Conjoint 556, “Addiction: Mechanisms, Prevention, Treatment”
2 credits; Wednesday 3:30-5:20PM Fall Quarter 2007.
Room Bagley 154

September 26, 2007  C. Chavkin  Explain the goals of course; provide definitions of addiction; present a succinct summary of the spectrum of approaches (social, epidemiological, psychological, psychiatric, pharmacological). Address the question: What is the role of stress in Addiction.

October 3, 2007  J.D. Hawkins  Predicting and Preventing Addictions: Environmental Contributions. The session will focus on empirically identified social, environmental and individual predictors of addictions that, when malleable, represent targets for interventions seeking to reduce the prevalence of addiction through preventive means. Session would overview preventive interventions for a range of addictions, that have been tested and shown to be efficacious in controlled trials.

October 10, 2007  GA Marlatt  The role of harm reduction. Cognitive-behavioral therapy (CBT) in the treatment of addictive behavior, with a focus on relapse prevention, harm reduction, and mindfulness meditation.

October 17, 2007  D Kivlahan  Brief Interventions can be effective in both clinical (treatment seeking) and opportunistic (not treatment seeking) settings. A description of the rationale and effectiveness of these interventions would also be placed within the context of the epidemiology and natural history of addictive problems.

October 24, 2007  R. Palmiter  The neural circuitry underlying reward. The roles of Dopamine, Norepinephrine and NPY mediation of drug-reward and appetite.

October 31, 2007  J Neumaier  Transition from molecular to behavioral understanding. Putting the psychiatric definitions of the DSM4 criteria of addiction within an animal behavioral context. Plasticity mechanisms within the brain based on neuroimaging. The goal of these first sessions is to reinforce the concept that the human behavior has a neuronal-biological basis, and the underlying pathology needs to be defined by changes in the structure and function of the brain.

November 7, 2007  T Grant  Evidence-based strategies for preventing future alcohol and drug exposed births among high-risk women. Topics include challenges of practicing good science in community intervention/prevention studies; program evaluation in practice; developing a sustainable model; prevalence of alcohol drinking by pregnant women in Western Washington and remaining challenges.

November 14, 2007  P Phillips  The role of dopamine in theories of addiction.

November 21, 2007  (Thanksgiving)

November 28, 2007  D. Donovan  Alcoholism treatment matching research: methodological and clinical issues.

December 5, 2007  AJ Saxon  Genetic determinants of addiction to opioids and cocaine, Medical consequences, co-occurring psychiatric conditions and pharmacologic
treatment for alcohol, opioid, cocaine, methamphetamine, and nicotine dependence. Treatments fall along a continuum from brief interventions to more formal treatment with continuing care in the context of a chronic disease model of addictions Wrap up session.

DESCRIPTION

**Format:** 50 min lecture in general language, followed by 50 min discussion with a small group of graduate students lead by the lecturer. Students will be expected to have read 1-2 assigned papers and come prepared for active discussion. The lecture will be open to the community and interested researchers are encouraged to attend. Lectures will be digitized and pod-cast for later remote access. The discussion section will be limited to graduate students enrolled for credit, maximum 20.

**Preamble:** The goal of this course is to “Broadly Train our Next Generation of Addiction Scientists.” Drug addiction has historically been studied from a wide range of disparate perspectives including: psychological, pharmacological, nursing, psychiatric, social work, medicinal chemical, prevention, legal, and neurodevelopmental perspectives. Each discipline has its own language, culture, and priorities that make it difficult for individual students outside of that specialty to understand the key advances, insights, methods, or challenges in that discipline. This course is designed to present the broad range of topics to graduate-level students being trained in addiction research within specific disciplines. Lectures will present the key advances, insights, methods, and challenges within each discipline in terms that are understandable to experts in other disciplines. The objective is to enable students to become familiar with the broad, multidisciplinary approaches required to understand addiction as a disease. Students will then be better equipped to integrate insights from outside their traditional discipline into their research.

**Grading** will be based on class participation and one written assignment. Each session will have 1-2 research papers assigned for discussion and distributed 1-week before the session. Students enrolled for credit will be expected to critically read the assigned paper(s) and be prepared to describe the methods used to obtain the data in the figures and tables, describe the alternative explanations excluded by control experiments included, describe additional experiments needed to extend the study, and describe the key findings based on the study. Class participation would be assessed by randomly calling on students to answer questions (and judging their level of preparation from their answers) and noting the number and quality of their contributions to the discussion. Each student would also be required to write a 5-10 page (single spaced) paper summarizing key points that they learned in the course from at least one perspective different from their field of study, and expand upon that description by explaining why those points were significant to them. This latter assignment would be asking them to actively reflect on the course content and articulate the value of multidisciplinary contributions to their education.

More DESCRIPTION:

**THE SCIENCE OF ADDICTION FROM CELL TO COMMUNITY**
Interdisciplinary Perspectives on the Prevention and Treatment of Addictive Behaviors

**CONJOIN 556**
A series of lectures about how to develop, test and disseminate more effective ways to prevent and treat addictive behaviors by University of Washington Research Scientists representing various approaches to the field.

OUTLINE OF EACH LECTURE

1. Problem Statement
   (Why did you choose to become a (Psychologist, Physician, Social Worker, etc.) studying addiction?)
   1.1. What are the most important problems to address in the field of addictive behaviors.
   1.2. What is the current state of knowledge about those problems in your discipline including your contributions to the literature?
   1.3. What research problems are you focusing on now?
   1.4. How will solving these problems advance the field?

2. Theoretical Conceptualization
   (“Nothing is as practical as a good theory” – Kurt Lewin)
   2.1. What are the models and theories that organize the findings of your discipline and contribution explanations for them?
   2.2. What is your theoretical perspective and why did you choose it?
   2.3. What does your theory predict about the problems you are researching?
   2.4. What questions about the problems does your theory suggest are important to investigate?

3. Research Methods
   (Briefly describe a representative research project or program of research you have conducted to illustrate the conduct inquiry in your discipline.)
   3.1. What are the key phenomena your research observes and measures?
   3.2. How to you operationally define these phenomena?
   3.3. How do you measure these phenomena with reliability and validity?
   3.4. What technologies are necessary for observation, measurement, data analysis and research reporting in your discipline?

4. Important Findings
   4.1. What new knowledge about the prevention and treatment of addictive behaviors has your research discovered?
   4.2. How does what you have learned relate to existing data in your discipline?
4.3. How do your findings relate to research of addictive behaviors in other disciplines?

4.4. What generalizations can you now make about addictive behaviors that are new contributions to the field?

5. Conclusions and Practical Implications

5.1. Summarize the most significant results of your research.

5.2. What conclusions about the problems investigated can you make?

5.3. How do your conclusions support or refute the theories in your field?

5.4. How can the results of your research be applied to the prevention and treatment of addictive behaviors?