BICD 104 Lecture schedule—

Mar. 30--Lecture 1 Bacterial chemotaxis, Paramecium

1. Adler Sci Am.pdf
2. Non-genetic individuality.pdf
3. Architecture and Signal Transduction Mechanism of the Bacterial Chemosensory Array.pdf

Apr. 1--Lecture 2 Paramecium, Worm behavior

1. Paramecium behav genetics.pdf
2. Paramecium Ca channels.pdf

3. *C. elegans* NPY variation.pdf

3. de Bono Aggregation.pdf

Apr. 6--Lecture 4 Worm variants, Fly rhythms

1. McGrath Varieties of behavioral natural variation.pdf
2. McGrath QTL mapping.pdf
3. Internal wakeup.pdf
4. Circadian Rhythms and Sleep in Drosophila melanogaster.pdf

Apr. 8--Lecture 5 Fly Rhythms, Cyanobacterial clock

1. Internal wakeup.pdf
2. Circadian Rhythms and Sleep in Drosophila melanogaster.pdf
3. Cyano clock.pdf
4. Synecho rev.pdf

2nd QUIZ through worm variants

Apr. 13--Lecture 6 Cyanobacterial clock, Fly sleep

1. Cyano clock.pdf
2. Synecho rev.pdf

3. TINS Fly Sleep.pdf

4. Circ and sleep.pdf

Apr. 13--Lecture 7 Fly Sleep

5. TINS Fly Sleep.pdf
6. Circ and sleep.pdf

Apr. 15--Lecture 8 Fly Courtship

Lecture 8a Courtship Videos

1. Love on the Fly.pdf
2. Courtship organization.pdf

Apr. 20-- Lecture 9 Learning and Memory

1. Fly & worm memory.pdf
2. Natural variants for learning and memory.pdf

Lecture 10 Social and antisocial flies

1. Fly social behavior
2. Dierick & Greenspan.pdf

3rd QUIZ worm variants through cyano clock

Apr. 22-- Lecture 11 Genes & Social Behavior

1. Social attachment.pdf
2. Pair bonding.pdf

Apr. 23--Midterm review session 2:30-3:30pm

Apr. 27-- Lecture 12 Natural Variants and Selection

1. Drosophila clock natural variation.pdf
2. Drosophila timeless natural variation.pdf
3. Aggression
4. Wing allometry
5. Geotaxis

Apr. 29—Midterm

May 4-- Lecture 13a— Studying addiction in flies and mice

1. Kaun (2-12) Drosohila as model for addiction
2. FLY COCAINE ASSAY.pdf

Lecture 13b – Genes and Behavior History

1. Origins of Behavior Genetics
2. Kruger at al. (2017) The rise of behavioral genetics and the transition to behavioral genomics and beyond.

May 6— Lecture 14. Circadian rhythms and health

1. Environmental 24-hr Cycles Are Essential for Health
2. Circadian topology of metabolism

4th QUIZ courtship through L & M

May 11-- Lecture 15 Nicotine Addiction (Changeux)

1. nAChR KOs.pdf
2. Genetics and smoking.pdf

May 13- Lecture 16 Genetics of Consciousness (Changeux)

1. Changeux--Climbing Brain Levels of Organization from Genes to Consciousness.pdf
2. Changeux--Nicotinic receptors in mouse prefrontal cortex modulate ultraslow fluctuations related to conscious processing.pdf

5th QUIZ social/antisocial through natural variation, selection

May 18—Lecture 17 Psychiatric Genetics

1. Schizophrenia.pdf
2. Autism and gene dosage review.pdf
3. Anxiety Genetics.pdf

May 20 – GWAS mapping

1. Palmer and Pe'er (2017)
2. Pardinas et al (2018)

May 25-- Lecture 19 Sokolowski—Foraging

1. Foraging review
2. Social behavior in 'simple' organisms

6th QUIZ mammalian social behavior through consciousness

May 27-- Lecture 20 -- Palmer Quantitative Genetics.pdf

1. Palmer--Genome-wide association study of behavioral, physiological and gene expression traits in outbred CFW mice.pdf
2. Genome-wide association analysis in a mouse advanced intercross line.pdf
3. Ponder et al. (2007) Genes, Brain and Behavior.pdf

7th QUIZ foraging through psych genet

June 1—Lecture 21 Jernigan--Genetics of General Cognitive Ability, genes and *g*

1. GWAS Cognition.pdf
2. Mol Psychiatry 2011 Davies.pdf

Jun 3 --Lecture 22 – Connectomes, anatomical and functional

a. Chiang fly anatomical connectome
2. *C .elegans* anterior connectome
3. Alivisatos Neuron—functional connectome
4. Alivisatos et al Science

Jun 4 – Final review session – 2:30-3:30pm

Jun 8—11:30am - 2:30pm Final Exam