Message from the Chair
Dr. David W. Busija

We are having continued success in areas of education, service, and research as we begin the 2014-2015 academic year. Our Masters in Pharmacology Program, which is the largest and oldest program of this type at the School of Medicine, has enrolled 29 excellent students from throughout the USA. They are enjoying their classes and also life in New Orleans. An important component of our Masters Program is service to the local community and so our students experience our city from all different perspectives. Our faculty provide quality instruction in the medical school curriculum principally through the Medical Pharmacology course directed by Dr. Craig Clarkson, Professor. We also are having increasing success in acquiring grant support, especially for the junior faculty. Dr. Prasad V. G. Katakam, Assistant Professor, with a rank of 1.16 percentile, received a 4 year Scientist Development Award from the American Heart Association as well as his previously awarded grant from the Louisiana Board of Regents. Dr. Stephen E. Braun, Assistant Professor, has been awarded three grants, including an R21/R33 award. Dr. Ricardo Mostany, Assistant Professor, received funding from the COBRE Aging Grant as well as from the Louisiana Board of Regents Research Fund. New funding was not limited to the younger faculty. Dr. Philip Kadowitz, Professor, received a large industry award to investigate the effects of serelaxin on pulmonary hypertension. Finally, Dr. Milton Hamblin, Assistant Professor, completed two years of research funding from the Tulane University program for Building Interdisciplinary Research Careers in Women's Health (BIRCWH).

We have continued to renovate offices and laboratories and are in the process of recruiting 1-2 new faculty members. Our faculty have hired post-doctoral fellows and laboratory personnel who are featured in the the New Faces section. Our current post-doctoral fellows, and Ph.D. and Masters students have also been productive. Please enjoy the newsletter.

The Department of Pharmacology is honored to host William M. Chilian, Ph.D., for the Seventeenth Annual James W. Fisher Distinguished Lectureship. Dr. Chilian will speak about "The Copernican Revolution in Our Understanding of Ischemic Heart Disease." Dr. Chilian is Professor and Chair of the Department of Integrative Medical Sciences, Northeast Ohio Medical University.

Dr. Chilian's research has focused on understanding how blood flow is regulated in the normal heart and how vascular pathologies contribute to ischemic heart disease and heart failure. His work has led to a better understanding of the normal development of coronary collateral vessel growth, sometimes called Mother Nature’s Bypasses, and why these collateral blood vessels do not grow in the hearts of patients with ischemic heart disease. Dr. Chilian is working toward enabling patients with ischemic heart disease to grow their own collateral blood vessels to circumvent occluded sections of coronary arteries. Please join us on November 7, 12:00 Noon, in Room 6065, Tulane School of Medicine to hear Dr. Chilian speak.

Dr. Milton Hamblin, Assistant Professor, recently completed two years of funding sponsored by the Tulane University’s Building Interdisciplinary Research Careers in Women’s Health (BIRCWH) program. The Tulane BIRCWH program provides mentored career development for junior faculty designed to increase the number of highly trained independent investigators in sex/gender differences and women’s health in the field of cardiovascular and related diseases. Dr. Hamblin’s research proposal to the BIRCWH program focused on the goal of determining sex-specific differences in estrogen receptor (ER) signaling seen in vascular biology and vascular remodeling-associated pathophysiology. During this two year period, Dr. Hamblin’s laboratory documented that a selective estrogen receptor-alpha (ERα) agonist induced greater relaxation of aortic rings obtained from female C57 mice than of aortic rings obtained from male C57 mice. However, the mechanisms responsible for this effect remain to be elucidated. The next steps will be to detail the mechanistic approaches that will address sex differences in ERα signaling responsible for differences in vascular tone and associated vascular diseases. Dr. Hamblin says that the BIRCWH program provided him mentorship, protected time, and the opportunity to develop his independent research program. In addition, he believes that the career development sessions were very informative and helpful and that his advisory committee: Dr. Patrice Delafontaine, Dr. David Busija, Dr. YiPing Chen, and Dr. Jane Leopold (from Brigham and Women’s Hospital in Boston, MA) have been instrumental in his development as an early stage investigator.
Faculty News

**Dr. David Busija**
- **Grant Award:** NIH R01 Individual Research Grant (David Busija, PI); "Mitochondrial influences on cerebral arteries," 11/1/14-10/31/18. Approximately $1,000,000.00 plus indirect costs pending award statement.
- **Invited Speaker:** Distinguished Invited Lecturer, University of California—Los Angeles, CA, "Mitochondria mechanisms on cerebral vascular tone in health and disease." May 2014.
- **Reviewer:** NIH Brain Injury and Neurovascular Pathologies Study Section, October 2014.
- **Awards:** Elected Treasurer of the Association of Medical School Pharmacology Chairs.

**Dr. Barbara Beckman**
- **Awards:** Elected to the Nominating Committee of the American Association for the Advancement of Science.
- **Service:** Represents Tulane Medical School on the Association of American Medical Colleges MCAT2015 Validity Study Committee, a long-term study to determine whether the newly designed MCAT delivers on its goal to be a more "holistic" tool for the Admissions process.

**Dr. Stephen Braun**
- **Grant Awards:** (1) NIAID R21/R33 (Stephen Braun, PI); "Modifying CMV-specific T cells to Target HIV," 12/01/14-11/30/19, $1,983,982; (2) Alliance for Cardiovascular Research (Stephen Braun, PI), "Targeting CCR5 in Stem Cells from Rhesus Macaque Tissues" $119,711 for one year; (3) Tulane SOM Faculty Pilot Research Pilot (Stephen Braun, PI) "CD4-CAR vectors with advanced T cell signaling," $25,000 for 8 months.

**Dr. Bruce Bunnell**
- **Awards:** Elected President of the International Federation of Adipose Therapeutics Society and appointed to the NIH/TAG Study Section.

**Dr. Prasad Katakam**
- **Grant Award:** American Heart Association National Scientist Development Grant (Prasad Katakam, PI) Priority Rank: 1.16 percentile. Title: "Insulin and Hypoglycemia Promote Cerebrovascular Injury to Hypoxia-Reoxygenation in Insulin Resistance," 07/01/2014 – 06/30/2018, $308,000.
- **Invited Speaker:** Tulane Hypertension and Renal Center of Excellence, Tulane University School of Medicine, New Orleans, "Uncoupling of Nitric Oxide Synthase and Insulin Resistance." May 2014.
- **Reviewer:** American Heart Association Endothelial Biology 2, spring and summer 2014; and (2) University of Utah Center on Aging (CoA) Pilot Grant Program: adhoc reviewer, October 2014.

---

**Service to Tulane SOM:** Dr. Bunnell: Co-Chair for the Research Strategic Planning and Research Advisory Committee; Dr. Busija: Chairman of the Basic Science Chairs; Dr. Mondal: Nominating Committee; Dr. Lindsey: Faculty Advisory Committee and BMS Admissions Committee; Dr. Katakam: Nominating Committee; Dr. Hamblin: University Senate; Dr. Clarkson: Curriculum Committee; Dr. Kadowitz: Personnel and Honors Committee; Dr. Beckman: Personnel and Honors and Grievance Committees.
Dr. Sarah Lindsey


- **Reviewer:** American Heart Association, Peer Reviewer, Cardiac Bio Reg - BSci6, Fall 2014.

- **Submitted Grants:** (1) American Heart Association National Innovative Research Grant, July 2014; and (2) LA Board of Regents Researcher Competitiveness Subprogram, November 2014.

- **Recognition Awards:** (1) New Investigator Award from the American Physiological Society Cardiovascular Section; and (2) Elected Fellow of the American Heart Association.

Dr. John McLachlan

- **Editorial Appointment:** Appointed as Associate Editor of the Journal of Endocrine Disruptors.

Dr. Howard Mielke

- **Invited Speaker:** (1) Pediatric Academic Societies and Asian Society for Pediatric Research Joint Meeting, "Evolving from Reactive to Proactive Lead Prevention: Diagnosis of Community Lead Loading in New Orleans". Vancouver, BC, Canada, May 2014; (2) Breakout Session: Getting the Lead Out: Heavy Metals and Urban Farming, International Farm to Table Symposium in New Orleans "Living with soil: Issues, outcomes and interventions in New Orleans," August 2014; and (3) International Conference on Recent Advances in Environmental Health Research, "Soil Hazards and Precautions: Mapping Garden and Community Soil Metals in Baltimore and New Orleans," Jackson, Mississippi, September 2014.

- **Invited Workshop:** Blacksmith Institute Workshop: Demonstrate techniques to ameliorate soil issues and health outcomes of lead contamination in villages that handle discarded wastes (breaking apart lead-acid batteries, smelting lead) from other countries; The Vietnamese have applied techniques developed in New Orleans to clean contaminated soils and the results have indi-cated remarkable reductions in lead exposure of the children in the village. Hanoi, Vietnam, November 20-21.

- **Moderator:** "Lead Exposure and Environmental Justice Tour" for members of the Society of Environmental Journalists, New Orleans, September 2014.

- **Outreach and Service to Tulane SOM:** Sustainable Produce Reached Our Urban Table (SPROUT) is developing gardens at the Broad Street ReFresh Community Farm Project in Mid-City on Broad Street. Dr. Mielke’s team is working with the project to ensure that the quality of the soil in the gardens and orchard is high; the fresh vegetables and fruits for the project will be grown as part of the ReFresh project. July 2014.

Dr. Debasis Mondal


- **Grant Submissions:** (1) NIH (NIAID), May 2014; (2) DOD (BCRP), Breakthrough Award, May 2014; (3) NIH (NCI) June 2014; and (4) NIH (NCI) June, 2014.

Dr. Ricardo Mostany

- **Grant Awards:** (1) Pilot COBRE on Aging and Regenerative Medicine (Ricardo Mostany, PI); $52,000 for one year; and (2) Pilot Funding (Pfund) for New Research LA EPSCoR (Dr. Mostany, PI); $10,000 for one year.

- **Invited Speaker:** (1) Department of Biochemistry and Molecular Biology Seminar Series. “Two-photo excitation microscopy; general concepts and applications in neuroscience,” Tulane University, New Orleans, LA. September 2014; (2) Sessions científiques, Instituto de Investigaciones Biomédicas de Barcelona, Consejo Superior de Investigaciones Científicas (CSIC), Institut d’Investigacions Biomèdiques August Pi i Sunyer (IDIBAPS), “Alteración de las dinámicas sinápticas corticales durante el envejecimiento: la solución o el problema?” Spain. June 2014; (3) Research Seminars, Instituto de Neurociencias de Alicante, Universidad Miguel Hernandez, “Alteración de las dinámicas sinápticas corticales durante el envejecimiento: la solución o el problema?” Spain. June 2014; and (4) Seminars on Biomedicine of the School of Medicine, Universidad Complutense de Madrid, “Alteración de las dinámicas sinápticas durante el envejecimiento: la solución o el problema?” Spain. June 2014.

- **Grant Submissions:** (1) Pilot COBRE on Again and Regenerative Medicine, April 2014; and (2) Pilot funding for New Research LA, EPSCoR, May 2014.
King Chan, a New Orleans native, joined the departmental office in April, 2014 as Accountant II. King has a wealth of experience from his work at University of New Orleans. His view of university finances from the administrative side will be valuable to the department.

Two people joined Dr. Lindsey’s laboratory in August: Brennah Murphy, a senior studying Neuroscience at Tulane and Margaret Zimmerman, Ph.D., a postdoctoral fellow who moved from Georgia Regents University in Augusta, GA. Dr. Zimmerman has extensive expertise in sex differences in blood pressure and the renin-angiotensin system.

Three people have joined Dr. Mostany’s laboratory: Heather Barnes, a senior double majoring in Neuroscience and English at Tulane, came in April; Bailin Alexander, who graduated with an M.S. in Pharmacology and accepted at Tulane SOM, joined the lab in May; and Dr. Raz Popescu came as a postdoctoral fellow in October and will contribute his expertise in electrophysiology to the lab.

Dr. Seong Chul Kim has joined Dr. Hamblin’s lab as postdoctoral fellow. Dr. Kim moved from Ohio State Univ.

Dr. Katakan’s laboratory has been growing. Nicholas R. Peterson, M.S., who recently graduated from the Pharmacology Master’s program joined the laboratory as a medical research technician. Gowthamram Rajaprabhakaran began working in the laboratory in the summer of 2014. He is a junior at Tulane University School of Science and Engineering and is also in the Neuroscience program.

Dr. Kadowitz’s lab has several additions: Ryan Jupiter, M.D., is a Tulane SOM 2014 graduate and postdoctoral fellow; Danny Yoo, M.S. in Pharmacology, 2014, is a Research Technician and will be attending LSU Medical School in Fall 2015; Justin Edward, a Tulane medical student, was a summer De Bakey scholar; and Vish Reddy, a 2013 Masters in Pharmacology graduate, will work with Dr. Kadowitz while applying to medical school.

Gowthamram Rajaprabhakaran (L) and Nicholas Peterson (R)

Heather Barnes, working with Dr. Mostany, presented a poster, “Mouse cortical plasticity across the estrous cycle” at the Tulane Neuroscience Summer Program Poster Session in August, 2014. Heather also received a Tulane Neuroscience Summer Program award.

Emma Trimmer and Rebecca Voglewede, working with Dr. Mostany, gave oral presentations at the proceedings of the Uptown Neuroscience Krew of Tulane University in April. Emma Trimmer, also working with Dr. Lindsey, presented a poster, “Androgen-Sensitive Hypertension in Adult mRen2.Lewis Rats,” at the American Heart Association Scientific Sessions of the Council for High Blood Pressure Research, 2014.


Congratulations to Dr. Aditi Mathur, a student of Dr. Mondal, who graduated in August! Her degree qualifying paper is presented in the Publications section on page six of the newsletter.

Rebecca Budish, working with Dr. Lindsey, presented a poster, “GPR30-Induced Increases in Cyclic AMP Involve Both Gαs And Gt10 Subunits” at the Tulane Health Sciences Research Day and the Tulane School of Science and Engineering Research Day.

Shreya Kashyap, working with Dr. Lindsey, received an Undergraduate Research Excellence fellowship from the American Physiological Society which provided a summer stipend to work in the lab for eight weeks.

Ibolya Rutkai, working with Dr. Busija, won the the Postdoctoral Scientist award from the Division for Cardiovascular Pharmacology of the American Society for Pharmacology and Experimental Therapeutics for her poster, “Preserved mitochondrial function in cerebral arteries following ischemia-reperfusion in the rat: the role of endothelium” at Experimental Biology, San Diego, CA, April, 2014. Ibolya’s other abstract has been selected for oral presentation at Neuroscience, November, 2014: “Ischemic post-conditioning by targeting mitochondria improved outcome of stroke in rat.” Ibolya’s publication of her current work in Dr. Busija’s laboratory is presented in the Publications section on page six of the newsletter.

Sombrita Dutta, working with Dr. Busija, will have an oral presentation, “Characterization of mitochondrial respiration in diazoxide preconditioned neurons,” at Neuroscience in Washington DC, November, 2014.

Justin Edward, working with Dr. Kadowitz, received a summer fellowship as a DeBakey scholar to work in the Kadowitz laboratory.
Graduate Spotlight: Dr. David Cai

Attending Tulane’s Pharmacology Masters program was one of the most positive and life-changing decisions of my life. I graduated from a small liberal arts college on the West Coast with an average GPA. The increasing academic competitiveness of medical school applicants convinced me that I had to do something to make myself a more unique and prepared applicant. I discovered the Masters in Pharmacology program at Tulane through a brochure that was sent to me and I spoke with a Tulane Alumnus who had attended Tulane Medical School. Among the many programs available, I chose Pharmacology one because of its academic prestige and its location in New Orleans.

I walked timidly into my first class to be greeted by the faculty and staff with great warmth, which I initially attributed to “southern hospitality”. However, it soon became apparent that the faculty and staff truly cared about us, our education, and our future interests. Drs. Agrawal, Beckman, Clarkson, Kadowitz, and Mondal made it their priority to guide, teach, and challenge our minds. Their flexible office hours, the available research opportunities, and tutoring sessions were just a few things that helped ensure our academic success. I received a great education during that year and gained many life-long friends. We all came from diverse backgrounds: geographically, academically, and also from all walks of life. We quickly bonded through social events, study groups, and classes. There was no “back-stabbing” because we were united by our mutual desire to be challenged academically and to excel, which made us invested in success for us all. We became a very tight group.

I felt fortunate to be able to explore and enjoy the city of New Orleans with my classmates. The city’s amazing food, the wonderful music scene, Saints games (WHO DAT!), crawfish boils, and the city’s constant need for a good party meant that there was always something for us to do.

The pharmacology program prepared me well for medical school. Its rigorous coursework, research opportunities, and the ability to take classes with the medical students made us stronger, more confident future physicians and scientists. I attended Tulane for medical school and now have a residency in otolaryngology-head and neck surgery. Attending the Tulane Pharmacology Masters Program was one of the best decisions of my academic career.

Student Spotlight--Class of 2015
Masters of Science in Pharmacology Students

Chad Caplan, New Orleans, is an LSU alumnus. Chad has volunteered at the Southern Eye Bank and is interested in a career in Ophthalmology. He enjoys working out, watching movies, and photography.

Jen Duong, Los Angeles, graduated from University of California-San Diego. She was a mentor with Uplift San Diego. Jen plays tennis and reads for leisure. Jen is interested in geriatrics.

Nick Hahn, New Orleans, graduated from the University of New Orleans. He has volunteered in several departments at Ochsner Medical Center and is interested in cancer research. Nick enjoys hunting and fishing also.

Ashtian Hobusch, San Diego, CA, is a San Diego State University alumna. She has assisted with Hepatitis B screenings as well as food prep for HIV patients. Ashtian intends to pursue a career in drug development. Ashtian enjoys soccer, swimming, and reading.

Neelsh Jain, Hartford, CT, graduated from the Univ. of Miami. He has volunteered at several Connecticut hospitals. Neelsh is interested in pharmacology, oncology, and radiology. He enjoys reading, playing sports, and hanging out with friends.

Todd Lambert, Baton Rouge, LA, graduated from University of Georgia. Todd was an executive member of UGA Miracle, which works with Children’s Healthcare of Atlanta. He enjoys sports, travel, and outdoor activities. Todd plans to pursue a career in Otolaryngology.

Madeline Rees, Pensacola, FL, earned a B.S. in Neuroscience from Tulane. She is interested in endocrinology. Madeline has volunteered at St. Margaret’s Nursing Home. She enjoys cooking, yoga, and going to concerts.

Aubrey Schachter, San Luis Obispo, CA, graduated from University of California-Los Angeles. She has volunteered at UCLA Medical Center and was a research assistant at UCLA Child OCD, Anxiety and Tic Disorders Program. Aubrey enjoys yoga and swimming.

Ruby Simmasalam, Edison, NJ, is a Boston University alumna. She is interested in stem cell research, and emergency, cardiovascular, and/or trauma medicine. She has volunteered with the Global Medical Brigades, Red Cross Food Kitchens, and Greater Boston Food Kitchen. Ruby enjoys outdoor activities when not studying.

Antonia Traina, New Orleans, LA, earned a B.S in Biology from LSU. She has volunteered at Habitat for Humanity and was the event coordinator for CASA Jefferson. Antonia is interested in OB/GYN and orthopedics. She enjoys kickball and ballet when she isn’t studying.

Please contribute 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://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


