

# Neural Networking

## Brain Awareness Week at UF

By Nicola Rutherford

### Chapter Officers

President

Danielle Sambo

Treasurer

Alexander Parker

Secretary

Sarah Tyson

Brain Awareness

Nicola Rutherford

Sruti Rayaprolu

Conference Coordinator

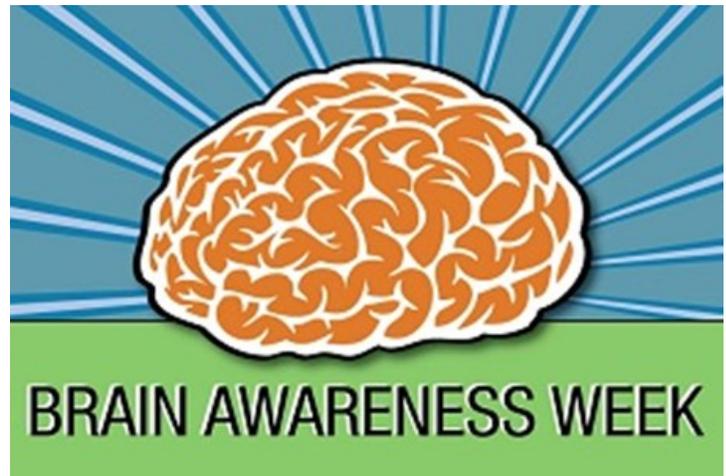
Caitlin Orsini, Ph.D.

Abbi Rosen

Chapter Representative

Joseph McQuail, Ph.D.

Every March, neuroscience is celebrated across the globe during the annual Brain Awareness Week. The Dana Alliance for Brain Initiatives, whose goal is to advance public awareness and education about the brain, organized the first Brain Awareness Week in 1996, and it has only grown in popularity since its inaugural year. The North Central Florida Chapter of Society for Neuroscience participates in Brain Awareness Week each year, and we are keeping up this tradition in 2016. We charge our generous volunteers with the task of traveling to local schools within the Alachua Public School Sys-



tem and getting students excited about the brain!

We visit the classrooms of K-12th grade and give age-appropriate presentations. Younger students

will make pipe cleaner models of neurons to help them learn how their structure makes communication between neurons possible. Middle school students will learn

*Continued on 2*

### Inside this issue:

Brain Awareness Week	1
Drs. Amara and Barnes	1
NCF-SFN Conference Schedule	3
NCF-SFN Travel Award Announcement	3
General Chapter Information	4
Thank You to Sponsors	4

## Former SfN presidents Amara, Barnes visit UF

By Caitlin Orsini and Joseph McQuail

UF's Brain Awareness Week will welcome two noted neuroscientists and former national Society for Neuroscience Presidents to campus. Dr. Susan G. Amara, Scientific Director of Intramural Research at the National Institute of Mental Health will be the keynote speaker of this year's NCF-SFN Chapter Conference. Dr. Carol A. Barnes, Regents Professor of Psy-

chology, Neurology and Neuroscience and Director of the McKnight Brain Institute at the University of Arizona has been invited to deliver the annual Luttge Lecture by the Department of Neuroscience with sponsorship from the McKnight Brain Research Foundation.

Dr. Amara will present "Neurotransmitter transporters & the cellular mechanisms of am-

phetamines: a presynaptic perspective".

Dr. Amara's research examines how antidepressants and psychostimulants, such as amphetamine, affect biogenic amine neurotransmitter transporters in the brain. In particular, her laboratory has focused on how amphetamine alters the internalization of dopamine transporters; *Continued on 2*



Dr. Susan Amara (top) and Dr. Carol Barnes (bottom)

## Amara, Barnes to visit UF during BAW

recently, her research team has also shown that amphetamine causes internalization of excitatory amino acid transporters in neurons, which results in an increase in excitability in dopamine neurons. These findings have important clinical implications for psychiatric conditions, such as depression and attention deficit hyperactive disorder, as medications used to treat these illnesses target these transporter systems.

Dr. Barnes will deliver a lecture entitled “Aging is not a disease: normal lifespan changes in brain circuits critical for memory”.

Dr. Barnes’ research examines physiological and behavioral changes in animal models of normal aging. Specifically, her

work pairs electrophysiological recordings of cellular activity from medial temporal regions in awake, behaving animals. This approach provides high temporal resolution of cellular activity that reveals aged individuals exhibit impoverished neural encoding of information during cognitive task performance. At the molecular level, Dr. Barnes was instrumental in the development of the catFISH technique (cellular compartment analysis temporal activity by fluorescence in situ hybridization). This technique uses immediate-early gene expression to examine behaviorally relevant activation of single cells as well as large ensembles of neural networks. Dr. Barnes also integrates research questions across rodent and non-human

primate models to facilitate the translation of her findings towards improved treatment of age-related cognitive decline in humans.

Dr. Barnes’ lecture will be presented on Monday, March 14, 2016 at 12PM in the DeWeese Auditorium/LG-101 of the McKnight Brain Institute.

Dr. Amara’s talk is scheduled for Tuesday, March 15, 2016 at 2:45PM, also in the DeWeese Auditorium. Dr. Amara will also participate in a panel discussion on Data Reproducibility in MBI LG-110 earlier that day at 11:15AM.

*Did you know that NCF-SFN is entirely run by students and postdocs, not faculty members?*

## NCF-SFN Brain Awareness Activities

about the 5 senses, find out whom in their class is a “super taster” and how your brain can play tricks on you! High school students will learn about the anatomy of the human brain and how it is similar to other mammal brains by performing dissection of sheep brains. These are just a few examples of the classes that we provide during Brain Awareness Week.

In addition to visiting local schools, we also play host to school field trips at our own McKnight Brain Institute. On Thursday 17th March, visiting students will take part in our human neuroanatomy workshop,

where they will get the chance to see real human brain sections and learn about the function of the different brain regions. On Friday March 18th, local home-schooled students are welcome to the MBI to experience the same classes we offer when visiting classrooms around the county. Furthermore, we are collaborating with the Cade Museum for Creativity + Invention to offer additional classes on Saturday March 19th.

This year we are thrilled to be reaching students at 17 different schools in Gainesville and neighboring towns including Alachua, High Springs, Hawthorne and

Archer! We anticipate that over 40 volunteers will teach is more than 1600 students! Wow!

Our main goal for this year is to spruce up the presentations and give them a little more pizzazz. I hope the students that participate in this year’s Brain Awareness Week will take some knowledge away from the classes and hopefully be inspired to become the next generation of neuroscientists!

For those interested to volunteer in support of our Brain Awareness Week, you can contact Nicola Rutherford ([nirutherford@ufl.edu](mailto:nirutherford@ufl.edu)) for more information.



Sruti Rayaprolu and Nicola Rutherford demonstrate the “Human-to-Human Interface”.



## Tuesday, March 15, 2016 Society for Neuroscience North Central Florida 6<sup>th</sup> Annual Chapter Conference

University of Florida  
Evelyn F. & William L. McKnight Brain Institute



**Susan G. Amara, Ph.D.**

Scientific Director  
Division of Intramural Research Programs  
National Institute of Mental Health (NIMH)  
Bethesda, Maryland

### Conference Agenda

8:30-11:00 am	Poster Competition	Founder's Gallery
11:15-12:15 pm	Panel Discussion "Data Reproducibility"	MBI LG-110
12:15-1:15 pm	Lunch	MBI LG-110
1:30-2:30 pm	Data Blitz	DeWeese Auditorium
2:45-4:00 pm	Keynote Address — Dr. Susan Amara "Neurotransmitter transporters & the cellular mechanisms of amphetamines: a presynaptic perspective"	
4:00 pm	Poster Awards Presentation Closing Remarks	

## Travel Awards for Neuroscience 2016

Planning to attend Neuroscience 2016 in San Diego? NCF-SFN is here to help! Any member whose dues are paid in full for the 2015-16 year is eligible to apply for a Travel Award from the Chapter. The chapter will give up to three \$200 awards to offset travel costs of graduate or postdoctoral members who are

presenting their research at the national meeting of the SFN. One additional \$200 award will be reserved for an undergraduate who is an author on a submitted SFN abstract.

Completed applications will include a copy of your accepted abstract, a curriculum vita, and a brief statement describing your

participation in Chapter activities. Further instructions will be provided in May to coincide with abstract submission .

Winners will be announced before member registration opens in July.

Checks will be presented at the Fall General Meeting.



Abbi Rosen and Sarah Johnson,  
2015 NCF-SFN Travel Award Winners

North Central Florida Chapter of the Society  
for Neuroscience  
PO Box 100244  
Gainesville, FL 32610-0244

Phone: (352) 627-9200  
Fax: (352) 392-8347  
E-mail: nflsfnchapter@gmail.com



*The North Central Florida Chapter of the Society for Neuroscience is located on the campus of the University of Florida in Gainesville, FL. Since its inception, the Chapter has been led by graduate students and postdoctoral fellows with support from faculty and administrators in the UF Department of Neuroscience. Each year we organize scientific and professional development venues for our members, visit local schools and community centers to educate about the brain and scientific research and sponsor travel awards to support attendance at the national meeting of the Society for Neuroscience.*

*Advancing the Understanding of the  
Brain and Nervous System*

**Visit us on the internet!**  
**<http://neuroscience.ufl.edu/sfn-north-central-fl-chapter/>**

## Thanks To Our Sponsors!

**UF** | Department of Neuroscience  
College of Medicine

**UF** | McKnight Brain Institute  
UNIVERSITY of FLORIDA

 **EnCor**  
Biotechnology Inc.

 **BANYAN**  
BIOMARKERS®

**TD** TUCKER-DAVIS TECHNOLOGIES  
New Frontiers in Neuroscience

 **Center for  
Smell and Taste**

**UF** | Office of Research  
UNIVERSITY of FLORIDA