

**News and Announcements**

**Musings from the Director.....**



I'm most pleased to welcome everyone back as we begin yet another academic year. There's a lot to report after the summer hiatus of the News and Announcements.

In May we created the position of Associate Director to help with the broad management and planning of the Center. Dr. Steve Munger, a new preeminence hire in Pharmacology, who is this month's featured member (see item 2), will serve in that position. Welcome Steve! Dr. Linda Bartoshuk will continue to serve as our Director of Human Research.

In June we held a most successful chemical senses symposium with our colleagues at FSU. Approximately 50 participants from both universities as well as several other institutions gave 8 platform presentations and 21 poster presentations in this one-day event. The keynote address was given by Dr. Tim Osborne from the Sanford-Burnham Medical Research Institute at Lake Nona in Orlando. By the way, the NIH P30 award that supports the meeting, research travel between UF and FSU, and the shared 'shop' core was extended through August 2015, so plan to continue to take advantage of those resources.

In July we launched an effort to enhance our visibility in conjunction with the UF Foundation. This consists of expanding and updating our home page as well as developing our branding for our membership to use in their public presentations. Stay tuned for more on that. Speaking of seminars, our chemical senses seminar series is set for the Fall term (see item 5). The series kicks off with a talk by Dr. Ivan Araujo on October 1<sup>st</sup> (see item 7).

Since we don't have a seminar in September (although FSU does – see item 6) we're planning instead to get everyone together and kick off the new term with a wine and cheese mixer on September 15<sup>th</sup> (see item 4). We hope everyone can drop by, even if only for a few minutes on the way home. This will be an excellent opportunity to get to meet our several recently hired chemical senses faculty.

Finally, this Fall we'll be restarting our chemical senses discussion group now that we have sufficient critical mass to sustain it (see item 8). This activity is open to faculty, postdocs and graduate students interested in critically evaluating new findings in the field, including their own findings prior to publication. All in all, the 2014/15 academic year looks to be another promising one for our chemical senses community at UF and our colleagues at FSU.

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## Featured Member

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### Dr. Steven Munger

#### Professor

Department of Pharmacology and Therapeutics  
University of Florida College of Medicine



Contact:

[Steven.munger@ufl.edu](mailto:Steven.munger@ufl.edu)

This month we're pleased to feature our newest member Dr. Steven Munger, Professor of Pharmacology and Therapeutics, who also serves as the Center's new Associate Director. He recently joined the faculty from the University of Maryland, School of Medicine. Dr. Munger is interested in understanding how diverse chemosensory transduction mechanisms, including different taste and olfactory receptors, contribute to chemosensory function, impact ingestive and social behaviors, and interact with hormonal systems that regulate metabolism, nutrient response and homeostasis. He has three major areas of current research.

**Mechanisms of alimentary chemosensation.** He is investigating the interactions between taste and hormonal systems. A key function of the taste system is to detect nutrients, toxins and indicators of spoilage, thus providing the animal with critical information about the quality and nutritional value of food before it is ingested. The ability to detect and discriminate taste stimuli is essential for health and survival, and can drive ingestive behaviors. Therefore, physiological mechanisms that modulate taste function in the context of nutritional needs and metabolic status could optimize ingestive decisions and directly impact human health. Although the gustatory system critically influences food preference, food intake and metabolic homeostasis, the physiological mechanisms that link taste function and metabolism are poorly understood. Recent findings from his laboratory and others suggest that the gustatory and gastrointestinal systems utilize a common molecular toolkit of receptors, signaling molecules and hormones to detect nutrients and other chemicals. This is consistent with a role for taste function in the maintenance of metabolic homeostasis and suggests that sensory function may be modulated in the context of metabolic status.

**Extraoral chemoreceptors and the regulation of metabolism.** The T1R and T2R families of G protein-coupled receptors play critical roles in the taste system, where they subserve the detection of sweet, savory and bitter-tasting stimuli. However, in recent years it has become clear that these same receptors are expressed in numerous tissues throughout the body. Some of these extraoral "taste" receptors may facilitate metabolic responses to ingested nutrients, while others may protect the body from inhaled or ingested toxins. Currently, he is using *in vivo* and *in vitro* approaches to characterize the roles of these two receptor families in the detection of chemostimuli by endocrine cells of the gut and its associated organs and in the control of glucose homeostasis. These studies should offer important new insights into the molecular and cellular mechanisms underlying metabolic diseases such as obesity, Type 2 diabetes mellitus, and the metabolic syndrome.

**Olfactory recognition of social cues.** It has become increasingly clear that the concept of a single olfactory system is grossly oversimplified. The olfactory system is actually composed of a number of subsystems, some well-known and others only recently characterized. These subsystems may be anatomically segregated within the nasal cavity, and they each make distinct neural connections to regions of the olfactory forebrain. They are clearly distinguished by the receptors they express and the signaling mechanisms they employ to detect and transduce chemosensory stimuli, and they respond to a plethora of diverse molecules, sometimes quite specifically, that range from volatile odors to peptides and proteins. He is using integrative approaches in the mouse to decipher the transduction mechanisms of these specialized subsystems, the ways in which the forebrain processes these signals, and the specific behaviors that they mediate. Of particular interest is a subsystem specialized to detect chemosignals that facilitate food-related social learning.

We are most pleased to have Dr. Munger join our chemical senses research community and the Center's leadership team.





# Wine and Cheese Mixer

Monday, September 15, 2014

5:00-6:30 PM



You are cordially invited to a wine and cheese mixer to kick off the new term. This event is being held jointly with the MBI. In addition to being a great opportunity to meet our newest chemical senses faculty - who will be our honored guests – it will be a great opportunity to get to meet other neuroscientists and for them to meet you.

The event will be held on Monday, September 15<sup>th</sup> from 5 to 6:30 PM in the MBI lounge area on the 5<sup>th</sup> floor of the McKnight Brain Institute just outside the Center office. Go through the door just to the right of the elevator. It would be great if you stop by and say hello, even if only for a few minutes on your way home.

If you plan to stop by on your way home with your car, you can park in the service vehicle lot on Newell Dr., immediately north of the MBI. Park in any open space not reserved for a specific vehicle. Also, you can park in the Jennings Hall lot just up the hill from there. That lot is entered from Museum Rd., although you can exit on to Newell. Restrictions on both lots will be lifted by 4:30 that day.

Looking forward to seeing everyone there!

LUNCH WITH THE  
SPEAKERS  
IMMEDIATELY  
FOLLOWS THE  
SEMINAR

*Faculty are reminded to encourage their postdocs and grad students (sorry, no faculty) to take advantage of the opportunity to meet with each of our speakers immediately following their seminar.*

*These luncheons are provided at no charge and are held just upstairs from the seminar room in the MBI conference room, Rm L5-101B. Take the elevator to the 5<sup>th</sup> floor and turn right immediately on exiting the elevator.*

*If you have a student or postdoc who would like to take advantage of this opportunity, please have them contact Cheri Brown ([browncl@ufl.edu](mailto:browncl@ufl.edu)) to reserve a spot since seating is limited.*

## UFCST's

### Chemical Senses Fall 2014 Seminar Schedule

The Center is pleased to announce its Fall seminar schedule. All seminars are held at Noon in the DeWeese Auditorium in the McKnight Brain Institute, 1149 Newell Dr. Don't forget, the seminars are followed immediately by a meet-the-speaker luncheon for graduate students and postdocs who sign up in advance ([browcl@ufl.edu](mailto:browcl@ufl.edu)).

**Wednesday, October 1<sup>st</sup>** - Dr. Ivan de Araujo (Associate Professor of Psychiatry, Yale University School of Medicine; Associate Fellow, the John B. Pierce Foundation)

Dr. de Araujo studied with Edmund Rolls at Oxford and Miguel Nicolelis at Duke. He uses behavioral, neurochemical, electrophysiological, and optogenetic approaches to study the neurobiology of feeding, in particular the influence of sugar-derived calories in the formation of alimentary habits.

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**Monday, October 13<sup>th</sup>** - Dr. Joel Mainland (Assistant Member, Monell Chemical Senses Center)

Dr. Mainland studies the molecular biology of olfaction who is interested in developing a predictive basis for relating molecular structure and olfactory perception using combined psychophysical and molecular approaches.

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**Monday, November 5<sup>th</sup>** - Dr. Elissa Hallem (Assistant Professor of Neuroscience, UCLA)

Dr. Hallem studies the function and organization of the neural circuitry that mediates odor driven behavior in free living and parasitic animals, especially nematodes such as the model organism *C. elegans*. She is the recent recipient of a MacArthur 'Genius' Award.

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**Monday, December 3<sup>rd</sup>** - Dr. Jay Gottfreid (Associate Professor of Neurology, Northwestern University)

Dr. Gottfreid is an emerging leader in clinical aspects of olfaction who uses high-resolution functional magnetic imaging computational techniques and psychophysiological paradigms to better understand the profound impairment in the sense of smell associated with Alzheimer's disease.

## Upcoming Chemical Senses' Seminar at FSU - Wednesday, September 10<sup>th</sup>



### 'Gustatory Processing in the Drosophila Brain'

Dr. Kristin Scott  
Professor of Genetics, Genomics, and Development  
Dept. of Molecular and Cell Biology  
University of California, Berkeley  
Berkeley, CA

Wednesday, September 10  
3:30 PM, Rm A221  
Psychology Building  
Florida State University

Dr. Scott studies taste recognition in the fruit fly, *Drosophila Melanogaster*, to examine how sensory information is processed by the brain. She uses a combination of molecular, genetic, electrophysiological and behavioral approaches to study taste circuits. Her aims are to understand how different tastes are distinguished by the brain and how taste percepts and behaviors are modified by experience.

**Note:** This lecture is at FSU in Tallahassee. To attend this and all chemical senses lectures at FSU, you can park in one of the four reserved spaces in front of the Psychology Building (move the parking cone, if necessary), then go inside the building and ask the receptionist for a parking permit to display on your windshield. Be sure to return the permit before you leave! If you wish you can also use the office maintained for visiting UF faculty and students in the Psychology Building, which is equipped with a phone and computer for your use. Ask the receptionist for directions and a key.

**Note:** This year we hope to be able to live stream the chemical senses lectures at FSU to the MBI conference room on the 5<sup>th</sup> floor of the McKnight Brain Institute, just outside of the Center office, L5-101B. We will announce if this is up and running in time for Dr. Scott's talk prior to September 10<sup>th</sup>.

## Upcoming Chemical Senses' Seminar at UF - Wednesday, October 1

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### **'The Physiology and Circuitry of Sweet Taste Reward'**

Dr. Ivan de Araujo

Associate Professor of Psychiatry  
Yale University School of Medicine  
Associate Fellow  
The John B. Pierce Foundation

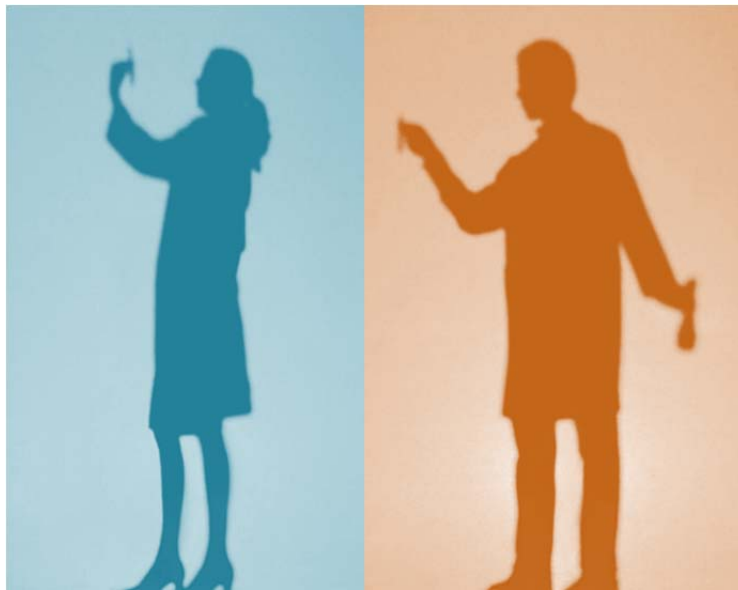
Wednesday, October 1  
12 Noon, DeWeese Auditorium  
Rm. L1-100, McKnight Brain Institute, University of Florida

Dr. de Araujo studies the neurobiology of feeding. Building on his training with Edmund Rolls at Oxford and Miguel Nicolelis at Duke, he uses behavioral, neurochemical, electrophysiological, and optogenetic approaches to understand the gastrointestinal and neural nutrient sensors (in contraposition to oral sensors) that mediate caloric intake. He is particularly interested in the influence of sugar-derived calories in the formation of alimentary habits.

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## Biweekly Chemical Senses Discussion Group – Starting Friday, September 5<sup>th</sup>

This Fall we plan to start a chemical senses discussion group now that we have sufficient critical mass to sustain it. This activity is open to faculty, postdocs and graduate students interested in critically evaluating established and emerging ideas in the chemical senses, including evaluating new findings/ideas prior to publication. The group will meet in the MBI Conference Room on the 5<sup>th</sup> floor of the McKnight Brain Institute, L5-101B, unless we outgrow that room. The group will meet at 10 AM every other week starting Friday, September 5<sup>th</sup>. The topic of discussion along with a reminder of the meeting will be circulated one week prior. To avoid cluttering mailboxes the information will be circulated only to those expressing interest in participating. If you are interested, please submit your name to Cheri Brown ([browncl@ufl.edu](mailto:browncl@ufl.edu)) so she can construct a distribution list.





# NIH Announcements

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- NIDCD Small Grant Program (R03)  
([PAR-13-057](#))  
National Institute on Deafness and Other Communication Disorders  
Application Receipt/Submission Date(s): February 26, 2013; June 26, 2013;  
October 18, 2013; February 26, 2014; June 26, 2014; October 28, 2014; February  
26, 2015; June 26, 2015; October 28, 2015
- NIDCD Clinical Research Center Grant (P50)  
([PAR-13-062](#))  
National Institute on Deafness and Other Communication Disorders  
Application Receipt/Submission Date(s): February, 22, 2013; May 30, 2013;  
October 1, 2013; January 30, 2014; June 2, 2014; October 1, 2014; February 2,  
2015; June 6, 2015; October, 1, 2015
- NIDCD Research Grants for Translating Basic Research into Clinical Tools (R01)  
([PAR-14-009](#))  
National Institute on Deafness and Other Communication Disorders  
Application Receipt/Submission Date(s): June 23, 2014, February 23, 2015, October  
23, 2015, June 23, 2016, February 23, 2017
- Notice of Participation of NIDCD in RFA-NS-13-013 Collaborative Research  
on Chronic Traumatic Encephalopathy and Delayed Effects of Traumatic  
Brain Injury: Neuropathology and Neuroimaging Correlation (U01)  
([NOT-DC-13-004](#))  
National Institute on Deafness and Other Communication Disorders
- Notice of Participation of NIDCD in RFA-NS-13-014 Pilot Projects on Sports-  
Related Brain and Spinal Cord Injury Research (R21)  
([NOT-DC-13-005](#))  
National Institute on Deafness and Other Communication Disorders
- Notice of Participation of NIDCD in RFA-NS-13-015 Pilot Projects on Sports-  
Related Brain and Spinal Cord Injury Research (R03)  
([NOT-DC-13-006](#))  
National Institute on Deafness and Other Communication Disorders
- NIDCD Research Grants for Translating Basic Research into Clinical Tools (R01)  
([PAR-14-009](#))  
National Institute on Deafness and Other Communication Disorders  
Application Receipt/Submission Date(s): June 23, 2014, February 23, 2015,  
**October 23, 2015, June 23, 2016, February 23, 2017**

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**UFCST Travel  
graduate students and  
postdocs**  
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The Center provides travel awards for graduate students and postdocs at the University of Florida on an ongoing basis. We encourage applications from young scientists whose main area of interest is not the chemical senses, but who would benefit from exposure to the field. We will also consider requests from graduate students and postdocs actively working in the chemical senses to attend the AChemS annual meeting or other scientific meetings of relevance to chemical senses research. Please submit requests for support in the form of a letter to the Center office at [ufcst@ufl.edu](mailto:ufcst@ufl.edu) at least one month before the start of the meeting. Please include in the request the estimated cost of travel, registration, and housing while at the meeting, and whether or not you intend to make a scientific presentation. Graduate students should submit letters that are countersigned or otherwise supported by their mentor. UFCST Travel Awards will be governed by the University of Florida travel guidelines.



## Upcoming Chemical Senses Meetings

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**September 10-13, 2014**

**ECRO XXIV Dijon**

Dijon, France

<https://colloque.inra.fr/ecro2014>

**September 16-19, 2014**

**ICBC – The International Citrus & Beverage Conference**

Sheraton Sand Key Resort

Clearwater Beach, FL

[www.conference.ifas.ufl.edu/citrus](http://www.conference.ifas.ufl.edu/citrus)

**November 20-21, 2014**

**Smell and Taste 06**

Dresden, Germany

<http://goo.gl/HbrJcU>

**November 21-23, 2014**

**Clinical CHEMOSENSATION 2014**

Dresden, Germany

<http://goo.gl/5STBhS>

**April 22-25, 2015**

**AChemS 37<sup>th</sup> Annual Meeting**

Hyatt Regency Coconut Point

Bonita Springs, FL

<http://www.achems.org/i4a/pages/index.cfm?pageid=3962>