Scientific Retreat on Neurodevelopmental Disorders Research
Sponsored by the South Carolina Clinical & Translational Research Institute (SCTR) and South Carolina Autism and Neurodevelopmental Disorders (SCAND) Consortium

Friday, March 1, 2019
Drug Discovery Auditorium (Room 110)
James E. Clyburn Research Center
Medical University of South Carolina (MUSC)
171 Ashley Ave., Charleston, SC 29425
Retreat Registration: 8:30 AM
Retreat Program: 9AM - 5:00 PM; Networking Reception: 5 – 6:30 PM

PROGRAM AGENDA

8:30  Retreat Registration, Poster Set-up and Continental Breakfast (Lobby)

9:00 - 9:05  Welcoming and Opening Remarks
Perry Halushka, MD, PhD, Distinguished University Professor, Department of Cell and Molecular Pharmacology and Experimental Therapeutics; Dean Emeritus, College of Graduate Studies, MUSC and Co-PI, SCTR Institute

9:05 - 10:30  Session One: From Bench to Bedside and Back Again: Integrated Approach to Studying the Genetics of a Neurodevelopmental Disorder
Moderator: Christopher W. Cowan, PhD, Professor and W.E. Murray SmartState Chair in Neuroscience, Department of Neuroscience, College of Medicine, MUSC

9:05–9:25  At the Bench: MEF2 Proteins Regulate Activity-Dependent Synapse Development
Chris Cowan, PhD

9:25–9:40  At the Bedside: Human Genome Sequencing links MEF2C to Syndromic Autism
Steve Skinner, MD, Director of the Greenwood Genetics Center, Greenwood, SC

9:40–10:00  Back to the Bench: Modeling MEF2C Haploinsufficiency Syndrome in mice
Adam Harrington, PhD, Postdoctoral Fellow, Department of Neuroscience, College of Medicine, MUSC

10:00–10:15  Into the Future: Insights into brain pathology and potential therapeutic strategies
Catherine Bridges, BS, MSTP student, Department of Neuroscience, College of Medicine, MUSC

10:15-10:30  Session One Q&A

10:30-10:45  Networking Coffee Break

10:45  Keynote Speaker Introduction
Chris Cowan, PhD

10:45 - 11:45  Keynote Address: From Genes to Pathology: The Path Forward in Genetically Complex Neurodevelopment Syndromes
Matthew W. State, MD, PhD, Oberndorf Family Distinguished Professor and Chair, Department of Psychiatry, University of California, San Francisco

11:45 - 1:00  Poster Session One and Working Lunch (BEB and DSB Lobbies)
1:00 - 2:30  **Session Two: From Bedside to Bench: Parental, Experimental and Treatment Perspectives for Anxiety in Neurodevelopmental Disorders**  
*Moderator: Jane Roberts, PhD, Professor, Department of Psychology, College of Arts and Sciences, University of South Carolina*

1:10-1:25  **How Fragile X and Anxiety Impact Our Family**  
Robin Blackwood, Fragile X Carrier, Mother to Son with FXS and Special Needs Advocate

1:25-1:45  **Biobehavioral Indices of Anxiety in Autism and Fragile X Syndrome in Young Children**  
Abigail Hogan, PhD, Res. Assistant Professor, Department of Psychology, USC

1:45-2:00  **Evaluating Nicotinamide Riboside Supplementation in a Mouse Model of Autism**  
Linnea Freeman, PhD, Assistant Professor, Biology Department, Furman University

2:00-2:20  **The Why and the How of Transcranial Magnetic Therapy in Autism**  
Manuel F. Casanova, MD, Professor of Biomedical Sciences, SmartState Chair in Childhood Neurotherapeutics, USC Greenville

1:55-2:10  **Session Two Q&A**

2:30 - 3:30  **Poster Session Two and Networking Coffee Break**

3:30 - 4:30  **Trainee Abstract Presentations:**  
*Moderator: Richard Steet, PhD, Director of Research, Head of the JC Self Research Institute, Greenwood Genetic Center*

3:30 - 3:45  **A Double-Blind, Placebo-Controlled Trial Demonstrates that Mavoglurant Increases Eye Gaze in Fragile X Syndrome**  
Reshma Joshi, DO, Resident (PGY1), Department of Pediatrics, College of Medicine, MUSC

3:45 - 4:00  **Investigating the role of EPHB2 in autism and autism-associated behaviors**  
Ahlem Assali, PhD, Postdoctoral Fellow, Department of Neuroscience, College of Medicine, MUSC

4:00 - 4:15  **High Frequency rTMS in Adults with Autism Spectrum Disorder and Depression: A Pilot Study**  
Melanie Wiley, BS, MSTP student, Department of Neuroscience, College of Medicine, MUSC

4:15 - 4:30  **Selective axonal translation of prenylated Cdc42 mRNA isoform supports axon growth**  
Matthew Zdradzinski, BS, Graduate Student, Department of Biological Sciences, USC

4:30 - 4:45  **Funding Successes and Opportunities:**  
*Network Analysis of Collaborations*  
Jane Joseph, PhD, Professor, Department of Neuroscience, College of Medicine, MUSC

**South Carolina Experimental Program to Stimulate Competitive Research (EPSCoR)**  
Jeff Twiss MD, PhD, Professor and SmartState Chair in Childhood Neurotherapeutics, Department of Biological Sciences, College of Arts ad Sciences, USC

**SCTR Pilot Project Program Funding Opportunities**  
Dayan Ranwala PhD, Research Assistant Professor and Associate Director, SCTR Pilot Project Program and Team Science Program

4:45 - 5:00  **Closing Remarks and Next Steps**  
Chris Cowan, PhD and Jane Joseph, PhD

5:00 - 6:30  **Networking Reception (Drug Discovery Building Lobby)**
Retreat Planning Committee Members
Manny Casanova, MD, USC Greenville
Chris Cowan, PhD, MUSC
Kevin Gray, MD, MUSC
Perry Halushka, PhD, MD, MUSC
Jane Joseph, PhD, MUSC
Dayan Ranwala, PhD, MUSC
Jane Roberts, PhD, USC
Rich Steet, PhD, GGC
Jeff Twiss, MD, PhD, USC
Michael Watson, MA, MUSC