Seminars

**PhD Dissertation Defense**

**Brain structure and function in emotion processing, emotion regulation, and reward processing neural circuitries in offspring at risk for bipolar disorder**

1495 BSTWR
Heather Acuff, BS
Center for Neuroscience
School of Medicine / Neurobiology

(Sponsored by the Center for Neuroscience)

**Senior Vice Chancellor’s Research Seminar**

**Innate immune mechanism of pulmonary pathophysiology in sickle cell disease**

Scaife Rm. 6
Prithu Sundd, PhD
Assistant Professor of Medicine and Bioengineering; University of Pittsburgh

(Sponsored by the Senior Vice Chancellor)

Notices

**Neurotransmitter Schedule**

The next *Neurotransmitter* will be published and mailed electronically on **Monday, July 30, 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, July 26, 2018**.

All seminars are listed in the “News and Events” section on the CNUP web site, [http://cnup.pitt.edu](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*.

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**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 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](mailto:salisburyd@upmc.edu), [teichert@pitt.edu](mailto:teichert@pitt.edu), [bdoiron@pitt.edu](mailto: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
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

Check out our website www.cnrl.pitt.edu

Postdoctoral Position in Human Genetics

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](http://www.publichealth.pitt.edu/home/directory/caterina-rosano) and [https://www.facebook.com/e.brain.pitt](https://www.facebook.com/e.brain.pitt) for more information about our work.

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](http://www.publichealth.pitt.edu/home/directory/caterina-rosano)
[https://www.facebook.com/e.brain.pitt](https://www.facebook.com/e.brain.pitt)
[http://www.caph.pitt.edu/researchprog.html](http://www.caph.pitt.edu/researchprog.html)

**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 [cnup.pitt.neurobio.edu](http://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 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.

Course Announcement

MSN BIO 2070: Human Physiology
Fall Semester, 2018
MW: 5:30 – 6:45 p.m.
F: 3:00 – 5:00 p.m.
Scaife Lecture Room 3

During the Fall Semester, Dr. Bill Yates will teach MSN BIO 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.

Undergraduates 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 in this class.

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

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