# Neurotransmitter

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## Neurotransmitter Schedule

The next *Neurotransmitter* will be published and mailed electronically on **Monday, October 4, 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 30, 2021**.

### Notices

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<th>Date</th>
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| Fri., 10/8 | 12:00 p.m. | Researchers on the Rise Lecture Dispositional Negativity and the Pavlovian Control of Active and Passive Defensive Behavior | Timothy Allen, PhD  
Assistant Professor of Psychiatry  
University of Pittsburgh  
School of Medicine  
*Virtual link: https://pitt.zoom.us/j/97643630949  
Passcode: 892922*(Sponsored by the Department of Psychiatry) |
| Fri., 10/15| 12:00 p.m. | Meet the PI Lecture Rhythms and Reward: Do Sleep and Circadian Factors During Adolescence Contribute to Risk for Substance Abuse and/or Other Negative Health Outcomes? | Brant Hasler, PhD  
Associate Professor of Psychiatry, Psychology and Clinical and Translational Science  
University of Pittsburgh  
School of Medicine  
*Virtual link: https://pitt.zoom.us/j/97084549775  
Passcode: 175340*(Sponsored by the Department of Psychiatry) |
| Fri., 10/22| 12:00 p.m. | Meet the PI Lecture Beyond Mismatch Negativity: Studying Echoic Memory and Adaptation in the Monkey to Better Understand Auditory Deficits in Schizophrenia | Tobias Teichert, PhD  
Assistant Professor of Psychiatry and Bioengineering  
University of Pittsburgh  
School of Medicine  
*Virtual link: https://pitt.zoom.us/j/91930664688  
Passcode: 093323*(Sponsored by the Department of Psychiatry) |
| Wed., 10/27| 1:00 p.m.  | Active Neuronal Ensembles |  
Yingxi Lin, PhD  
Professor of Psychiatry and Behavioral Sciences  
SUNY Upstate Medical University  
*Virtual link: https://pitt.zoom.us/j/96468972021*(Sponsored by the Joint Departments of Neurobiology/Neuroscience Virtual Seminar Series) |
| Wed., 11/3  | 1:00 p.m.  | How Patterned Spontaneous Activity Helps Wiring the Developing Visual Cortex | Christian Lohmann, PhD  
Endowed Professor, Faculty of Science  
Netherlands Institute for Neuroscience  
*Virtual link: https://pitt.zoom.us/j/94120585834* |
Fri., 11/5  
12:00 p.m.  
**Distinguished Scientist Lecture**  
*Extracellular Vesicles as Systemic Stress Signals and Novel Mechanisms in Neurodevelopment*  
Via Zoom  
Tracy Bale, PhD  
Professor of Pharmacology  
Director, Center for Epigenetic Research in Child Health & Brain Development  
University of Maryland  
School of Medicine  

Virtual link:  
https://pitt.zoom.us/j/98966223957  
Passcode: 527868  

**(Sponsored by the Joint Departments of Neurobiology/Neuroscience Virtual Seminar Series)**

Fri., 12/17  
12:00 p.m.  
Meet the PI Lecture  
*Reward & Emotion Neural Circuitry in Adolescents*  
Via Zoom  
Erika Forbes, PhD  
Professor of Psychiatry, Pediatrics, Psychology and Clinical and Translational Science  
University of Pittsburgh  
School of Medicine  
Virtual link:  
https://pitt.zoom.us/j/99993053059  
Passcode: 416977  

**(Sponsored by the Department of Psychiatry)**

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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

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

Caterina Rosano, MD, MPH
Professor of Epidemiology
Graduate School of Public Health
University of Pittsburgh,
130 De Soto Street,
South Parran Hall, 5139
Pittsburgh PA, 15261
(412)-383-1294 or (412)-759-3572
http://www.publichealth.pitt.edu/home/directory/caterina-rosano
https://www.facebook.com/e.brain.pitt
http://www.caph.pitt.edu/researchprog.html

Newly Funded T32 in Population Neuroscience

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

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

Postdoctoral Associate Positions in Systems Neuroscience

Postdoctoral positions are available in the Runyan lab in the Department of Neuroscience at the University of Pittsburgh. Our research involves dissecting inhibitory and neuromodulatory circuits across the cortical hierarchy. Our goal is to understand how changes in behavioral context and brain state shift local information processing and the transmission of information between cortical networks. We use two-photon imaging of population activity and optogenetics in head-fixed mice performing perceptual decision-making tasks. See carolinerunyan.org for more information about our work.
We are seeking individuals with experience in two-photon imaging, large-scale electrophysiology, optogenetics, and/or mouse behavior. As we build our laboratory and our own approach to understanding the brain, the ideal candidates should have strongly driven scientific curiosity and problem-solving skills, as well as excellent interpersonal skills. This position offers the opportunity to participate in building a new research program, and to work in the highly collaborative, collegial environment at the University of Pittsburgh and Carnegie Mellon University. See cnbc.cmu.edu and 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 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 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 R01 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 postdoctoral 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=9912917&icde=47306435&ddparam=&ddvalue=&ddsub=&cr=1&csb=default&cs=ASC&epball=) 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.
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 immune 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 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 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 Gi-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/

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/

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.

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 ASSISTANT POSITION AVAILABLE IN THE DEPARTMENT OF PSYCHIATRY AT THE UNIVERSITY OF PITTSBURGH.

A research technician position is available in the laboratory of Dr. Rui Peixoto in the Translational Neuroscience Program at the University of Pittsburgh. The Peixoto lab uses electrophysiology, optogenetics,
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 koflerj@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

The lab is funded by NINDS (NIH 1R01 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,
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 position is ideal for a researcher interested in the use of neural stem cells and their formulation in pre-extracellular matrix as a bioscaffold, but also in stroke in preclinical models. This encompasses the use of restorative approaches. Our laboratories main aim is to develop a method of induced tissue regeneration in rodent models 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.

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.

**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 Trials 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

Neurobiology, Biomedical Engineering, and Mathematics at Pitt and Carnegie Mellon) is extensive.
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://cftpitt.taleo.net/careersection/pitt_faculty_external_pd/jobdetail.ftl?job=21004895&tz=GMT-04%3A00&tzname=America%2FNy_East. 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
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).

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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 PIs. 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](https://mailchi.mp/d4b3587c5214/w2thbmx410?e=e8a62e167b)

These newsletters go out to departments at > 80 universities throughout the country. We think this offers students access to job opportunities they may have never heard about and the PI’s job post reaches a much larger pool of applicants. Students looking for positions can find great opportunities at [gotbenchspace.com](https://gotbenchspace.com). If any PI’s at Pitt want to submit a post they can do so at [https://gotbenchspace.com/jobs-list/](https://gotbenchspace.com/jobs-list/) and if they use the coupon “Pitt” their post will be Free!”

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**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).

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**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_extern al/jobdetail.ftl?job=21002602&tz=GMT-04:00&tzname=America/New_York](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://neuronx.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/S266166720301337) 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.

Postdoctoral Position Available

The Cunningham Laboratory at the University of Pittsburgh is actively recruiting postdoctoral fellows to work in the lab. The lab is interested in the neural and sensory biology of the auditory system, with a particular emphasis on the function of the mammalian cochlea. Our goals are to uncover molecular and cellular mechanisms of normal auditory processing, to elucidate the biological origins and pathophysiologies of hearing loss, and to contribute to the development of novel therapies for auditory disorders. The lab utilizes cutting-edge techniques including the generation and analysis of novel genetic mouse models combined with biochemistry, molecular biology, histology, viral vectors, and high-resolution fluorescent microscopic imaging.

More information about the Cunningham Lab is located at thecunninghamlab.com

Applicants must have a Ph.D. in Neuroscience, Cell Biology, Biochemistry, or a relevant field and must be eligible for employment in the United States. The ideal candidate will have a strong record of research achievement, be committed to working collaboratively and will strive to contribute to a positive, dynamic, and team-oriented lab atmosphere. Applications will continue until the position is filled.

The Cunningham Laboratory is a member of the Pittsburgh Hearing Research Center at the University of Pittsburgh, which brings together basic and clinical auditory researchers with the aim of understanding auditory function and developing new therapies. The lab is located in the Department of Otolaryngology and the Pittsburgh Institute for Neurodegenerative Diseases (PIND) and has access to excellent shared and core facilities.

The University of Pittsburgh has a strong and vibrant research environment and is consistently in the top 10 in the United States in NIH funding. Neurobiology and Auditory research are strengths at the University, and postdoctoral fellows have many opportunities for collaboration, networking, training, and career development.

Pittsburgh is frequently listed as one of the best places to live in the United States, with numerous cultural and outdoor opportunities in addition to reasonable cost of living.
Interested candidates should email a brief statement of research interests, a CV, and the names and contact information of three references to Dr. Chris Cunningham (cunningc@pitt.edu).

**Postdoctoral Fellowship in Pediatric Traumatic Brain Injury Research**

The Department of Physical Medicine & Rehabilitation in the University of Pittsburgh School of Medicine, affiliated with the UPMC Children’s Hospital of Pittsburgh, is recruiting candidates for a Postdoctoral Fellowship in Pediatric Traumatic Brain Injury Research. Candidates are invited to apply for a 2-year postdoctoral fellowship position working with Principal Investigator, Dr. Amery Treble-Barna, PhD, with a start date in Summer or Fall 2022. The goal of the position is to train the fellow in the conduct of rigorous clinical and translational research in pediatric TBI, with foci in any of the following areas:

- Influences of social determinants of health on neurobehavioral recovery
- Health inequity/disparities in neurobehavioral recovery and rehabilitation utilization
- Development and validation of a caregiver-report measure of rehabilitation utilization
- Biomarkers of neurobehavioral recovery, including genetic, epigenetic, and protein biomarkers

Fellows will have the opportunity to:

1) Publish manuscripts from multiple pre-existing datasets
2) Contribute to and ultimately publish from data being collected for multiple NIH-funded studies
3) Collaborate on multi-institutional research projects, facilitating networking within the field
4) Pursue intra- and extra-mural grant funding with mentorship from the PI
5) Participate in fellowship didactic seminars and workshops focused on career development and preparing for faculty positions

Supervised clinical neuropsychology training hours and didactics are negotiable for candidates pursuing psychologist licensure.

**Research Program:** Dr. Treble-Barna’s research aims to account for unexplained heterogeneity in outcomes following pediatric TBI with the long-term goal of moving the field towards precision medicine to improve individual prognostication, predict response to rehabilitation, and identify novel targets for treatment development. Her research program tackles this unexplained heterogeneity problem from several angles by investigating environmental (e.g. psychosocial adversity), genetic, epigenetic, and rehabilitation factors influencing neurobehavioral recovery.

**Environment:** The fellow will have the opportunity to interact and receive mentorship from multidisciplinary faculty from psychology and neuropsychology, physiatry, critical care medicine, pediatrics, epidemiology, genetics and epigenetics, and biostatistics. Formal postdoctoral seminars and workshops are provided across the PM&R Department and the School of Medicine, with the goal of preparing fellows for the next steps of their career. Intramural funding opportunities are available to support fellow research projects. The University of Pittsburgh is an Affirmative Action/Equal Opportunity Employer and values equality of opportunity, human dignity, and diversity.

**To Apply:** Candidates must have obtained their doctoral degree by the start date. Candidates with doctoral degrees in Psychology/Neuropsychology, Neuroscience, Rehabilitation Science, Epidemiology, Statistics, or related fields are encouraged to apply. Salary is commensurate with NIH guidelines, and benefits are competitive. Interested candidates are invited to submit a cover letter and CV to amery.treble-barna@pitt.edu.