

January 7, 2019

# Neurotransmitter



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## Neurotransmitter Schedule

The next *Neurotransmitter* will be published and mailed electronically on **Tuesday, January 22, 2019**. All seminar announcements and notices must be submitted to Hali Hetz via email ([cnup@pitt.edu](mailto:cnup@pitt.edu)) **no later than 12:00 noon on Thursday, January 17, 2019**.

All seminars are listed in the "News and Events" section on the CNUP web site, <http://cnup.pitt.edu>. The web site is updated as information is received so you can find additions or changes between issues of the *Neurotransmitter*.

## Seminars

Wed., 1/9  
4:00 p.m. PCPR & University of Pittsburgh Brain  
Institute Special Seminar:  
*Kappa opioid receptors drive aversive  
components of pain*

BST  
1495 Catherine Cahill, PhD  
Professor  
Department of Psychiatry and  
Biobehavioral Sciences  
University of California, Los Angeles

*(Sponsored by the Pittsburgh Center for Pain  
Research)*

Wed., 1/9  
4:00 p.m. Department of Neurology Grand Rounds  
Series:  
*The neuropsychiatric presentation: When  
to look deeper?*

1105AB  
Scaife Steven Gangloff, MD  
Resident, Department of Neurology  
Conference University of Pittsburgh School of  
Center Medicine

*(Sponsored by the Department of Neurology)*

Wed., 1/9  
4:00 p.m. CNBC Postdoc Seminar:  
*Sex differences in stress-related alcohol-  
motivated and affective behavior:  
Involvement of excitatory signaling in the  
amygdala*

Mellon  
Institute Megan L. Bertholomey, PhD  
Social Room Postdoc, CNBC  
University of Pittsburgh

*Using GCaMP6 to measure activity in the  
trigeminal ganglia*

Jane E. Hartung, PhD  
Postdoc, CNBC  
University of Pittsburgh

*(Sponsored by the Center for the Neural Basis  
of Cognition)*

Thurs., 1/10  
10:00 a.m. Department of Psychology Colloquium:  
*Stress, emotion regulation, and immunity:  
A systems perspective on healthy aging*

Martin  
Colloquium Rebecca Reed, PhD  
Center; 4127 Department of Psychology  
Sennott Square University of Kentucky

*(Sponsored by the Department of Psychology)*

Fri., 1/11  
12:00 p.m. Department of Psychiatry Lecture Series,  
Meet the PI Lecture:  
*Understanding the OCD brain: Using  
technology to build bridges between  
humans and mice*

UPMC  
Western Susanne Ahmari, MD, PhD  
Psychiatric Assistant Professor of Psychiatry,  
Hospital, Director, Translational OCD Laboratory  
2nd floor University of Pittsburgh  
Auditorium

*(Sponsored by the Department of Psychiatry)*

Fri., 1/18  
12:00 p.m. Department of Psychiatry Lecture Series,  
Special Guest Lecture:  
*Convergent paths to psychosis in clinical  
and genetic risk populations*

UPMC  
Western  
Psychiatric  
Hospital,  
2nd floor  
Auditorium  
Carrie Bearden, PhD  
Professor of Psychology  
University of California, Los Angeles  
*(Sponsored by the Department of Psychiatry)*

Fri., 1/18  
3:00 p.m. Department of Psychology Colloquium:  
*Socioeconomic status and brain  
development: From science to policy*

Martin  
Colloquium  
Center; 4127  
Sennott Square  
Martha J. Farah, PhD  
Professor of Psychology  
University of Pennsylvania  
*(Sponsored by the Department of Psychology)*

Wed., 1/23  
10:00 a.m. Ph.D. Dissertation Defense:  
*Neural state changes in primate motor  
cortex during arm movements with  
distinct control requirements*

Mellon  
Institute  
Social Room  
#328  
Steven Suway  
Center for Neuroscience/Neurobiology  
School of Medicine,  
University of Pittsburgh  
*(Sponsored by the Department of Psychiatry)*

Fri., 2/1  
12:00 p.m. Department of Psychiatry Lecture Series,  
Special Guest Lecture:  
*Stress and schizophrenia: Susceptibility in  
the developing brain*

UPMC  
Western  
Psychiatric  
Hospital  
2nd floor  
Auditorium  
Anthony Grace, PhD  
Distinguished Professor of Neuroscience  
Professor of Psychiatry and Psychology  
University of Pittsburgh, Department of  
Neuroscience  
*(Sponsored by the Department of Psychiatry)*

Fri., 2/1  
12:30 p.m. CNBC Colloquium:  
*Dynamics of prefrontal computations  
during decision-making*

328  
Mellon  
Institute  
Joni Wallis, PhD  
Professor, Helen Wills Neuroscience  
Institute  
Professor, Department of Psychology  
University of California, Berkeley

*(Sponsored by the Center for the Neural Basis  
of Cognition)*

## Notices

### Postdoctoral Fellowship Available in Visceral Pain and Neurophysiology

The Kolber Lab in the Department of Biological Sciences and Chronic Pain Research Consortium at Duquesne University is soliciting applications for a full-time postdoctoral associate with training in electrophysiology (extracellular recording or related), behavior, optogenetics, and physiology. We are interested in studying the physiology that drives brain lateralization in pain. The laboratory combines a variety of state-of-the-art approaches to investigate complex system level questions related to the integration of pain and stress in mice and the application of those findings in human studies.

Candidates must have a PhD in neuroscience, pharmacology, biology, physiology or an equivalent field. Additional requirements include excellent interpersonal skills; excellent oral and written communication skills; strength in team building; a commitment to development of and scholarly participation in pain and stress research programs at Duquesne and in the Pittsburgh area.

At Duquesne, a strong neuroscience and pain group provides opportunities for cross-disciplinary research and for additional post-doctoral training outside of the lab (e.g. mentoring, administration, education and teaching).

Interested candidates should forward their CV and names of 3 references to:

Benedict J. Kolber, PhD  
Associate Professor  
Department of Biological Sciences  
Duquesne University  
E-mail: [kolberb@duq.edu](mailto:kolberb@duq.edu)  
Website: [www.kolberlab.com](http://www.kolberlab.com)

## Postdoctoral Position in Neurophysiology and Neuroimaging

The laboratory of Dr. Ferrarelli at the University of Pittsburgh has an opening for a postdoctoral researcher. The goal of the research is to investigate the neurobiology of psychiatric disorders, and especially schizophrenia and related disorders, employing neurophysiological and neuroimaging techniques. These techniques include high-density (hd)-EEG, Transcranial Magnetic Stimulation (TMS), fMRI, and 7T Magnetic Resonance Spectroscopy Imaging (MRSI), applied both during wakefulness and sleep.

Our lab recently utilized some of these techniques to identify several putative biomarkers in patients with chronic schizophrenia, and you will be involved in novel studies assessing these biomarkers in early course psychosis and individuals at clinical high risk for schizophrenia and related disorders. Some of these biomarkers have been associated to memory, plasticity, and general cognitive ability, and tend to predict post-learning performance improvement in healthy individuals. Thus, by collecting these measures in adolescents and young adults, our studies could not only significantly contribute to an early detection and assessment of the level of risk for psychosis, but could also contribute to elucidate some of the neural circuits and mechanisms underlying learning and memory in the normally developing brain.

This position is therefore ideal for candidates who are interested in employing a multi-modal imaging approach to characterize brain circuits implicated in risk for psychosis and related cognitive dysfunctions during a critical phase of brain maturation. It will also provide the opportunity to spend time in Pittsburgh, one of the most livable and vibrant cities in the country, and to work in the Department of Psychiatry, a unique environment for young researchers to foster collaboration, be productive, and develop an independent program of research.

Applicants should send a CV and a statement of interest to the PI ([ferrarellif@upmc.edu](mailto:ferrarellif@upmc.edu)).

### Candidate Profile:

- 1) Ph.D. in neuroscience, psychology, biology, physics, mathematics or other neuroscience-related disciplines
- 2) Preferred experience in one or more of the above-mentioned techniques
- 3) One or more first-author publications in an international, peer-reviewed neuroscience journal
- 4) Strong data-analysis and programming skills (MATLAB, C, R, MNE-Python, or related programming languages)
- 5) Proficient in spoken and written English

## Post-Doctoral Position in Translational Auditory NeuroImaging Available at the Western Psychiatric Institute and Clinic, University of Pittsburgh School of Medicine

The main research goal of the CNRL is to further understand the progressive pathology and pathophysiology of emerging psychosis. We utilize multimodal imaging including concurrent electroencephalography (EEG) and magnetoencephalography (MEG), structural MRI, MR diffusion spectrum imaging, fMRI, and MR pseudo-continuous arterial spin labeling measures of blood perfusion. Brain activity measures span simple sensory and perceptual processes to complex higher-order cognition. Within our collaborative basic program of research into auditory neurophysiology, our currently NIH-funded cross-species study of auditory processing in non-human primates and humans is seeking a post-doctoral associate with interest in brain imaging, neurophysiological source analysis, and advanced signal processing.

We seek an exceptional individual with training in EEG or MEG, or advanced signal processing and modeling techniques to undertake the human component of this project. Familiarity with and skills in multimodal imaging, advanced signal processing (e.g., ICA, fusion), source localization, or other analytic methods are desired. Interest in signal processing and mathematical modeling are necessary.

The interdepartmental team includes Prof Salisbury's laboratory: (<https://psychiatry.pitt.edu/news/dr-dean-f-salisbury-forges-new-ground-detect-underlying-brain-abnormalities-giving-rise>),

Dr. Tobias Teichert's laboratory: (<http://www.psychiatry.pitt.edu/about-us/our-people/faculty/tobias-teichert-phd>),

and Dr. Brent Doiron's group: (<https://www.mathematics.pitt.edu/people/brent-doiron>).

The post-doctoral associate will also work closely with the animal and neural modeling groups.

The postdoctoral position is for one year with a potential for renewal pending funding and satisfactory performance. If interested, please contact Prof. Salisbury via e-mail (attach your CV): [salisburyd@upmc.edu](mailto:salisburyd@upmc.edu)

Check out our website [www.cnrl.pitt.edu](http://www.cnrl.pitt.edu)

## **Postdoctoral Position in Population Neuroscience of Aging**

A postdoctoral position is available for a highly-motivated individual to study the problems of brain aging by applying neuroscience and epidemiological methods.

The fellow will work with our eBRAIN research group, led by Dr. Caterina Rosano, at the University of Pittsburgh. eBRAIN applies cutting-edge brain imaging methods and longitudinal trajectories of risk factors to understand brain aging effects on cognitive and physical function. The anticipated research project involves collection and analysis of DTI and PET imaging of the dopaminergic system, as well as analyses and data collection of ultra- high field images at 7 Tesla. The fellow will be exposed to a highly interactive and interdisciplinary group of neuroscientists, neuro-epidemiologists, neuroimagers, and psychiatrists. Candidates must have a doctoral degree in neuroscience, epidemiology or related fields with strong quantitative skills. Technical expertise in neuroimaging techniques and the ability to learn and develop new skills are required. A strong fundamental understanding of study design is highly desirable. The successful candidate should have an excellent publication record, solid written/verbal English communication skills, strong organizational skills, and the ability to work independently.

The eBRAIN research group is situated within the Department of Epidemiology at the Graduate School of Public Health, located in the heart of the Oakland Campus, in Pittsburgh, Pennsylvania. The University of Pittsburgh is an integrated global health enterprise and one of the leading health care systems in the United States. Diverse and inclusive, University of Pittsburgh educates medical students, scientists, health care professionals and the public; conducts biomedical research; and provides patient-centered medicine to prevent, diagnose and treat human illness.

Interested and qualified applicants are encouraged to consult <http://www.publichealth.pitt.edu/home/directory/caterina-rosano>  
<https://www.facebook.com/e.brain.pitt>  
Applications must include:

- 1) a cover letter outlining research accomplishments and career goals,
- 2) curriculum vitae, and
- 3) a list of three references with contact information (including mailing address, phone number and e-mail address) to:

Caterina Rosano, MD, MPH  
Professor of Epidemiology  
Graduate School of Public Health  
University of Pittsburgh,  
130 De Soto Street,

South Parran Hall, 5139  
Pittsburgh PA, 15261  
(412)-383-1294 or (412)-759-3572

<http://www.publichealth.pitt.edu/home/directory/caterina-rosano>  
<https://www.facebook.com/e.brain.pitt>  
<http://www.caph.pitt.edu/researchprog.html>

## **Newly-Funded T32 in Population Neuroscience**

The Graduate School of Public Health and the Department of Psychiatry at the University of Pittsburgh are pleased to announce a **new pre- and postdoctoral training program in Population Neuroscience of Aging & Alzheimer's Disease**. The program is co-directed by Drs. C. Rosano and M. Ganguli, with positions available immediately.

The PNA program trains highly talented individuals to pursue successful independent research in the etiology of Alzheimer's Disease and other age-related dementia (ADRD). Eligible applicants must have backgrounds in either contemporary neuroscience or population/data science. For example: PhD graduates or candidates in Epidemiology, Neuroscience, Information Science, Biostatistics, Biomedical informatics and MD/DO graduates with training in Neurology, Psychiatry, Geriatric medicine, and related disciplines. Please contact [stc15@pitt.edu](mailto:stc15@pitt.edu) with questions.

## **Postdoctoral Associate Positions in Systems Neuroscience**

Postdoctoral positions are available in the Runyan lab in the Department of Neuroscience at the University of Pittsburgh. Our research involves dissecting inhibitory and neuromodulatory circuits across the cortical hierarchy. Our goal is to understand how changes in behavioral context and brain state shift local information processing and the transmission of information between cortical networks. We use two-photon imaging of population activity and optogenetics in head-fixed mice performing perceptual decision-making tasks. See [carolinerunyan.org](http://carolinerunyan.org) for more information about our work.

We are seeking individuals with experience in two-photon imaging, large-scale electrophysiology, optogenetics, and/or mouse behavior. As we build our laboratory and our own approach to understanding the brain, the ideal candidates should have strongly driven scientific curiosity and problem-solving skills, as well as excellent interpersonal skills. This position offers the



opportunity to participate in building a new research program, and to work in the highly collaborative, collegial environment at the University of Pittsburgh and Carnegie Mellon University. See [cnbc.cmu.edu](http://cnbc.cmu.edu) and [cnp.pitt.neurobio.edu](http://cnp.pitt.neurobio.edu) for more details.

Interested candidates should send a CV, statement of research interests, and contact information for two references to [runyan@pitt.edu](mailto:runyan@pitt.edu).

### **Postdoctoral Research Fellow in the Neuroimaging Laboratory**

The Neuroimaging Laboratory at the University of Pittsburgh has a postdoctoral research fellow position open immediately. The candidate should possess a Ph.D. degree in biomedical engineering, neuroscience, or a related field, and have published scholarly articles in peer-reviewed scientific journals. The candidate should have a strong research background in brain imaging, systems neuroscience, neurophysiology (electrophysiology, neuro-metabolism and/or blood flow regulation), computation, neural engineering, and/or data analysis (signal/image processing). Experience with rodent experimentation, advanced biological imaging (two-photon or optical microscopy or fMRI), neural tissue histology, and data analysis in MATLAB/Python are essential. The candidate will work on longitudinal imaging of rodent brain dynamics in health and disease. The candidate may also be involved in projects related to early detection of Alzheimer's disease and neural engineering depending on interests. The candidate will be working with an interdisciplinary team of radiologists, neurologists, neural engineers, material scientists and biophysicists. Candidates with experience in calcium imaging or MRI/fMRI (especially in animals) are strongly encouraged to apply.

Interested candidates should submit curriculum vitae, the names of three references, a statement of research experience, and date of availability to Alberto L. Vazquez ([alv15@pitt.edu](mailto:alv15@pitt.edu)). Information on the Neuroimaging Laboratory can be found on this website (<http://neuroimaginglab.pitt.edu>).

The Department of Radiology is strongly committed to a diverse academic environment and places high priority on attracting female and underrepresented minority candidates. We strongly encourage candidates from these groups to apply for the position.

The University affirms and actively promotes the rights of all individuals to equal opportunity in education and employment without regard to race, color, sex, national origin, age, religion, marital status, disability, veteran status, sexual orientation, gender identity, gender expression, or any other protected class.

### **Postdoctoral Fellow in LNCD Lab**

A postdoctoral research position is available in the Laboratory of Neurocognitive Development (LNCD) directed by Dr. Beatriz Luna at the University of Pittsburgh.

The LNCD uses multimodal approaches to characterize the neural basis of the normative development of cognitive and motivational processes during the transition through adolescence to adulthood to construct a normative template of development to inform impaired development in clinical populations.

Current projects utilize: fMRI, rsfMRI, DTI/DSI, PET, MT, R2', and MRSI, as well as a comprehensive neurocognitive battery and assessments related to mental health to probe the mechanisms underlying neurocognitive development. Unique tasks that probe reinforcement learning and working memory as well as contextual learning are used with fMRI to further inform mechanisms.

The successful applicant would develop their unique projects beginning with available data from ongoing studies and later transitioning into establishing their unique scientific trajectory. They will also be expected to help mentor trainees and provide input and direction on existing projects. Opportunities for transition to faculty positions are available.

### **Qualifications**

- PhD with a background in psychology, neuroscience, cognitive science and/or development who is interested in neurocognitive development through adolescence.
- Strong written and verbal presentation skills
- A promising research publication record, and an interest in using multiple methodologies

### **Preferred Technical Qualifications**

- Experience with fMRI (including analyses in FSL, AFNI, or similar)
- Strong programming skills (e.g., Matlab, Python)
- The ability to run or learn to run basic and more complex statistical

Preferably but not exclusively, applicants must be eligible to work in the United States to apply for T32s.

LNCD projects are supported by ongoing R01 NIMH grants and endowments to provide a stable research environment. Pittsburgh has uniquely strong neuroscience, psychiatry, and psychology communities through the University of Pittsburgh and Carnegie Mellon University, which are highly collaborative. The city was recently named one of the most affordable cities

in the U.S., has a long-standing culture and large university population, and is a hotspot for major entrepreneurship such as Google and Uber.

If you are interested in applying, please email Dr. Luna directly [lunab@upmc.edu](mailto:lunab@upmc.edu) with a CV and statement of interest.

### **Postdoctoral Position in Auditory Neuroscience**

A postdoctoral position investigating the cortical mechanisms underlying complex sound perception, and developing novel techniques for probing the role of cortical circuit elements in perception, is available immediately. Our research focuses on the mechanisms by which auditory cortex extracts meaningful sounds from noisy environments and constructs behaviorally useful representations of these sounds. Our lab uses electrophysiological, computational, behavioral, and optogenetic approaches in an animal model, and is interested in developing imaging methods.

Applicants must have a PhD in Neuroscience or a relevant field and must be eligible for employment in the US. Ideal candidates will exhibit strong scientific curiosity, be highly motivated to pursue an academic career, and have experience with at least one of the following skills: in-vivo electrophysiology, behavioral testing in animals, or optogenetics. Other desirable skills include data analysis, programming, and scientific writing and communication. Outstanding candidates without this experience may also be considered on a case-by-case basis.

Our laboratory is embedded in a group of labs with a focus on [auditory neuroscience](#) in the [Department of Neurobiology](#) at the University of Pittsburgh. We regularly interact with the growing auditory community at both Pitt and Carnegie Mellon University (CMU). We are embedded within the exceptional neuroscience community at Pitt (Center for Neuroscience at the University of Pittsburgh, [CNUP](#)) and CMU (Center for the Neural Basis of Cognition, [CNBC](#)). Postdocs can thus interact with numerous labs sharing similar research interests, and participate in varied neuroscience seminars.

The University of Pittsburgh was recently ranked [third](#) in terms of total NIH funding received in 2018. Pittsburgh is a city that has transformed from its steel city roots into a healthcare and high-tech hub. In 2018, Pittsburgh was ranked the [second most livable city](#) in America, according to The Global Livability Index 2018 (The Economist).

Interested candidates should email a brief statement of research interests and CV to Dr. Srivatsun Sadagopan ([vatsun@pitt.edu](mailto:vatsun@pitt.edu)).

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