke
27	23-Mar	Fri	7-TMS receptors - oligomers 2	Clarke
28	26-Mar	Mon	phospholipid signalling I	Paukert
29	28-Mar	Wed	phospholipid signalling II	Paukert
30	30-Mar	Fri	Receptor tyrosine kinases I	Adamo
31	2-Apr	Mon	Receptor tyrosine kinases II	Adamo
32	4-Apr	Wed	Receptor Modulation I	Berg
	6-Apr	Fri	Receptor Modulation II	Berg
33	9-Apr	Mon	Receptor Modulation III	Berg
	11-Apr	Wed	Exam 3	
34	13-Apr	Fri	Nuclear Receptors: Steroids, retinoids, thyroid hormones	Morilak
35	16-Apr	Mon	Nuclear Receptors: Steroids, retinoids, thyroid hormones	Morilak
	18-Apr	Wed	Non-classical Steroid Actions	Roberts
36	20-Apr	Fri	no class (Physiology Student Research Symposium)	
37-38	23-Apr	Mon	Neuropeptides 1 and 2 (2 hrs 10:30 am - 12:30 pm)	Roberts
39	25-Apr	Wed	Ion channels	Lodge
	27-Apr	Fri	Holiday - no class!	
40	30-Apr	Mon	Ligand-gated ion channels 1	Lodge
41	2-May	Wed	Ligand-gated ion channels 2	Lodge
	4-May	Fri	CBN Retreat - no class	
42	7-May	Mon	Immunopharmacology 1	O'Connor
43	9-May	Wed	Immunopharmacology 2	O'Connor
44	11-May	Fri	Chronic Drug Treatment 1	Collins
45	14-May	Mon	Chronic Drug Treatment 2	Collins
	16-May	Wed	Exam 4	
46	18-May	Fri	Transporters 1	Daws
47	21-May	Mon	Transporters 2	Daws
48	23-May	Wed	Homeostasis Concepts	Brenner
49	25-May	Fri	Diffusion and Osmosis	Brenner
	28-May	Mon	Holiday - no class!	
50	30-May	Wed	Transmembrane Transport	Brenner
51	1-Jun	Fri	Transcellular Transport	Brenner
52	4-Jun	Mon	Muscle 1	Brenner
53	6-Jun	Wed	Muscle 2	Brenner
	8-Jun	Fri	Exam 5	