



THE TRIANGLE TRANSMITTER

Society for Neuroscience Annual Meeting 2015: Recap

The Society for Neuroscience annual meeting was held October 17-21 in Chicago. With more than 30,000 attendees and 15,000 scientific presentations, this conference is the world's largest source of emerging news about brain science and health.

Dozens of members of our local Triangle SfN chapter traveled to Chicago to give talks, participate in symposiums, and present poster presentations of their work. Several members participated in the SfN Local Chapters Workshop, including Drs. Shannon Farris, Chintan Oza, John Meitzen, and Richard Weinberg. This workshop focused on international collaborations, and our members returned energized to improve existing and initiate new Triangle SfN programs.

Scientific highlights of the meeting included: how early life experiences have profound effects on brain development; new technologies to record from neurons in freely behaving animals and analyze big data; new insight into the relationship between the gut and the central nervous system; mechanisms underlying sex differences in traumatic brain injury; how glia regulate brain activity and neurogenesis; the interactions between stress and addiction; and the neurobiology of social behavior, and much more!

-Dr. John Meitzen, NCSU

FEBRUARY 2016

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The Triangle Transmitter is published by the Triangle Chapter of SFN and edited by Gretchen Chidester, PhD

Mark Your Calendar For These Upcoming Events!

March 10: Triangle Synapse Club, held in the Bryan Research Building at Duke University (5:15 pm)

March 14th: Neuroscience Trivia at Bull McCabes Irish Pub (ages 21+)

March 17: Brain Awareness Day Presentation with Marina Picciotto, Science Café at the NC Museum of Natural Sciences (7pm, 101 DCL)

April 7: 2nd Annual Spring Neuroscience Conference at the NC Biotechnology Center (1-6pm)

Have an event you'd like to promote? Send an email to trianglesfnnews@gmail.com to have your event added to our calendar at <http://trianglesfn.org/calendar-of-event>

Save the Date: 2nd Annual Triangle SfN Spring Neuroscience Conference



April 7th, 2016
1-6pm

NC Biotechnology Center
15 TW Alexander Drive, Durham 27703

2ND ANNUAL TRIANGLE SfN SPRING NEUROSCIENCE CONFERENCE



Keynote Speaker



Keith W. Kelley, PhD

Professor Emeritus of Immunophysiology, University of Illinois
Editor-in-Chief: *Brain, Behavior, and Immunity*

Distinguished Local Speakers



Garret Stuber, PhD

Assistant Professor of Psychiatry, University of North Carolina at Chapel Hill



Cagla Eroglu, PhD

Assistant Professor of Cell Biology, Duke University



Wayne Silver, PhD

Professor of Biology, Wake Forest University

Judged poster session and reception to follow.

REGISTRATION

For more information or to register, please visit
trianglesfn.org



Inaugural T.K. Li Lectureship: Dr. George Koob

In honor of the many accomplishments of Dr. Ting-Kai (T.K.) Li, the Addiction Division of the Department of Psychiatry and Behavioral Sciences has recently instituted the T.K. Li Lectureship. Dr. Li's research has contributed significantly to the field of alcohol addiction, transforming our understanding of alcoholism and the methods by which alcohol's effects are investigated. Dr. Li pioneered the development of animal models for the study of alcohol abuse.

From 2002 through 2008, Dr. Li served as the Director of the National Institute on Alcohol Abuse and Alcoholism (NIAAA), part of the National Institutes of Health. He has authored more than 400 journal articles and earned many prestigious awards, including the Jellinek Award, the James B. Isaacson Award for Research in Chemical Dependency Diseases and the R. Brinkley Smithers Distinguished Science Award. Dr. Li has also served in prominent leadership and advisory positions including past President of the Research Society on Alcoholism. He is a member of the Institute of Medicine of the National Academy of Sciences and an honorary fellow of the United Kingdom's Society for the Study of Addiction. He is currently Professor Emeritus in the Addiction Division of the Department of Psychiatry and Behavioral Sciences at the Duke University School of Medicine.

As part of our mission to promote neuroscience in the Triangle area, Triangle SfN, in collaboration with Duke University Department of Psychiatry and Behavioral Sciences, co-sponsored the first inaugural T.K. Li Lectureship on November 18, 2015. This event featured Dr. George Koob, the current Director of NIAAA and was attended by more than 150 participants from across the Triangle area. Dr. Koob was introduced and welcomed by Dr. Nancy Andrews, the Dean of Medical School, and Dr. Joe McClernon, the Director of the Addiction Division of the Department of Psychiatry and Behavioral Sciences at Duke.



*Drs. George Koob, T.K. Li, and Amir Rezvani
(Photo courtesy Katie Li)*

Addiction as a stress surfeit disorder

Dr. Koob's lecture focused on the dysregulation of key neurochemical elements involved in the brain stress system within the frontal cortex, ventral striatum, and extended amygdala. He showed that specific neurochemical elements in these structures include not only recruitment of the classic stress axis, mediated by corticotropin-releasing factor in the extended amygdala, but also recruitment of dynorphin-k opioid aversive systems in the ventral striatum and extended amygdala. He emphasized that drug addiction impacts multiple motivational mechanisms and can be conceptualized as a disorder that progresses from positive reinforcement to negative reinforcement. Dr. Koob hypothesized that the negative emotional state that drives such negative reinforcement is derived from dysregulation of key neurochemical elements involved in the brain stress systems within the frontal cortex, ventral striatum, and extended amygdala. Additionally, he hypothesized that these brain stress systems may be engaged in the frontal cortex early in the addiction process.

-Amir Rezvani, PhD (Duke University)

Save the Date: Brain Awareness Night 2016

When: March 17

Where: NRC building at the NC Museum of Natural Sciences

Time: 6-8:30 pm

6-7 pm: Neuroscience themed-exhibits and short talks led by NCSU scientists

7-8 pm: Neuroscience-themed Science Cafe with addiction Dr. Marina Picciotto

8-8:30 pm Neuroscience exhibits re-open

From flies to humans (and every animal in between!), brains make behavior happen! Come explore a special brains and behavior themed Science Cafe on March 17! From 6-7 pm, meet local neuroscientists and interact with hands-on brains and behavior exhibits suitable for all ages. Short, accessible talks by neuroscientists in the Daily Planet will celebrate national Brain Awareness Week and tell you what local neuroscientists are discovering. At 7pm, our special guest, prominent neuroscientist Dr. Marina Picciotto from Yale University will lead a Science Café on addiction, a mental illness directly mediated by changes in brain function. Afterwards, the exhibits will re-open for one final celebration of brain and behavior.

Dr. Picciotto is a world-class expert on the effects of nicotine on the brain. She and her colleagues use molecular, genetic, and pharmacological approaches to link the biochemical, cellular, and anatomical levels of investigation to complex behaviors, including addiction, depression, feeding and learning. Of primary interest to her is the role of nicotinic acetylcholine receptors in brain function and development. Dr. Picciotto is currently the Charles B. G. Murphy Professor of Psychiatry and Professor in the Child Study Center, Professor of Neurobiology and of Pharmacology, and Deputy Chair for Basic Science Research in the Department of Psychiatry at Yale University. She has won numerous awards for her work, including the Presidential Early Career Award in Science and Engineering by President Clinton and the Jacob P. Waletzky Memorial Award for Innovative Research in Drug Addiction and Alcoholism by the Society for Neuroscience.

ComSciCon-Triangle:

Science Communication Workshop for Graduate Students

Duke, NCSU, and UNC-Chapel Hill graduate students in STEM fields are invited to apply for [ComSciCon-Triangle 2016](#), a science communication workshop organized by and for graduate students. At this two-day conference (5/14 and 5/20, 9am-2pm, Frontier at Research Triangle Park), attendees will have the opportunity to develop their science communication skills, network with fellow graduate student leaders passionate about science education and outreach, learn from expert writers and professional science communicators, and produce an original writing for publication.

We'd like to thank the following sponsors for their generous support: Duke School of Medicine, Duke Science and Society, NCSU College of Humanities and Social Sciences, NCSU College of Sciences, Research Triangle Park, UNC Chapel Hill Graduate School, and UNC Research. ComSciCon-Triangle is organized by graduate students from Duke University, NC State University, and UNC Chapel Hill.

Questions? Contact the local organizing committee at ComSciCon.Triangle@gmail.com

More Brain Awareness Week Events!

Morehead Planetarium: March 5th

Calling all science outreach enthusiasts! Interested in a teaching experience before Brain Awareness Week? The Middle School Science Club (MSSC) is a group of 45 sixth-to-eighth graders who are extremely excited about science. They will be coming to Morehead Planetarium on Saturday, March 5th to learn about concussions and how to protect the brain.

The students will arrive at 2:30pm and depart around 5pm. We have three interactive activities planned for this event:

1. How does the skull protect the brain? We will demonstrate this by using eggs (brains) in plastic containers (skulls). What do you think will happen when you shake the container? How about when water (cerebrospinal fluid) is added? In doing this activity, we will also discuss the different layers that protect the brain.

2. Design your own helmet! Sometimes the skull isn't enough to protect the brain, and we need well-designed helmets to properly protect it. Students will design unique helmets out of different materials and test them out on a brain (an egg). By dropping the "helmeted" egg from a height, we can see which helmets work best to protect the brain and discuss why.

3. We will also have "concussion goggles" on hand to demonstrate how vision and perception is impaired during concussion. Students can walk along a line or play catch while wearing the goggles, to see how everyday actions are affected by concussions.

We need a few volunteers who will help teach these concepts and guide students through the activities! If interested, email Deirdre at sackett@live.unc.edu

NC Museum of Life + Science: March 8-13th

Join the UNC Bowles Center for Alcohol Studies during Brain Awareness Week as we teach kids about concussions - what they are, how to check for them, what to do if you get one, and how to prevent them.

WHAT: Protect the Brain: Concussion!

WHERE: NC Museum of Life + Science (433 Murray Avenue, Durham)

WHEN: March 8-13th (9:45am–12:00pm, and 11:45am–2:00pm)

Sign up here:

www.SignUpGenius.com/go/70A0F44ABAD2A1-protect

If you participate, you will work in a team. We will send you detailed instructions on each activity in the lab, including sheep and human brains and distortion goggles that simulate concussive damage to the visual system.

This is a great way to teach kids about what parts of the brain do what and encourage them to protect their brains from injury! As always, we will promote a positive message of brain health that includes protecting their brain from drugs and alcohol, especially while it is still growing.

For more information, contact Donita at DLR@unc.edu

Neuroscience Trivia

When: March 14th at 7:30pm

Where: Bull McCabe's Irish Pub

Details:

- Free appetizers (while supplies last)
- Event is 21+ (unless accompanied by a parent)

**THE TRIANGLE SYNAPSE CLUB
PRESENTS**

**Central amygdala neurotensin neurons
regulate alcohol consumption, positive
valence, and sedation**

**Zoe McElligott
Dept of Psychiatry, UNC**

**Tuesday, March 8, 2016
Lecture: 6:00-7:00 PM**

**101L Bryan Research Bldg., Duke
Come for snacks and social hour, beginning at 5:15.**



Parking available on LaSalle, ~2 blocks west of Bryan

**FREE FOOD AND BEVERAGE
provided by Duke Institute for Brain Sciences**

Outreach Committee Update

A number of Triangle SfN Chapter members participate in neuroscience outreach programs with both children and adults. Neural Connections, an undergraduate outreach club in UNC's Department of Psychology & Neuroscience, is led by Dr. Marsha Penner. Members of Neural Connections participated in Carolina's First Look Program, in which potential first generation college students (now in middle school) get to tour the UNC campus and learn about what they can study.

Neural Connections also participates in many of the adult-oriented After Hours programs at the Durham Museum of Life and Science including the "Science of Sour" and "Science of Beer", and "Heroes and Villains". Check out some photos from our events below and on the next page!

--Christina Lebonville, UNC



All photos courtesy of Patrick Glace

Outreach Committee Update (continued)



All photos courtesy of Patrick Glace

NORTH CAROLINA TRIANGLE CHAPTER SOCIETY FOR NEUROSCIENCE
MEMBERSHIP AND DUES FOR 2016

Annual Dues:

Regular Membership: \$20.00/year or \$50.00/3 years

Student Membership: \$5.00/year or \$12.00/3 years

Partner Membership: \$25.00/year or \$60.00/3 years

**Membership in Triangle SfN
does not require membership in
National SFN**

Name: _____

Position: _____

Dept. & Institution: _____

Office Address: _____

City, State, Zip: _____

Telephone: _____ E-Mail Address: _____

CHECK ONE

Regular:	1 year	\$20.00	()	Student:	1 year	\$5.00	()
	3 years	\$50.00	()		3 years	\$12.00	()
Partner:	1 year	\$25.00	()				
	3 years	\$60.00	()				

Date: _____

Dues payable by cash, check or PayPal (TriangleSfNChapter@gmail.com)**Return your payment and this form to:**

Dr. Shannon Farris
 Chapter Representative
 111 T.W. Alexander Dr.
 Mail Drop F2-04
 Research Triangle Park, NC 27709

Please make checks payable to:

SfN NC Triangle Chapter

KEEP IN TOUCH!**General questions and comments:**TriangleSfNChapter@gmail.com**Communications committee:**TriangleSfNNews@gmail.comTwitter: [@Triangle_SfN](https://twitter.com/Triangle_SfN)Facebook: facebook.com/groups/trianglesfn**LinkedIn:**[Society for Neuroscience Triangle Chapter](https://www.linkedin.com/groups/Society-for-Neuroscience-Triangle-Chapter)Website: <http://www.trianglesfn.org>