

# Biological Sciences

February 20th, 2017 AY 16-17 #155

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## Announcements

### **From Alice Lee:**

In November 2016, the Small World Initiative (SWI) and the Centers for Disease Control & Prevention (CDC) encouraged students to do something about the antibiotic crisis in recognition of the CDC's 9th Annual Get Smart About Antibiotics Week (Nov. 14-20). This coincided with global activities from the World Health Organization, European Union, Pan-American Health Organization, and similar organizations in Canada and Australia.

Alice Lee's MB360, Inquiry in Microbiology: Crowdsourcing Antibiotics course, took home first place in this challenge. The CDC commented that the class's entry had excellent depth and reach of impact. They believed the students did a great job recording their impact, which is one of the most important things they do in public health.

The winning team will receive a special tour of the CDC and CDC museum in Atlanta Georgia. They will also receive a mentoring session with Lauri Hicks, a Medical

Epidemiologist and director for the CDC's office of antibiotic stewardship. Her expertise is in bacterial respiratory diseases, outbreak investigations, and antibiotic resistance and use.

A [winner profile](#) was posted and their outreach efforts last fall can be seen in this [youtube video](#).



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### **Facilities Announcement:**

The switch replacement for the Thomas Hall has been scheduled for Tues Feb 21st. Work will begin at 7 pm and the outage will only occur until 7 am Wednesday Feb 22nd.

During this outage, contractors will be onsite to upgrade the network infrastructure. **Network connectivity will be intermittent as connections are migrated to new equipment.**

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### **Save-the-Date**

**Dr. Adam Hartstone-Rose**

**Public Science Cluster Candidate Seminar**

# Something to Chew On – Public Science and the Exploration of Mastication!

**When:**

11 a.m.-12 p.m., Tuesday, Feb 21st

**Where:**

Stephens Room, 3503 Thomas Hall

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The Campus Writing & Speaking Program's Faculty Workshop Presents:  
**Multimodality, Writing, and Disability: Designing Accessible Classroom Practices**



**Wednesday,  
February 22  
12-2 p.m.  
129, 1911 Building**

**Dr. Melanie Yergeau, Assistant Professor**  
Department of English  
University of Michigan



<http://go.ncsu.edu/yergeauworkshop>

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# Building the Global Change Community

A Seminar Series Convening Five NCSU Colleges

**FEB 9 DR. ERIN SEEKAMP (CNR)**  
Enhancing Transparency of Climate Adaptation  
Planning for Cultural Resource Management  
3:30pm | 101 David Clark Labs

**FEB 23 DR. ELSA YOUNGSTEADT (CAL)**  
Climate Change and Plant-Pollinator Interactions  
3:30pm | 101 David Clark Labs

**MAR 30 DR. ASTRID SCHNETZER (MEAS)**  
Harmful Algal Blooms and Climate Change  
3:30pm | 101 David Clark Labs

**APR 13 DR. SANKAR ARUMUGAM (COE)**  
Utilizing Climate Information for Improving  
Water, Energy and Ecological Management  
3:30pm | 101 David Clark Labs



Hosted by the SE Climate Science Center and the Global Change Fellows





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## SPECIAL SEMINAR

Chancellor's Faculty Excellence Program:  
**Microbiomes and Complex Microbial Communities Cluster**

### **Stochastic and deterministic bacterial community assembly in a *C. elegans* host model**

**Dr. Nicole Vega**  
Department of Physics  
Massachusetts Institute of Technology

1:30 PM on Thursday, February 23<sup>rd</sup>, 2017  
3503 Thomas Hall - Stephens Room

**ABSTRACT:** Despite decades of theoretical and observational investigation, the factors directing community assembly in real ecosystems are still poorly understood. The problem is particularly acute in host-associated systems such as the intestinal microbiota. Furthermore, while these communities are known to vary between hosts, the causes and consequences of this heterogeneity are not well understood. We use *C. elegans* as a simple model for community assembly in a host environment. Gut-associated communities are assembled *de novo* from a set of bacterial species selected to cover a broad taxonomic range and a spectrum of host interactions, including both probiotics and pathogens of the worm; these results provide insight into the selective forces governing community assembly in this environment. Further, the stochastic forces affecting community assembly are described through modeling and experiments; the rate of intestinal colonization by bacteria is used to move between drift-dominated and deterministic regimes, and the resulting heterogeneity between individual communities is described. We find that, while the host environment imposes distinct selective pressures on its bacterial contents, stochastic forces are sufficient to produce considerable heterogeneity between individuals

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Triangle Chapter  
**Society for Neuroscience**

Register Now-  
[www.TriangleSfN.org](http://www.TriangleSfN.org)

# 3<sup>rd</sup> Annual Spring Conference

## Plan to Participate!

- Network with local neuroscientists
- Present a poster
- Attend "ask a grad student" panel
- **Attendance is free!!!**

### Featured Speakers-



**Dr. David Anderson**  
California Institute of Technology



**Dr. Serena Dudek**  
National Institute of Environmental Health Sciences



**Dr. Leslie Sombers**  
North Carolina State University



**Dr. Michael Nader**  
Wake Forest University



**April 13, 2017**

10:00 am - 5:30 pm

Embassy Suites

201 Harrison Oaks Blvd, Cary, NC

**TOXICOLOGY PROGRAM  
SPRING 2017 SEMINAR SCHEDULE**

**Tuesdays @ 4:00 PM Toxicology Building Room 2104, Centennial Campus**

\*Co-sponsored by Center for Human Health and the Environment

<b>DATE</b>	<b>SPEAKER</b> <i>Affiliation</i>	<b>TITLE</b>
1/10	<b>Jason Richardson</b> <i>Northeast Ohio Medical University</i>	Gene-environment interactions in neurological disorders
1/17	<b>Russell Thomas</b> <i>EPA</i>	Too many chemicals, so little time
1/24	<b>Darryl Zeldin*</b> <i>NIEHS</i>	Thromboxane (TXA2) Attenuates Th9 Cell Differentiation and Function During Allergic Lung Inflammation
1/31	<b>Christopher Sistrunk</b> <i>Alumni Speaker City of Hope</i>	Hiding in Plain Sight: How Morphologically Normal Breast Tissues Display Biochemically Cancerous Phenotypes in High Risk Women
2/7	<b>Hazel Nichols</b> <i>UNC Gillings School of Global Public Health</i>	Cancer and pregnancy
2/14	<b>John Brock</b> <i>UNC Asheville</i>	Human and Wildlife Exposure to Phthalates: Discovery and Future Directions
2/21	<b>Katherine Franz</b> <i>Duke University</i>	Designing molecules to mine for copper along the host-pathogen interface
2/28	<b>Mark Zylka</b> <i>UNC School of Medicine</i>	Genetic and environmental risks for autism
3/7	<b>No Seminar</b>	<b>SPRING BREAK</b>
3/14	<b>No Seminar</b>	<b>Society of Toxicology Meeting</b>
3/21	<b>Humphrey Hung-Chang Yao*</b> <i>NIEHS</i>	Sex, Arsenic, and Hedgehog: Mouse Models of Fetal Origins of Adult Diseases
3/28	<b>Serena Dudek</b> <i>NIEHS</i>	New insights into regulating synaptic plasticity from an unexpected place: Hippocampal Area CA2
4/4	TBD	
4/11	<b>Antony Williams</b> <i>EPA</i>	The EPA CompTox Chemistry Dashboard – A Data Integration Hub for Environmental Chemists and Toxicologists
4/18	<b>Allison Camp</b> <i>NCSU, PhD Student Advisor: Gerald LeBlanc</i> & <b>Stephanie Eytcheson</b> <i>NCSU, PhD Student Advisor: Gerald LeBlanc</i>	<i>TBD</i>  & <i>Hemoglobin Levels Modulate Toxicity to Nitrate</i>
4/25	<b>Rick Woychik*</b> <i>NIEHS</i>	Research Strategies for Exploring the Landscape of Environmental Health

Time: 1:30 pm

Location: Stephens Room, 3503 Thomas Hall



**January 23**  
**Dr. Steven Benner,**  
 Foundation for Applied Molecular Evolution  
 (Hosted by Dr. Jeff Thorne)



**February 6**  
**Dr. Karl Broman**  
 University of Wisconsin  
 (Hosted by the Genetics Graduate Students)



**February 20**  
**Dr. Chao-Qiang Lai**  
 Alumnus Seminar  
 USDA, Tufts University  
 (Hosted by Dr. Trudy Mackay)



**March 13**  
**Dr. Susan McCouch**  
 Cornell University  
 Hosted by the Genetics Graduate Students)



**March 27**  
**Dr. Kirk Wilhelmsen**  
 UNC-Chapel Hill  
 (Hosted by Dr. Robert Anholt)



**April 10**  
**Dr. Charles Aquadro**  
 Cornell University  
 (Hosted by the Genetics Graduate Students)



**April 24**  
**Dr. Craig Montell**  
 University of California at Santa Barbara  
 (Hosted by Dr. Robert Anholt)



**January 30**  
**Dr. William Jeffery**  
 University of Maryland  
 (Hosted by the Genetics Graduate Students)



**February 13**  
**Dr. Brian Wiegmann**  
 Charles Darwin Lecture  
 NC State University  
 (Hosted by the Dr. Trudy Mackay)



**February 27**  
**Dr. Eric Gaucher**  
 Georgia Tech  
 (Hosted by Dr. Jeff Thorne)



**March 20**  
**Dr. Logan Everett**  
 NC State University  
 (Hosted by Dr. Trudy Mackay)



**April 3**  
**Dr. Mariana Wolfner**  
 Cornell University  
 (Hosted by Dr. Robert Anholt)



**April 17**  
**Dr. Philip Benfey**  
 Duke University  
 (Hosted by Dr. José Alonso)



# W. M. Keck Center for Behavioral Biology

## *Distinguished Speaker Series*

Spring 2017

January 26 John McGann

*Department of Psychology  
Rutgers University*

***Beyond Bottom-Up Sensory Processing: Learning and Expectation  
Can Shape Sensory Input to the Mouse Brain***

*3:30 pm - 101DCL*



February 9 Karen Carleton

*Department of Biology  
University of Maryland, College Park*

***QTL and Gene Regulatory Networks for Seeing Through the Eyes of a Fish***

*3:30 pm – 3503 Thomas Hall*



March 9 Marlene Zuk

*College of Biological Sciences  
University of Minnesota*

***Rapid Evolution in Silence: Adaptive Signal Loss in the Pacific Field Cricket***

*3:30 pm – 3503 Thomas Hall*



March 16 Jon Kaas

*Vanderbilt Brain Institute  
Vanderbilt University*

***The Evolution of the Human Brain***

*3:30 pm – 3503 Thomas Hall*

*7:30 pm – Daily Planet Café*

*NC Museum of Natural Sciences*



April 24 Craig Montell

*Molecular, Cellular and Developmental Biology  
University of California at Santa Barbara*

***Decoding the Receptors Controlling Animal Behavior in Drosophila***

*1:30 pm – 3503 Thomas Hall*



# Spring 2017 Neuro Events

Neurogroup meets 3<sup>rd</sup> Thursday Stephens room 3<sup>rd</sup> floor Thomas Hall 11:30-1:00

Neurojournal club meets once a month in room 139 of David Clark Labs 11:00-12:00

January 19 Neuro-group

March 24 Neurojournal

February 3 Neurojournal

April 13 Triangle Society for Neuroscience  
<http://trianglesfn.org/springmeeting/>

February 16 Neuro-group

April 20 Neuro-group

March 3 Neurojournal

April 20 Neuro-group

## **Brain Awareness Day**

March 16

April 21 Neurojournal

Neuro-group 11:30

Dr. Alex Marshall High Point University

Jon Kaas seminar 3:30

May 18 Neuro-group

NCMNS event 6:30

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**Duke Women in Science & Engineering &  
Graduate Women in Science  
Research Triangle Chapter**

# A Celebration of Women in Science

**Saturday, May 20, 2017 at Duke University**

**Keynote Address**

**Dr. Patricia Jensen**

National Institute of  
Environmental Health Sciences

**“Diverse Origins in Science”**



- Research symposium
- Short scientific talks
- Poster session
- Networking reception with refreshments
- Free registration

Time and exact location to be determined, registration will open March 2017  
[sites.duke.edu/wise/](http://sites.duke.edu/wise/)      [gwisresearchtriangle.org/women-in-science-symposium/](http://gwisresearchtriangle.org/women-in-science-symposium/)



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