



Message from the Director:

This past week at our NeuroNetworking seminar, we heard from Mike Scharf who taught us a bit about insecticide neurotoxicity, and Jason Cannon who walked us through the mechanisms of environmentally-induced dopaminergic neurodegeneration. Next week will begin the last, but not least, phase of our seminar series - Neuroengineering. [Mathew Tantama and Jenna Rickus will be speaking on July 20th](#). Our last seminar is scheduled for the 27th with Alex Chubykin and Joseph Irudayaraj. We look forward to hearing about their research.

Speaking of exciting research, congratulations are in order for Jason Cannon (and his collaborators) for their National Institute of Environmental Health Sciences \$1.68 Million award to study if [dietary factors may have a role in Parkinson's disease](#). We look forward to the results of their study. Finally, as you can see below, we will once again be sponsoring a competitive travel grant for our graduate students, please feel free to pass this along to your students and let us know if you have any questions.

- Donna Fekete, *Inaugural Director*

Travel Grant

The Institute for Integrative Neuroscience is accepting applications for a travel award which will provide up to \$500 to support student travel to scientific meetings held August 2016 to January 2017. If you are a graduate student traveling to a meeting between now and January of 2017 you are eligible for this round. To apply, submit a single PDF file containing items 1-3 to neuro@purdue.edu by 5pm July 30th. Additionally, please have a referee submit a letter of recommendation on your behalf (item number 4) via the same method.

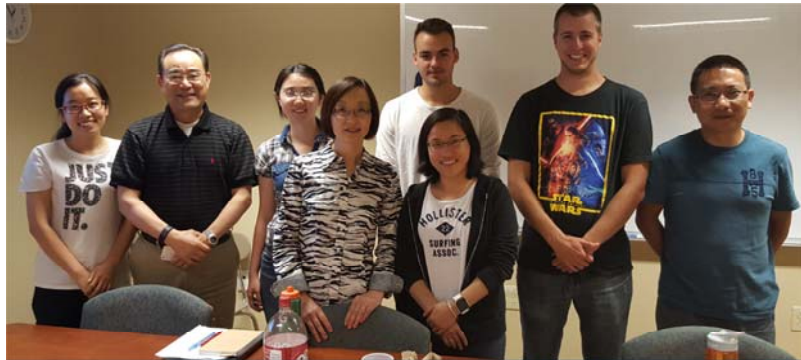
Each application should contain the following:

- 1 - Cover letter from the student that includes the name of the meeting or conference to be attended, the approximate costs for the meeting (registration, travel, etc.) and the type of presentation (poster, talk, etc.) if any, and why attending this particular meeting will be beneficial to your professional development. Additionally, please indicate if you have previously attended this event or if this is your first time.
- 2 - A copy of the abstract of your presentation, if possible.
- 3 - A short (1-2) sentence statement from your major professor that he/she supports your attendance to this meeting and indicating that sufficient lab funds exist to cover all costs over \$500.
- 4 - One letter of support from a professor who is NOT your major professor; as mentioned above this should be submitted by the reference.

Featured Faculty Member:

Dr. Wei Zheng is a Professor of Health Sciences and Toxicology and the Head of School of Health Sciences at Purdue University. He is a toxicologist in the fields of metal-induced neurodegenerative disorders such as Parkinson's disease, Alzheimer's disease and essential tremors. Dr. Zheng received his B.S. in Pharmacy and M.S. in Pharmacology from Zhejiang University and his Ph.D. in Toxicology from University of

Arizona. He was an Assistant Professor and later tenured Associate Professor in School of Public Health at Columbia University in New York City (1993-2003). He joined



Purdue University in 2003 and became a Full Professor in 2006. In 2008, Dr. Zheng took the leadership

role as the Head of the School that comprises more than 60 faculty, clinical instructors, researchers and staff, 400-500 undergraduate majors and 40-45 graduate students, offering undergraduate degrees (BS) in environmental health, occupational health, radiological health, medical laboratory sciences, and pre-professional health sciences, as well as graduate degrees (PhD, MS, MPH) in environmental health, toxicology, industrial hygiene, health physics and medical physics.

For the past 25 years, his research team has been exploring the metal-induced neurotoxicities with a particular focus on the roles of brain barrier systems in regulating metal homeostasis in brain. His major achievements in metal toxicological research include: (1) his seminal discovery that lead (Pb) accumulation in brain choroid plexus reduces the level of transthyretin in human and animal cerebrospinal fluid (CSF), a protein that transports thyroid hormones and b-amyloids in brain; (2) his original research that unveils the molecular mechanism by which iron (Fe) and copper (Cu) are transported in and out of brain by the blood-brain barrier and blood-CSF barrier and how exposure to manganese (Mn) alters these processes, leading to Mn-induced parkinsonism; (3) his novel discovery of a distinct role of Pb in the formation of amyloid plaques in the pathoetiology of Alzheimer's disease; (4) his effort in translating laboratory discoveries to human health research and intervention by exploring cohorts of smelters, welders and battery workers for better biomarker development and for effective metal chelation therapy; and (5) his leadership role in fostering collaborations among metal toxicologists, medical device engineers, physicists, epidemiologists, and environmental health field workers for human studies of metal-induced neurodegenerative diseases such as Mn in Parkinson's disease and Pb in Alzheimer's disease. He has authored one book and 162 original research manuscripts. His research has been supported by the funds mainly by NIH grants (since 1994), U.S. Department of Defense contracts, and other awards from pharmaceutical companies such as Johnson & Johnson and Eli Lilly.

Dr. Zheng has been actively participating in more than 70 NIH study section reviews or other governmental and industrial grant review panels, and was a standing member of NIH/Environmental Health Sciences Review Committee (2003-2007) and NIH/Neurotoxicology and Alcohol Study Section (2008-2012). He has been serving as the member of the Editorial Boards of *Toxicology Letters*, *Experimental Biology and Medicine*, *Fluids and Barriers of CNS* and *Chinese Journal of Preventive Medicine*. He served as the President of Society of Toxicology Metal Specialty Section (2009-2011), the President of International Neurotoxicology Conference (a joint conference of the Int'l Neurotoxicology Association and the Int'l Commission on Occupational Health) in 2011, and the incoming President of the International Society for Trace Element Research in Humans (ISTERH) (2015-2019). Dr. Zheng received the **Best Publication Award** by *the Society for Experimental Biology and Medicine* in 2005, the title of **University Faculty Scholar** by Purdue University, the **Distinguished Chinese Toxicologist** by the American Association of Chinese in Toxicology in 2010, the **Carrier Achievement Award** by Society of

Toxicology Metal Specialty Section in 2015, and most recently being inducted as a **Fellow** of the U.S. Academy of Toxicological Sciences in 2016. If you'd like to learn more about Dr. Zheng, please visit [his website](#).

Save the Date:

Chromatin & Epigenetics Symposium will be held on Tuesday, October 11, 2016. Session topics include: Epigenetic process in development and differentiation, RNA-dependent epigenetic regulation, chromatin biology and disease and chromatin and genome integrity.

https://www.conf.purdue.edu/landing_pages/ces/

Funding Opportunities:

Internal coordination required: [Arnold and Mabel Beckman Foundation Young Investigators Program](#)

This program provides grants of approximately \$750,000 over four years for young, tenure-track faculty in the chemical and life sciences for projects that "represent a departure from current research directions rather than extensions or expansions of existing programs." Of particular interest are proposals that open up new avenues of research in chemistry and the life sciences by fostering the invention of methods, instruments and materials. Eligible applicants must be U.S. citizens or permanent residents and should not have been in a tenure-track position for more than three full years. Furthermore, applicants can have no more than \$225,000 in direct, annualized external funding grants during any BYI Program Year (Aug-July) at time of application. Start-up funds, department-wide instrumentation grants, and "Transition" grants (such as NIH K99/R00) are not counted toward this total. Letters of intent are due to Beckman by August 15. Full applications are submitted only by invitation. Although this program is *not* a limited submission, applications do require the signature of both the dean and the president or provost. The Office of the Executive Vice President for Research and Partnerships is assisting the Offices of the President and Provost by reviewing the submissions, editing as needed, and then securing the president's/provost's approval to submit. Due to this, we have an internal deadline of **August 1** for application materials as described in the attached document.

[Eli Lilly-Stark Neurosciences Pre-Doctoral Research Fellowship in Neurodegeneration - 2016.08](#)

LETTER OF INTENT (LOI) DEADLINE - AUGUST 5, 2016

FULL APPLICATION DEADLINE - AUGUST 26, 2016 (5:00 PM)

The Stark Neurosciences Research Institute and the Indiana Clinical and Translational Sciences Institute (CTSI) are seeking applicants for special pre-doctoral training fellowships in translational neurodegenerative disease research. We seek applicants whose research is focused on age-related neurodegeneration, including Alzheimer's disease, Parkinson's disease, amyotrophic lateral sclerosis, chronic traumatic encephalopathy, among others. Translational research refers to what is popularly termed as "bench to bedside"; the process by which research in the lab translates into patient treatment. Translational research fosters the multidirectional integration of basic research, patient-oriented research, and population-based research, with the long-term aim of improving the health of the public. Translation can involve everything from basic science discoveries in the lab that directly focus on human disease states, through animal studies and drug development to the development of clinical trials and studies in humans.

Annual stipend (plus applicable health insurance) is aligned with current NIH recommendations. Annual supplement of \$7,500 to be used for travel, computers, and general supplies. Initial funding duration is for one (1) year, and is renewable for one (1) additional year pending review and demonstration of satisfactory progress.

[Eli Lilly-Stark Neurosciences Post-Doctoral Research Fellowship in Neurodegeneration - 2016.08](#)

LETTER OF INTENT (LOI) DEADLINE - AUGUST 5, 2016

FULL APPLICATION DEADLINE - AUGUST 26, 2016 (5:00 PM)

The Stark Neurosciences Research Institute and the Indiana Clinical and Translational Sciences Institute (CTSI) are seeking applicants for special post-doctoral training fellowships in translational neurodegenerative disease research. We seek applicants whose research is focused on age-related neurodegeneration, including Alzheimer's disease, Parkinson's disease, amyotrophic lateral sclerosis, chronic traumatic encephalopathy, among others. Translational research refers to what is popularly termed as "bench to bedside"; the process by which research in the lab translates into patient treatment. Translational research fosters the multidirectional integration of basic research, patient-oriented research, and population-based research, with the long-term aim of improving the health of the public. Translation can involve everything from basic science discoveries in the lab that directly focus on human disease states, through animal studies and drug development to the development of clinical trials and studies in humans.

Annual stipend (plus applicable health insurance) is aligned with current NIH recommendations. Annual supplement of \$7,500 to be used for travel, computers, and general supplies. Initial funding duration is for one (1) year, and is renewable for one (1) additional year pending review and demonstration of satisfactory progress.

[Activity-Based Therapy Grant Program - Indiana Spinal Cord & Traumatic Brain Injury Research Fund - 2016.09](#)

LETTER OF INTENT (LOI) DEADLINE - AUGUST 12, 2016

FULL APPLICATION DEADLINE - SEPTEMBER 9, 2016 (5:00 PM)

The State of Indiana established the research fund known as the Indiana Spinal Cord and Traumatic Brain Injury Research Fund (ISCBIRF) effective July 1, 2007. This fund, established under Indiana Code (IC) 16-41-42-4, will consist of appropriations, gifts and bequests, fees deposited in the fund under IC 9-29-5-2, and grants received from the federal government and private sources.

Effective July 1, 2015 this fund was supplemented and additionally authorized by legislation to provide prescribed, defined, and limited support to non-profit organizations corresponding to 501(c) 3 Federal tax status engaged in rehabilitative clinical care employing “activity based” approaches.

The overall objective of this program is to foster and encourage activity-based therapy programs for the prevention, treatment, and cure of spinal cord and traumatic brain injuries, including acute management, medical complications, rehabilitative techniques, and neuronal recovery.

Applications to this program are limited to \$1,000,000 (maximum of \$600,000 during the first year; \$400,000 during the second year) for up to two (2) years in duration based on appropriate achievement of milestones and progress reports.

[Burroughs-Wellcome Career Awards at the Scientific Interface](#) BWF's Career Awards at the Scientific Interface (CASI) provide \$500,000 over five years to bridge advanced postdoctoral training and the first three years of faculty service. These awards are open to U.S. and Canadian citizens or permanent residents as well as to U.S. temporary residents. Candidates must hold a Ph.D. degree in one of the fields of mathematics, physics, chemistry, computer science, statistics, or engineering and must have completed at least 12 months but not more than 48 months of postdoctoral research by the date of the full invited application deadline. *Sponsor Deadlines:* Sept 6 – Pre-proposal; January 9 – Invited full proposals.

NIH Biophysical and Biomechanical Aspects of Embryonic Development This FOA encourages applications that propose to advance our knowledge in the area of the physics and mechanics of embryonic development.

- [R01](#) Deadline: September 19
- [R21](#) Deadline: September 19

[NIH Impact of Aging in Human Cell Models of Alzheimer's Disease \(R01\)](#) The goal of this FOA is to

establish the impact of aging on the expression and/or modulation of AD pathological processes and to assess age-related AD genotype-phenotype relationships in human cell models. Research incorporating different brain cell types to promote neural circuit maturation and complexity in such cell models is expected to better recapitulate and give greater insight into AD pathological processes. Deadline: September 28.

[NIH Development and Application of PET and SPECT Imaging Ligands as Biomarkers for Drug Discovery and for Pathophysiological Studies of CNS Disorders \(R01\)](#) This FOA invites research grant applications from organizations/institutions that propose the development of novel radioligands for positron emission tomography (PET) or single photon emission computed tomography (SPECT) imaging in human brain, and that incorporate pilot or clinical feasibility evaluation in pre-clinical studies, model development, or clinical studies. Deadline: October 5.

[NSF Dear Colleague Letter: Change Makers](#) EHR invites innovative research and development proposals to advance STEM learning, while exploring solutions to multidisciplinary or transdisciplinary global challenges in either formal or informal settings for learners of all ages and prior educational experience, including learners traditionally under-represented in STEM. Research and development efforts should contribute to both the STEM and STEM education knowledge bases. Deadline: Varies by directorate

NIH Social Epigenomics Research Focused on Minority Health and Health Disparities This FOA supports and accelerates human epigenomic investigations focused on identifying and characterizing the mechanisms by which social experiences at various stages in life, both positive and negative, affect gene function and thereby influence health trajectories or modify disease risk in racial/ethnic minority and health disparity populations.

· [R01](#) Deadline: November 15

· [R21](#) Deadline: November 15

NIH Autism Centers of Excellence (ACE) This program is intended to build on the research progress and momentum of the past decade by funding research on innovative interventions and services for individuals with ASD across the lifespan, as well as cutting-edge research on the neurobiological basis and phenotypic characteristics of ASD that might lead to the identification of novel intervention strategies. A PD/PI may submit only one application, either an ACE Center or an ACE Network. This does not exclude multiple applications from a single institution, provided each application is submitted by a different PD/PI.

[Networks \(R01\)](#) Each ACE Network will consist of a multi-site project focusing on a specific topic of research for R01 support through this FOA. Each ACE Network will submit one R01 application that includes sub-awards to the collaborating sites. Deadline: November 17

[Centers \(P50\)](#) The P50 mechanism allows for integrative, multi-disciplinary, coordinated programs of research that demonstrate cohesion and synergy across research projects and cores. Deadline: November 17



Copyright © 2016 Purdue University Pillars of the Life Sciences, All rights reserved.

You are receiving this email if you are a member of our Integrative Neuroscience Center or you have expressed interest in the center.

Our mailing address is:

Purdue University Pillars of the Life Sciences
207 S. Martin Jischke Drive
Lafayette, IN 47907

[Add us to your address book](#)

Want to change how you receive these emails?

You can [update your preferences](#) or [unsubscribe from this list](#)