Dr. Barbara Beckman Announces Retirement

Dr. Barbara Beckman will retire at the end of the fall, 2016, academic term. Dr. Beckman has deep roots in Tulane academics and has led a life of service to science and the Tulane community. She completed her undergraduate degree at Tulane in Biology in 1968, left to complete her education, and returned to Tulane in 1978. She completed a M.A. degree at University of Texas, Austin and completed her Ph.D. at Johns Hopkins School of Medicine after serving as a Research Associate in Medicine at Harvard University Medical School. At Tulane, Dr. Beckman assumed many different roles: Assistant, Associate, and Full Professor of Pharmacology; Adjunct Professor in the Department of Physiology; Adjunct Professor in Otolaryngology; Program Member at Tulane Cancer Center; Director: Interdisciplinary Molecular and Cellular Graduate Program; Fellow: Center for Bioenvironmental Research; Interim Chairman of the Department of Pharmacology; and from 2004 to the present, Assistant and then Associate Dean of Medical School Admissions. She has mentored more than 62 students for their theses and she has been a strong supporter of women in science. In 2012 she created the Barbara S. Beckman Professorship in Pharmacology to encourage diversity and propel the careers of women scientists and to encourage women to take leadership roles in the basic sciences. Also, in 1991 she established the James W. Fisher Distinguished Lectureship in Pharmacology, which sponsors annual lectures by distinguished scientists. Dr. Beckman has received many honors and awards during her professional career, including: Fellow of the American Association for the Advancement of Science, Owl Club Outstanding Second-Year Teaching Award, Reviewer for the National Research Council, Hughes Predoctoral Fellowship, and served on several NIH Study Sections. She also maintained a stellar research laboratory supported by grants from the National Institutes of Health, the Department of Defense, the American Heart Association, the American Cancer Society as well as training grants to train the next generation of scientists. The Department of Pharmacology and Tulane Medical School will miss Dr. Beckman. However, as Professor Emerita she will continue service to Tulane for the next several years by advising students about how to achieve their career goals. She will be available to meet once a week and can be contacted by email at bbeckman@tulane.edu

Dr. Ricardo Mostany, Principal Investigator, has received a five year, $1,542,625 grant from the National Institute on Aging (NIA) to study the mechanisms of age-related changes in synaptic plasticity in brain circuits and investigate their impact in memory and learning. He will study the poorly defined neural mechanisms that mediate the decline of brain performance with aging and which affect many aspects of normal aging. The study will focus on differences in synaptic plasticity of cortical excitatory neurons during learning between young and aged mice, and on the decay of inhibitory interneuron activity in the cortical circuits of aged mice. The results will provide a foundation for the development of therapeutic strategies to ameliorate the progression of age-related brain performance decline. In addition, as a complicating factor, healthy brain aging may obscure underlying deficits that are substrates, or primers, for the occurrence of neurodegenerative disorders, such as Alzheimer's disease. The results of this investigation will also serve as the basis for the study of age-related cognitive disorders. Dr. Mostany received funding for the past two years from Tulane's COBRE in Aging and Regenerative Medicine (P20GM103629) in the form of two pilot projects that produced a large portion of the preliminary work.

Dr. Prasad Katakam, Principal Investigator, has received a four year, $1,316,876 grant from the National Institute of Neurological Disorders and Stroke General Medical Sciences to study the endothelial expression of neuronal nitric oxide synthase. Recent evidence has implicated cerebral microvascular dysfunction in brain injury following stroke. Nitric oxide synthase (NOS) has endothelial (eNOS) and neuronal (nNOS) isoforms that were named after the locations where they were first identified. Dr. Katakam's preliminary studies have identified nNOS in freshly isolated rat brain microvessels and brain microvascular endothelial cells from rat, mouse, and humans. He has found that endothelial nNOS is functionally distinct from the nNOS expressed in the neurons and eNOS. This form: enNOS, is the focus of his studies. His funded studies will test the hypothesis that enNOS is functionally distinct from nNOS of neuronal origin and eNOS and also that enNOS is the primary mediator of anoxic/ischemic injury in endothelial cells and brain. His proposed studies will fundamentally advance the mechanistic understanding of NOS, the single most important regulator of the neurovascular unit, and will provide breakthrough findings to target enNOS for treating microvascular dysfunction in stroke.

NIH R01 Award to Dr. Ricardo Mostany

NIH R01 Award to Dr. Prasad Katakam

Message from the Chair, Dr. David Busija

As I finish my 6th year as Chair on December 31, it is a pleasure to reflect upon our accomplishments. Our teaching program remains strong with awards from the Owl Club for our Pharmacology Course awarded T2 Course of the Year and Dr. Craig Carlson awarded T2 Professor of the Year. We continue to recruit high quality students into our Masters in Pharmacology Program and our graduates enjoy a high rate of success in getting into medical school. We have recruited our sixth Assistant Professor, Dr. Suttiva (Joy) Intapad, who joined us on July 1. Dr. Intapad is supported by two large foundation awards and brings a new research direction. Laboratory space is being renovated for Dr. Intapad and this effort will cap the renovation of virtually all of the offices and laboratories in the department. We now have 5 NIH R01, or equivalent, awards in the department as well as several other types of grant awards. The first of our new faculty, Dr. Prasad Katakam, has been approved for promotion to Associate Professor with tenure. Dr. Barbara S. Beckman, Professor and Associate Dean for Admissions, will retire on December 31. Dr. Beckman has been an integral and important part of our department and the university and we will miss her presence. However, she will continue to be represented by the ongoing Barbara S. Beckman Endowed Professorship, which is currently held by Dr. Sarah Lindsey. I want to thank all of the faculty, staff, and students for contributing to the success of our department.

Dr. Barbara Beckman, Associate Dean of Admissions and Professor of Pharmacology, leads the student procession at the 2016 Tulane Medical School graduation, an honor she has performed every year since becoming Associate Dean.
Dr. Stephen Braun, Principal Investigator, has been awarded $1,517,469 from NIAID for his grant, "Modifying CMV-specific T cells towards HIV" to link the CMV-specific immune response, which is directed at a persistent virus and maintains a Tcm and Tem phenotype in the tissues, with an HIV targeted response. Rhesus CMV-specific T cells will be co-transduced with retroviral vectors expressing a CD4-CAR (chimeric antigen receptor) with intracellular T cell signaling domains in a rhesus challenge model.

Dr. Suttira Intapad, Assistant Professor, joins Pharmacology Faculty

Dr. Intapad moved from the University of Mississippi Medical Center. Her research projects focus on the mechanisms of the fetal programming of adult diseases, specifically cardiovascular-renal physiology, hypertension, and obesity associated with low birth weight. Early fetal insult and/or an adverse fetal environment can lead to adaptive changes that result in fetal survival, but also in structural and physiological changes with long term consequences. These projects are funded by an AHA SDG Award: "Maternal preeclampsia programs hypertension in mouse offspring," and a Kidney Council New Investigator Award: "Role of Sphingosine-1-phosphate signaling pathway on the blood pressure and kidney function of intrauterine growth restricted mouse."

Environmental Signaling Laboratory

Dr. Mielke, met with Dr. Joseph Kanter, Medical Director of the New Orleans Health Department on Aug. 18, 2016 to discuss the transference of the research of the Environmental Signaling Laboratories, in particular the results of their ten year study of New Orleans soil lead contamination pre- and post-Hurricane Katrina and the positive effects on the soil from the hurricane, into public policy to promote medical intervention on lead exposure. http://dx.doi.org/10.1016/j.envint.2016.06.017

Dr. David Busija

- **Professional Service:** (1) 2014 - present, Treasurer: Association of Medical School Pharmacology Chairs; (2) 2016 - present, ASPET Division of Pharmacology Education APS Liaison; and (3) Editorial Board Member, American Journal of Physiology.

Dr. Stephen Braun

- **Grant Award:** PI: NIAID R21/R33: Please see article, above.
- **Submitted Grants:** (1) Department of Defense, and (2) National Institute of AIDS and Infectious Diseases (NIAID).
- **Moderator:** Co-Chair: 34th Annual Symposium on Nonhuman Primate Models for AIDS, New Orleans, October 11-14, 2016.
- **Journal Reviewer:** (1) Molecular Therapy, (2) Meta Gene.
- **Grant Reviewer:** 2016 NIAID: (1) Special Emphasis Panel/Scientific Review Group 8/2016 ZRG1 AARR-J 13; (2) AIDS Discovery and Development of Therapeutics (ADDT); (3) Small Business: HIV/AIDS Innovative Research Applications ZRG1 AARR-J 13.

Dr. Bruce Bunnell

- **Publications:** Please see Publications Section on Page 6.

Dr. Suttira Intapad

- **Grant Awards:** (1) PI: AHA Scientist Development Award, "Maternal preeclampsia programs hypertension in mouse offspring," $308,000, 01/2016-12/2019, and (2) PI: Career Development Grant (Norman Siegel Research Scholar Grant), American Society of Nephrology, "Role of Sphingosine-1-phosphate signaling pathway on the blood pressure and kidney function of intrauterine growth restricted mouse," $200,000, 7/2016-6/2018.
- **Grant Submission:** PI: NIH (NHBLI), R01.
- **Reviewer:** Thieme Medical Publishers, October 2016, Hypertension, July 2016.

Dr. Philip Kadowitz

- **Publications:** Please see Publications Section on Page 6.

Dr. Prasad Katakam

- **Grant Awards:** (1) R01 Award, please see Page 1.
- **Moderator:** Poster Professor, Abstract Poster Session: Cerebrovascular Disease/Stroke (Basic & Clinical) II, AHA Scientific Sessions, New Orleans, LA, 11/14/16.
Dr. Sarah Lindsey
- **Award**: Research Career Enhancement Award, American Physiological Society.
- **Submitted Grants**: (1) NIH R01; (2) CoPI: NIH R03; (3) CoPI: Dept. of Defense (DOD); and (4) CoPI: COBRE pilot funds.
- **Moderator**: Vascular Biology and Dysfunction, AHA Council on Hypertension, 9/16/16. Orlando, FL.

Dr. John McLachlan
- **Recently on the NIH Campus, Bethesda, MD**: Featured participant in the international meeting (September 18-20, 2016): Twenty-five Years of Endocrine Disruption Research, co-sponsored by the Endocrine Society and the National Institute of Environmental Health Sciences. (1) Delivered evening lecture to participants on key events in the formation of the discipline that studies how environmental chemicals can mimic hormones and disrupt the reproductive health of multiple species; (2) Delivered the opening address on the past and future of this field of study; (3) After the formal meeting, Dr. McLachlan was invited to the Dirksen Senate Office Building on Capitol Hill to brief congressional staffers on this important topic in environmental health sciences.

Dr. Howard Mielke
- **Invited Speaker** (1) 13th International Symposium on Recent Advances in Environmental Health Research, RCMI Center for Environmental Health, Jackson State University. “Getting the Lead In, Out, and Beyond: Hurricane Katrina and dynamic temporal/spatial changes in New Orleans,” Jackson, MS, 9/13/16; (2) 12th Nursing and Healthcare Congress, Keynote Address: “Pediatric lead exposure intervention: Official statements vs. scientific review.” Vancouver, BC, Canada, 10/4/16; and (3) 26th Annual Meeting, The International Society of Exposure Science, “Bridge the Ineffective Lead Treatment Gap: Lessons from Hurricane Katrina in New Orleans, USA for Establishing an Effective Lead Intervention Strategy” Utrecht, Netherlands, 10/10/16.
- **Outreach** (1) Interviewed for an article: “Finding poison on our playgrounds,” The Magazine of Tulane University School of Medicine, 43(2):8-11; (2) Revised environment and health section of the New Orleans Master Plan which also included three meetings with city officials about reducing lead exposure to enhance health outcomes for New Orleans children.

Dr. Debasis Mondal
- **Grant Award**: NIH/NCATS, approved for UH3 Phase, Dr. D. Mondal (CoPI), Dr. A.B. Abdel-Mageed (PI), “Targeting Tumor-Derived exRNA-Containing Microvesicles by High Throughput Screening,” approximately $1,000,000 for November 2016 through 7/30/18.
- **Invited Speaker**: (1) Tulane Structural & Cell Biology, “Targeting ER-stress and Proteasome Function in Aggressive Cancers: Utility of Phytochemical-Pharmaceutical Combinations,” 9/28/16, and (2) Tulane Primate Center, “ASCs migrate to HIV-1 reservoirs and reactivate latency,” presented by Dr. Partha Chandra (Research Scientist II), Covington, LA, 5/14/16.
- **Grant Submissions**: (1) NIH R21; (2) DOD; and (3) NIH R01.
- **Reviewer**: (1) Grants: DOD Grant Reviewer, CDMRP PCRP DEV-CET panel member, 09/14/16 - 09/16/2016; (2) Manuscripts: PLoS One; Oncology Letters; Toxicology; and Biochimie.
- **Professional Service**: (1) Board of Directors: American Association of Indian Scientists in Cancer Research (AAISCR), and (2) Vice President of AAISCR, May, 2016.

Dr. Ricardo Mostany
- **Grant Awards**: (1) R01 Award. Please see Page 1; (2) CoPI: Tulane Brain Institute Research Award Fund Award, Schrader and Mostany, “Orchestration of thalamic oscillations by Shox2 and its role in experience-dependent cortical plasticity,” 7/11/2016 - 6/30/2017, $25,000; (3) PI: 2016 Spring Carol Lavin Bernick Faculty Grant, Tulane Office of Research - Research Bridge Funding, “Cortical plasticity during the estrous cycle: implications for learning,” $11,500, 07/01/16 - 06/30/17.
- **Submitted Grants**: (1) NIH/NIA R01; (2) 2016 Spring Carol Lavin Bernick Faculty Grant - Research Bridge Funding; and (3) Tulane Brain Institute Research Fund Award; (4) COBRE in Aging and Regenerative Medicine, Junior PI.
- **Outreach**: (1) Organized by The Greater New Orleans Chapter of the Society for Neuroscience: Brain Awareness Week event for Children: Your Sensational Brain with lab members, 3/16/16, and (2) Activities sponsored by Puentes New Orleans for STEM NOLA: with lab members, provided guidance at Youth Events: Career Round Table, (June 2016) and Career Day: Mock Interviews and Career Fair, (April 2016).
Laboratory of Dr. David Busija

Dr. Ibbolya Ruthai (Pharm) Postdoctoral Fellow, (1) submitted an AHA Association Wide Scientist Development Grant, 7/27/16; (2) was appointed to the American Physiological Society Cardiovascular Section Trainee Committee, 5/1/16 - 5/1/19; and (3) interviewed a graduate student and co-wrote a blog for PharmTalk - A Blog for Young Scientists, as member of the Young Scientists Committee, American Society of Pharmacology and Experimental Therapeutics (ASPET), posted 11/14/16. https://www.aspet.org/Blog.aspx?id=9004&blogid=400

Dr. Ivan Merdzo (Pharm) Postdoctoral Fellow, (1) published a first authored manuscript: Please see Publication Section on Page 6; and (2) presented a poster: "Impaired Mitochondrial Respiration in the Large Cerebral Arteries in Rats With Type 2 Diabetes," AHA Scientific Sessions, 11/13/16, New Orleans.

Laboratory of Dr. Prasad Katakam

Venkata (Ram) N. Sure (Pharm) (1) has been awarded a pre-doctoral American Heart Association (AHA) grant, "Role of Neuronal Nitric Oxide Synthase in Brain Microvascular Endothelial Cells, $52,000, 7/01/16-6/30/18, and (2) has a first authored paper, please Publications Section on Page 6.

Laboratory of Dr. Sarah Lindsey

Dr. Margaret Zimmerman (Pharm) Postdoctoral Fellow, published a first-authored manuscript. Please see the Publications Section on Page 6.

Dillion Hutson (CMB) (1) was awarded an ASPET Summer Undergraduate Research Fellowship, and (2) was interviewed by PharmTalk - A Blog for Young Scientists (ASPET), posted on 11/14/16, https://www.aspet.org/Blog.aspx?id=9004&blogid=400

Hallie Spooner (CMB) (1) received the Newcomb-Tulane College Dean’s Award; and (2) a Tulane University Summer Research Fellowship in Neuroscience.

Jen Duong (Pharm), Margaret Zimmerman (Pharm), and Dr. Lindsey co-authored a poster, "Aging Decreases Vascular GPER Expression and Function," presented by Dr. Lindsey at the AHA Council on Hypertension, 9/15/16, Orlando, FL.

Laboratory of Dr. Ricardo Mostany


Marissa Heffler (BI/NU) received a $905 grant from Newcomb College to build an optogenetic stimulator for the study of synaptic plasticity in the aged brain, 3/17/16.

Kathy Le (BI/NU) (1) received a Tulane Summer Undergraduate Research Program in Neuroscience (TURN) Award, April 2016, and gave a TURN poster: "Age-related changes to inhibitory synaptic inputs onto pyramidal neuron subtypes in the primary somatosensory cortex," August, 2016, and (2) received a Dean’s Grant from the Newcomb-Tulane College to attend Neuroscience 2016, San Diego, CA, Sept. 2016.


Rebecca Vogelwede (BI/NG) (1) has a first authored manuscript. Please see Publications Section on Page 6. She (2) presented two posters: Cold Spring Harbor Laboratory Neuronal Circuits meeting, NY "Age-dependent differences in dendritic spine dynamics within the primary somatosensory cortical barrel field following sensory manipulation," 04/07/16; and Society for Neuroscience 2016, "Age-dependent alterations in dendritic spine dynamics in the somatosensory cortex following whisker stimulation," San Diego, CA, 11/12-16/2016 for which she received a Travel Award from Tulane OGPS and a Tulane School of Science and Engineering Dean’s Travel Award; (3) gave four seminars: D.U.N.K. (3/18/16), LSU Cell Biology & Anatomy (3/23/16, 9/14/16), and Pharmacology PiP (3/30/16); (4) invited to serve on the NOLA Brain Awareness Week, "Careers in Neuroscience" panel by the Tulane University Neuroscience Association, 3/16/16; (5) served as the Tulane graduate student representative for the Greater New Orleans Society for Neuroscience, 4/16/16; (6) received a travel grant and a grant to cover living accommodations to attend the Summer Workshop on the Dynamic Brain and present "Extracting preferred spatial frequency and orientation form Ca2+ imaging responses to natural scenes in the visual cortex," 9/3/16; received "Best Collaboration" Award for Team Final Project Presentation.

Kaeli Vandemark (BI/NU) (1) received a Newcomb College Institute Research Grant of $2,500 to study the changes in volume and morphology of dendritic spines associated with learning in young and aged mice, 4/6/16, (2) received a TURN Award, April 2016, and gave a TURN poster presentation, "Age-Related Changes in Dendritic Spine Volume and Morphology After Sensory Stimulation in the Primary Somatosensory Cortex," August, 2016.

Annie Dewitt (BI/NU) gave a poster, "Age-dependent differences in dendritic spine dynamics within the somatosensory cortical barrel field following sensory manipulation," THSCRD, 4/6/16.

Michael Laughdrti (BI/NP) participated in (1) LatiNOLA STE+ (AM): Mock Interviews and Career Fair (4/2016), and Career Round Table, both organized by Puentes New Orleans (6/2016); with (2) Brain Awareness Week, sponsored by The Greater New Orleans Chapter of the Society for Neuroscience (4/16/16), and (3) the Bayou Regional Robotics Championship, (3/19/16).
Master's Graduate Spotlight: Letter from Nick Hahn

Dr. Katakam and Pharmacology,

Medical school has been stressful and exciting all at the same time. I have to say the Masters Program in the Pharmacology Department really helped me to have a competitive edge and to be better prepared for medical school. I recently took my first big exam and I did really well. I just recently talked to another student from the Pharm program and he just finished one of the big anatomy exams at Tulane and he also did very well. I hope everything is going well in the Pharmacology Department and the new masters class. Now that school has started and I have finished my first exam I just wanted to say that I am very grateful for all the people that have helped me along the way to get where I am.

Sincerely,
Nick Hahn, Tulane School of Medicine, Class of 2020

Master's in Pharmacology Class of 2017

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Thank you to those who have donated to The Dr. Krishna C. Agrawal Education Fund to support our students

This is an endowed pool of resources to support students in the Department of Pharmacology. To read the biography of Dr. Krishna please go to: http://www2.tulane.edu/som/departments/pharmacology/agrawalfund.cfm

To support Pharmacology students through The Dr. Krishna C. Agrawal Education Fund or to make a gift to the Department of Pharmacology, contact Mark McKeown, Senior Director of Development for Tulane University School of Medicine, 504-314-7380, or mmckeown@tulane.edu

Tulane University School of Medicine Office of Development #8745, 1430 Tulane Avenue, New Orleans, Louisiana 70112
In Memoriam: Dr. James W. Fisher

Dr. James W. Fisher, former Regents Professor and Chairman of Pharmacology at Tulane University School of Medicine from 1968 to 1996, passed away on May 1, 2016 after a short illness. In recognition of his scientific accomplishments, Dr. Barbara Beckman established the James W. Fisher Distinguished Lectureship in Pharmacology in 1991. Dr. Fisher was the first to show that the kidney is the primary source of erythropoietin. Erythropoietin is now widely used to treat the anemia which often follows cancer chemotherapy, AZT treatment in AIDS patients, dialysis in patients with end-stage renal disease, and many other conditions.

Publications


Pharmacology News is a publication of the Department of Pharmacology, Tulane University 1430 Tulane Avenue, Suite 3700, #8683, New Orleans, LA 70112; Phone: 504-988-5444.

http://www2.tulane.edu/som/departments/pharmacology/index.cfm

Chair: Dr. David W. Busija
Department Administrator: Debbie Sanders
Senior Editor/Newsletter Preparation: Nancy Busija
Newsletter Oversight: Dr. Barbara Beckman, Dr. Sarah Lindsey

Departmental Mission Statement:
We will educate and train medical and graduate students in the principles of pharmacology using modern techniques and will conduct state-of-the-art research in pharmacology-related fields in order to expand the frontiers of science and medicine.