

Principles of Pharmacology and Physiology

Spring 2017

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

William P. Clarke, Ph.D. - course director
Office: Rm 2.532.2U DTL, phone: 567-4171
Email: clarkew@uthscsa.edu

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

(*not required, but recommended for Pharmacology students)

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