

**Chemistry 474: Neurochemistry****CRN: 39000**

<b>Instructor:</b>	Dr. Kelly Drew
<b>Office/office hrs:</b>	104 Irving I, MWF 10-12:00
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<b>Lecture:</b>	MWF 3:30-4:30, Reichardt Room 165
<b>Homework:</b>	Assignments posted on course schedule are due at the <b>beginning of the next class</b> unless otherwise indicated. <b>Homework turned in after the deadline will not be accepted</b>

- Know

## Course Schedule

Last Updated: 2/6/2013 5:55 PM

Date		Lecture #		Topic and Reading Assignments (Reading assignments will usually be discussed in the next class)	Hand-outs and Homework ( <b>HW</b> is due at the beginning of the next class period after it is assigned and listed below)
Jan	20	F	1	<p>Introduction to chemistry and the brain  <a href="http://www.youtube.com/watch?v=bqkUbiUkR5k&amp;feature=relmfu">http://www.youtube.com/watch?v=bqkUbiUkR5k&amp;feature=relmfu</a>                      Read  <a href="http://www.nature.com/nature/journal/v467/n7319/full/nature09510.html">http://www.nature.com/nature/journal/v467/n7319/full/nature09510.html</a></p>	<p><b>HW:</b> Write a review of  <a href="http://www.nature.com/nature/journal/v467/n7319/full/nature09510.html">http://www.nature.com/nature/journal/v467/n7319/full/nature09510.html</a>                      1. Briefly summarize the findings                      2. Note what aspect of the report makes you trust the results or conclusions.                      3. Note what aspect of the report makes you doubt the results or conclusions.</p>
	23	M	2	<p>Review Chapter "Synaptic transmission and cellular signaling" Techniques                      Optogenetics  <a href="http://www.youtube.com/watch?v=I64X7vHSHOE">http://www.youtube.com/watch?v=I64X7vHSHOE</a>                       Immunohistochemistry  <a href="http://en.wikipedia.org/wiki/Immunohistochemistry">http://en.wikipedia.org/wiki/Immunohistochemistry</a></p>	<p><b>HW:</b>                      1. Explore professional access to topics in neuroscience and neurochemistry (Handout)                      2. Short essay: Is science truth?</p> <p>Recommended: Lies, Damned Lies, and Medical Science  <a href="http://m.theatlantic.com/magazine/ar.4.533.88osv9(a)6(/a2.88o">http://m.theatlantic.com/magazine/ar.4.533.88osv9(a)6(/a2.88o</a></p>

	8	W		<p>Quiz 1 (take home) and meet with groups to select a paper for projects and prepare a timeline for preparing for presentation on 2/17</p> <p>Read:  <a href="http://www.nature.com/nature/journal/v447/n7143/full/447368a.html">http://www.nature.com/nature/journal/v447/n7143/full/447368a.html</a></p>	<p>Group meeting/select paper. Title, time line and copy of paper due by end of class.</p> <p>Take home quiz due Friday</p>
	10	F	9	<p>Catecholamines  Read chapter on catecholamines</p>	

Glutamate finale

Article 5

Scannevin and Haganir, 2000

[http://www.nature.com/nrn/journal/v1/n2/full/nrn1100\\_133a.html](http://www.nature.com/nrn/journal/v1/n2/full/nrn1100_133a.html)

or

MacGillavry et al., 2011

	23	M	33	Endocannabinoids	
	25	W	34	Endocannabinoids and energy regulation Gamage and Lichtman, 2012 <a href="http://onlinelibrary.wiley.com/doi/10.1002/pbc.23367/pdf">http://onlinelibrary.wiley.com/doi/10.1002/pbc.23367/pdf</a>	
	27	F	35	Gaseous neurotransmitters (NO, CO, H <sub>2</sub> S)  Kilduff et al., 2011 <a href="http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3014438/?tool=pubmed">http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3014438/?tool=pubmed</a>	
	30	M	36	Group Presentations (3)	
		W	37	Quiz 3	
		F	38	Review	
<b>May</b>	<b>7</b>		3:15-5:15	Comprehensive Final Exam	
					All make up assignments are due, 10:00 am Grades must be posted by May 16, 12:00pm