

March 12, 2018

Neurotransmitter

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Seminars

- Wed., 3/14
4:00 p.m.
- 1495
BSTWR
- David Clark, PhD
Professor
Department of Anesthesiology
Stanford University
- (Sponsored by the Pittsburgh Center for Pain Research)*
- Fri., 3/16
12:00 p.m.
- Rm. 6
Scaife
- Zachary Z. Freyberg, MD, PhD
Assistant Professor
Department of Psychiatry
University of Pittsburgh
- (Sponsored by the Senior Vice Chancellor)*
- Mon., 3/19
4:00 p.m.
- 6014
BST3
- Andrew B. Newberg, MD
Professor and Director of Research
Marcus Institute of Integrative Health
Thomas Jefferson University and Hospital
- (Sponsored by the University of Pittsburgh Brain Institute)*
- Tues., 3/20
4:00 p.m.
- Univ. Club
Ballroom A
- Michael Shadlen, MD, PhD
Professor and Howard Hughes Medical
Institute (HHMI) Investigator;
Department of Neuroscience; Kavli
Institute for Brain Science; Columbia
University
- (Sponsored by the Department of Neurobiology)*

- Thurs., 3/29
12:00 p.m.
- S439 UPMC
Montefiore
- Ariel Gildingers, MD
Associate Professor
Department of Psychiatry
University of Pittsburgh
- (Sponsored by the Alzheimer Disease Research Center)*
- Wed., 4/4
1:00 p.m.
- 6014
BST3
- Dean Pountney, PhD
Discipline Lead, Biochemistry; 3rd Year
Coordinator; Leader, Neurodegeneration
Research Group; School of Medical
Science; Griffith University Gold Coast
Campus
- (Sponsored by PIND)*
- Fri., 4/6
12:00 p.m.
- WPIC 2nd fl.
Auditorium
- Researchers on the Rise Lecture**
*The role of interpersonal factors in
borderline personality disorders*
- Joseph Beeney, PhD
Danella Hafeman, MD, PhD
Assistant Professors
Department of Psychiatry
School of Medicine
University of Pittsburgh
- (Sponsored by the Department of Psychiatry)*
- Fri., 4/6
3:00 p.m.
- 4127 Sennott
Square
- Melissa Ferguson, PhD
Professor of Psychology
Chair of the Department of Psychology
Cornell University
- (Sponsored by the Department of Psychology)*

Fri., 4/13
12:00 p.m. **Distinguished Scientist Lecture**
*Circuits of reward and decision-making:
Linking monkey tracing studies to human
connectivity, disease, and
neurotherapeutic targets*

WPIC 2nd fl.
Auditorium Suzanne Haber, PhD
Professor of Neuroscience, Pharmacology,
and Psychology; University of Rochester
Medical Center

(Sponsored by the Department of Psychiatry)

Wed., 4/18
4:00 p.m. **Peripheral neuropathy: Bench to bedside**

1495
BSTWR Donna Hammond, PhD
Professor of Anesthesiology; Professor of
Pharmacology; University of Iowa

(Sponsored by the Pittsburgh Center for Pain
Research)

Notices

Postdoctoral Position

The Sorkin lab in the Department of Cell Biology at the University of Pittsburgh School of Medicine is looking for a postdoctoral fellow to work on a project funded by the National Institute of Drug Abuse. The project aims at elucidation of the mechanisms of intraneuronal trafficking of the dopamine transporter (DAT), and regulation of the substrate transport function of DAT by this trafficking. The effects of psychostimulants on DAT localization and function *in vitro* and *in vivo* mouse models are also studied in the lab. Our multidisciplinary approach includes experiments using various molecular and cell biology methodologies, quantitative mass-spectrometry, high-end optical microscopy including diffraction-limited whole brain imaging and super-resolution imaging of individual synapses, transgenic mouse models, primary neuronal cultures of dopaminergic neurons and acute brain slices. Candidates with training and interest in neuroscience, and experience in mouse brain models are encouraged to apply. Start date for the position is as soon as possible. To inquire about the position please contact Dr. Alexander Sorkin at sorkin@pitt.edu.

Four Postdoctoral Positions in Systems and Computational Neuroscience

The Departments of Psychiatry, Bioengineering and Mathematics are seeking four postdocs in the labs of Drs. Doiron, Salisbury, and Teichert at the University of Pittsburgh. We have openings for four postdoctoral researchers to work on a newly-funded BRAIN initiative grant. The goal of the research is to understand the micro- and mesoscopic events that underlie the dynamic modulation of EEG and MEG amplitude to repeated auditory stimuli. We will study this phenomenon using identical paradigms in three model systems (human, monkey, and *in silico*) and at five levels of observation to understand how the effect is enhanced, attenuated, or otherwise altered while transitioning from synapse to cell, from cell to circuit, from circuit to brain region, and from brain region to macroscopic EEG/MEG measurements.

The post-doctoral researchers will work within a collaborative team that includes PIs Salisbury, Teichert, and Doiron, as well as Co-Investigators Kass, Sweet, Ghuman and Gonzales-Burgos. Two postdocs will focus on non-human primate EEG, CSD, single cell and microinjection studies with Dr. Teichert. One postdoc will focus on human EEG/MEG studies with Dr. Salisbury. One postdoc will model large-scale neural networks with Dr. Doiron. All positions are ideal for candidates who are interested in understanding how micro- and mesoscopic neural signals recorded in animal models can inform our understanding and interpretation of macroscopic signals recorded in humans. Applicants should send a CV and a statement of interest to one of the PIs (salisburyd@upmc.edu, teichert@pitt.edu, bdoiron@pitt.edu).

Candidate Profile

- 1) Ph.D. in neuroscience, psychology, biology, physics, mathematics or other neuroscience-related discipline
- 2) One or more first-author publications in an international peer-reviewed neuroscience journal (under review is OK)
- 3) Strong data-analysis and programming skills (Matlab, R, MNE or related programming languages)
- 4) Proficient in spoken and written English
- 5) Willing and able work productively as part of a team

Research Scientist Position

Cognition Therapeutics, Inc. is a clinical stage pharmaceutical company targeting neurodegenerative disorders. Our lead molecule CT1812 is currently in the clinic for Alzheimer's disease. Located in Pittsburgh's historic South Side, we are seeking highly motivated individuals to work in a dynamic industry environment.

The candidate will be a key contributor in a scientific research team developing cutting-edge cell-based assays. Responsibilities include assay development, execution and statistical analysis of studies of first-in-class compound mechanism of action using primary neuronal cultures.

The candidate will work with others in a team-based environment and make formal presentations of experimental results to the company.

Qualifications

- Ph.D. in neurobiology, industry experience a plus
- Background in learning and memory biology, neurodegenerative disease biology
- Technical expertise in primary neuronal cultures, immunohistochemistry, westerns, ELISAs, FRET-based assays, microscopy, automated imaging with Cellomics platform.

Please send your resume and references to:
Info@cogrx.com

Cognition Therapeutics, Inc. is an equal opportunity employer.

About Cognition Therapeutics, Inc.

Cognition Therapeutics, Inc. (CogRx) is a privately held biopharmaceutical company whose disease-relevant screening and novel chemistry platforms have produced a pipeline of disease modifying small molecule drug candidates which are being developed to treat Alzheimer's disease and potentially other neurocognitive disorders. Cognition's lead molecule, CT1812, is a proprietary first-in-class, orally available small molecule that is currently in clinical trials in patients with mild-to-moderate Alzheimer's disease. This highly brain penetrant compound targets the sigma-2/PGRMC1 receptor complex, displacing toxic beta amyloid oligomers from their binding sites on brain cells and clearing them into the cerebrospinal fluid. CT1812 has been shown in multiple Alzheimer's disease models to stop memory loss. Additional information about Cognition may be found online at <http://www.cogrx.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).

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

Several Post-Doctoral Positions in Clinical Cognitive NeuroImaging Available at the Western Psychiatric Institute and Clinic, University of Pittsburgh School of Medicine

Post-Doctoral Associate positions are available in the Clinical Neurophysiology Research Laboratory, Dean F. Salisbury, PhD, Director, at the Western Psychiatric Institute and Clinic of the University of Pittsburgh School of Medicine & University of Pittsburgh Medical Center for EEG/MEG and MRI clinical neuroimaging.

Check out our website www.cnrl.pitt.edu

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. Our currently NIH-funded strategy is to relate these functional measures to gray and white matter pathology and hemodynamic pathophysiology, and, in turn, pathophysiology and pathology to symptoms. Furthermore, we track these measures longitudinally following first psychotic episode, and during the clinical-high risk state. Understanding of the basic dysfunctions, in turn, will lead to earlier identification, better interventions, and improved outcome in schizophrenia and other psychotic disorders. Thus, our group has the scientific aim of understanding basic auditory perceptual system-level pathology and pathophysiology in psychosis, and the applied clinical aim of developing new biomarkers of disease presence to detect true prodromal cases prior to the emergence of psychosis. We also have several other programs of research examining pathophysiology in bipolar disorder, the effects of brain stimulation on psychosis, auditory pattern analysis, the effects of adjunctive medication on neurophysiology in psychosis, and cross-species studies of auditory processing in non-human primates and humans.

We seek exceptional individuals with training in EEG, MEG, or MRI techniques to join our laboratory. We have solid funding across 3 mechanisms. Familiarity with and skills in multimodal imaging, advanced signal processing (e.g., ICA, fusion), source localization, or other analytic methods are desired. Training in psychopathology, including clinical interviews and instruments (e.g., DSM, SCID, SANS, SAPS, PANSS, etc.), is preferable, but not an absolute requirement.

The postdoctoral position appointments are currently available, and are 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

Postdoctoral Associate Position

Mapping Neural Circuits of Motor Control and Motor Learning in Mice

Postdoctoral positions are available in the Hooks lab at the University of Pittsburgh School of Medicine for highly motivated researchers with an interest in using and developing state-of-the-art techniques for circuit analysis to understand how motor cortex circuitry contributes to the control of movement. My research addresses the role of M1 circuitry in the planning, initiation, control, and learning of movements. Specifically, I seek candidates for two projects. First, I am interested in quantifying motor learning in a rodent reaching task and using this learning paradigm to determine the changes in motor cortex microcircuitry that contribute to learning this skill. Second, I am interested in mapping the circuitry connecting two classes of motor thalamic nuclei to motor cortex. The project will identify the thalamic nuclei receiving output from subcortical centers of for motor learning (basal ganglia and cerebellum) and then identify the cell types and circuits where these complementary pathways converge in cortex. Our major approaches include optogenetics and whole-cell recording. The lab uses a range of cell-type specific tools for studying excitatory and inhibitory subtypes of neurons, stereotaxic surgery, and viral vectors to target, label, excite, and manipulate selected neurons, and neurophysiological methods to map local and long-range circuits.

I want ambitious, motivated, and independent scientist with a PhD in neurobiology or related fields. An ideal candidate will have experience with whole-cell recording approaches, animal behavior, and some familiarity with MATLAB. Excellent verbal and written communication skills, technical expertise, and scientific creativity are essential.

The Neurobiology Department at the University of Pittsburgh has exceptional resources and opportunities for career development and collaboration with a number of other leading laboratories interested in understanding cortical circuits as well as motor control, and the neuroscience community in Pittsburgh (including the Departments of Neuroscience, Neurobiology, Biomedical Engineering, and Mathematics at Pitt, as well as Carnegie Mellon University) is quite substantial. Pittsburgh itself is a wonderful environment to live. This is a full-time position with standard university benefits.

Interested candidates should send a curriculum vitae (CV), a cover letter stating research interests, and contact information for three references to:

Bryan (Mac) Hooks

hooksm@pitt.edu

Assistant Professor of Neurobiology
University of Pittsburgh School of Medicine
203 Lothrop Street BSTWR Suite W1458
Pittsburgh, PA 15213
412-624-8465

<http://www.neurobio.pitt.edu/faculty/hooks.htm>

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 cnup.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 Position

Background

A postdoctoral associate position is available in the lab of Dr. Quasar Padiath in the Department of Human Genetics. Dr. Padiath's lab is involved in the identification and elucidation of genetic mechanisms underlying various neurological disorders. The current position involves a project for characterization of mouse and cell culture models for human demyelinating diseases and the identification of potential therapeutic targets.

The work holds the promise of identifying novel pathways and exciting new mechanisms that underlie demyelinating diseases. It will not only help us in elucidating basic biological phenomena but also may have therapeutic implications for common diseases such as Multiple Sclerosis.

The position will allow exciting opportunities for publication, collaborative research, attendance at scientific meeting and overall career development.

Interested candidates are encouraged to send a cover letter, a short write up of their research/laboratory experience together with their latest CV and 3 references to Dr. Quasar Padiath (qpadiath@pitt.edu).

Qualifications

A PhD/MD with a background in neurobiology, cell biology, or molecular biology is essential. Candidates should have experience with working with mouse or rat models involving the nervous system. Proficiency in cell culture and the ability to work with primary glial or neuronal cultures is also highly desirable. Candidates should have the ability to work independently, think critically and creatively and function as part of a team. Excellent verbal and written communication skills are required.

Fresh PhD/MDs or candidates with previous postdoctoral experience are welcome. Salary will be commensurate with experience.

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, neuroepidemiologists, 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>

Neurotransmitter Schedule

The next *Neurotransmitter* will be published and mailed electronically on **Monday, March 26, 2018**. All seminar announcements and notices must be submitted to Lisa Summe via e-mail (lms232@pitt.edu) **no later than 12:00 noon on Thursday, March 22, 2018**.

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