

September 3, 2019

Neurotransmitter



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Neurotransmitter Schedule

The next *Neurotransmitter* will be published and mailed electronically on **Monday, September 16, 2019**. All seminar announcements and notices must be submitted to Natalee Bright via email (CNUP@pitt.edu) **no later than 12:00 noon on Thursday, September 12, 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*.

Notices

Thurs., 9/12 4:00 p.m. Distinguished Lecture in Neurobiology:
***Ultrastructure of Long-term Potentiation:
A Cellular Mechanism of Learning***

University Club, Ballroom A
Kristen Harris, PhD
Professor of Neuroscience
University of Texas at Austin

(Sponsored by the Department of Neurobiology)

Fri., 9/13 12:00 p.m. Department of Psychiatry Lecture Series,
Special Guest Lecture:
***Assembling Tridimensional Models of the
Human Brain to Study Development and
Disease***

UPMC WPIC 2nd floor, Auditorium
Sergiu Pasca, MD
Assistant Professor of Psychiatry and Behavioral Sciences
Stanford Center for Sleep Sciences and Medicine
Stanford University

(Sponsored by the Department of Psychiatry)

Mon., 9/23 10:00 a.m. Neurobiology Research Seminar:
***Speaking and hearing: What marmosets
can teach us about the sensory-motor
control of voice and evolutionary origins
of vocal communication***

Victoria Hall Room 123
Steven J. Eliades, MD, PhD
Assistant Professor
Department of Otorhinolaryngology:
Head and Neck Surgery
University of Pennsylvania Perelman
School of Medicine

(Sponsored by the Department of Neurobiology)

Thurs., 9/26 12:00 p.m. Topics at Noon Series:
***Learning the Brain's Response to Music
And its Applications in
Neurodegenerative Brain Disorders***

BST South S100A
Jacobco Mintzer, MD
Executive Director, Roper. St. Francis
Research & Innovation Officer, Roper St.
Francis Healthcare
Charleston, South Carolina

*(Sponsored by the University of Pittsburgh
Alzheimer Disease Research Center and
University of Pittsburgh School of Medicine
Continuing Education in the Health Sciences)*

Fri., 9/27 12:00 p.m. Department of Psychiatry Lecture Series,
Researchers on the Rise Lecture:
***Neurobehavioral Mechanisms Linking
Social Rejection, Pain, and Suicide Risk
In Youth***

UPMC WPIC 2nd floor, Auditorium
Caroline Oppenheimer, PhD
Assistant Professor of Psychiatry
University of Pittsburgh School of
Medicine

***Sleep and Neurobehavioral Vulnerability
Mood Disorders***

Adriane Soehner, PhD
Assistant Professor of Psychiatry
University of Pittsburgh School of
Medicine

(Sponsored by the Department of Psychiatry)

Fri., 10/04 12:00 p.m. Department of Psychiatry Lecture Series,
Meet the PI Lecture:
***Emotion Waves: From Everyday
Reactions to Psychiatric Intervention***

UPMC Greg Siegle, PhD

WPIC
2nd floor,
Auditorium

Assistant Professor of Psychiatry,
Psychology, and Clinical and
Translational Science
University of Pittsburgh School of
Medicine

(Sponsored by the Department of Psychiatry)

Mon., 10/07
4:00 p.m.

Distinguished Lecture in Neurobiology:
***Functional Synaptic Architecture of
Visual Cortex***

University
Club,
Ballroom
A

David Fitzpatrick, PhD
Chief Executive Officer,
Research Group Leader,
and Scientific Director
Max Planck Florida Institute of
Neuroscience

*(Sponsored by the Department of
Neurobiology)*

Thurs., 10/24
12:00 p.m.

Topics at Noon Series:
***Social relationships and cognitive
functioning in older adults***

ADRC
Conference
Room
S439

Andrea Weinstein, PhD
Assistant Professor of Psychiatry
University of Pittsburgh

*(Sponsored by the University of Pittsburgh
Alzheimer Disease Research Center and
University of Pittsburgh School of Medicine
Continuing Education in the Health Sciences)*

Mon., 11/11
4:00 p.m.

Distinguished Lecture in Neurobiology:
***Pathways of Organelle- Organelle Cross
Talk and Their Role(s) in Cell Metabolism
And Homeostasis***

University
Club,
Ballroom
A

Jennifer Lippincott-Schwartz, PhD
Janelia Senior Group Leader
Howard Hughes Medical Institute

*(Sponsored by the Department of
Neurobiology)*

Thurs., 11/14
4:00 p.m.

Topics at Noon Series:
***Neural Marker Identification and Target
Engagement for Treating Worry in Late-
Life: Implications for Dementia***

ADRC
Conference
Room
S439

Helmet Karim, PhD
Postdoctoral Scholar
Department of Psychiatry
University of Pittsburgh

(Sponsored by the University of Pittsburgh)

*Alzheimer Disease Research Center and
University of Pittsburgh School of Medicine
Continuing Education in the Health Sciences)*

Thurs., 12/05
12:00 p.m.

Topics at Noon Series:
***Vascular contributions to cognitive
impairment and dementia***

ADRC
Conference
Room
S439

C. Elizabeth Shaaban, PhD, MPH
Postdoctoral Fellow
Population Neuroscience of Aging &
Alzheimer's Disease
Department of Epidemiology,
Graduate School of Public Health

*(Sponsored by the University of Pittsburgh
Alzheimer Disease Research Center and
University of Pittsburgh School of Medicine
Continuing Education in the Health Sciences)*

Course Announcement

NROSCI 1014/2014: Speaking of Science
Fall Semester, 2019

MW 11:00-12:15 p.m.

Crawford Hall room 241

During the Fall Semester, Dr. Judy Cameron (jcameron@pitt.edu) and Dr. Alan Sved (sved@pitt.edu) will teach NroSci 1014/2014, Speaking of Science. This course teaches strategies for giving presentations about science to both a scientific audience and a public audience. Topics covered include (1) how to engage your audience, (2) the art of breaking down your message, (3) tips for how to make clear, interesting slides, and (4) pointers on presentation style.

Communication skills, including knowing your audience and why they are interested in the information you are speaking about, how to translate scientific jargon into understandable concepts for the public, and how to keep the audience engaged will be discussed. Students give a total of 5 presentations and receive individualized feedback on all presentations. The course is offered to both undergraduate and graduate students. It is particularly useful to students who will present a formal scientific presentation at a meeting, a public talk, or defend their thesis in the coming year.

Questions about the course and requests to view the course syllabus can be directed to Dr. Judy Cameron (email: jcameron@pitt.edu).

Course Announcement

MSNBIO 2070: Human Physiology

Fall Semester, 2019

MW: 6:00 – 7:15 p.m.

F: 3:00 – 5:00 p.m.

Crawford Hall Room 169

During the Fall Semester, Dr. Bill Yates (byates@pitt.edu) will teach MSNBIO 2070, Human Physiology. This advanced survey course covers the integrative physiology of all of the major organ systems, including the cardiovascular system, respiratory system, renal system, immune system, gastrointestinal system, and reproductive system.

Lectures are coupled with problem-based learning exercises to provide a comprehensive and detailed background regarding physiological processes. This course is ideal for graduate students who desire a comprehensive yet thorough course in human physiology in preparation for advanced coursework or as background for research projects.

Undergraduate students who previously took a physiology course, but who would like an advanced treatment of the material to prepare for medical or graduate school, are also welcome to enroll in this class.

Questions about the course can be directed to Bill Yates (email: byates@pitt.edu).

Interested students may also refer to the course website for information: <http://honorshumanphysiology.com>.

Postdoctoral Fellow/Staff Scientist Position **Translational Neuroscience/Electrophysiology** **University of Pittsburgh**

A postdoctoral fellow or staff-scientist position is available in the laboratory of Dr. Susanne Ahmari in the Translational Neuroscience Program at the University of Pittsburgh <http://ahmarilab.pitt.edu/>. This project will utilize multiple advanced techniques for the analysis and manipulation of cortico-striatal circuits in order to discover the cellular and circuit abnormalities underlying compulsive behaviors. This position is funded by an NIMH R01 (https://projectreporter.nih.gov/project_info_description.cfm?aid=9709695&icde=45654581), with potential additional support from a Burroughs Wellcome Fund Career Award for spin-off projects for a motivated candidate.

The ideal candidate will have expertise in *in vivo* electrophysiology in awake animals. They will also have the opportunity to learn and apply other techniques including optogenetics, *in vivo* calcium imaging, and viral tract tracing.

Qualified applicants are expected to hold a recent doctoral degree in neuroscience, biological sciences, bioengineering, or related disciplines, with a track record of productivity. Prior experience in electrophysiology, computational analysis methods, rodent behavioral testing, and optogenetics is highly preferred. Candidates must be able to work collaboratively within a collegial team, and have excellent oral and written communication skills.

The Department of Psychiatry and Center for Neuroscience at the University of Pittsburgh offers a highly collaborative, top-notch research and training environment. The successful candidate(s) will become part of a large, multidisciplinary neuroscience community, and will have ample opportunities for collaboration. Training grant positions are available for competitive post-doctoral candidates who are interested in pursuing an independent academic position. Competitive salary and benefits are available.

Interested candidates should email their curriculum vitae/ biosketch, a letter of interest outlining experience and research goals, and the names and contact information of three references to sahmari@pitt.edu. Please submit applications by August 31st to ensure full consideration.

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).

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-](http://www.psychiatry.pitt.edu/about-us/our-people/faculty/tobias-teichert-phd)

[people/faculty/tobias-teichert-phd](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

Check out our website 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/direc>

[tory/caterina-rosano](http://www.facebook.com/e.brain.pitt)
<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 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 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 and 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.

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). 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, email Dr. Luna at lunab@upmc.edu with a CV and statement of interest.

Two Post-Doc/Senior Scientist Positions in Auditory Neuroscience

The Teichert lab at the University of Pittsburgh has openings for two postdoctoral researchers or senior scientists to study auditory function in the macaque monkey (www.teichert.pitt.edu). Scientifically, the lab is focused on identifying the neural substrate of auditory short-term memory ([Teichert & Gurnsey, 2019, J Neurophys](#)) to better understand how it can be affected in conditions such as schizophrenia. Methodologically, the lab is focused on bridging the gap between single-cells and macroscopic EEG by concurrently recording from a 1,000-channel 3-dimensional grid of LFP contacts that covers the entire volume of one hemisphere. The positions are funded by a new R01 MH120117 "Echoic memory function and physiology in the rhesus macaque" and an ongoing BRAIN Initiative RF1 MH114223 "Understanding the synaptic, cellular and circuit events in of MEG & EEG using a vertically translational cross-species approach".

The post-docs will be part of the lively and growing auditory neuroscience community at [Pitt/CMU](#), and will benefit from the multi-disciplinary environment of the BRAIN Initiative grant led by PIs Teichert, Doiron and Salisbury as well as collaborators Chamanzar, Kass, Ghuman, Sweet, and Gonzales-Burgos. Successful applicants will likely have a strong background in one or more of the following: auditory neuroscience, non-human primate electrophysiology, or EEG/MEG source-reconstruction techniques. Applicants should send a CV and a statement of interest to Dr Teichert (teichert@pitt.edu).

Research Associate

RESEARCH ASSOCIATE POSITION AVAILABLE IN THE DEPARTMENT OF PSYCHIATRY AT THE UNIVERSITY OF PITTSBURGH MEDICAL CENTER

A research technician position is available in the laboratory of Dr. Susanne Ahmari in the Translational Neuroscience Program at the University of Pittsburgh. The Ahmari lab uses multiple advanced techniques for the analysis and manipulation of neural circuits in order to discover the molecular, cellular, and circuit

abnormalities underlying Obsessive Compulsive Disorder and anxiety. The ideal candidate will be able to work collaboratively and effectively communicate with an interactive and collegial research group.

Specific job responsibilities include mouse colony maintenance (including breeding and genotyping), performing mouse behavioral studies (including optogenetics), cryostat/tissue mounting, immunohistochemistry, preparing reagents and solutions, and general lab duties such as autoclaving and dishwashing. Preference will be given to candidates with experience in stereotaxic surgery.

Requirements: Bachelor's Degree in Biology, Neuroscience, Psychology, Chemistry, or related field required. At least 1 year of experience working in a neuroscience or other biological science laboratory. At least 1 year of experience required with rodent experiments generally, with specific experience in the areas of rodent colony maintenance, genotyping, and behavioral experiments. Opportunities will also be available for motivated candidates to learn in vivo microscopy and in vivo electrophysiology.

Interested candidates should email their CV, a letter of interest outlining experience, and the names and contact information of three references to ahmarise@upmc.edu.