Message from the Director:

We have begun planning a few exciting initiatives this year, including the inauguration of a thematic**Distinguished Lectures in Neuroscience Seminar Series** and a call for **Special Lectures in Neuroscience** course proposals for the Spring semester (details to follow soon).

As many of you know we have been spending some time evaluating the core facilities to focus on building out. To that end, we would like to get a sense of the labs that would be interested in sending an individual to a 2-day training course (lectures and hands-on training) on the handling and differentiation of **human iPSCs** (induced pluripotent stem cells). The training will be conducted by a company representative and will be run out of the 3D3C tissue culture core facility in Discovery Park, most likely within the next 1-2 months. Our hope is to have the final differentiation component of the training focused on neural induction. If you or one of your students would be interested in this type of training, please let us know as soon as possible. We will sponsor attendance by PIIN members, with the limit of one individual per lab. Seats are limited.

I am pleased to offer my personal **congratulations to M. Katie Scott** (PULSe program, BIOL) for being awarded an Individual F31 Fellowship from the NIH for her project entitled "Molecular regulators of innervation and patterning across the developing cochlea." We hope this is one of many NRSA awards to come to our hard-working graduate students and postdocs! There was stiff competition for the graduate student travel grants this round. We are pleased to announce the winners as **Sayan Dutta**(MCMP), **Jesyin Lai** (BIOL/BME), **Ka Ng** (PSYCH), **Meridith Robins** (MCMP) and **Ryan Verner**(BIOL/BME). You will each soon be receiving your letter of award.

As we look forward, we are excited to welcome **Dr. Bruce Lamb of the Stark Neuroscience Institute** in Indianapolis for a visit and seminar on August 31. We hope to build stronger bridges between our Institutes, and seek your help in welcoming him with a good turnout to the seminar, and individual meetings with interested faculty.

Please see below for an announcement of the **Steer Lecture by Dan Sanes,** another prominent neuroscientist. Finally, if you think your innovative work is worthy of national recognition, please see details of the **Ripple competition** listed below. The grand prize is a Ripple Neural Interface System.

PURDUE INSTITUTE FOR INTEGRATIVE NEUROSCIENCE
Where science meets engineering

Donna Fekete, Inaugural Director

On Wednesday, August 31st, Dr. Bruce Lamb, Director of the Stark Neuroscience Institute will join us for a special seminar:

The Role of Innate Immunity in Neurodegeneration

MJIS 1001 @ 9:30AM, August 31st

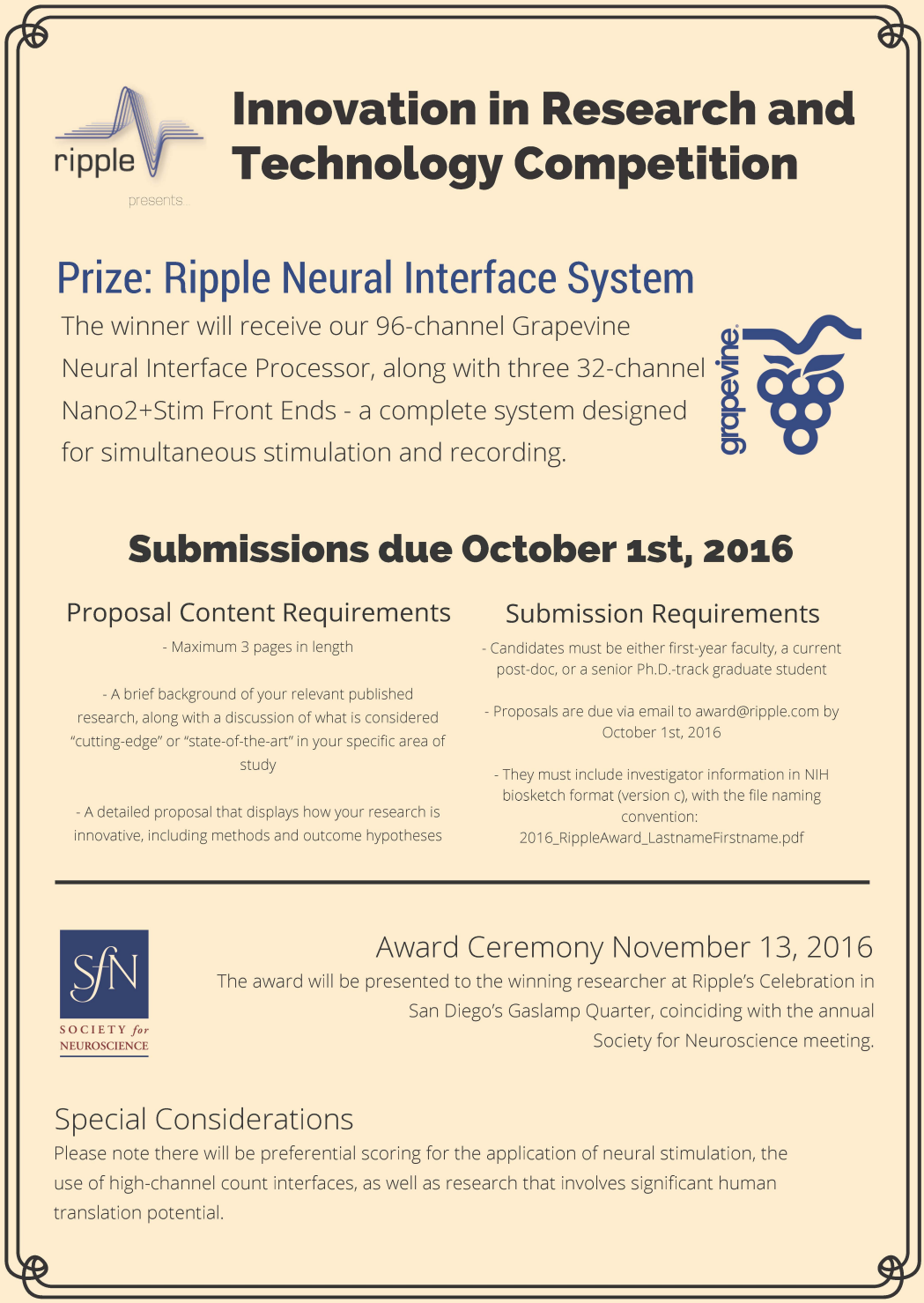
Dr. Lamb's laboratory works on the basic science of Alzheimer's disease, with a focus on: 1) genetic modifiers identified from both mouse and human studies, 2) microglia and neuronal-microglial communication in the development and progression of AD pathologies; and 3) traumatic brain injury as an environmental modifier for the development of AD pathologies. In addition, Dr. Lamb is actively involved in advocacy for increased research funding for the disease.

2016 Neuroscience Institute-sponsored Research Awards

Justine Arrington (CHEM) Weiguo Andy Tao (BIOCHEM)	Identification of the Substrates of CDKL5 using Patient-Derived iPSCs as a Disease Model
Timothy Bentley (VET) Mahua Dey (IUMS) Karis Clase (ABE) Jin-Xin Cheng (BME/CHEM)	Brain Tumor Banking in a Canine Model of Spontaneous Brain Tumors
Hari Bharadwaj (SLHS/BME) Michael Heinz (SLHS/BME) Jennifer Simpson (Clinical Ed in Audiology)	Connecting Laboratory and Clinical Auditory Neuroscience at Purdue: Non-invasive Assays of Cochlear Synaptopathy
Edward Fox (PSYCH) Alex Chubykin (BIOL)	Dissection of the Brain Circuit that Controls Meal Size

Sebastien Heli (PSYCH) Jeffrey Siskind (ECE) Dan Foti (PSYCH)	MRI-compatible Trigger Console and Response System
Jessica Huber (SLSH) Ji Yeon Lee (SLSH), Sebastien Helie (PSYCH)	MR-compatible microphone
Cagla Kantarcigil (SLHS) George Malandraki (SLHS) Chi Hwan Lee (BME)	SMART (Swallowing Muscle Activation Recorded via Telehealth) sensors preliminary validation study
Brandon Keehn (SLHS) Ulrike Dydak (PSYCH)	Attentional Strengths and GABergic Function in Children with Autism Spectrum Disorder
Susan Sangha (PSYCH) Julia Chester (PSYCH)	A New Method for Manipulating Specific Neural Pathways during Learning
Mathew Tantama (CHEM)	Proposal for a Summer Neuroscience Seminar Series

Innovation in Research and Technology Competition



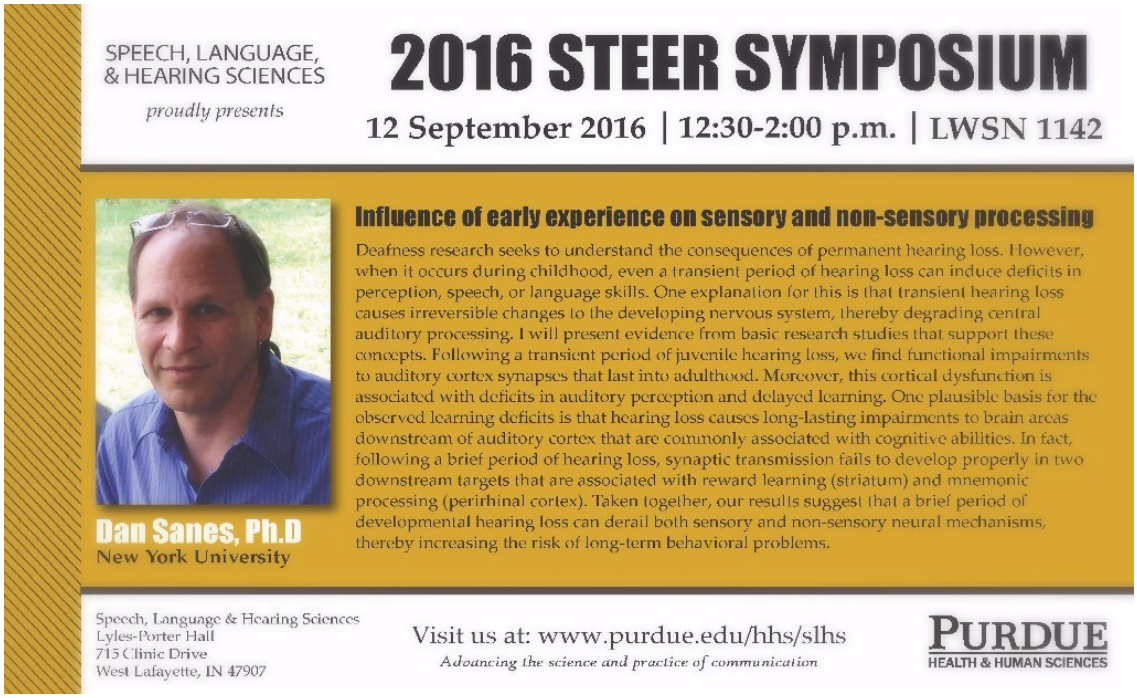
Featured Faculty Member:

Dr. Pedro Irazoqui received his B.Sc. and M.Sc. degrees in Electrical Engineering from the University of New Hampshire, Durham in 1997 and 1999 respectively, and the Ph.D. in Neuroengineering from the University of California at Los Angeles in 2003 for work on the design, manufacture, and packaging, of

implantable integrated-circuits for wireless neural recording.

He is director of Purdue's Center for Implantable Devices, associate head for research and professor in the Weldon School of Biomedical Engineering, and School of Electrical and Computer Engineering. His group develops wireless implantable devices for various potential applications including monitoring and suppression of epileptic seizures; prosthesis control for injured military personnel; modulation of cardiac arrhythmias; treatment of depression, and gastroparesis, a partial paralysis of the stomach; and monitoring and therapeutic modulation of intraocular pressure for glaucoma.

He has been named Showalter Faculty Scholar, and Purdue University Faculty Scholar, both in 2013. He is a senior member of IEEE. He has received the Best Teacher Award from the Weldon School of Biomedical Engineering (2006 & 2009), the Early Career Award from the Wallace H. Coulter Foundation (2007 & Phase II in 2009), the Marion B. Scott Excellence in Teaching Award from Tau Beta Pi (2008), and the Outstanding Faculty Member Award from the Weldon School of Biomedical Engineering (2009), as well as the Excellence in Research Award from Purdue in 2010, 2012 and 2013. He has been serving as Associate Editor of IEEE Transactions on Biomedical Engineering since late 2006. If you'd like to learn more about Dr. Irazoqui, 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:

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.**

- *RO1* **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.**

NIH Novel Approaches to Diagnosing Alzheimer's Disease and Predicting Progression (R01) The goal of this FOA is to identify new approaches to diagnosing AD and predicting outcome. These novel

biomarkers should provide new biological information about patients with dementia and/or address the shortcomings of currently-validated biomarkers. 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.

- *RO1* 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

DOD-ARMY Funding Opportunities

Parkinson's Focused Idea Award Deadlines: November 9 – Pre-application; November 30 – Application

Parkinson's Impact Award Deadlines: November 9 – Pre-application; November 30 – Application

Epilepsy Idea Development Award Deadlines: August 17 – Pre-application; November 9 - Application

Peer Reviewed Alzheimer's Convergence Science Research Award Deadlines: August 17 – Pre-application; November 9 – Application

Peer Reviewed Alzheimer's Epidemiology of Military Risk Factors Research Award Deadlines: August 17 – Pre-application; November 9 – Application

Peer Reviewed Alzheimer's Translational Research Partnership Award Deadlines: August 17 – Pre-application; November 9 – Application

Peer Reviewed Alzheimer's Quality of Life Research Award Deadlines: August 17 – Pre-application; November 9 – Application

NIH U.S.-Russia Bilateral Collaborative Research Partnerships on Cancer (R21) The purpose of this program is to stimulate collaborative basic, translational, and clinical research between U.S.-based researchers and Russian researchers in the areas of cancer biology, prevention, early detection, diagnosis, and treatment as well as the physical and chemical sciences and engineering in cancer biology, nanotechnology, and radiation epidemiology. Deadline: November 4

NIH-NIBIB Trailblazer Award for New and Early Stage Investigators (R21) This award is an opportunity for New and Early Stage Investigators to pursue research programs of high interest to the NIBIB that integrate engineering and the physical sciences with the life and behavioral sciences. This FOA invites applications from researchers who are at the early stage of their independent careers or those who have not had substantial prior NIH funding. A Trailblazer project may be exploratory, developmental, proof of concept, or high risk-high impact, and may be technology design-directed, discovery-driven, or hypothesis-driven. Deadline: October 16

Limited Submissions:

Preproposals and rankings to the EVPRP should be e-mailed to EVPRPlimited@purdue.edu. Purdue's open limited submission competitions, limited submission policy, and templates for preproposals may be found at http://www.purdue.edu/research/funding-and-grant-writing/limited-submissions.php. For any case in which the number of preproposals received is no more than the number of proposals allowed by the sponsor, the EVPRP will notify the PI(s) that an internal competition will be unnecessary.

Limited Submission: *NIH Asthma and Allergic Diseases Cooperative Research Centers* The purpose of this FOA is to invite applications from single institutions or consortia of institutions to participate in the Asthma and Allergic Diseases Cooperative Research Centers program. The program will support centers that integrate clinical and basic research to conduct studies on the mechanisms underlying the onset and progression of diseases of interest, including asthma, rhinitis (allergic and non-allergic), chronic rhinosinusitis, atopic dermatitis, food allergy, and drug allergy. The overarching goal of the program is to improve the understanding of the pathogenesis of these conditions and to provide a rational foundation for new, effective treatments and prevention strategies. For this opportunity, Purdue may submit only ***one*** application.

Internal Deadline: Contact EVPRPlimited@purdue.edu by September 19th.

Sponsor Deadline: April 3, 2017

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