

Pharmacology News

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TULANE UNIVERSITY SCHOOL OF MEDICINE DEPARTMENT OF PHARMACOLOGY

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 (ER α) agonist induced greater relaxation of aortic rings



Dr. Krousel-Wood, BIRCWH Principal Investigator, left, and Dr. Hamblin, right.

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 ER α 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.
- **Invited Speaker:** Krabbe Translational Research Network Annual Meeting, "Future Challenges of Hematopoietic Stem Cell Transplantation and Gene Therapy in Rhesus Macaque with Krabbe Disease: Opportunities for Understanding Disease." Ft. Lauderdale, FL. March, 2014.
- **Poster Presentations:** (1) Lee N, Walker E, Egerer L, Bunnell BA, Mondal D, Laer von D, and Braun SE. "The Therapeutic Potential of Secreted Antiviral Entry Inhibitory (SAVE) Peptides Expressed by Transduced Mesenchymal Stem Cells to Block Viral Infection." *Molecular Therapy* 22: S183, 2014. (2) Li WP, Walker EM, Freytag LC, Braun SE. "Characterization of Dendritic Cells Derived In Vitro from Rhesus Bone Marrow CD34+ Cells. *Molecular Therapy*" 22: S272, 2014; and (3) Braun SE, Walker E, Sahu G, Skowron G, Marx PA, von Laer D, MacLean A. "Designer T Cells Redirected to Target HIV Env+ Cells." *Molecular Therapy* 22: S273, 2014.
- **Submitted Grant:** (1) NIAID U19 Cure HIV, July, 2014; (2) LA Clinical and Translational Sciences, Oct. 2014; (3) TNPRC Pilot Program, Oct. 2014; and (4) NIH NCCAM R21, Oct. 2014.

Dr. Bruce Bunnell

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

- **Invited Speaker:** Keynote Speaker, "Adipose Stem Cells: Standardization and Application," Tissue Engineering and Regenerative Medicine International Society, European Society, Genoa, Italy.

Dr. Craig Clarkson

- **Teaching Awards:** Tulane University Society of Teaching Scholars, School of Medicine, 2008-present

Dr. Milton Hamblin

- **Invited Speaker:** (1) "Sex differences in vascular diseases." Tulane University School of Medicine Department of Physiology Seminar Series, January 2014; (2) "Sex differences in vascular biology and pathophysiology." LSU School of Medicine Department of Physiology Seminar Series, New Orleans, LA, February 2014.
- **Chair:** Featured Topic Session: "Sex/Gender Influences on the Cardiovascular System," Experimental Biology, April 2014, San Diego, CA.

Dr. Philip Kadowitz

- **Grant Award:** Novartis (Dr. Philip Kadowitz, PI); "Serelaxin for the treatment of pulmonary hypertension". Serelaxin is a recombinant protein made in female reproductive organs and is believed to protect against preeclampsia. This study will test the protein against pulmonary hypertension. \$290,000 for one year.
- **Invited Speaker:** (1) "Historical Studies on Nitroglycerin and the Role of Nitric Oxide," Surgery Educational Conferences, Tulane Medical School, August 2014; (2) "Nitroglycerin History and Mechanism of Action," Grand Rounds and Vascular Biology Conferences, Tulane University Heart and Vascular Institute, October 2014.

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.
- **Poster Presentations:** (1) Prasad Katakam, Dan Liu, Angellica Gordon, Somhrita Dutta, Venkata Sure, Ibolya Rutkai, and David Busija. "Low glucose-induced mitochondrial dysfunction enhances hypoxia-reoxygenation injury in brain microvascular endothelial cells," and (2) Prasad Katakam, Somhrita Dutta, Samuel Grovenburg, Angellica Gordon, Venkata Sure, Ibolya Rutkai, and David Busija. "Mitochondrial depolarization of perivascular nerves induces cerebral vasodilation by neuronal nitric oxide synthase activation," both presented at Experimental Biology, San Diego, CA, April 2014.
- **Reviewer:** (1) 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.

Faculty News

Dr. Sarah Lindsey

- **Invited Speaker:** (1) Tulane Pathology Grand Rounds, April 2014, "Targeting the G protein-coupled estrogen receptor in cardiovascular disease;" (2) Co-chair and Invited Speaker: APS Cross-Sectional Symposium, "Sex Differences in Physiology and Pathophysiology," Experimental Biology, April 2014, Talk: "Role of the G protein-coupled estrogen receptor in estrogen-dependent hypertension;" (3) 25th Annual University of Alabama at Birmingham Vascular Biology and Hypertension Symposium, Sept. 2014, "Targeting the G protein-coupled estrogen receptor in cardiovascular disease;" and (4) Tulane Structural and Cellular Biology, Oct. 2014, "Membrane-Initiated Estrogenic Signaling in Cardiovascular Tissues."
- **Poster Presentations:** (1) Lindsey SH, Liu L, Chappell MC. (2014) "GPER Activation Ameliorates Vascular Remodeling in Salt-sensitive mRen2.Lewis Rats." Experimental Biology, San Diego, CA, April 2014; (2) Trimmer EH and Lindsey SH. (2014) "Androgen-Sensitive Hypertension in Adult mRen2.Lewis Rats." American Heart Association Scientific Sessions of the Council for High Blood Pressure Research; and (3) Yamaleyeva LM, Pulgar VM, Lindsey SH, McGee CM, Varagic J, Yamane L, daSilva M, Bonfa P, Brosnihan KB. (2014) "Endothelial Dysfunction in ACE2 Deficient Mice is Associated with Placental Hypoxia and Reduced Uterine Arterial Flow." American Heart Association Scientific Sessions of the Council for High Blood Pressure Research.
- **Reviewer:** American Heart Association, Peer Reviewer, Cardiac Bio Reg - BSci 6, Fall 2014.
- **Submitted Grants:** (1) American Heart Association National Innovative Research Grant, July 2014; and (2) LA Board of Regents Reserach 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 indicated 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 Reaching 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

- **Poster Presentations:** (1) "Simultaneous Detection of SOX9 and NRF2 in Prostate Tumor Sections from African Americans: Novel Biomarkers of Aggressive Disease and Health disparity." Tulane Health Science Research Day, New Orleans, LA. April 2014; (2) "COX-2 and TLR-4 a novel biomarker of chronic inflammation in leukocytospermia." American Society of Andrology Conference. Atlanta, GA. April 2014; (3) "A Synthetic Flavonoid Abrogates Resistance Through Inhibition of Focal Adhesion Kinase and P-glycoprotein Activity in Breast Cancer Cells." American Association for Cancer Research (AACR) Conference, San Diego, CA. April 2014; (4) "A novel ex vivo tissue culture assay for determining the effects of anti-tumor drugs on angiogenesis." Experimental Biology Meeting. San Diego, CA. April 2014; and (5) "Targeting Tumor-derived exRNA Containing Exosomes by High Throughput Screening." NIH Grantees Meeting: The Second exRNA Communication Meeting, Bethesda, MD. May 2014.
- **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 Biomédiques 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, "Alteration of synaptic dynamics in the aging brain - A problem or a solution?" Spain, June 2014; and (4) Seminars on Biomedicine of the School of Medicine, Universidad Complutense de Madrid, "Alteración de las dinámicas sinápticas corticales durante el envejecimiento: la solución o el problema." Spain, June 2014.
- **Grant Submissions:** (1) Pilot COBRE on Aging and Regenerative Medicine, April 2014; and (2) Pilot funding for New Research LA, EPSCoR, May 2014.

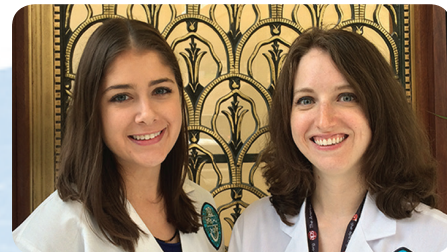
New Faces in Pharmacology Research

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.



King Chan

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.



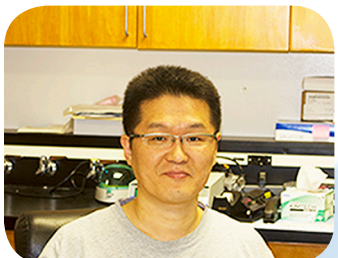
Brennah Murphy (L) and Dr. Margaret Zimmerman (R)

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.



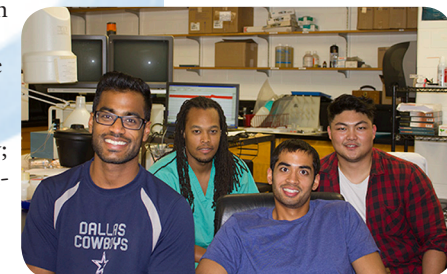
L to R: Balin Alexander, Heather Barnes, and Dr. Raz Popescu

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



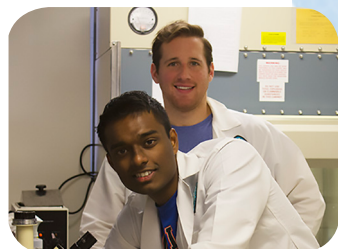
Dr. Seong Chul Kim

Dr. Katakam'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.



L to R: Vish Reddy, Ryan Jupiter, Justin Edward, and Danny Yoo

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 DeBakey 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)

Trainee News

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 Krewe 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.

Donna Edwards, working with **Dr. Mondal**, presented a poster, "PRL-3: Novel Biomarker and Potential Therapeutic Target for Prostate Cancer Progression" at Mechanisms & Models of Cancer, a Cold Spring Harbor Laboratory Meeting, New York, New York, August, 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 $G_{\alpha s}$ and $G_{\alpha i}$

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



David Cai, M.D.

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 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.

Neelesh Jain, Hartford, CT, graduated from the Univ. of Miami. He has volunteered at several Connecticut hospitals. Neelesh 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

Publications

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Esparandar, L., Caldwell, D., Watson, R., Blanco-Mezquita, T., Zhang, S. and **Bunnell, B.** (2014) Application of Adipose Derived Stem Cells on Scleral Contact Lens Carrier in an Animal Model of Severe Acute Alkaline Burn, Eye Contact Lens, in press. PMID: 24901976

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1430 Tulane Avenue, SL83, New Orleans, LA 70112; Phone: 504.988.5444

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