

NGG 588: Topics in Translational Neuroscience

Location:

Smilow Center for Translational Research (SCTR)
12th Floor - Room 12-146AB

Time: Fridays: Noon to 2:30 PM

This course will introduce graduate students in neuroscience and related disciplines to basic mechanisms and clinical features of major categories of nervous system disease. Each two-hour class will consist of two parts; a formal lecture followed by a seminar on the same topic. The formal basic science lectures will discuss genetic, molecular, and cellular mechanisms relevant to the disease examined while the seminar will illustrate how that information can be used in the clinical setting to promote further discovery and inform treatment. Some of the seminars will be associated with the Clinical Neuroscience Training Program (CNST) to provide the opportunity to interact with medical students and clinicians. The course will rely on assigned readings of primary research papers and discussions during class.

This is a weekly spring semester course consisting of two components:

- A one-hour lecture detailing the neurobiology of a particular disease
- A one-hour seminar delivered by the Clinical Neurosciences Training Program (CNST) Seminar Series
- A 30 minute discussion on the topic presented in each lecture and seminar

Participating faculty include:

- Course director Mariella De Biasi who will select weekly special lecturers and run the course
- A weekly lecturer who specializes in the disease being covered that week
- The CNST seminar speaker for that week, selected by the CNST directors Dan Wolf and Xilma Ortiz-Gonzalez

Contact Hours:

- 2.5 hours per week on Fridays
- 1CU

Activity Types:

- Lecture
- Seminar
- Small Group Discussion

Course Materials:

- Readings selected by the weekly lecturer

Prerequisites:

- Graduate-level students, senior undergraduates with permission from the Instructor
- Open to PSOM students with permission from the Department
- Priority given to NGG students, then other BGS, then other PSOM, then other Penn students on space-available basis

Student Details:

- Class size limit = 20 students
- Expected to attract second-year NGG, first or second year PGG, other PSOM students

Evaluation of Student Performance: Students will be evaluated based on their ability to identify gaps in the current knowledge for the topic presented in each class/seminar and answer questions based on readings assigned before each class (40%). There will also be evaluated on a final short paper on a topic of their choice among those presented in class (40 %), and their general participation to the group discussions (20%).

Calendar of lectures for 2020

Calendar of lectures for 2020

01-17-2020: Introduction to the course

12-1: Mariella De Biasi, PhD, Course Director - Course Introduction

1-2: Xilma Ortiz-Gonzalez, MDPH, new Assoc. Director of CNST. Mitochondrial Neurogenetics

01-24-2020: Topic 1. Visual System & Retinal Dysfunction

12-1PM: Gustavo Aguirre, VMD, PhD, Department of Medical Genetics and Ophthalmology, University of Pennsylvania School of Veterinary Medicine

1-2 PM: Geoff Aguirre, MD, PhD, Department of Neurology

01-31-2020: Topic 2. Pain

12-1PM: Ishmail Abdus-Saboor, PhD, Department of Biology, Penn School of Arts & Sciences

1-2PM: Beth Winkelstein, PhD, Department of Bioengineering UPenn

02-07-2020: Topic 3. Fear Circuitry, Depression & Anxiety Disorders

12-1 PM: Amelia Eisch, PhD, Department of Anesthesiology and Critical Care, Children's Hospital of Philadelphia

1-2 PM: Desmond Oathes PhD, Department of Psychiatry

02-14-2020: Topic 4. Neuroinflammation

12-1PM: Jorge Alvarez, PhD, University of Pennsylvania School of Veterinary Medicine
Department of Pathobiology

1-2 PM: F. Christopher Bennett, MD, Department of Psychiatry

02-21-2020: Topic 5. Hunger Circuits and Obesity/Eating Disorders

12-1PM: Matt Hayes, PhD, Department of Psychiatry

1-2 PM: Kelly Costello Allison, PhD, Center for Weight and Eating Disorders, Department of Psychiatry

02-28-2020: Topic 6. Neurodevelopment & Schizophrenia

12-1 PM Stewart Anderson, MD, Children's Hospital of Philadelphia and Department of Psychiatry

1-2 PM Raquel Gur, MDPH, Department of Psychiatry

03-06-2020: Topic 7. Impulse Control Disorders and the Dopaminergic System

12-1 PM: Mariella De Biasi, PhD., Department of Psychiatry

1-2 PM: Daniel Weintraub, MD, Department of Psychiatry

03-13-2020 Spring Break- no class

03-20-2020: Topic 8. Sleep and Cognition/Dementia

12-1PM: Sigrid Veasey, MD, Sleep Medicine

1-2PM: Nalaka Gooneratne, MD, MSc

03-27-2020: Topic 9. Epigenetics and Chromosomal Architecture

12-1PM: Benjamin Garcia, PhD, Epigenetics Program, Department of Biochemistry and Biophysics

1-2PM: Jennifer Phillips-Cremins, Ph.D., Department of Bioengineering

04-03-2020: Topic 10. CAG Repeats & Huntington's Disorder

12-1PM: Beverly Davidson, PhD, Children's Hospital of Philadelphia and Department of Pathology

1-2PM: Pedro Gonzalez-Alegre, MDPH, Department of Neurology

04-10-2020: Topic 11. Pharmacogenomics of Alcohol Use Disorder

12-1 PM: Hank Kranzler, MD, Center for Studies on Addiction, department of Psychiatry and VA Hospital

1-2 PM: Mariella De Biasi, PhD, Dept of Psychiatry

04-17-2020: Topic 12. Taste

12-1PM: Hakan Ozdener, MDPH, MPH, Monell Center for Chemical Senses.

1-2 PM: Noam Cohen, MD PhD, Department of Otorhinolaryngology,

04-24-2020: Topic 13. Translational research on neuro-regeneration

12-2PM: D. Kacy Cullen PhD, Departments of Neurosurgery & Bioengineering