The Pharmacology Department has had a very successful second semester.

In Medical School teaching, the Owl Club awarded the T1 Module of the Year Award to Dr. Craig Clarkson and the T2 Course of the Year Award to Pharmacology. The T1 Module and the T2 Course are organized by Dr. Craig Clarkson, who commented, "The T2 Course of the Year Award is a team award. Everyone who participates: faculty, PBL facilitators, and staff should be congratulated." Thank you to all of our dedicated faculty and staff for giving our students your best teaching effort.

From our Masters in Pharmacology Program, 34 students will receive their degrees on May 17, 2019 on the uptown campus and likely will experience the same degree of success in getting into medical programs as in previous years. Our cumulative success rate over five years for students progressing to a medical, dental, osteopathic, or physician assistant school is 78.5%. For the class of 2018, 64% of those who have applied thus far have been accepted into a MD, PA, or dental program.

From our graduate program, Venkata N. Sure, who studied with Dr. Prasad Katakam, will receive his Ph.D. at the May graduation. He is currently a post-doctoral research fellow at Georgia Technical University in Dr. Ming-Hui Zou’s lab.

Among faculty successes this spring, 1) Dr. Sarah Lindsey was promoted to Associate Professor with tenure on April 1, 2019, 2) Dr. Joy Intapad successfully passed her third year review and will advance toward promotion, 3) Dr. Stephen Braun was placed on the tenure track, 4) Dr. Partha Chandra was appointed as Instructor, and 5) both Dr. Lindsey and Dr. Katakam were elected as Fellows of the Cardiovascular Section of the American Physiological Society (see picture, top).

Last, we are completing the final stage of our renovations with the complete remodeling of the laboratories on the fourth floor that were occupied by the late Dr. Phillip Kadowitz (see picture, right).

Dr. Sarah Lindsey and Dr. Prasad Katakam inducted as Fellows of the Cardiovascular Section of the American Physiological Society

Dr. Sarah Lindsey (Left) and Dr. Prasad Katakam (Right) pose with Dr. David Busija (Center), at a celebratory dinner following their induction as Fellows of the Cardiovascular Section (FCVS) of the American Physiological Society (APS). Becoming a Fellow of the Cardiovascular Section of APS is a distinct honor signifying recognition by one’s professional peers.

Renovations included combining two smaller spaces into a larger research laboratory, which required removing a wall and other adjustments.
**Dr. David Busija**

- **Professional Service:** (1) Chaired the Cardiovascular Division meeting of the American Society for Pharmacology and Experimental Therapeutics (ASPET) at Experimental Biology, Orlando, FL, April 6–9, 2019 (EB2019); (2) Attended the ASPET Council Meeting, EB2019; (3) Served as American Physiological Association (APS) Liaison on the Division for Pharmacology Education Meeting of ASPET, EB2019; and (4) Hosted the Pharmacology Chairs’ Association of ASPET Mixer, EB2019.
- **Invited Speaker:** "Mitochondrial Dynamics in the Cerebral Vasculature During Health and Disease,” Augusta University, Augusta, GA, 12/3/18.
- **Submitted Grants:** (1) R01 NIH, PI: DW Busija, 2/5/19; (2) R01 NIH, PI: DW Busija, 2/5/19; (3) R01 NIH, PI: DW Busija, 2/5/19; and (4) R01 NIH, PI: DW Busija, 3/5/19.
- **Grant Reviewer:** NIH Stroke Preclinical Assessment Network (SPAN), Bethesda, MD, 3/18–19/19.

**Dr. Stephen Braun**

- **Grant Award:** R21 NIH NIAID, MPI: Miti Kaur, MD and Stephen E. Braun, PhD, “NKT-CAR cells as a novel immunotherapeutic strategy for targeting HIV/SIV reservoirs in adipose tissue,” 6/01/19–5/31/21, $467,500.
- **Submitted Grants:** (1) PI (subcontract): Stephen E. Braun, Ph.D. U19 NIH NIAID, MPI: Jay Rappaport, PhD; (2) MPI (subcontract): Stephen E. Braun, Ph.D. R01 NIH, MPI: Partha Chandra, Ph.D; (3) Stephen E. Braun, Ph.D. R01 NIH NIAID, MPI: Siddappa Byrareddy, Ph.D.
- **Grant Reviewer:** (1) NIH Center for Scientific Review Study, Program Evaluation of NIH Peer Review Processes; (2) NIAID Study Section, Special Emphasis Panel PAR-18-319: HIV Vaccine research and design (HIVRAD) program (P01) ZAI KKS-A (S1).

**Dr. Partha Chandra**


**Dr. Suttira Intapad**

- **Grant Award:** Pilot grant NIH 5P20GM109036 - Tulane COBRE for Clinical and Translational Research in Cardiovascular and Metabolic Diseases, "Brain Leptin receptors regulate blood pressure of intrauterine growth restricted mice," 03/2019–02/2020, $100,000.
- **Invited Speaker:** (1) Physiology Department, Faculty of Medicine, Chiang Mai University, "Developmental programming of cardiovascular diseases," Chiang Mai, Thailand, 4/22/19; (2) Renal & Vascular Workshop, Department of Physiology, Tulane School of Medicine “Work in progress- S1P and hypertension of IUGR mice,” 2/25/19; (3) Vascular Biology Center, Department of Medicine, Augusta University, Georgia, “Sphingosine signaling pathway and blood pressure in IUGR mice,” Augusta, Georgia 12/17/18; (4) “Role of Brain Leptin Receptor on Hypertension of Low Birth Weight Offspring,” Department of Epidemiology, Tulane School of Public Health and Tropical Medicine, 11/5/18.
- **Journal Reviewer:** American Journal of Physiology: Heart and Circulatory Physiology, American Journal of Physiology: Renal Physiology.

**Dr. Prasad Katakam**

- **Award:** Inducted as a Cardiovascular Fellow of the APS at Experimental Biology 2019, 4/6–9/19 (EB2019).
- **Invited Speaker:** (1) Department of Structural & Cellular Biology, "Measurement of mitochondrial respiratory function using Seahorse XFe24 analyzer,” Tulane School of Medicine, Louisiana, LA, 10/9/18; (2) University of Mississippi Medical Center, Department of Pharmacology and Toxicology, "Novel Mitochondrial Actions of Nitric Oxide Synthase Isoforms," Jackson, MS, 12/10/2018; (3) International Stroke Conference 2019: Vascular Biology in Health and Disease Debate Session: Reperfusion Injury: Fact or Fiction, "Reperfusion injury is a Fact,” Honolulu, Hawaii, 2/8/19.
- **Reviewer:**: American Heart Association Career Development Award Organ Basic Sciences, Journals: Circulation Research, Stroke.
- **Service to SOM:** Judge for Tulane Health Sciences Research Day 2019, 2/18–19/19 (THSRD 2019).

**Dr. Sarah Lindsey**

- **Award:** Inducted as Fellow of the Cardiovascular Section of the APS at EB2019.
- **Grant Submission:** R01 (Co-Investigator with Dr. Minolfi Prieto).
- **Symposium Organizer:** Organized two symposia: (1) Cardiovascular Signaling via the G Protein-Coupled Estrogen Receptor, ASPET, EB2019, and (2) Hormonal Influences on Tissue Remodeling, APS, EB2019.
- **Invited Speaker:** "GPER Signaling in Vascular Disease,” EB2019.
Dr. Sarah Lindsey, continued

- **Grant Reviewer**: Graduate Women in Science National Fellowship Program.

Dr. Howard Mielke


Dr. Ricardo Mostany

- **Grant Reviewer**: Medical Research Council, Neurosciences & Mental Health Board (Developmental Neurobiology), United Kingdom, 12/2018.

Dr. Ibolya Rutkai

- **Invited Talk**: Center for Clinical Neurosciences, Department of Neurosurgery, “Mitochondria in the cerebral vasculature,” Tulane University School of Medicine, New Orleans, LA, 2/22/19.
- **Grant Submission**: K01 NIH NIA, 2/12/19.
- **Grant Reviewer**: ASPET Travel Awards to Experimental Biology 2019.

Dr. Margaret Zimmerman

- **Journal Reviewer**: Journal of Applied Physiology.

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**SOM Committees**: Dr. Braun: Tulane Primate Research Center Space Committee; Dr. Bunnell: Chair: Faculty Grievance, Chair: Personnel and Honors, Research Advisory, TNPRC Executive Committee; Dr. Busija: Head: Basic Science Chairs, LCME subcommittees: (1) Mission, Planning, Organization, and (2) Leadership and Administration; Dr. Clarkson: Curriculum, BMF Steering; Dr. Lindsey: Chair: BMS Admissions, Campus Climate Task Force - Harrassment by Faculty subcommittee, LCME Accreditation - Junior Faculty Committee; Dr. Intapadi: Faculty Advisory; Dr. Katakam: Curriculum, Admissions, BMS Steering; Dr. Mostany: Tulane Brain Institute Executive; Chair: Tulane Brain Institute Seminar Series; Nominating: President, Greater NOLA Society for Neuroscience Chapter.
Laboratory of Dr. David Busija

Dr. Sinisa Čikić presented a poster, "Sex-dependent differences of mitochondria-related proteins in rat brain microvessels: a LC-MS/MS-based proteomics study," at THSRD 2019; and was a co-author on two other posters presented by Dr. Ibolya Rutkai at national meetings: EB2019 and Association of Clinical and Translational Science 2019, Washington, D.C.

Genevieve Curtin (NU) successfully passed her Honor’s Thesis Defense, "The Effects of Estrogen on Mitochondrial Respiration," 4/4/19. Genevieve received the Senior Scholar in Neuroscience Award from the Neuroscience Program, to be awarded at graduation. After graduation, Genevieve will work in Dr. Davey Smith’s lab at UCSD, will volunteer at a migrant clinic in San Diego and a refugee clinic in Tijuana, Mexico. She plans to apply to medical school. Congratulations Genevieve!!

Laboratory of Dr. Suttira (Joy) Intapad

Dr. Amruta Narayamappa (Pharm) presented a poster, "Brain leptin signaling and blood pressure in intratheine growth restricted mice," at THSRD 2019.

Katherine Chan (SPH) presented two posters, (1) "Potential role of sphingolipids signaling pathway in preeclampsia and intratheine growth restricted offspring," at THSRD 2019; and (2) "Imbalance of sphingolipids synthesis/degradation pathway in preeclamptic mouse placenta and kidneys of intratheine growth restricted mouse fetuses," at EB2019.


Laboratory of Dr. Prasad Katakam

Venkata (Ram) Sure, Ph.D. student (Pharm), presented a poster, "Effect of NOS inhibition on mitochondrial function in Brain Microvascular endothelial cells under normoxia and oxygen-glucose deprivation-reoxygenation (OGD-R)," EB2019. Ram successfully defended his dissertation in Fall, 2018 and graduated in December 2018. Dr. Sure joined the laboratory of renowned vascular biologist, Dr. Ming-Hui Zou at Georgia State University, Atlanta as a Post-doctoral Research Fellow. Congratulations Ram!!

Dr. Siva Sakamuri, Post-doctoral Fellow (Pharm), presented a poster, "Mitochondrial Respiratory Dysfunction in the Isolated Brain Microvessels," at EB2019.

Wesley Evans, Ph.D. Student (NP), presented a poster, "Insulin-induced hypoglycemia directly affects the cerebral microvasculature in vivo," EB2019.

Aaron Albeck (NU) gave an oral presentation, “Peroxynitrite induceds depolarization and impairments of respiration in isolated murine brain microvessels,” EB2019. Aaron also received the 2019 Barbara A. Horwitz and John M. Horowitz Undergraduate Abstract Award at EB2019. Congratulations Aaron!!


Allen Chen (Medical Student, DeBakey Scholar) presented a poster, "Hyperglycemia impairs mitochondrial respiration in human brain microvascular endothelial cells," EB2019.

Other authors who contributed to the posters from the Katakam lab include: Jared Sperling (Pharm), Safen Zheng (Pharm), NR Petterson, Dr. Sarah Lindsey, Dr. David Busija, Dr. Ricardo Mostany, and Dr. Prasad Katakam.

Laboratory of Dr. Sarah Lindsey, Our webpage

Dr. Benard Ogola (Pharm) (1) received the Tulane BIRCWH Award for Research in Women’s Health and Sex Differences in Cardiovascular and Related Diseases at THSRD 2019, and (2) gave an oral presentation, “Membrane-Initiated Signaling and Vascular Remodeling,” EB2019.

Ines Aguerre (NU) (1) received the APS Horowitz Undergraduate Abstract Award at EB2019 and (2) presented a poster, "Role of Sex and GPER in Renal Damage Induced by Ang II Hypertension," EB2019. Ines is graduating with a Bachelor of Science in Neuroscience and Bachelor of Arts in Sociology. She has accepted a job at the Columbia University Multiple Sclerosis Center as a junior clinical research coordinator. Congratulations and good luck in the Big Apple!!

Mary Wilkinson (NU) presented a poster, "Hormonal Regulation of Estrogen Receptors," EB2019. Mary is graduating with a dual degree in Public Health and Neuroscience. She was accepted to the Peace Corps and will be moving to Sierra Leone to serve as a Community Health Promoter. Congratulations, Mary!!

Tristen Wong (NU), received (1) the Newcomb-Tulane College Dean’s Grant, $527, for "Characterizing the Impact of Sex Hormones and GPER on Cardiovascular Function,” and (2) the Tulane Undergraduate Research in Neuroscience (TURN) Summer Program Award.

Nicholas Harris (BE), received the (1) Tulane CELT Summer Fund for Student/Faculty Research, $4,000, for " Trafficking of Prorenin Receptors in Endothelial Cells and Vascular Damage in Type 2 Diabetes," and (2) an ASPET Summer Undergraduate Research Fellowship.

Laboratory of Dr. Ricardo Mostany, Our webpage

Andrew Davidson (CMB), gave two talks and presented three posters. Talks: (1) "Structural Plasticity in the Aged Motor Cortex,” Cell and Molecular Department, Works in Progress Seminar Series, Tulane University, New Orleans, LA 11/26/18; (2) "Structural Plasticity of Pyramidal Neurons in the Aged Motor Cortex," Department of Biology, University of North Carolina-Chapel Hill, 02/26/19. Posters: (1) "Dendritic Spine Density and Dynamics of Layer 5 Pyramidal Neurons of the Primary Motor Cortex are Elevated with Aging,” 2018 Greater New Orleans Chapter of the Society for Neuroscience Annual Retreat, New Orleans, LA, 12/05/18; (2) "Differences in Learning-Induced Structural Plasticity in the Young and Aged Motor Cortex,” Keystone Symposium on Molecular and Cellular Biology, Taos, New Mexico, 01/22/19; and (3) "Differences in Learning-Induced Structural Plasticity in the Young and Aged Primary Motor Cortex,” at THSRD 2019.

Dr. Rebecca Voglewede (NP), presented a poster, "Reduced Structural Plasticity in the Aging Barrel Cortex," at the 2018 Greater New Orleans Chapter of the Society for Neuroscience Annual Retreat, New Orleans, 12/05/18. Rebecca also successfully defended her Ph.D. Dissertation, "Reduced Sensory-Evoked Structural Plasticity in the Aged Barrel Cortex" on November 12, 2018. Rebecca is currently working as a Post-doctoral Fellow in the laboratory of Dr. Nace Golding at UT Austin. Congratulations Dr. Voglewede!!

Dr. Ion R. Popescu (Pharm), presented a poster, "Hypereexcitability & Decreased Inhibition of Pyramidal Neurons in the Somatosensory Cortex of Aged Mice" at THSRD 2019.


Other authors who contributed to the posters from the Mostany lab include: Hernan Mejia-Gomez (Pharm), Michael Jacobowitz (Pharm), Bryan Wooten (NU), Kaili Vandemark (NU), Annie DeWitt (NU), Marissa Heffler (BE), Emma Trimmer (Pharm), Kathy Q. Le (NU), Alexandria E. Leland (NU), Heather Barnes (NU), Dr. Bernarde Ogola (Pharm), Dr. Sarah Lindsey, and Dr. Ricardo Mostany.
Thank you to those who have donated to The Dr. Krishna C. Agrawal Education Fund to support our students.

This endowed fund supports students in the Department of Pharmacology.

To read the biography of Dr. Krishna please go to: Agrawal Fund

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

The Switch to Windows 10: Upcoming computing changes and what they will mean for you

Many of you have probably already heard about the imminent switch to Windows 10. If you haven’t, then you need to know that Microsoft is ending support for Windows 7 on January 14, 2020. That means no more updates, bug fixes, security patches, etc. Technology Services has a goal of having everyone switched over by December 2019. Windows 8 or 8.1 users have until January 2023. If you already have Windows 10, so much the better.

I am in the process of surveying the department and determining what needs to be done to comply. In most cases, we will be able to simply upgrade the computer’s OS. However, there will be exceptions. For example:

- Some lab computers have proprietary software that will not run on Windows 10. If that software cannot be upgraded, then these computers will have to be disconnected from the network. Regardless, after January 2020 Network Services will block network access for Windows 7 PCs.
- Some lab computers are simply too old to run Windows 10. These computers will have to be disconnected from the network if they aren’t already.
- Other PCs will need to be upgraded in some way (usually the RAM or video card). Most of these upgrades will be fairly inexpensive.
- Some of you may choose, or be forced, to replace the PC.
- I will meet with each of you to discuss your particular situation in detail.
- Currently, I am waiting for Technology Services to provide me with a special flash drive they are developing that streamlines the upgrade process.

PC Login Changes: Technology Services wants to change the way we log into our PCs. It’s not policy yet, but they are working on that. In an attempt to make this slightly less painful, they are pushing for everyone to get moved over to this new policy at the same time as the Windows 10 upgrade. This will not affect Mac users.

Most of us currently log onto our PCs “locally.” This means that your login credentials are verified by a component within your computer and the policies and rules that govern how your computer can be used are stored in your computer. If Technology Services gets this policy enacted, logging onto our PCs will differ in the following ways:

- Our login credentials will be verified, over the network, by a central authority within Tulane’s “domain controller.” This is more secure and allows any Tulane person to use any Tulane computer.
- The rights and permissions on our PCs will be governed by the policies handed down by and superseded by policies residing on and managed on the aforementioned domain controller. This is more secure and gives the university more control over their assets and allows them to have a better understanding of what computers are attached to Tulane’s network.

I expect we will have to ask for some accommodation or recommendations from Tech Services with regards to lab computers. I will know more about that in the coming months. As always, please feel free to send any question my way at dmaag@tulane.edu

Master’s in Pharmacology, Graduate Spotlight: Vishwaradh Reddy, M.D., Class of 2019

Texas Tech University Health Sciences Center, Lubbock, Texas

Before medical school, I would have never guessed that ophthalmology would be the field that I would choose as my life’s work. But in retrospect, it all makes sense. I developed an interest in global medicine through my study of anthropology in undergrad and doing research in the Pharmacology Department at Tulane sparked my interest in microsurgery. Ultimately when I was able to observe ophthalmic surgery and the impact that it can have on patient lives locally and globally, my path became very clear to me.

I will soon be graduating from medical school and starting the next chapter of my medical career. I am moving to Chicago for my residency training. My intern year will be at the University of Illinois Hospital where I will be training in their preliminary medicine program. After that, I will move to Loyola University Medical Center for training in ophthalmology.

I want to sincerely thank Dr. Katakam and the Masters in Pharmacology Program for everything that they have done for me, because I would not have made it to this point if it was not for the experience in this program and Dr. Katakam’s guidance. He was/is an amazing professor and mentor to me. I hope that I will find myself in New Orleans soon so that I can come to visit.

Vish Reddy, M.D.
New Faces will appear in the next issue of Pharmacology News

Publications


**Intapad S**, Dasinger JH, Johnson J, Brown AD, Ojeda NB, and Alexander BT. Male and female intrauterine growth-restricted offspring differ in their blood pressure, renal function, and glucose homeostasis responses to a post-natal diet high in fat and sugar. Hypertension. DOI:10.1161/HYPERTENSIONAHA.118.12134. accepted December 21, 2018
