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NEWSLETTER ITEMS

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Rothermel at

Wishing you a wonderful winter break and a Happy New Year!

A Message from DTCB's Chair and Director of Graduate Studies:

As we reflect on this past semester and all of the challenges and obstacles our students, faculty and staff have faced we are extremely proud of everything we have accomplished together. We want to thank all of the faculty for putting in the time and work to make sure we, as a department, continued to uphold our academic standards and give our students an educational experience that will set them up for future success, even though our teaching environment was vastly different. Students, this semester showed us just how well you can adapt to changes and persevere through not-so-ideal circumstances; thank you for showing up every day eager to learn and put in the work. To the office staff, thank you for being there to answer all of our questions and continuing to make sure the department runs like a well-oiled machine.

Each of you helped make this semester the success that it was, and we hope everyone has the opportunity to slow down (at least a bit) and enjoy this winter break – we all deserve it. We look forward to seeing you all next semester!

Sincerely,
Dr. Xiaoqi Liu, Chair
Dr. Isabel Mellon, Director of Graduate Studies

Student Spotlight:

DTCB had two Master's of Forensic Toxicology and Analytical Genetics students selected to be recipients of the Lyman T. Johnson Fellowship. Congratulations Jordan and Kaleigh!



Jordan Brown is a Brandywine, Maryland native and a first year Forensic Toxicology and Analytical Genetics Master's candidate. Jordan is a proud graduate of Alabama State University where she received her Bachelor's of Science degree in Forensic Chemistry. She chose to attend the University of Kentucky on her belief that she will undoubtedly be challenged and set up for immeasurable success upon graduation. In the future Jordan plans to attend Medical School and become a Forensic Pathologist.

Second spotlight cont. on next page

Student Spotlight cont.:



Kaleigh Monet Wingate is a first year student in the Forensic Toxicology and Analytical Genetics Program concentrating in Forensic Toxicology/Chemistry. She is a recent graduate of Wake Forest University, holding a Bachelor's degree in Biology with a minor in Women, Gender, and Sexuality Studies. She is a United Negro College Fund STEM scholar and also was a Merit Supplemental Scholar. At Wake Forest University, Kaleigh was involved in Division 1 Cheerleading, Minority Association for Pre-Health Students, Orientation Leader, Women's History Month Committee, Black Student Association, Mental Health Ambassador, General Wellbeing Ambassador and PREPARE, an organization aimed at advocating and facilitating programming surrounding rape and sexual assault. Kaleigh is very passionate about mental health and even founded an event on campus at Wake Forest called "She Thrives" where she highlighted mental health centering women of color voices. Kaleigh spent a semester living in Venice, Italy studying microbiology, biology of disease/the plague, intermediate Italian, Venetian history and Venetian art History. She conducted research in the Venetian canals studying the effects of pollution and tourism. She also worked with Dr. Smith on plant ecophysiology and studied the effects of harsh or unusual environments on plants. Her future plans include getting involved in biochemistry research next semester in hopes to apply to Medical School.

THANK YOU

Thank you, Dr. Michael Graziano, PhD alumni, for another generous donation to the department!

Recent Graduation

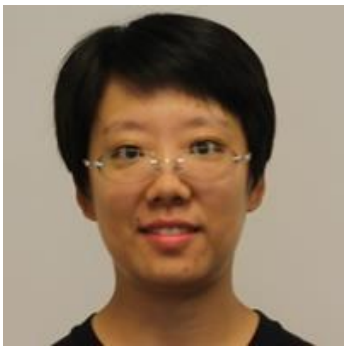


Dr. Nathalia Vitoria Pereira Araujo.
Mentored by Dr. Vivek Rangnekar.
Defended November 2020.

CONGRATULATIONS!

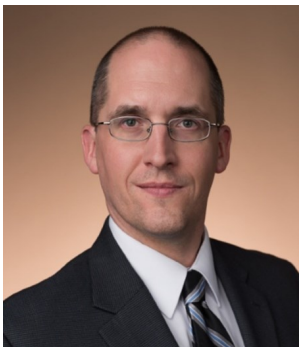


Awards



Na Ding, a second year PhD student in Dr. Qiou Wei's lab, won a student travel award to attend the Annual Society of Basic Urology Research Meeting. She attended the meeting November 11–14, 2020 for her work titled, "Role of Prx4 in Prostate Cancer Development and Radiation Resistance."

Awards



Dr. Nathan Vanderford was selected by the Kentucky Academy of Science as the recipient of their annual award given for Excellence in Science Education & Outreach.

Click here to read the article about Dr. Vanderford by the Kentucky Academy of Science.

Good luck to our second year Master's of Forensic Toxicology and Analytical Genetics students who will start their required internships over the next couple of months!

Cara Allen - KY's Dept. of Public Health Newborn Screening Lab
Taylor Childers - KCA Labs
Moumita Dam - KY's Dept. of Public Health Newborn Screening Lab
Jonathan Gallup - Spartanburg County Sheriff Forensic Lab
Isabel Snyder - UKY's Dept. of Pathology, Genomics Division



Faculty Activity:

Study Sections:
Drs. Jian Fu, Jimmy Yang, Andrew Lane, Kate Zaytseva, Xiaoqi Liu, Teresa Fan, Richard Higashi

Presentations/Virtual Posters:
Drs. Andrew Lane, Teresa Fan, Richard Higashi, Xiaoqi Liu

Publications:
Beger, R.D., Dunn, W.B., Bandukwala, A., Bethan, B., Broadhurst, D.B., Clish, C.B., Dasari, S., Derr, L., Evans, A., Fischer, S., Flynn, T., Thomas Hartung, T., Herrington, D., **Higashi, R.,** Hsu, P-C., Jones, C., Kachman, M., Karuso, H., Kruppa, G., Lippa, K., Maruvada, P., Mosley, J., Ntai, I., O'Donovan, C., Playdon, M, Raftery, D., Shaughnessy, D., Souza, A., Spaeder, T., Spalholz, B., Tayyari, F., Ubhi, B., Verma, M., Walk, T., Wilson, I., Witkin, K., Bearden, D.W., and Zanetti, K.A. (2020) Towards Quality Assurance and Quality Control in Untargeted Metabolomics Studies. *Metabolomics*. **15**: 4.

M. J Merino, C. J. Ricketts, C. D. Vocke, Y. Yang, D. R. Crooks, **T. W.-M. Fan**, **A. N. Lane**, J. K. Killian, P. Meltzer, W. M. Linehan (2020). Multifocal renal cell carcinomas with somatic IDH2 mutation: report of a previously undescribed neoplasm. *Am. J. Surg. Path.* **In press**

Li LY, Chen XS, Wang KS, Guan YD, Ren XC, Cao DS, Sun XY, Li AX, Tao YG, Zhang Y, Yin MZ, Wang XL, Wu MH, **Yang JM**, Cheng Y. RSK2 protects human breast cancer cells under endoplasmic reticulum stress through activating AMPKα2-mediated autophagy. Oncogene. 2020 Oct;39(43):6704-6718. doi: 10.1038/s41388-020-01447-0. Epub 2020 Sep 21. PMID: 32958832.

Guan Y, Jiang S, Ye W, Ren X, Wang X, Zhang Y, Yin M, Wang K, Tao Y, **Yang JM,** Cao D, Cheng Y. Combined treatment of mitoxantrone sensitizes breast cancer cells to rapalogs through blocking eEF-2K-mediated activation of Akt and autophagy. Cell Death Dis. 2020 Nov 3;11(11):948. doi: 10.1038/s41419-020-03153-x. PMID: 33144562; PMCID: PMC7642277.

Dr. Teresa Fan has been appointed Senior Associate Editor of *Cancer and Metabolism*.

Publications:
Guan Y, Jiang S, Ye W, Ren X, Wang X, Zhang Y, Yin M, Wang K, Tao Y, **Yang JM,** Cao D, Cheng Y. Combined treatment of mitoxantrone sensitizes breast cancer cells to rapalogs through blocking eEF-2K-mediated activation of Akt and autophagy. Cell Death Dis. 2020 Nov 3;11(11):948. doi: 10.1038/s41419-020-03153-x. PMID: 33144562; PMCID: PMC7642277.

Alumni Spotlight:

Dr. William "Allan" Rees attended the University of Kentucky's Graduate Center For Toxicology (GCT) over 25 years ago after completing his BS from Hampden Sydney College. Allan's education focused on the liberal arts, biology and German at Hampden Sydney, and after working briefly at an environmental science engineering firm in Atlanta, GA, he returned to school at UK to obtain a graduate degree. He met Dr. Thomas Tobin in the summer before matriculation, who was an adjunct professor in the GCT and professor of pharmacology at the Gluck Equine Research Center. Here he began taking classes and working in the Gluck Center labs pursuing his degree. "I have very fond memories of Lexington and working alongside some of the best equine veterinarians in the country. Virology and Pharmacology were two of my most favorite courses and Biochemistry was the least favorite. This lab is also where I began to take an interest in clinical trials".

Dr. Tobin's lab was an interesting place to perform research in that his lab was one of the first to develop technology which eventually became one of the first founding companies in the original UK Biotech Park. "This lab experience really was the first place to spark my interest in how science can be converted into a commercial business operation. Overtime I knew I was not headed to the world of academia to be a professor, and my interest peaked in how science plays a key role in the business development process. I realized it was possible I could find a way to blend my interests in science and business together".

Before joining the Altria family of companies in 2004, Allan was a Senior Research Associate at Merck & Co. Inc coming out of UK focusing on clinical operations which supported the development of novel therapeutics. As a development role at Merck, Allan was transferred to Richmond, VA, his home town to continue his work. Coincidently, Altria was moving its headquarters from New York City to Richmond at that same time, and during this time he became aware of the novel clinical research in the field of tobacco harm reduction. Allan spent summer's growing up on his family's tobacco farm, so he new all about growing leaf and taking it to market for sale. But what he did not realize is that there was a whole new generation of tobacco products being developed to reduce the harm associated with traditional tobacco smoking which is the leading cause of mortality and morbidity in the world. "I thought to myself, novel therapies play a role in our healthcare system each day, but the impacts to population health through tobacco harm reduction could make an even larger impact to healthcare".

Today, Allan serves as Senior Director, Science Operations, at Altria Client Services (ALCS) in Richmond, Va. In this role, he combines his experiences in Procurement, Finance, Quality and Clinical Operations disciplines to lead the science operations function and infrastructure to support Altria's strategies for core and innovative product development. "I find it exciting to be part of Altria's 10 year vision to responsibly lad the transition of adult smokers to a non-combustible future". Allan also provides scientific insights to aid the development of reduced-risk products and supports Altria's external engagement strategy.

Prior to his current role, Allan served in multiple areas at Altria and Philip Morris USA including: Clinical Sciences, where he conducted clinical research of early heat-not-burn reduced harm products; Regulatory Affairs, where he lead international product reporting and the first FDA product ingredient and HPHC submissions for Altria's smokeable and smokeless product portfolios; Strategic Product Planning, where he provided Operations and Strategic support; and Leaf Procurement, where he led the procurement of domestic leaf and leaf by-products (Receiving Stations and Stemmery Operations) for PMUSA.

Allan lives in Richmond, Va with his wife Terry and two children. He volunteers in the Richmond community by serving on several boards including J. Sargeant Reynolds Community College Board, St. James Episcopal Church Vestry Board, and St. Michael's School Board.

Ph.D., Toxicology, College of Medicine, University of Kentucky, Lexington, KY
B.S., Biology and German, Hampden Sydney College, Hampden Sydney, VA