

# MUSC BRAIN RESEARCH INSTITUTE

## FALL 2019 NEWSLETTER

This is the inaugural edition of the MBRI Quarterly Newsletter in which we highlight recent news and events, and we celebrate our neuroscientists' awards and achievements. One of the key MBRI missions is to increase science advocacy and awareness among the public and our legislators. In this first edition, we focus on events related to this mission.

**ANNOUNCEMENTS:** We are launching a competition to create an official logo for the MBRI. Please submit your logo design ideas to [mcginty@musc.edu](mailto:mcginty@musc.edu) by October 30th for consideration. The designer of the selected logo will receive \$100. May the most creative logo win!

### **Chris Cowan at NIH Caucus Briefing**

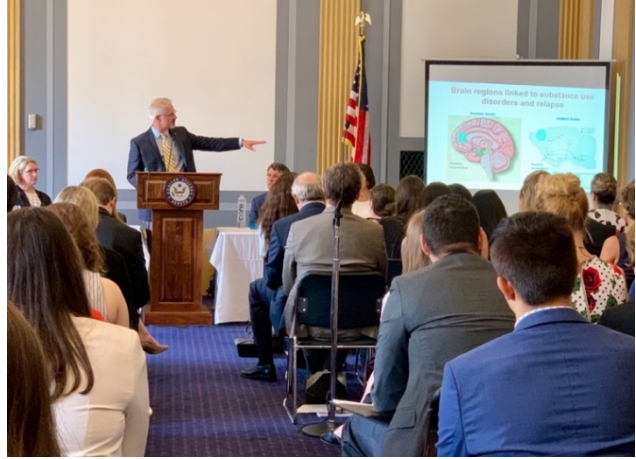
Our new Department of Neuroscience Chair, Dr. Chris Cowan, is a member of the Society for Neuroscience (SfN) Government and Public Affairs Committee, and he has frequently participated in "Hill Day," SfN's hallmark annual research advocacy event. For the last 3 years at Hill Day, Chris has visited with South Carolina's Senators and House of Representative members and their staffers to highlight the



exciting neuroscience research at MUSC and to advocate for increased federal funding to support biomedical research.

Dr. Cowan with U.S. Senators Dick Durbin (IL) and Lindsey Graham (SC) at a Senate NIH Caucus briefing on the BRAIN Initiative & neuroscience research.

As a consequence, Chris was invited by Senators Lindsey Graham (R-SC) (right of Chris in the photo) and Dick Durbin (D-IL) (left of Chris), co-Chairs of the Senate’s NIH Caucus, to present a talk to Senate legislators and staff on Capitol Hill on July 24, 2019. Chris spoke about the brain and substance use disorders. Other speakers were the Directors of NIMH and NINDS as well as an ALS patient and advocate. The audience was predominantly legislative assistants from congressional offices, but also attending were staff from SfN, the



Dr. Cowan speaking about brain and substance use disorders at the Senate’s NIH Caucus briefing on July 24, 2019

President of ACT for NIH, and representatives of the National Association of Biomedical Research (NABR). During the same trip, Dr. Cowan met with Senators Lindsey Graham and Tim Scott (R-SC) and Representative Joe Cunningham (D-SC) and their staffers to advocate for increased funding to the NIH and NSF budgets in fiscal year 2020 and to discuss the exciting neuroscience research ongoing at MUSC.

## **Legislative Assistant Experiences Neuroscience**

On August 19, the Deputy Legislative Assistant to Senator Tim Scott, Ms. Alaura Ervin, toured the neuroscience facilities on campus. She was accompanied by many of our Neuroscience-related faculty. Ms. Ervin was astonished by the



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Alaura Ervin with Howard Becker (top left); Catrina Robinson (top middle); Steve Kautz (top right); Bashar Badran & William DeVries (bottom left); Heather Boger (bottom right)

discoveries, innovations, and synergy among the preclinical and clinical neuroscience labs.

We are grateful to the following faculty for generously donating their time and infectious enthusiasm to wow Ms. Ervin:

- Dr. Howard Becker, Psychiatry and Charleston Alcohol Research Center
- Dr. Catrina Robinson, Neurology and Behavioral Testing Lab
- Dr. Jens Jensen, Neuroscience and Center for Biomedical Imaging
- Dr. Bashar Badran, Psychiatry and Transcranial Magnetic Stimulation Lab
- Dr. Steven Kautz, Public Health and Human Neurological Recovery Labs
- Dr. Heather Boger, Neuroscience and Human Brain Experience
- Dr. Rachel Penrod, Neuroscience and Rodent Behavioral Testing Labs

## **Science Advocacy Training**

On September 10, 2019, Adam Katz, the Advocacy Engagement Manager for the Society for Neuroscience (SfN), visited MUSC and trained neuroscience faculty,



postdocs, and students in how to effectively encourage legislators to support biomedical science and to understand the importance of a robust and consistent federal government investment to ensure discovery of the causes and cures for brain-related disorders.

Participants in the SfN Neuroscience Advocacy Training program in September 2019.

## **Claflin U Students Experience Neuroscience**

On September 12, 2019, MBRI hosted a Cognitive Neuroscience class headed by Dr. Sharon Richards from Claflin U. Many thanks to the Cowan Lab (Rachel P, Ahlem A), Reichel Lab (Carmela and Stewart), Otis Lab (Beth and Kelsey), and Scofield Lab (Ben and John) for sharing their knowledge with the visiting students, and to Heather Boger and Catherine Bridges for human brain experiences.



## **Chris Cowan at MUSC Science Café**

On September 17, 2019, Dr. Cowan gave a lay-friendly presentation to a standing-room only crowd about recent research efforts in the area of Autism Spectrum Disorders. The Science Café was held at the Holiday Inn Riverview Hotel and Restaurant and is a monthly community outreach activity sponsored by MUSC.



## **Heather Boger Interviewed on Local News**



for individuals suffering from Alzheimer's Disease.

On August 27<sup>th</sup>, Dr. Heather Boger was interviewed on NBC News 2 about the Alzheimer's Association fundraising walk on September 14<sup>th</sup>. The goal was to raise funds to help serve local families dealing with the demands associated with caring

<https://www.counton2.com/community/you-can-walk-to-end-alzheimers-this-september/>

# NEUROSCIENCE DEPARTMENT FUNDING ANNOUNCEMENTS

## Congratulations to the following PIs for receiving new research funding!

**Drs. Peter Kalivas (Center Director), Christopher Cowan, Jakie McGinty, Brett Froeliger, Makoto Taniguchi, Carmela Reichel, Mike Scofield: NIDA P50 Center of Excellence (DA046373)**

“Center for Opioid and Cocaine Addiction (COCA)”

**Dr. Peter Vento: NIDA K99 (DA044331)**

“Role of Nucleus Accumbens D2-receptor Expressing Neurons in Punished Cocaine Seeking”

**Dr. Ana-Clara Bobadilla: NIDA K99 DA046522)**

“Nucleus Accumbens Neuronal Ensembles in Drugs and Natural Rewards Seeking”

**Dr. Ethan Anderson: NIDA K01 (DA046513)**

“Targeting Phospholipase C and Dendritic Spines to Reduce Cocaine and Heroin Motivation”

**Catherine Bridges: F30 (HD098893)**

“Microglial Contributions to MEF2C Haploinsufficiency Syndrome”

**Dr. Hunter Moss: NINDS F31 (NS108623)**

“Advanced Diffusion MRI Applied in Hypoxic-Ischemic Neonates”

**Dr. Kumar Sambamurti: NIA R21 (AG062378)**

“Dietary Restriction and Associated Changes in Gut Microbiota to Prevent Alzheimer Disease”

**Ying Chao: NIDA F30 (DA048597)**

“The role of 5HT2C Receptor in RMTG Response to Cocaine”

**Dr. Brett Froeliger: NIDA UG3 (DA048510)**

“Examining the Effects of the Theta Burst Stimulation on Corticothalamic Mediated Inhibitory Control and Smoking Relapse Vulnerability”

**Dr. Brett Froeliger: NIDA R01 (DA038700)**

“Translational Neuropsychopharmacology Research of Nicotine Addiction”

**Dr. Brett Froeliger: NIDA R01 (DA048094)**

“Neural Mechanisms Mediating Appetitive Regulation and Smoking in Nicotine Addiction”

**Dr. Peter Kalivas: Veterans Affairs Grant (A190107)**

“Neuroadaptation Produced by Acute PTSD-Like Stress Create Vulnerability for Cannabis Addiction”

**Dr. Takashi Sato: American Heart Association**

“Neural Circuit Mechanisms Underlying Functional Recovery Following Stroke”

**Brandon Hughes: NIDA F31 (DA048557)**

“The role of NPAS4 in Drug Addiction”

**Dr. Sarah Barry: NIDA F32 (DA047845)**

“Epigenetic Mechanisms in Heroin Seeking Behavior”

**Dr. James Otis: NARSAD Young Investigator Award (A180002)**

“Visualizing the Activity of Prefrontal Projection Neurons during Cocaine Seeking”

**Dr. Constanza Keller: NIDA K99 (DA047426)**

“Circuit Mechanisms for Conditioned Stress Regulation of Addiction”

**Dr. Christopher Cowan: R01 supplement for Alzheimer’s Disease research (MH111464)**

“Transcriptional Regulation of Synapse Development in Intellectual and Developmental Disorder”

**Dr. Christopher Cowan: R01 subcontract (NS086444)**

“Cellular Mechanisms of Anti-Depressant Drug Actions in Neuropathic Pain Models”

**Drs. Christopher Cowan, Hainan Lang, Baerbel Rohrer: SFARI Pilot Grant (Project 649452)**

“Linking Neuroimmune Dysfunction, Sensory System Defects and Autism-like Behavior in a New Mouse Model of Syndromic Autism”

\*\*If you are a member of the Neuroscience Department and receive new research funding, or if you received new research funding recently and are not listed above, please send an email to [Brandon Harris-Smith](#) and include the title and grant number so you can be featured in future newsletters.