NEUROSCIENCE RESEARCH AT MUSC

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Partnering for Impact in Global and Public Health Symposium:
Facilitating Global Health Research Collaborations in Neuroscience Nov 3, 2015
MUSC’s Neuroscience Community

- **Neuroscience Institute**: Facilitates interdisciplinary collaborations within the South Carolina neurosciences community
- **Center for Advanced Imaging Research**: Revealing brain circuitry and cellular function
- **Center on Aging**: Improving the quality of life for older adults in South Carolina through research and education
- **Charleston Alcohol Research Center**: Linking basic and clinical advances in alcohol research
- **Neurobiology of Addiction Research Center**: Multidisciplinary research on the neurobiology of drug-seeking behavior
- **Addiction Sciences Division** of Dept. of Psychiatry
- **South Carolina Spinal Cord Injury Center**: Advancing knowledge of traumatic spinal cord injury and repair
- **Stroke Rehabilitation Research Center** Dept of Rehabilitation Sciences, College of Health Professions
Neuroscience Research Focus Areas

- Addiction
- Aging
- Movement Disorders
- Cortical Plasticity and Cognition
- Neurodegenerative Disorders
- Stroke
- Brain Development and Pediatric Neuroscience
- Functional Neuroimaging
- Schizophrenia and Affective Disorders
- Visual System Function
The Neuroscience Institute (NI) Advances Neuroscience Research across Campus

The goals of the NI are to

• Catalyze translational research
• Provide excellence in graduate education
• Promote development and outreach
NI Catalyzes Translational Research

- Annual pilot grants awarded to a team of basic and clinical neuroscientists to obtain preliminary data toward gaining extramural funding in the neurosciences
- 2015 Awardees:
  - Adkins and Schnellmann - “Mitochondrial Enhanced Rehabilitative Training after Experimental Stroke”
  - Joseph and Lavin - “Improving cognitive function in neurodevelopmental disorders”
  - Eskandari, Yost, and Smith - “Growth of CNS Progenitor Cells under Pressure: Implications for Biomarkers of Neonatal Hydrocephalus”
NI Provides Excellence in Graduate Education

Current students:

- 26 PhD
- 5 MD/PhD
- 1 MS

Pre-doctoral awards:

- 4 NIH Individual National Research Service Awards (NRSA)
- 8 NIDA/NIAAA pre-doctoral training slots
Neuroscience Institute Activities

- Annual Meet and Greet
- Neurosciences Graduate Seminar Series
- Neurosciences Journal Club
- Teaching internships at CofC
- Supervising undergraduates in SURP and CofC Honors Program
- Neuropalooza
NI Supports Career Development

Postdoc Seminar Series

Gives neuroscience postdocs in any department or college at MUSC, an opportunity to present their work and provides networking with their colleagues.
NI Promotes Development and Outreach

• *Educational Outreach and Teaching* is directed at implementing educational outreach programs as well as equipping graduate students with tools for teaching at the University level.

• Graduate students learn how to effectively plan and execute outreach activities that expose young minds to science and research, during and beyond Brain Awareness Week.
Frontiers in Neuroscience

- 16th Annual meeting April 4, 2016
- Convening as SC Chapter of Neuroscience
- Theme “Stress and Neuropsychiatric Disorders”
- Keynote speaker: Amy Arnsten, Ph.D. Dept. of Psychiatry, Yale U Sch Med
- In 2015, there were 130 registrants (including scientists, clinicians, educators, and students) and 35 posters presented by students and postdocs
Global Neuroscience Opportunities

- Our faculty, postdocs, and students are MUSC ambassadors to the world
- Society for Neuroscience global initiatives
- IBRO Travel Awards and Research Fellowships
- NIH Fogarty International Center programs funding to perform research and to train researchers in a variety of global health areas