

UAMS Department of Pharmacology & Toxicology

Alumni Newsletter, December 2020



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WELCOME ALUMNI AND FRIENDS!

Dear Alumni and Friends,

Time has truly flown by since you received our last newsletter in early 2019. A LOT has happened on many fronts since then. New faculty have arrived in the department and others have retired. Some of the accomplishments of their research teams are highlighted in this publication. More PhD degrees have been awarded and trainees launched on new careers. UAMS has a new Chancellor, Cam Patterson, MD, MBA, who has led efforts to build an exciting campus vision. A search is underway for a new dean of the College of Medicine. Finally, we have six pages of career and family news from our department alumni to share with you.

Of course, the biggest news may be the arrival of the COVID-19 pandemic in Arkansas in early 2020, which profoundly impacted our educational and research missions at UAMS, in addition to the lifestyles of all Americans. "Virtual classrooms" rapidly became the norm instead of the exception for graduate and medical education. Many department members learned to work remotely in the early days of the pandemic when graduate students were off-site and laboratory resources and funds were frozen except for critical needs. Department members donated hundreds of hours to perform health screening at the entrances to our patient-care areas. Masking, social distancing and hand sanitizing became standard work practices. As 2020 closes, we hope to take on 2021 with the same positive mindset and "can do" attitude that have kept the department healthy and productive during the last very challenging year.

Best wishes to you and your families for a Safe and Healthy 2021. As the COVID-19 pandemic subsides, we wish you many happy times as you re-acquaint with family members and friends, and renew your travel plans. Please stay in touch and if your travel plans bring you to Arkansas, stop by to see the department and growing UAMS campus. Happy New Year!

Nancy J. Rusch, PhD, Professor and Chair

Faculty, Staff, and Trainees, UAMS Department of Pharmacology and Toxicology

FROM MEMBERS
OF THE
PHARMTOX
DEPT,
STAY
HEALTHY
AND BE
SAFE!



PHARM TOX FIGHTS COVID-19

Department Joins in the Fight!

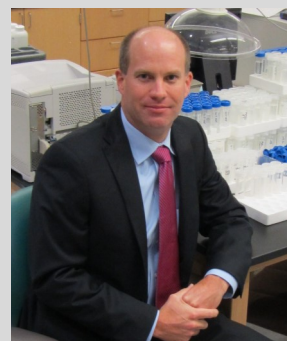
Faculty, trainees and staff in the department responded positively to the call for help as the COVID-19 pandemic challenged UAMS. Some examples of our efforts to join in the fight against COVID-19 are mentioned below.



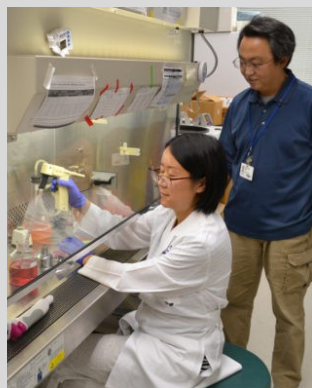
Department business manager, Fred Goad (*pictured left*) joined the team of administrators responsible for staffing of a Covid-19 health screening station for patients and employees at the Winthrop P. Rockefeller Cancer Institute. These volunteers scanned employee badges, took temperatures, and assisted and transported patients. Kudos to faculty (Drs. Alexei Basnakian, Lisa Brents, Shengyu Mu, Nirmala Parajuli, Nancy Rusch, Neville Tam), staff (Kelly Ball, Fred Goad, Sorena Lo, Shane Shelton, Sylvia Stewart) and more members of the department that volunteered their time, primarily weekend hours, to man these stations (*pictured right*, Sylvia Stewart and Dr. Rusch). Trainees including Julia Tobacyk, Laura Ewing and Brian Parks volunteered on the campus or in the community in other efforts related to the diagnosis, contact tracing and containment of COVID-19.



Department members also donated to the UAMS food pantry, which delivered food to employees and students quarantined at home. Dr. Basnakian (*pictured at left*) framed and hung pictures of nature in the department to brighten the environment, and several department members either made or purchased face masks to ensure compliance with this new standard of protection.



Assistant professor, Dr. Jeffery Moran (*pictured at right*), was part of a team that included the Arkansas Department of Health, Arkansas Children's Hospital and UAMS to develop high-quality antibody testing. It is being used to determine the prevalence of previous COVID-19 infections in communities across the state.



With the assistance of postdoctoral fellow, Dr. Yunmeng Liu, Dr. Shengyu Mu (*pictured at left*) organized a list of supplies and equipment in the department needed by the UAMS clinical laboratories for COVID-19 testing. Donating labs included those of Drs. Basnakian, Leung, Mu, Parajuli, Peterson and Rusch. The department provided a stock of pipettors, vials, screw-cap tubes, bleach, gloves, and other critical items.

Department alumni, Yingni Che (formerly with Dr. Owens lab) achieved local fame during the pandemic by purchasing gallons of hand sanitizer from a local business, Rock Town Distillery, and giving it in spray bottles to front line workers including firefighters, store clerks, and delivery persons. Her generous efforts received attention in the Arkansas Democrat Gazette (*photo at right*).

ARKANSAS ONLINE: www.arkansasonline.com

Stopping by for sanitizer



Yingni Che loads hand sanitizer Tuesday that she pre-ordered

FACULTY APPOINTMENTS

Dr. Shuk-Mei Ho



Internationally renowned scientist, Shuk-Mei Ho, PhD, joined the department in July 2019 as Professor. Dr. Ho also serves as UAMS Vice Chancellor of Research and Innovation. She oversees UAMS's mission to grow research capacity, improve research infrastructure, promote innovation, and build research partnerships that can be translated to better clinical care and disease control in Arkansas and across the nation.

Dr. Ho's research interests pertain to the role of hormones and endocrine disruptors, and the interplay between genetics and epigenetics, in disease development as well as how early-life experiences can be a root cause in later development of cancers, asthma, neural disorders and other complex chronic diseases. Her work, published in more than 240 articles, has pioneered the fields of environmental epigenetics and developmental origins of adult disease. Dr. Ho is the recent recipient of the Distinguished Toxicology Scholar Award from the Society of Toxicology and recently was the recipient of the Distinguished Alumni Award from her alma mater, the University of Hong Kong. She is past president of the Society for Basic Urological Research and has chaired numerous scientific reviews and policy committees for the National Institutes of Health and the U.S. Department of Defense. She serves as a charter member of the National Advisory Environmental Health Sciences (2016-2020) and a member of the External Expert Panel for the O'Brien Urology Research Centers (U54). Prior to coming to UAMS, Dr. Ho served as director of the Cincinnati Cancer Center, where she also was the Hayden Family Endowed Chair for Cancer Research. She also served as the Jacob G. Schmidlapp Professor and chairwoman of the Department of Environmental Health at the University of Cincinnati College of Medicine.

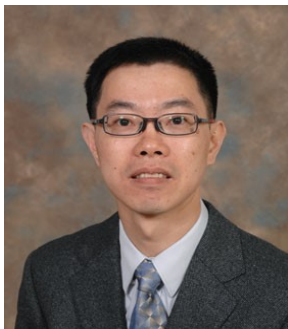
Dr. Ricky Leung



Yuet-Kin "Ricky" Leung, PhD, joined the department as associate professor in 2019. Dr. Leung arrived from the University of Cincinnati, where he began his faculty career in 2005 in the Division of Environmental Genetics and Molecular Toxicology, Department of Environmental Health.

Dr. Leung received his doctorate in biochemistry from The Chinese University of Hong Kong in 2001 and completed his postdoctoral fellowship at the University of Massachusetts Medical School, where his research focused on the contribution of estrogen receptor beta to prostate cancer. Dr. Leung directed the NIEHS-funded Integrative Technologies Support Core of the Center for Environmental Genetics at the University of Cincinnati. Dr. Leung's research focuses on understanding gene dysregulation in hormone-related cancers, and includes topics ranging from upstream epigenetic gene regulation to downstream regulation of post-transcriptional protein isoforms. His laboratory dissects the roles of epigenetic regulators during gene transcription using target-specific as well as genome-wide approaches to understand transgenerational inheritance. Dr. Leung already has collaborated with the UAMS Department of Neurosurgery to develop a novel long-read sequencing method for improving glioma prognosis. He also is involved in collaborative projects to design a new class of protein degradation-based cancer therapeutics and explore the role of the mitochondrial epigenome in contributing to poor health outcomes in Arkansas' Marshallese population.

FACULTY APPOINTMENTS



Dr. Neville Tam

Dr. Ngai Chung Neville Tam joined the department in 2019 as assistant professor. Prior to his arrival, Dr. Tam served as assistant professor in the Department of Environmental Health at the University of Cincinnati. He received his doctorate from the University of Hong Kong and completed a post-doctoral fellowship in the Department of Surgery at University of Massachusetts Medical School.

Dr. Tam's research interests include the effect of sex hormones and oxidative stress on prostatic aging and carcinogenesis. He has strong expertise in establishing novel animal models for explorations related to oncology, environmental health and toxicology. Current research projects focus on the impact of early-life exposure to environmental stressors on later-life health outcomes (cancer risks and fertility), inter-/trans-generational epigenetic inheritance via epitranscriptomic mechanisms, and environmentally induced stem cell carcinogenesis.



Dr. Michael Berquist

Dr. Michael Berquist was appointed assistant professor in 2019 after a post-doctoral fellowship as a T32 Scholar with Drs. William Fantegrossi and S. Michael Owens. He was awarded the PhD in behavior analysis from Western Michigan University in 2016.

Dr. Berquist has served as co-director and then director of the Experimental Design and Quantitative Analysis Course since 2017. He co-developed the course and has designed and led lectures on fundamental and advanced statistical concepts used in experimental designs. He also lectures in other graduate courses. His research interests include using behavioral assays to develop and evaluate pharmacotherapies for treating drug use disorders and mental health conditions, including posttraumatic stress disorder and early childhood stresses. He recently was awarded an Arkansas Biosciences Institute grant from the Arkansas Children's Research Institute (ACRI) to explore the behavioral impact of adolescent alcohol use following prenatal opioid exposure and early life abuse.



Dr. Nirmala Parajuli

Dr. Nirmala Parajuli was appointed tenure-track assistant professor in 2020. Dr. Parajuli joined the department in 2009 as a postdoctoral fellow in the laboratory of Dr. Lee Ann MacMillan-Crow. Subsequently, Dr. Parajuli was appointed assistant professor (non-tenure track) in 2018 and moved to the Arkansas Children's Research Institute (ACRI) to become a COBRE junior investigator. While at ACRI, she received several internal grants and was awarded a Transformational Project Award from the American Heart Association. Most recently, Dr. Parajuli received a Barton Pilot Award to explore the role of the Hsp72 chaperone protein in monocyte-derived macrophage activation and renal graft failure.

Dr. Parajuli also was selected as one of six UAMS Research Academy Scholars in 2020. This inaugural award is a joint initiative of the UAMS Division of Research and Innovation and the UAMS Translational Research Institute. Program mentors include professors, Alexei Basnakin and Steven Post, and associate professor Ricky Leung.

FACULTY APPOINTMENTS

Dr. Hui-Ming Chang



The department welcomed professor Hui-Ming Chang in 2020 as professor of Pharmacology, Toxicology and Internal Medicine. Dr. Chang moved to UAMS from the University of Missouri School of Medicine where she co-directed the Center for Precision Medicine.

Dr. Chang received her MD degree from the National Taiwan University. She was awarded the MPH and MS degrees in epidemiology and physiology, respectively, from Harvard Chan School of Public Health. She completed her internship at George Washington University Medical Center, her residency at Boston University Medical Center, and clinical and research fellowships at Boston Children's Hospital, Harvard Medical School. Prior to joining the U. of Missouri, Dr. Chang worked at the University of Texas Health Science Center and MD Anderson Cancer Center in Houston.

Recently, Dr. Chang leveraged her preclinical discoveries into a clinical trial to explore a potentially novel therapeutic for doxorubicin-induced cardiotoxicity. The clinical trial will be initiated at UAMS and funded by a 3.48M NIH grant. Her research interests include onco-cardiology, chemobrain, pain mechanisms and the role of sentrin/sumoylation in cardiovascular diseases. Other areas of expertise include medical education and evidence-based medicine.

Dr. Nancy Rusch Appointed Interim Executive Associate Dean for Research



Professor and chair Nancy Rusch has accepted an appointment in the College of Medicine as Interim Executive Associate Dean for Research. Dr. Rusch was appointed by Dean Christopher Westfall, who mentioned her exceptional leadership not only in the department, but also in the College of Medicine and the Translational Research Institute.

Dr. Rusch will begin serving in this role on January 1, 2021 following the retirement of professor Richard Morrison, who currently holds the position. She will hold this appointment until a permanent replacement is selected.

Dr. Rusch will continue to serve as Professor and Chair of the department during this time and maintain other campus responsibilities.

Dr. Paul Prather Named Vice Chair of Department

Professor Paul Prather was named Vice Chair of the department in 2020 following the retirement of Dr. Philip Mayeux. Dr. Prather was selected for his proven leadership abilities in the department. He directs the T32 Systems Pharmacology and Toxicology (SPaT) training program; serves as chair of the department's promotion and tenure committee; chairs the faculty search committee; and recently assumed directorship of the Pharmacology, Toxicology and Experimental Therapeutics graduate track. Additionally, he coordinates multiple subprojects in his R01 grant, which is the single largest NIH award in the department.



NEW FACULTY ROLES

Dr. MacMillan-Crow Appointed GPIBS Track Director



Professor Lee Ann MacMillan-Crow assumed the position of director of the Graduate Program in Interdisciplinary Biomedical Sciences (GPIBS) in the UAMS Graduate School, effective December 1, 2020. She will be the contact person for the program, chair the GPIBS Advisory and Admission Committees, and work with the track directors to advance this graduate program. Dr. MacMillan-Crow has served on tens of dissertation committees and as a major advisor to many PhD students. She was the graduate program director for the former Interdisciplinary Toxicology Graduate Program, and since the start of GPIBS, has served as the track director for the Pharmacology, Toxicology, and Experimental Therapeutics (PTET) graduate track. Professor Paul Prather will assume the role of PTET track director for the department.

Dr. Peterson Elected as Chair of COM Research Council



Associate professor Eric Peterson will assume the position of Chair of the College of Medicine Research Council in July 2021. He is currently serving the council as Chair-Elect.

Dr. Peterson was elected to this leadership position by his peers on the Research Council, who are basic, clinical, and translational investigators in the College of Medicine. The Research Council has umbrella responsibility for research development and coordination with the COM and advises the Executive Associate Dean for Research on all matters that are significantly related to the efficient and effective function of the College's research missions. In addition, the council reviews applications for intramural pilot and bridging grants, reviews core facilities, and reviews proposed campus policies and revisions to existing policies that have potential to impact the College's research mission.

FACULTY PROMOTIONS

Dr. Rhee Recommended for Promotion to Professor



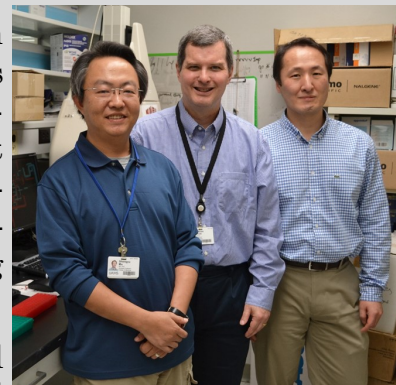
Associate professor Sung Rhee has been recommended by the College of Medicine Promotion and Tenure Committee to advance to the rank of Professor! Pending approval by the UA Board of Trustees, this promotion is effective July 1, 2021. Dr. Rhee joined the department in 2006 as research assistant professor. He entered the tenure track in 2009 as assistant professor and was promoted to associate professor in 2012.

Dr. Rhee has been the recipient of funding from the NIH and American Heart Association (AHA) for his research on the regulation of ion channels in cerebral arteries as it relates to hypertension and stroke. Most recently in 2019, he was awarded a 3-year AHA Transformational Project Award for his proposal titled, "Impaired cerebral collateral dilation in hypertension: Implications for stroke damage and antihypertensive therapy". In addition to his research program, Dr. Rhee co-directs the cardiovascular module for medical students at UAMS, and he has been recognized with numerous campus teaching awards.

FACULTY AWARDS & RECOGNITION (2019)

Dr. Mu Receives \$1.89 Million Award from NIH

Assistant professor, Shengyu Mu received a \$1.89 million award from NIH in 2019 to continue his groundbreaking research, which explores why millions of people worldwide do not respond to available treatments for high blood pressure. The findings of his laboratory support an emerging theory that salt-sensitive hypertension may be the manifestation of an immune disorder. He is pictured at right with co-investigators Steven Post, PhD, professor of pathology, and Sung Rhee, PhD, associate professor of pharmacology and toxicology.



Dr. Mu's laboratory reported earlier that immune cells, white blood cells called T lymphocytes (T cells), can infiltrate the kidney and stimulate excessive salt retention, resulting in blood pressure elevation. He was able to pinpoint the underlying mechanism: When too many of a major subtype of T cells interact directly with the tubular cells of the kidney that reabsorb salt, the kidney's absorption of salt increases and salt-sensitive hypertension results.



Dr. Brents Receives NIH R21

Assistant professor Lisa Brents received her first NIH R21 award in 2019, titled "Use of precision deuteration to determine the contribution of norbuprenorphine to buprenorphine-associated neonatal abstinence syndrome". Norbuprenorphine (NorBUP) is an active metabolite of buprenorphine (BUP) that may contribute to the adverse effects of maternal BUP treatment on offspring to cause neonatal abstinence syndrome (NAS). The goal of the R21 award is to validate a new tool, BUP-D2, which reduces NorBUP formation without altering BUP activity, which may alleviate NAS. Co-investigators include professors Paul Prather of our department and Peter Crooks, chair of Pharmaceutical Sciences at UAMS.

Dr. Alexei Basnakian Received VA Merit Award



Professor Alexei Basnakian received a VA Merit Review grant in 2019 titled "DNase-targeted mitigation of acute kidney injury due to rhabdomyolysis." Dr. John Arthur, professor and chair of the UAMS Department of Nephrology, serves as co-investigator. The study is focused on Dr. Basnakian's long-term interest in the role of DNA-degrading enzymes, DNases/endonucleases, in acute tissue injury. His team has developed DNase inhibitors, which show considerable protection against acute kidney injury.

Dr. Rusch Awarded TL1 Training Grant



Professor and chair Nancy Rusch was awarded a 5-year NIH-funded TL1 training grant. It is a component of the Clinical and Translational Science Award (CTSA) received by the UAMS Translational Research Institute (TRI) in 2019. Dr. Rusch co-directs the program with Dr. Kevin Sexton (assistant professor in the Department of Surgery) and Dr. Nancy Gray, president of Arkansas BioVentures. Dr. Rusch also was recognized with the Dean's Honor Award for Educational Innovation for her leadership of the program in 2020.

FACULTY AWARDS & RECOGNITION (2020)

Dr. Rhee Receives Golden Apples in 2019 and 2020

Associate professor Sung Rhee, who directs the cardiovascular module for medical students at UAMS, received the Sophomore Golden Apple award in 2019 and 2020 for a total of **five consecutive years!** The Golden Apple Award is given annually at the medical school graduation to one faculty member in each year of the medical school curriculum. Dr. Rhee also received the Senior Golden Apple award in 2019 and the Senior Gold Sash award in 2020. Dr. Rhee was selected to hood the senior medical students at the 2019 convocation—the first time a basic scientist was selected for this honor by the senior students.



Dr. Zheng Receives R03 Award

Associate professor Fang Zheng was awarded an R03 from the NIH in May 2020 to further his research on the role of endothelial TRPC3 channels in neurovascular coupling and seizure. The major goal of the project is to generate and characterize inducible and brain-specific genetic deletion of TRPC3 channels in vascular endothelial cells. This mouse model will be used to elucidate the role of endothelial TRPC3 channels in dysfunctional neurovascular coupling. The goal is to provide new treatment options for epilepsy and stroke.



COBRE Phase 2 Grant Funded

Professor Alexei Basnakian and professor and chair Nancy Rusch along with assistant professors Shengyu Mu and Amanda Stolarz contributed to the award of a P20 COBRE Phase 2 grant titled “Center for studies of host response to cancer therapy”. The grant is led by Dr. Marjan Boerma in the College of Pharmacy, and is based on the premise that improving cancer therapy requires comprehensive management of cancer therapy-related toxicities. Dr. Basnakian (*pictured left*) co-directs two Cores, whereas Drs. Rusch and Mu serve as mentor and co-investigator, respectively, for the project “Mechanism and prevention of doxorubicin-induced lymphedema” led by Dr. Stolarz (*pictured right*), who was a graduate student in the department and now serves as assistant professor in the College of Pharmacy.



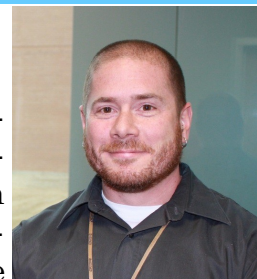
Dr. Shuk-Mei Ho Receives VA BLRD Merit Award

Professor Shuk-Mei Ho received a VA Merit Award in 2020 titled “Metal-induced cell-level changes in prostate epithelium and cancer risk”. The award was ranked in the 4.7th percentile. Associate professor, Ricky Leung and assistant professor, Neville Tam, are co-investigators. The 4-year project will look at prostate epithelial stem cells that are sensitive to and targets of environmental insults. Mouse models, functional assays, and single-cell sequencing will be used to investigate the role of these cells in prostate carcinogenesis and identify stem cell populations in the adult prostate as the possible origin of metal-associated prostate cancer.

FACULTY AWARDS & RECOGNITION (2020)

Dr. Fantegrossi Awarded DEA Contract

Associate professor Bill Fantegrossi was awarded a contract from the U.S. Department of Justice, Drug Enforcement Administration. He will conduct studies on a series of drugs that are likely precursors for the classical hallucinogen lysergic acid diethylamide (LSD), and on a series of drugs with structural similarities to the psychostimulant/dissociative drug of abuse, phencyclidine (PCP). The contract studies will use behavioral models of abuse liability to explore the in vivo pharmacology of these novel drugs. The DEA contracts with laboratories to determine abuse liability of these novel compounds for use in regulatory decisions.



Dr. Berquist and Brents Receive ACRI/ABI Award

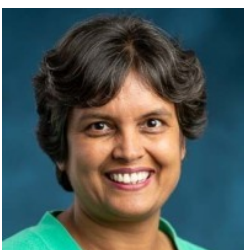
Assistant professors Michael Berquist and Lisa Brents received an intramural ACRI/ABI Investigator-Initiated Research Grant Award in 2020. This 2-year study will establish a causal link between alcohol abuse susceptibility, prenatal opioid exposure, early life stress, and noradrenergic dysregulation in adolescent rats. Drs. Berquist and Brents hypothesize that dysregulation of the noradrenergic system results in a greater susceptibility to develop an alcohol use disorder in adolescents who have experienced prenatal opioid exposure and adverse childhood experiences.



Barton Pilot Awards

Assistant professor Nirmala Parajuli was the recent recipient of a 1-year Barton Pilot Award titled "The role of Hsp72 chaperone in monocyte-derived macrophage activation and renal graft failure". She will test the hypothesis that renal cold storage induces Hsp72 in renal allografts, which promotes monocyte-derived macrophage infiltration and activation to promote graft injury.

Professors Lee Ann MacMillan-Crow and Paul Prather also were awarded a Barton Pilot Award titled "Characterization of synthetic cannabinoid-induced mitochondrial dysfunction leading to renal injury". "K2" and "Spice" are products sold as "synthetic marijuana", but they contain dangerous synthetic cannabinoids (SCBs). These SCBs can cause acute kidney injury. The studies will test the hypothesis that SCBs bind to cannabinoid type 1 (CB1) receptors to generate reactive oxygen species and renal mitochondrial dysfunction.



Dr. MacMillan-Crow Awarded U.S. Patent

Professor Lee Ann MacMillan-Crow was awarded a new U.S. Patent in 2020 titled "OMA1 Activity Assay". Dr. MacMillan-Crow's team devised a new, efficient method and composition for detecting mitochondrial dysfunction often due to stress or disease. Her patent relates to a first-in-kind reporter based high-throughput method to measure OMA1 activity, which should be useful for drug discovery and detection of diseases associated with mitochondrial dysfunction. OMA1 is a mitochondrial protease that helps in quality control of mitochondria.

FACULTY RETIREMENTS: DR. PAUL GOTTSCHALL



Dr. Gottschall with his wife Pati and Dr. Nancy Rusch at his retirement celebration.

Dr. Paul Gottschall retired in May 2019. Dr. Gottschall served as professor in the department since 2007 after being recruited from the University of South Florida College of Medicine. Dr. Gottschall was an avid mentor at UAMS and served on 22 dissertation committees, supervised 11 rotating graduate students, hosted 9 SURF students, and mentored young faculty in INBRE and COBRE programs. He directed the Pharmacology Graduate Program for six years and co-directed the graduate biostatistics course.

Dr. Gottschall was recognized internationally for his discoveries in Alzheimers research. He served on 48 NIH study sections from 1998 to 2007 and continually served on the NIH Clinical and Neuroimmunology and Brain Tumor Study section reviewing over 300 NIH grants. He also reviewed for many

other federal and private funding agencies. An additional talent was playing his guitar, and you can enjoy his voice on the You Tube channel at “ampatify”.



DR. MICHAEL OWENS RETIRES

Dr. S. Michael Owens retired from the department in August 2019. He began his career at UAMS in 1985 as assistant professor and held many leadership positions. Dr. Owens served as director of Graduate Studies from 1993 until 1999. He was appointed director of the Center for Alcohol and Drug Abuse Studies in 2000, a position he held until his retirement. He also served as the interim chair of the department in 2004.

He was recognized by many awards, including the Wilbur Mills Endowed Chair in Alcohol and Drug Abuse Prevention in 2001, the Chancellor's Distinguished Faculty Teaching Award in 2005 and the COM Dean's Distinguished Faculty Scholar Award in 2005. In 2016, he was named an Arkansas Research Alliance Fellow.



Dr. Owens with Dr. Misty Stevens, his daughter, Rachel, and his wife, Becky, at his retirement.

Dr. Owens was continuously funded by NIH/NIDA since 1986 and was the recipient of a NIH Research Career Development Award. He served as mentor to thirteen PhD or MD/PhD students and five postdoctoral fellows. He authored more than 125 papers, reviews, and book chapters. He also co-founded InterveXion Therapeutics, LLC, for which he serves as Chief Scientific Officer. He still works part-time for the company.



Dr. Owens with his trainees at his retirement party.

DR. PHILIP MAYEUX RETIRES

The department celebrated Dr. Philip Mayeux's retirement on February 28, 2020 after almost 30 years of service. Dr. Mayeux joined the department in 1991. He was appointed Vice Chair of the department in 2013.

Dr. Mayeux led efforts to win a NIH T32 grant in 2013 and directed the award titled the Systems Pharmacology and Toxicology (SPaT) T32 Training Program. He directed the Pharmacology Graduate Program for 10 years and served as the department's director of education for 7 years, overseeing all graduate training. He also served as primary advisor to ten PhD students and served on twenty additional dissertation committees, and was named Graduate Faculty of the Year in 2012 for his success in training PhD students. Dr. Mayeux served on NIH study sections from 2009 until his retirement, and his research into new therapeutics to treat sepsis-induced kidney injury was funded by the NIH and American Heart Association. Dr. Mayeux also was recognized for his culinary skills, particularly his coveted carrot cake, and he shared his culinary product generously with the faculty, staff and students at UAMS.



Dr. Galen Wenger, Dr. Michael Owens, Joe Nichols, Dr. Mayeux, Dr. Paul Prather, and Dr. Dave Wessinger at Dr. Mayeux's retirement celebration.

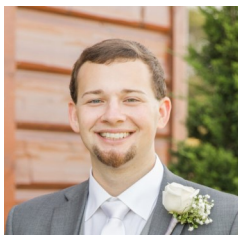
GRADUATE RECOGNITION

ASPET Washington Fellows Program



Graduate students Brittney Garner and Lauren Russell served as 2019 ASPET Washington Fellows. They were part of a class comprised of 10 graduate students from across the country. The mission of the ASPET Washington Fellows Program is to enable developing and early career scientists interested in science policy to learn about and become more engaged in public policy issues. The program helps students develop skills and insights to become future leaders in science. Brittney and Lauren visited Washington D.C. to hear from legislative staff and scientists in the policy profession, be trained in advocacy by members of ASPET, and meet with their legislators to discuss challenges facing the scientific community. They are pictured with Arkansas Senator Tom Cotton.

Dr. Glenn and Lori Millner Distinguished Scholars



Congratulations to graduate students, Lance Benson (mentor, Dr. Mu) and Brian Parks (mentor, Dr. Brents), who were selected as the inaugural Dr. Glenn and Lori Millner Distinguished Scholars! Lance and Brian are eligible to receive the \$1500 annual scholarship until graduation. The new scholarship program was established through a generous gift to the UAMS Graduate



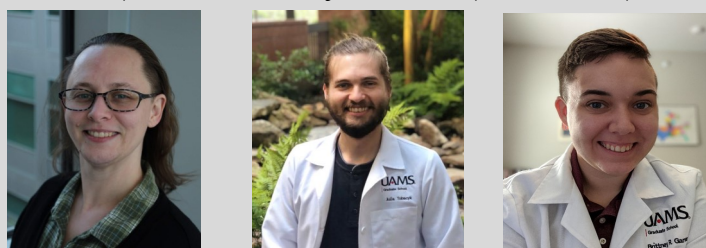
School by Dr. Glenn Millner and his wife, Lori Millner, to honor his parents, Charles and Marion Millner. Dr. Millner is a 1989 graduate of the interdisciplinary toxicology program and a department alumnus.

GRADUATIONS (2019-2020)

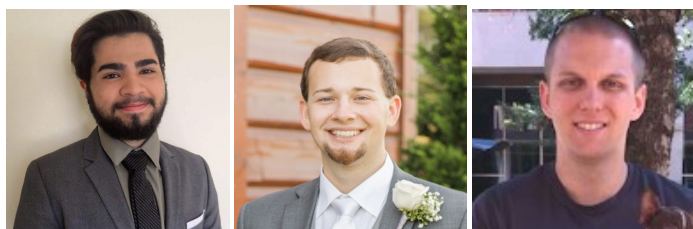
Congratulations to our graduate students who received recognition at the 2020 UAMS Convocation. Due to Covid-19, this ceremony, held on Friday, May 15, was virtual. Our 2019 Graduates (*pictured left to right below*) were Chris Bolden (Peterson), Michael Cozart (Zheng), Charles Hay (Peterson), Bill Hyatt (Fantegrossi) and Samantha McClenahan (Owens).



Our 2020 Graduates (*pictured left to right below*) were Laura Ewing (Kortubash), Stephen Shrum (MacMillan-Crow/Rusch), and Brittney Garner (Rusch/Mu).



New Pharmacology Track Students



The department welcomed three new graduate students to the PTET Track in 2019-2020. Joel Vazquez (*pictured, left*) joined the department in 2019. He is mentored by secondary faculty, Mitchell McGill. Joel received his undergraduate degree from St. John's University. Lance Benson (*center*) and Brian Parks (*pictured, right*) joined the department in 2020. Lance, who is mentored by Dr. Shengyu Mu, received his undergraduate degree from Harding University. Brian graduated from Abilene Christian University and is mentored by Dr. Lisa Brents.

IN MEMORIAM

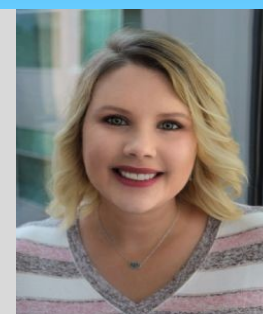


Kyle Urquhart

Graduate student Kyle Urquhart (mentor, Dr. Bill Fantegrossi) died unexpectedly on July 22, 2019. Kyle was a scholar in the T32 Systems Pharmacology and Toxicology (SPaT) T32 Training Program. He began pursuing his PhD in 2016 and his dissertation research focused on mechanisms of tolerance and dependence liability to fentanyl analogues.

Melissa Clemens

Graduate student Melissa Clemens died unexpectedly on May 24, 2020. Melissa was mentored by Dr. Mitchell McGill and she was a scholar in the T32 SPaT Training Program. She joined the department in 2017 to pursue her PhD degree in the area of mechanisms of acetaminophen-induced hepatotoxicity.



SYSTEMS PHARMACOLOGY & TOXICOLOGY (SPaT) T32

Dr. Prather Appointed Director of SPaT

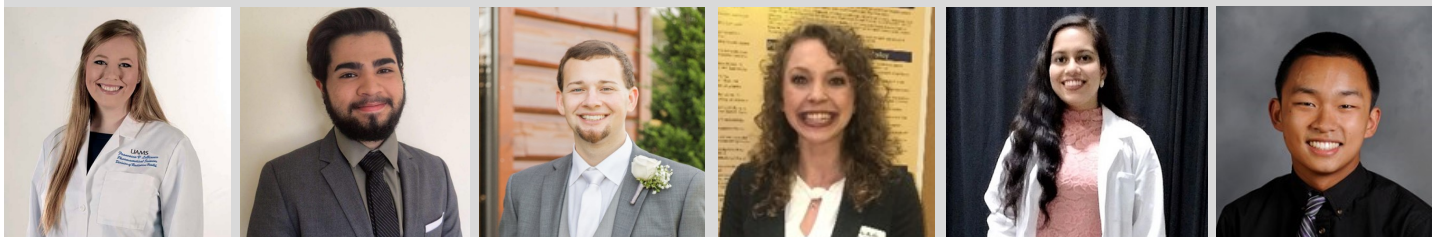
Professor Paul Prather was appointed director of the SPaT T32 Training Grant following the retirement of Dr. Philip Mayeux, who directed the program since it was awarded in 2013. Dr. Prather has been a faculty member in the department since 1995, and has been a member of the SPaT program faculty since 2013, working closely with Dr. Mayeux. During his tenure at UAMS, Dr. Prather has supervised the training of eight PhD students and served on dissertation committees of an additional sixteen students. Dr. Prather's research focuses on the pharmacological characterization of synthetic cannabinoids present in the emerging drugs of abuse called K2 or Spice.



SPaT Appointments (2019-2020)

Six students were selected as trainees for SPaT for 2019 and 2020. Two students are chosen annually for the NIH-funded slots for a term of two years. One MD/PhD student is chosen annually for a campus-funded slot for a one year term. The training program consists of didactic training in pharmacology, toxicology, physiology, pharmacokinetics, metabolism, biostatistics, grant writing, and the responsible conduct of research (RCR). The trainees' dissertation projects must use an animal model of human disease or involve clinical studies.

The SPaT scholars pictured below (*left to right*) include Francesca Lobianco (2019), Joel Vazquez (2019), Lance Benson (2020), Kalee Holloway (2020), Anveshi Guha (2019) and Ravi Sun (2020).



SPaT Symposiums (2019 and 2020)



The SPaT T32 Training Program hosted its annual symposium in May 2019. The invited speaker was Dr. Susan B. Horwitz, Distinguished Professor at the Albert Einstein College of Medicine. She is pictured with 2018-2019 SPaT trainees. Front Row (l-r): Ryan MacLeod, Mary "Allie" Schleiff, Dr.

Horwitz, Laura Ewing, and Julia Tobacyk. Back Row (l-r): Samantha McClenahan, Brittney Garner, Brian Koss, Lascelles Lyn-cook, Bill Hyatt, Chuck Hay, Caitlin Caperton, Kyle Urquhart and Melissa Clemens. Due to Covid-19, the 2020 SPaT Symposium was held virtually. It featured invited speaker, Dr. S. Cyrus Khojasteh, Principal Scientist and Associate Director, Genentech, Inc. (South San Francisco).

ALUMNI and OTHER FRIENDS (2020 UPDATES)

Bill Allaben (NCTR) is managing toxicologist and principal consultant with Toxicology Advisors, LLC. He retired from the FDA/NCTR in 2009.

Rais Ansari (Research Assistant, Gandy) is an associate professor in the College of Pharmacy at Nova Southeastern University in Fort Lauderdale, FL.

Chris Bolden (PhD, Peterson) is a Trauma T32 postdoctoral fellow at University of Texas Health Science Center in Houston.

Kelly Byrnes-Blake (PhD, Owens) is keeping busy with her pharmacokinetic business, Northwest PK Solutions. Both children are in high school and doing well.

Louis Chang (Faculty) retired from the National Health Research Institutes in Taiwan and is an advisor to the School of Medicine and consultant to the President at National Cheng Kung University in Taiwan. He was bestowed with the title of Chair Professor of Molecular Medicine at NCKU and Chair Professor of Environmental Health and Toxicology in various medical universities in Taiwan. Due to COVID-19, he has returned to Georgia.

Michael Cozart (PhD, Zheng) is a postdoctoral fellow in the UAMS Dept of Geriatrics.

John Crow (Faculty) is enjoying his retirement splitting time between Little Rock and Colorado. He recently took up metal detecting and is working on launching his second career as a science writer for professional and lay-science publications.

Brian Cummings (Postdoc, Schnellman) is the department head of Pharmaceutical and Biomedical Sciences at the University of Georgia.

Greg Davis (Technician, Wessinger) received his RN/BSM from UAMS in 2017 and is working on his master's in nursing in the family nurse practitioner's program.

Neil Detweiler (PhD, Rusch) is still teaching at Goshen College. His wife **Rachel Versluis** (Research Technician, Rusch) is in nursing school. Their three boys are 6 (Owen), 4 (Emrys) and 1 (Anders).

Laura Ewing (PhD, Koturbash) accepted a postdoc position with Dr. Michael Birrer in the UAMS Winthrop P. Rockefeller Cancer Institute.

Terry Fletcher (Research Assistant, Rusch) is making the most of his retirement and ongoing rehabilitation. His newest hobby is caring for and socializing foster puppies and kittens for local rescues. He has saved almost 20 lives that now live as far away as Maine!

Max Ford (PhD, Prather) is working at the veterinary diagnostic lab under the Arkansas Department of Agriculture as a virology section supervisor.

Brittney Garner (PhD, Rusch/Mu) is a regulatory specialist/research scientist at NuShores Biosciences, LLC in Little Rock.

Charles Hay (PhD, Peterson) is a postdoctoral fellow at the Medical College of Wisconsin.

Dinesh Hinenallur (PhD, Rusch) is senior principal scientist at Pfizer in Boston, MA.

Jack Hinson (Faculty) remains active in the department and with Acetaminophen Toxicity Diagnostics. He recently completed a review article with Dr. Mitch McGill.

Bill Hyatt (PhD, Fantegrossi) is completing the MD portion of the MD/PhD degree at UAMS.

Dae Song Jang (PhD, Basnakian) is a postdoctoral fellow at NIH/NIDDK in Bethesda, MD.

ALUMNI and OTHER FRIENDS (2020 UPDATES)

Sujay Kharade (PhD, Rusch) is principal scientist II at Charles Rivers Labs in Boston. His wife, **Nisha Nanaware-Kharade** (PhD, Peterson), is senior manager with Alexion Pharmaceuticals Inc.

Hillary Hanvey Mayberry (Staff, Rhee) is working at UAMS in Plastic and Reconstructive Surgery. She and her husband expected their first child, a girl, in August!

Bill Massey (PhD) was appointed Chief Scientific Officer at Vikor Scientific.

Samantha McClenahan (PhD, Owens) is a postdoctoral fellow at Vanderbilt University.

Tanecia Mitchell (PhD, MacMillan-Crow) is assistant professor in the Department of Urology at University of Alabama at Birmingham. She received a NIH R03 grant to study the role of diet on macrophage immunometabolism.

Shankar Munasamy (PhD, MacMillan-Crow) is an associate professor of pharmacology at Drake University in Des Moines, Iowa. He was awarded Teacher of the Year for 2019-2020.

Andrew Norwood (PhD, Fantegrossi) is an associate attorney at Denton & Zachary, PLLC.

Mary Ortiz (Admin) is retired and enjoying time with her daughter and new grandson.

Edith Parker (Admin) is executive assistant in the UAMS Dept of Physiology and Cell Biology.

Asif Pathan (PhD, Rusch) is senior director of clinical pharmacology at DAVA Oncology, which is a Dallas-based CRO focused on oncology drug development.

Naeem Patil (PhD, Mayeux/MacMillan-Crow) is research assistant professor at Vanderbilt.

Tonya Rafferty (Research Assistant, Palade) is a research assistant in the UAMS Dept of Neurobiology and Developmental Sciences in the laboratory of Dr. Paul Drew.

Martin Ronis (Faculty) is professor of Pharmacology and Therapeutics in the College of Medicine at Louisiana State University. He was awarded a 10-year MERIT award from the NIAAA and the LSU Alcohol Research Center was refunded for another 5 years.

Chris Stewart (PhD, Slikker; Postdoc, Kennedy) is principal consultant with SGI Consulting.

Amanda Stolarz (PhD, Rusch) and **Daniel Fil** (Postdoc, Kiaei) are engaged! They plan to tie the knot tentatively in Fall 2021.

Misty Thompson (PhD, Crow) has joined the clinical research operations team for a medical device company specializing in neurological devices.

Zhen Wang (PhD, Mayeux) is assistant professor at University of Mississippi Medical Center.

John Wedig (Adjunct) is still going on cruises, participating in various shooting sports, working out at a fitness center and eating low sodium and low fat foods!

Galen Wenger (Faculty) remains active in the department helping out as needed despite having retired in 2014. He is an active member of the UAMS Emeritus Faculty Council.

Dave Wessinger (Faculty) is enjoying retirement camping in his two airstreams, and having fun with his three grandsons. He and his wife Laura are active with the Arkansas Razorback Airstream Club and the Arkansas Fly Fishers club.

Mark Zorbas (PhD, Owens) still is working at Pfizer as the global technology lead in regulatory submissions.

ALUMNI and OTHER FRIENDS (PREVIOUS UPDATES)

Rhonda Anthony (Administration) is a grants specialist and executive assistant to Dr. Mark Smeltzer in the UAMS Dept of Microbiology and Immunology.

Alex Alund (PhD, Ronis) is ORISE postdoctoral fellow at NCTR in Jefferson, AR.

Will Atchley (PhD, Owens) is an assistant professor in the UAMS Department of Internal Medicine (Pulmonary and Critical Care).

January Baumgardner (PhD, Ronis) is a lecturer at Ouachita Technical College in Malvern.

Venkata Bhogaraju (PhD, Crow) is a pharmacy manager at Walmart Pharmacy in Moses Lake, Washington.

John Bowyer retired from the Division of Neurotoxicology at NCTR in October 2019.

Angela Burke (PhD, Hinson) was promoted to medical research scientist/toxicologist with NASMA. This promotion allowed her to work remotely, so she moved back to Arkansas with her 3-year-old daughter Savannah.

Dian Cao (PhD) is staff cardiologist and assistant professor in the Dept of Internal Medicine, Cardiology Division, UT Southwestern Medical Center.

Yingne Che (Research Assistant, Owens) is a research assistant in the UAMS Donald W. Reynolds Institute on Aging.

Parimal Chowdhury (Adjunct) received a lifetime achievement award from the International Society for the Prevention of Tobacco Induced Diseases (ISPTID).

Krishna Chimalakonda (PhD, Moran) is a scientist in the Division of Drug Safety Research (DDSR), Center for Drug Evaluation Research (CDER), US FDA.

Danielle Cruthirds (PhD, Macmillan-Crow) is associate professor in the Department of Pharmaceutical Sciences at McWhorter School of Pharmacy, Samford University.

Helen Cunny (PhD, Slikker) still works for the NIEHS in Research Triangle Park, NC as a project officer in the area of reproductive and developmental toxicology.

Jaclyn Daniels (PhD, Wessinger) is a postdoctoral fellow at NCTR.

Linval DePass (PhD, Morris) received one of two awards by the Society of Toxicology to travel to Cuba as an International Toxicology Scholar in 2019. She will give lectures on toxicology and safety pharmacology at a conference in Havana.

Rob Dorman (PhD, Brock) is a general surgeon at Mercy Hospital in Rogers.

Malvin Driver is chief of retina service, South Texas Veteran's Healthcare System in San Antonio, TX. He is teaching ophthalmology to residents from UTSA.

Sherry Ferguson (Adjunct) was selected as the permanent director of the Division of Neurotoxicology at NCTR.

Lirit Franks (PhD, Prather) is a stay at home mom and enjoying time with her children.

Gloria Gabriel (Administration) runs Gigi's Cake Boutique in Sherwood, AR.

Brenda Gannon (PhD, Fantegrossi) is assistant professor in the Department of Pharmacology, Toxicology and Neuroscience at LSU Health Shreveport.

ALUMNI and OTHER FRIENDS (PREVIOUS UPDATES)

Hollye Garner (PhD, Wessinger) was promoted to regional director, East, Complement Medical Science Liaisons, Alexion Medical Affairs.

Yun Ge (PhD, Light) works at the FDA/CDRH/OIVD as a scientific writer.

Karen Gilmore-Thomas has a 4-year old granddaughter and a new grandson.

Angela (Disch) Gray (PhD, Ali) is a clinical business solutions analyst with Mercy Health Systems in Fort Smith.

Michael Hambuchen (PhD, Owens) is assistant professor of Pharmaceutical Science and Research at Marshall University School of Pharmacy in West Virginia.

Jay Harriman (PhD, Schnellman) was promoted to the head of drug safety at Boehringer Ingelheim Animal Health.

Stephanie Hastings (Technician, Stimers) is a nurse anesthesiologist at Great Rivers Medical Center in West Burlington, IA.

Howard Hendrickson (Postdoc, Owens) is chair of the Department of Pharmaceutical, Social and Administrative Sciences at Samford University McWhorter School of Pharmacy.

Hunter Holthoff (PhD, Mayeux) is a nephrology fellow in the UAMS Department of Internal Medicine.

Alissa Huberty (Research Technician, Palade) is a physician assistant at UAMS. She and her husband are proud parents of a new daughter.

Tom Hudzik is a Volweiler research fellow with Abbott/AbbVie, which is an emeritus, director-level position.

Scott Jarmer (MS, Harbison) is a pathologist in Wichita, KS.

Biny Joseph (PhD, Rusch) is grant program manager in Neuro-oncology Research, a department of the University of Texas MD Anderson Cancer Center.

Anthony Kiorpes (NCTR) is “semi-retired”, but lecturing at the University of Minnesota and serving as Associate Editor for the journal *Toxicology and Industrial Health*.

Charlotte Lemmonds is working for Bayer Consumer Care.

Mark Levi (Postdoc, Crow) is a pharmacologist at the Center for Biologics at the FDA.

Ben Lieblong (PhD, Rusch) is a clinical trial coordinator in the UAMS Department of Pathology working on a Phase 2 trial of a therapeutic HPV vaccine.

John Lipscomb (PhD, Slikker) presented the keynote address on health risk assessment at Kansas University Medical Center’s annual John Doull Symposium.

Xiuli Liu (PhD, Mayeux) is professor of pathology and director of GI and liver pathology at the University of Florida in Gainesville.

John Marecki (Faculty) is an Instructor in the UAMS Department of Biochemistry and Molecular Biology.

Beth Maris teaches AP Chemistry at Little Rock Central High School.

ALUMNI and OTHER FRIENDS (PREVIOUS UPDATES)

Celia McCaslin (Administration) is coordinator for the UAMS Anatomical Gift Program.

Diane McKinstry (Administration) is program coordinator for the UAMS INBRE Program.

Donald McMillan (Past Chair) continues in retirement at University House, a retirement community associated with the University of Washington. He is active in educational life having given more than a half dozen talks on various aspects of pharmacology.

Alessandra Milesi-Hale (PhD, Owens) is a child neurologist at Miami Children's Hospital.

Meagan Myers (PhD) reports a new addition to her family, Sloane Winter Myers.

Paul Nony (PhD, Schnellmann) is a partner at the Center for Toxicology and Environmental Health, LLC.

James Oldham (PhD, Cave) is retired and babysitting seven grandchildren.

Elina Pathak (PhD, Mayeux) is a research scientist at Reliance Life Sciences in Mumbai.

Merle Paule retired from the National Center for Toxicological Research in 2018.

Aleksandra Pesic (Research Associate, Rusch) is in cancer research at Toronto General/Princess Margaret Hospital.

Maheswari Rajasekaran (PhD, Prather) returned to her native India following graduation.

Ron Reed (Research Technician, Crow) is still horse showing 12 months of the year and giving riding lessons.

Emily Reichard (PhD, Peterson) is pursuing her pharmacy degree at UAMS.

Kerrey Roberto (Research Technician, Palade) is IACUC Administrator at UAMS.

Joan Runnels (Administration) moved to Rockwall TX to be closer to family. She is enjoying her grandchildren and her shelter dog, Dodger.

Jennifer Gibson Schnellmann (PhD, Schnellmann) is associate professor in the College of Pharmacy at the University of South Carolina.

Bernard Schwetz (former Director, NCTR) is living in Taiwan and working as an English editor for an academic health center.

Kathryn Seely (PhD, Prather; postdoc, Mayeux) was promoted to section director at the Arkansas Department of Health in Little Rock.

John Seng (PhD, Gandy/Leakey) is assistant research professor at UAMS and BARBA Program Manager.

Jennifer Shoemaker (PhD, Prather) is owner and a science writer with Flourish Medical Writing based in Nashville.

Clark Sims (PhD, Mayeux) accepted a position as a senior research associate at Arkansas Children's Nutrition Center. He and his wife welcomed a baby boy, Jack Bennett Sims.

Rohit Singal (PhD, Ronis) is a research scientist with Sanofi U.S. Inc., in Framingham, MA.

Sharda Singh (Faculty) is assistant professor in the Department of Internal Medicine at Texas Tech University in Lubbock, TX.

ALUMNI and OTHER FRIENDS (PREVIOUS UPDATES)

Mary Alice Smith (PhD, Harbison) retired in 2016 from the University of Georgia. She still serves on student committees, gives occasional lectures, serves on grant review panels and is a consultant to several government agencies.

Swapnil Sonkusare (PhD, Rusch) is a tenure-track assistant professor at the University of Virginia (UVA) Charlottesville.

Anup Srivastava (PhD, Rusch) is working for the FDA as a toxicology reviewer in the Office of New Drugs (OND), Center for Drug Evaluation Research (CDER).

Joe Stimers (Faculty) is enjoying his retirement.

Manish Tiwari (PhD, Mayeux) is a physician/researcher at the University of Nebraska at Omaha.

Keshari Thakali (Postdoc, Rusch) is assistant professor in the Department of Pediatrics, Developmental Nutrition at Arkansas Children's Hospital.

Linda Traylor (PhD, Mayeux) is senior director of Scientific Affairs at The Binding Site, Inc.

Barbara Vogt (PhD, Mattison) has a consulting practice, Tox Focus LLC, and is adjunct assistant professor in the UAMS College of Public Health, and guest lecturer.

Rick Wiese (PhD, Kadlubar) participated in a 3- month resident think tank held at Merck Corporate HQ in Darmstadt, Germany. His team developed a proposal that was selected to move to the inception phase in the strategy and transformation group of Merck.

Sarah White (PhD, Owens) is teaching chemistry at Arkansas Technical College at Ozark.

Linnzi Wright (PhD, Paule) works at the US Army Edgewood Chemical Biological Center, Toxicology and Obscurants Division, Aberdeen Proving Ground, MD.

Liping Wu (PhD, Mayeux) is associate manager of Regulatory Affairs at Johnson & Johnson in Singapore.

Xinwen (James) Yu (PhD, Kennedy) continues his quest of personalized medicine for cancer therapy while working at Dako, an Agilent company, in CA.

Piotr and Ludwika Zimniak (Faculty) continue their retirement in California.

Best Wishes for a Safe & Happy New Year!



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