

**Gene-Brain-Behavior Interactions in Neurodevelopmental Disorders:
Towards an Integration of Perspectives on Disease Mechanisms Clinical
Syndromes and Disorders**
T32 Postdoc Seminar Series

University of North Carolina at Chapel Hill
Carolina Institute for Developmental Disabilities
FALL 2015 and SPRING 2016 Syllabus

PURPOSE

This seminar examines the topics of genetics, neuroanatomy, physiology, and behavioral development to provide a broad-based and integrated background to understand the etiology and potential mechanism underlying neurodevelopmental disorders.

TIME AND LOCATION

Wednesdays, 9:00 am – 10:30 am
Autism Building off Smith Level Road, 2nd floor conference room
Address: 100 Renee Lynne Court, Carrboro*

COURSE DIRECTORS

Joe Piven, MD and Ben Philpot, PhD

Coordinators: *Shanna Resendez, PhD, Mark Shen, PhD, Michael Sidorov, PhD,
Rachel Bailey, PhD, Robert Emerson, PhD, Jessica Kinard, PhD, and
Sarah Sinnott, PhD*

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| Sept 9 | Brain Anatomy and Dissection
Aldo Rustioni, MD
Professor, Department of Cell and Physiology |
| Sept 16 | Early Brain Development
Eva Anton, PhD
Professor, Department of Cell and Physiology |
| Sept 23 | Synaptic Plasticity in Developmental Disorders
Ben Philpot, PhD
Kenan Distinguished Professor, Department of Cell and Physiology |

- Oct 14 **Reward Processing and Autism**
Gabriel Dichter, PhD
Associate Professor, Department of Psychiatry and Psychology
Director, Clinical Affective Neuroscience Lab
- Oct 28 **Sensory Neurobiology and Development**
Spencer Smith, PhD
Assistant Professor, Department of Cell and Physiology
- Nov 4 **Experience-Dependent Plasticity in V1 and Beyond**
Michael Sidorov, PhD
Postdoctoral Research Associate, Department of Cell and Physiology
- Nov 18 **Overview of Genetics**
Karen Mohlke, PhD
Professor, Department of Genetics
- Dec 9 **Using hiPS Cells to Study Neurodevelopmental Disorders**
Raluca Dumitru, PhD
Research Scientist, Department of Neuroscience Center
- Dec 16 **Developing Novel Mouse Models for Neurodevelopmental Disorders**
Courtney Thaxton, PhD
Research Associate, Department of Cell Biology and Physiology
- Jan 6 **DREADDs (Designer Receptors Exclusively Activated by Designer Drugs)**
Bryan Roth, M.D., PhD
Michael Hooker Distinguished Professor of Protein Therapeutics and
Translational Proteomics, Department of Pharmacology
- Feb 24 **Oxytocin Regulation of Socially Motivated Behaviors**
Shanna Resendez, PhD
Postdoctoral Research Associate; Department of Psychiatry
- Feb 26 **Cognitive Development:
From Attentional Orienting to Representing Other Minds.**
Jed T. Elison, PhD
Assistant Professor, Institute of Child Development
University of Minnesota
- Mar 30 **Language Development in Children with Neurodevelopmental Disorders**
Linda Watson, EdD
Professor, Department of Allied Health Sciences
Speech and Hearing Sciences

- Apr 13 **Repetitive Behavior-Phenomenology and Application**
Brian Boyd, PhD
Associate Professor, Department of Allied Health Sciences
Division of Occupational Science
- Apr 20 **Genetic and Behavioral Mouse Models of Developmental Disorders**
Sheryl Moy, PhD
Professor, Department of Psychiatry
- May 4 **Genetic and Environmental Risks for Autism**
Mark Zylka, PhD
Professor, Department of Cell and Physiology
- May 25 **Gene Therapy**
Steve Gray, PhD
Research Assistant Professor, Department of Ophthalmology
- Jun 8 **Gene-Environment Interactions and Neurodevelopment**
Cindy Lawler, PhD
Branch Chief, Genes, Environment, and Health Branch
National Institute of Environmental Health Sciences