Neurotransmitter

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### Neurotransmitter Schedule

The next *Neurotransmitter* will be published and mailed electronically on **Tuesday, September 7, 2021**. All seminar announcements and notices must be submitted to Natalee Bright via email ([CNUP@pitt.edu](mailto:CNUP@pitt.edu)) no later than 12:00 noon on **Thursday, September 2, 2021**.

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<th>Meet the PI Lecture</th>
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<td>Researchers on the Rise Lecture</td>
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<td><strong>Beyond Mismatch Negativity: Studying Echoic Memory and Adaptation in the Monkey to Better Understand Auditory Deficits in Schizophrenia</strong></td>
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<td><strong>Dispositional Negativity and the Pavlovian Control of Active and Passive Defensive Behavior</strong></td>
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<td><strong>Functional and Neurochemical Substrates of Amygdala-Frontal Circuitry Across Development and Anxiety</strong></td>
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<td>Shaolin Yang, PhD</td>
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<td>Fri., 10/15</td>
<td>Meet the PI Lecture</td>
<td><strong>Extracellular Vesicles as Systemic Stress Signals and Novel Mechanisms in Neurodevelopment</strong></td>
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<td><strong>Rhythms and Reward: Do Sleep and Circadian Factors During Adolescence Contribute to Risk for Substance Abuse and/or Other Negative Health Outcomes?</strong></td>
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<td>Fri., 11/5</td>
<td>Distinguished Scientist Lecture</td>
<td><strong>Reward &amp; Emotion Neural Circuitry in Adolescents</strong></td>
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<td><strong>Extracellular Vesicles Lecture</strong></td>
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<td>Director, Center for Epigenetic Research in Child Health &amp; Brain Development</td>
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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 (ferrarelli@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

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 email address) to:

Caterina Rosano, MD, MPH
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 carolinernyuan.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 cmhc.cmu.edu and https://www.cnup.pitt.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.

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 function and on attracting female and underrepresented minority candidates. We strongly encourage candidates from these groups to apply for the position.

Interested candidates should send a CV, statement of research interests, and contact information for two references to stc15@pitt.edu with questions.
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).

Postdoctoral Fellow/Staff Scientist/Research Associate Position: Translational Neuroscience, University of Pittsburgh

The Torregrossa Laboratory in the Department of Psychiatry’s Translational Neuroscience Program at the University of Pittsburgh is in search of a qualified post-doctoral fellows or research technicians. The position is supported by a newly funded, collaborative R01 from NIAAA (https://projectreporter.nih.gov/project_info_description.cfm?aid=991297&icde=47306435&ddparam=&ddvvalue=&ddsub=&cr=1&csb=default&cs=ASC&pball=) to investigate the interactions between alcohol exposure and sleep at a neurophysiological level in the labs of Drs. Mary Torregrossa and Yanhua Huang. The project involves the use of many advanced techniques including EEG recordings, sleep analysis, slice electrophysiology, sleep manipulations, and alcohol drinking behavior. Opportunities will also be available to work on related projects that include the use of DREADDs, optogenetics, in vivo calcium imaging and fiber photometry. The ideal candidate will have prior experience in some of the techniques described above, with experience in slice physiology highly desired.

Qualified applicants at the post-doctoral or staff scientist level are expected to hold a recent doctoral degree in a related field and to have a strong record of productivity. Research technicians will be considered with at least a Bachelor’s degree in a biological science or bioengineering related discipline and prior lab experience. Candidates are expected 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 torregro@pitt.edu.

Postdoctoral Position Available

A postdoctoral position investigating the organization and function of auditory corticofugal projection systems in behaving mice is available in the Williamson Laboratory at the University of Pittsburgh.

Details on the research focus and approaches of the laboratory can be found here:

https://www.williamsonlaboratory.com/research/

Applicants must have a PhD in Neuroscience or a relevant field and must be eligible for employment in the US. We are looking for individuals with an excellent record of research achievements and expertise at the intersection of two or more of the following areas: electrophysiology, two-photon imaging, quantitative behavior, and computational neuroscience. Applications will continue until the position is filled.

The Williamson Laboratory is the newest member of the Pittsburgh Hearing Research Center at the University of Pittsburgh. The lab is embedded within the Departments of Otolaryngology and Neurobiology and affiliated with the Center for Neuroscience (CNUP) and the Center for the Neural Basis of Cognition (CNBC). Postdoctoral fellows will be part of a highly supportive and diverse research environment with excellent career development opportunities. The University of Pittsburgh was ranked third in terms of total NIH funding received in 2018. The Global Livability Index (The Economist) recently ranked Pittsburgh as the second most livable city in America.

Interested candidates should email a brief statement of research interests, a CV, and the names and contact information of three references to Dr. Ross Williamson (rsw@pitt.edu).

Postdoctoral Application

The Bio-Integrating Optoelectric Neural Interface Cybernetics Lab within the Department of Bioengineering at the University of Pittsburgh is seeking a post-doctoral associate. The position is funded through...
an active grant from the NIH to conduct leading-edge research at the frontier of neuroscience and neurobiology using novel engineered technologies to disentangle long-standing basic neurobiology questions at the interface of neurophysiology and engineering. The goals of the lab broadly fall into three categories: (1) Manipulating neuronal and non-neuronal cells to influence the function of neuronal networks, (2) Understanding the role of neuroimmune cells in neural circuit function, neuronal damage, and CNS regeneration, and (3) Improving long-term performance of implanted electrodes and integrating man-made (engineered) technology with the human brain for the purpose of studying normal and injured/diseased nervous systems in vivo at the cellular level, as well as restoring function to patients. Applicants should hold a PhD in a related field including but not limited to Biomedical Engineering, Neurobiology, Neuroscience, Molecular/Cellular Biology, Biochemistry, Electrical Engineering, Computer Science, Mechanical Engineering, Chemical Engineering, Physics, Optics, Material Science, and Mathematics. Animal surgery experience is preferred. The candidate should have a strong research background in in vivo electrophysiology or in vivo two-photon microscopy. Expertise with in vivo two photon imaging, viral transduction in rodent brain, image processing (e.g. GCaMP) and head-fixed visual cortex experiments (V1) are desired. Experiences with electrical stimulation, optogenetics, transgenic animal models, histology, functional/evoked electrophysiology/imaging, advanced optical imaging, stroke, TBI, and neurodegenerative diseases is seen as advantages. He/she will be working with an interdisciplinary team of neural engineers, neuroscientists, neurosurgeon, biologists, and material scientists. The appointment is intended to be 2 years and may be renewable depending on availability of funds. It is expected that most candidates will lack experience in all the above areas; training will be provided to fill necessary proficiencies. To apply, please send a cover letter and curriculum vitae (CV) as a single pdf document to Takashi Kozai (tdk18@pitt.edu). The Department of Bioengineering 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. Visit BIONICLAB.ORG for more information.

**Postdoctoral Positions Available**

The Department of Anesthesiology and Perioperative Medicine at the University of Pittsburgh is seeking to fill two postdoctoral research positions in chronic pain and drug dependence. Our NIH-funded research laboratory discovers, visualizes and manipulates pathological changes in CNS circuits that develop in the setting of neuronal injury, inflammation, diabetes, and multiple sclerosis. For example, we discovered new mechanisms by which tissue or nerve injury establishes opposing systems of persistent pain sensitization (latent neuronal sensitization) and analgesia (constitutive activity of G-protein coupled receptors) (e.g. Solway et al, PNAS; Corder et al, Science). We also validate new protein and cellular targets for the development of new non-opioid pharmacotherapies and analgesic drugs for chronic pain. Please see our laboratory web pages [https://www.taylorlab.anes.pitt.edu/](https://www.taylorlab.anes.pitt.edu/)

Within the Pittsburgh Center for Pain Research, we provide a dynamic research environment with exceptional resources for training in basic and translational neuroscience, including scientific mentorship and collaboration within the PCPR, and access to state-of-the-art core facilities at Pitt. Together, we will design experiments that incorporate your existing and emerging strengths in an environment that values hard work, intellectual curiosity, innovative thinking, and teamwork. For more details on training opportunities in pain research such as journal clubs, courses, and seminars, please see our PCPR website [http://pcpr.pitt.edu/](http://pcpr.pitt.edu/)

Applicants must have a PhD in neuroscience, physiology, pharmacology or equivalent and have demonstrable achievement, interest and preparation to address important questions in neuroscience, including multiple first-authored research articles in well-known international journals. This includes publications with one or more of the following methods: behavioral pharmacology in cre-transgenic mice, in vivo GCaMP calcium imaging / optogenetics / chemogenetics, fluorescence in situ hybridization, single-cell RNA sequencing, or drug vapor self-administration in mice. Current graduate students with US citizenship or permanent residence (green card) in strong training programs are encouraged to apply and will be fully supported in their submission of early-career NIH grants. Advanced fellows with a proven track record of high quality first-author publications in strong journals will also be considered.

*Please send a Cover Letter that briefly details career goals and prior research experience, CV, and list of three references to Dr. Bradley Taylor via email BKT@pitt.edu.***

**Postdoctoral Associate Position Opening**

**Research Topic**: Molecular and Cellular Pathobiology of Neurodegenerative Disease

**Start Date**: Position available immediately
Description: The Donnelly Laboratory in the Department of Neurobiology at the University of Pittsburgh School of Medicine is searching for enthusiastic and creative postdoctoral associates to study the molecular and cellular neurobiology of Amyotrophic Lateral Sclerosis (ALS), Frontotemporal Degeneration (FTD), and related dementias. Researchers will work in a collaborative environment within the LiveLikeLou Center for ALS Research at the University of Pittsburgh Brain Institute under the advisement of Christopher Donnelly. Postdoctoral associates will be expected to lead one of a few possible research projects investigating RNA binding protein biology, RNA metabolism, or intracellular transport in neurodegeneration. Successful candidates will be expected to carry out basic and translational research employing molecular/cellular biology, biochemistry, cutting-edge microscopy techniques, and induced pluripotent stem cell model systems.

Interested candidates should have a Ph.D. and a publication history in the biological sciences or related fields at their start date. Proficiency with molecular/biochemical methodologies, mammalian cell culture, and basic microscopy is required. Candidates with experience utilizing induced pluripotent stem cell cultures, protein biochemistry, liquid-liquid phase separation, nucleic acid cellular assays, or DNA/RNA sequencing and analyses are encouraged to apply. Postdoctoral NIH training grant opportunities are available.

Successful candidates will work closely with Dr. Donnelly to develop a high-impact research project that aligns with their interest as well as a detailed career plan catered to their long-term goals within academia, industry, or other fields.

Requirements: Ph.D. degree in biological sciences or relevant field at the time of start date. Interested candidates should send their curriculum vitae to chrisdonnelly@pitt.edu.

References will be requested for qualified candidates.

The University of Pittsburgh is an Affirmative Action/Equal Opportunity Employer and values equality of opportunity, human dignity, and diversity. EOE including disability/veterans.

Research Specialist/Research Scientist Positions in Neurodegenerative Disease

An exciting new project on microglial biology in neurodegenerative disease has created two new positions in the Burton Lab in PIND. As a result, we are currently recruiting outstanding Research Specialists or Research Scientists with expertise in: (i) intravital imaging and image analysis; and (ii) testing experimental therapies in mouse models of neurodegeneration. As the project is funded by the US Department of Veterans Affairs, applicants must be eligible for VA employment (IPAs may be available, allowing current Pitt employees to retain their university position). Funding starts 1 October 2021, although an earlier start date may be possible. Salary is negotiable, commensurate with qualifications and experience. Fluent written and spoken English, commitment to scientific rigor and excellence, and the ability to work within a team are essential. Enquiries are welcome from all qualified candidates, including researchers from groups historically under-represented in science. Please contact Edward A. Burton MD, DPhil, FRCP (eab25@pitt.edu) to learn more about these opportunities informally. Further details can be found at: https://www.burtonlab.pitt.edu/opportunities/

Postdoctoral Position in Neuropathology

A postdoctoral position is available in the laboratory of Dr Julia Kofler in the Division of Neuropathology at the University of Pittsburgh. The position is supported by a newly funded R01 grant from NIA to study “Genetic and molecular correlates of white matter pathology in Alzheimer’s disease”. The project involves the use of many advanced techniques including whole slide imaging, digital image analysis, digital spatial profiling, RNA sequencing and genome-wide association studies. The lab is tightly integrated with the Neurodegenerative Brain Bank and affiliated with the Alzheimer’s disease research center at the University of Pittsburgh. The major goals of the lab are to 1) identify and characterize genotype associations of AD pathology.
endophenotypes; 2) to define neuropathologic features of Chronic Traumatic Encephalopathy; and 3) to identify neurobiological processes underlying the development of psychosis in Alzheimer’s disease.

The ideal candidate will have a PhD in neuroscience, genetics or a related discipline and have published scholarly articles in peer-reviewed articles. Prior experience with analysis of large omics datasets is highly desirable. The candidate will be working with an interdisciplinary team of neuropathologists, neuroscientists, geneticist and biostatisticians and is expected to have excellent oral and written communication skills.

Interested applicants should send a CV, letter of interest outlining experience and research goals, and the names and contact information of three references to koflerjk@upmc.edu.

Research Technician Position Available to Study Circuits Underlying Motor Control and Motor Learning

A research technician position is available in the Hooks lab at the University of Pittsburgh School of Medicine for either a highly motivated young researcher or a senior researcher interested in mapping neural circuitry of motor control and motor learning.

Our lab uses state-of-the-art methods for circuits mapping: cell-type specific mice to identify 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. An ideal candidate will have experience with animal husbandry, stereotaxic surgery, histology/immunostaining, and fluorescence microscopy. These techniques will be most crucial to on-the-job success. We can train exceptional candidates in these skills as well.

Scientific creativity, excellent verbal and written communication skills, and technical expertise are essential. Interested candidates should send a resume or curriculum vitae (CV), a cover letter stating research interests, and contact information for three references to Bryan (Mac) Hooks (hooksm@pitt.edu).

More information about the lab is available at: [http://www.neurobio.pitt.edu/faculty/hooks.htm](http://www.neurobio.pitt.edu/faculty/hooks.htm)

The lab is funded by NINDS (NIH IR01 NS103993), The Department of Defense (CDMRP Discovery Award), and the University of Pittsburgh. Positions are available immediately with competitive salary and benefits (NIH scale). The Department of Neurobiology has exceptional strength in motor systems and excellent resources for collaboration and career development. The Pittsburgh neuroscience community (including Neuroscience, Neurobiology, Biomedical Engineering, and Mathematics at Pitt and Carnegie Mellon) is extensive.

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**NROSCI 1014/2014: Speaking of Science**

Fall Semester, 2021
MW 11:00-12:15 p.m.
Crawford Hall room 241

During the Fall Semester, Dr. Judy Cameron (jcameron@pitt.edu) and Dr. Carol Colby (ccolby@cnbc.cmu.edu) will teach NROSCI 1014/MSNBIO 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 4 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). The course is now published in Canvas for those interested in looking at the details (all sections are combined and can be viewed: 2221 NROSCI 1014 SEC1040).

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**A Postdoctoral position is available with a start date around 1 October 2021**

A position will be available in the Pittsburgh-based laboratory of George Wittenberg, MD, PhD. The project is on: 1. the normal role of the premotor cortices on motor function and, 2. the altered role in people with a specific type of stroke and to develop a method of synchronized practice and brain stimulation that can enhance motor function. Techniques used include transcranial magnetic stimulation, exoskeleton robotics, and MRI.

The laboratory is part of the Human Engineering Research Laboratory and Rehab Neural Engineering Labs, with affiliations at the University of Pittsburgh, UPMC, and Carnegie Mellon University. The environment is excellent for training in general, and particularly in motor rehabilitation after neurological injury.

Ideal candidates will have experience/familiarity in some or all of the following:

- Analysis of multijoint movement and muscle activity
- Transcranial Magnetic Stimulation
- Functional MRI
• Recovery of Motor Function after Stroke

An advanced degree in Biomedical Engineering, Physical or Occupational Therapy, Psychology, or Neuroscience is preferred but other applicants will be considered.

This is not a formal announcement of a position being available. The position would be offered through the Department of Veterans affairs, which is an equal opportunity employer. Please contact George Wittenberg at GeoWitt@Pitt.edu with a C.V.

Post-doctoral Fellow – Restorative Neuroscience

Applications are invited for a highly motivated post-doctoral position to investigate the role of neurogenesis in bioscaffold-induced tissue regeneration in rodent models of stroke. The candidate is expected to be part of a multi-disciplinary effort that encompasses bioengineering, neuroscience and radiological approaches. Our laboratories main aim is to develop restorative approach to repair the damage caused by stroke in preclinical models. This encompasses the use of extracellular matrix as a bioscaffold, but also includes the use of neural stem cells and their formulation in pre-formed tissue constructs.

The position is ideal for a researcher interested in developing expertise in the emerging field of restorative neuroscience. The applicant will be encouraged and supported to pursue independent funding and advance their academic career. Collaborative projects with industry partners also provide an opportunity to explore careers in the biotechnology and pharmaceutical sectors. This NIH-funded position will be for an initial appointment period of 2 years.

The post-doc fellow is expected to lead our effort to implant extracellular matrix-based bioscaffold into a rat model of stroke using MRI-guidance, followed by immunohistochemical analyses to evaluate its potential for the treatment of tissue damage caused by stroke. The main focus of this position will be on in vivo preclinical experiments and their histological analysis, but opportunities are available to extend this effort to include behavioral analyses and magnetic resonance imaging. As part of the candidates post-doctoral training, it is expected that they will contribute to manuscript and grant writing, as well as present their research effort at scientific conferences. The post-doc will also have the opportunity to co-supervise undergraduate and graduate researchers, as well as be an integral part of managing the day-to-day activities of the laboratory.

For more information:
http://www.radiology.pitt.edu/ril.html

Applications and further inquiries: This position is immediately available. Interested applicants should email Dr Mike Modo (mmm154@pitt.edu) with their CV, a cover letter outlining their interests and career plans, as well as the names for 3 references.

Alzheimer’s Disease Research Center- Call for Letters of Intent for Developmental Projects

One of the research missions of the Alzheimer’s Disease Research Center (ADRC) at the University of Pittsburgh is to fund developmental projects to stimulate new and innovative research relevant to Alzheimer’s disease. Types of research can range from basic science to clinical/psychosocial, with particular attention given to novel approaches. Proposed research may involve humans, other animals or in vitro studies. Investigators interested in clinical trials should consider applying through the NIA Alzheimer’s Disease Pilot Clinical Trails FOA. The investigator is responsible for obtaining appropriate Institutional Review Board or Animal Care and Use Committee approval for the proposal. The subject population, clinical, neuropathological and neuroimaging databases of the ADRC are available resources for approved proposals. Additional resources include the database from the National Alzheimer Coordinating Center (NACC).

Eligibility: Applicants should be postdoctoral or junior faculty level investigators at the University of Pittsburgh but may be awarded to a more senior investigator whose research is primarily in areas other than AD and ADRD research or who wants to work in the dementia field.

Funding Period: March 1, 2022 to February 28, 2023

Amount: Up to $75,000 direct costs per project

v Letter of Intent: A brief description of the proposed developmental project should be e-mailed to Leslie Dunn, MPH, Center Administrator (dunnlo@upmc.edu) by August 3, 2021. Please include title of the proposal, names of investigators/co-investigators, brief description of project, and a brief statement of relevance of the proposed research to the field. If using ADRC resources, discuss with appropriate core leader to determine availability of subjects or samples.

v Investigators invited to submit a full proposal will be notified by August 13th.

v Deadline: Applications must be received no later than September 7, 2021. (Please request full application guidelines at (412) 692-2731.)

For further information, please contact: Leslie Dunn, MPH, ADRC Administrator (412) 692-2731 ADRC, 4 West, UPMC Montefiore dunnlo@upmc.edu

Postdoctoral Associate Position

The Levine Laboratory in the Department of Neurobiology and the University of Pittsburgh Brain Institute at the University of Pittsburgh School of
Medicine seeks a highly motivated and creative postdoctoral associate to investigate the molecular and cellular root causes of Alzheimer’s Disease (AD). This laboratory focuses, in particular, on oxidative neuronal DNA damage as a root cause of beta amyloid accumulation, and it therefore utilizes various multi-disciplinary strategies for inducing and studying DNA damage and repair in mammalian neurons, as well as methods for researching the molecular and cellular biology of normal and AD neurons. Oxidative stress is one of the earliest pathologic changes in AD, and neurons in the brain are vulnerable to this stress and the consequent damage that it induces, especially double-strand DNA breaks (found frequently in AD neurons).

We are searching for a postdoc with a background in DNA damage and repair or a background in neurobiology (and ideally, both!). Researchers will work in a highly collaborative environment comprising nine full-time Alzheimer’s groups mainly located in BST-3, including this one, with exceptional resources available for animal modeling, cell and brain imaging, DNA and RNA sequencing, genomic engineering, data analyses, optogenetics, et al. The nine Laboratories leading our “Assault on Alzheimer’s” will meet monthly starting in September to share results, methods, and data emerging at meetings and the literature; to plan collaborations, including center and program project grants, etc. The “Assault”, which is led by Dr. Levine, is focused on cause and prevention, given the knowledge that beta amyloid, the apparent trigger of the disease, begins to accumulate in the brains of patients many years before even the earliest symptoms of Alzheimer’s, and every proposed treatment of Alzheimer’s – including the depletion of amyloid in the brain – has failed to date. A successful candidate will be expected to lead a basic research project on topics such as the mechanism by which oxidative DNA damage may induce beta amyloid in neurons, whether damage repair engages DNA or RNA-based pathways, or whether damage-induced amyloid has a greater likelihood of provoking the downstream concomitants of amyloid accumulation, e.g., tau phosphorylation, than other possible causes of amyloid accumulation. We welcome other ideas that candidates may have for projects along these lines. The postdoc will be expected to employ molecular/cellular biology, biochemistry, and cutting-edge microscopy. Animal models are not employed in this laboratory.


Interested candidates should have a Ph.D. or M.D. and a publication history in areas relevant to DNA damage or neuroscience, and ideally, both. Proficiency with molecular and biochemical methods, mammalian cell culture, fluorescence imaging, and basic microscopy is necessary. A successful candidate would work closely with Dr. Arthur Levine and a Research Staff Scientist, Dr. Starr Welty. The goal is to develop a high-risk, potentially high-reward project that is consistent with the candidate’s long-term interest in academia or industry.

A Ph.D. in a biologic science or M.D. with research training is required. Interested candidates should send their curriculum vitae, a letter of interest, and a biosketch to alevine@pitt.edu. Applicants should also apply through the University of Pittsburgh Talent Center using the following link: https://cfopitt.taleo.net/careersection/pitt_faculty_external_pd/jobdetail.ftl?job=21004895&tz=CMT-04%3A00&tzname=America%2FNear_York. The requisition number is 21004895. References will be requested for qualified candidates, followed by in-person interviews of lead candidates. In addition to the e-mail, a hard copy may be sent to:

Arthur S. Levine, M.D.
Distinguished University Professor
Executive Director, University of Pittsburgh Brain Institute
Professor of Medicine, Molecular Genetics and Neurobiology
Senior Vice Chancellor Emeritus, Health Sciences
John and Gertrude Petersen Dean Emeritus, School of Medicine
University of Pittsburgh
Biomedical Science Tower 3, 10045
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**Benchspace- Hiring Platform Announcement**

“A small group of graduate students at Pitt created a science hiring platform called Benchspace, with the goal of making hiring easier and more effective for both students and PI’s. When PI’s post on the job board, we send them a personalized digital flyer which they can forward to their colleagues. The digital flyer has embedded links making it very easy for candidates to access the job post when they receive email forwards. Additionally, we send out monthly newsletters featuring recently submitted jobs. So far we have a Neuroscience/Neurobiology newsletter, and Immunology Newsletter, a Cardiovascular newsletter, and a Biological Sciences Newsletter.

Here is our most recent neuroscience newsletter: https://mailchi.mp/d4b3587c5214/w2thbmx410?e=e8a62e167b
Postdoctoral Position in Psychiatric Neuroimaging

The laboratory of Dr. Deepak Sarpal at the University of Pittsburgh has an immediate opening for a postdoctoral researcher.

The laboratory is focused understanding mechanisms that underlie psychiatric treatments with an overarching goal of advancing therapeutic approaches for chronic mental illness. The laboratory is interested in applying innovative and multimodal neuroimaging approaches to examine neurobiological systems that track patients across antipsychotic treatments. This includes high-field, 7-Tesla, neuroimaging-based fMRI, magnetic resonance spectroscopy imaging (MRSI), and proxy measures of dopamine functioning. The candidate will work across datasets with these and other neuroimaging measures to characterize treatment response/psychotic disorders while collaborating with researchers at the University of Pittsburgh and external collaborators. This position is ideal for candidates who are interested in innovation at the interface between real-world psychiatric treatment and neuroimaging. The position is in Pittsburgh, Pennsylvania, a vibrant city with a high ‘livability’ index and a robust academic community. The University of Pittsburgh Department of Psychiatry is a unique and renowned environment for junior researchers to build collaborations and develop as investigators.

Candidate Profile:
1) Ph.D. in neuroscience, biomedical engineering, psychology, statistics, or other related disciplines.
2) Neuroimaging experience is highly preferred.
3) One or more first-author publications in a peer-reviewed journal.
4) Strong data-analysis (e.g., R, Python, or MATLAB) and programming skills (e.g., UNIX/BASH, Python).
5) Proficiency in spoken/written English.

Applications must include: 1) a cover letter outlining research accomplishments and career goals; 2) a curriculum vitae; and 3) a list of at least two references with contact information (phone number and email address). Candidates should send inquiries and applications to Deepak Sarpal (sarpaldk@upmc.edu).

NIH NINDS T32-Funded Postdoctoral Positions

The University of Pittsburgh seeks to fill a number of NIH NINDS T32-funded postdoctoral positions for training in the Neurobiology of Neurological Disease. A primary goal of this training program is to provide a crucial clinical component to the education of postdoctoral fellows. A second major goal is to ensure that trainees are provided with mentored research training to create a pathway to independence.

This T32 program is administered by the Department of Neurobiology and directed by Dr. Peter Strick, PhD, but represents a community-wide training program that includes faculty from basic science and clinical departments throughout the University.

Prior to application, applicants must select and obtain acceptance from a research mentor chosen from the list of members of the Center for Neuroscience at the University of Pittsburgh (CNUP) who are engaged in NINDS-funded research.

Successful applicants must have a PhD in Neuroscience, Biology, Molecular Biology, Pharmacology, Physiology, Bioengineering, or a related field. A list of current and former T32 trainees can be found at: https://neurobio.pitt.edu/t32-trainees.

In order to be eligible for NIH NINDS T32 funding, applicants must be either US Citizens or Permanent Residents.

While preference will be given to junior postdoctoral applicants, more experienced postdoctoral researchers will also be considered, especially if they are: a) working on highly innovative projects; b) working on projects that require extended time and effort for completion; or c) training in new fields or specialties.

To apply for T32 support see: https://www.neurobio.pitt.edu/applying-t32. Please email the following in PDF format to the Program Administrative Assistant, Melissa Lepore (melissa.lepore@pitt.edu):

1) Curriculum vitae.
2) A summary of your research accomplishments and a description of your research plans (2-3 pages).
3) A summary of your relevant coursework (1-2 pages).
4) A statement of your long-term career objectives (1-2 pages).
5) A statement describing the relevance of your background and training to Neurological Disease Research (1-2 pages).
6) A letter of nomination from the faculty sponsor which includes a brief statement of the proposed research project.
7) Three letters of recommendation.

Please contact Melissa Lepore (melissa.lepore@pitt.edu 412-648-9538) with any questions about the application process or for further details about the training program.
Research Technician Position Available

The laboratory of Dr. Christopher Cunningham in the Department of Otolaryngology at the University of Pittsburgh School of Medicine is searching for an enthusiastic and highly motivated research technician. The Cunningham Lab is interested in understanding the molecular and cellular basis for sound processing in the cochlea of the mammalian auditory system. The lab aims to unravel the molecular and cellular machinery that is essential for hearing, and to identify novel therapeutic targets to address hearing loss. The lab uses cutting-edge mouse genetics, biochemistry, and microscopic imaging techniques to address their research questions.

The technician will be an integral part of the research team, helping to setup and maintain the lab and perform experiments. The technician will work closely with the PI to plan, execute, document and analyze experiments. These will include molecular biology, immunohistochemistry, western blotting/biochemistry, cell culture, and fluorescent imaging. The ideal candidate will be able to work collaboratively and contribute to a positive, dynamic, and team-oriented lab atmosphere. Prior experience with molecular biology, biochemistry and/or immunohistochemistry is highly desirable. Experience with cell culture or rodent models is also preferred.

Interested candidates should submit their application online to: https://cfopitt.taleo.net/careersection/pitt_staff_external/jobdetail.ftl?job=21002602&tz=GMT-04:00&tzname=America/New_York

More information about the lab is available at: http://phrc.pitt.edu/people/christopher-l-cunningham

The University of Pittsburgh is an Affirmative Action/Equal Opportunity Employer and values equality of opportunity, human dignity and diversity. EOE, including disability/veterans.

NeuroNex Post-doctoral Position – University of Pittsburgh

A postdoctoral scientist position is currently available in the Translational Neuroscience Program, Department of Psychiatry, University of Pittsburgh School of Medicine. Highly motivated candidates with an interest in neocortical circuit function in the primate brain are encouraged to apply.

The position is primarily funded by the NeuroNex program (https://neuronex.org/) of the National Science Foundation (NSF). Our NeuroNex project is part of a multidisciplinary international network of laboratories in Canada (Western University, London; University of Toronto, Toronto), Germany (Georg-August-Universität Göttingen) and the US (Yale University; New York University and University of Pittsburgh). Our network, The Fabric of the Primate Neocortex and the Origin of Mental Representations (https://www.nxwm.io/about-us/), is dedicated to studying the molecular, cellular, physiological and neural network bases of working memory in the primate brain.

The postdoctoral position in Pittsburgh is based in the laboratories of Drs. Guillermo Gonzalez Burgos and David A Lewis. Our labs are part of the group of laboratories, in our NeuroNex network, using patch clamp electrophysiology in acute brain slices to investigate the cellular physiology of neurons involved in the mechanisms of working memory. The candidate will join a dynamic and vibrant international group of researchers with frequent interactions and discussions. Our brain slice physiology project plans to study, in vitro, neurophysiological mechanisms that may contribute to activity patterns mediating working memory in the dorsolateral prefrontal cortex and other areas of the primate neocortex. In addition, we plan on using patch-seq methods (https://www.sciencedirect.com/science/article/pii/S2666166720301337) to obtain gene expression data from the recorded neurons. The postdoctoral scientist would also participate in separate NIMH-funded studies of pyramidal neurons and interneurons in primate and mouse brain.

Candidates will investigate cellular/synaptic physiology in brain slices, therefore previous experience using video-microscopy patch clamp techniques in acute brain slices is absolutely required. Knowledge of MatLab and/or Python programming languages is preferred, but not strictly required. Candidates interested in this position should contact Guillermo Gonzalez Burgos (gburgos@pitt.edu). Please send your curriculum vitae, a letter expressing your interest in our project, a summary of research experience and three references.

We will begin reviewing applications September 15, 2021, continuing until positions are filled. After initial review of applications, some applicants will be asked to schedule interviews with members of the T32 Executive Faculty Committee.