DEPT. OF TOXICOLOGY AND CANCER BIOLOGY NEWSLETTER

Volume 6, Special Issue

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New Grants (New grants are shared once the department receives PADR 1 stating the account has been created):



David Orren (PI in grants below) and Amrita Machwe (Co-I in grants below):

National Institute on Drug Abuse, U54 Pilot "Cytotoxicity of Filtered Cigars in Comparison to Cigarettes" Total funding: $38,250. APPALTRUST Rapid Response Award for 3 months. This grant studies the oral and bronchial epithelial cell cytotoxicity of condensates from reference and commercial filtered cigars compared to cigarettes.

National Institute on Drug Abuse, U54 Pilot "Filtered Cigar Toxicity: Generation of Oxidative Stress and Pro-Inflammatory Factors" Total funding: $30,600. APPALTRUST TCORS Pilot Grant for 1 year. This grant investigates, in bronchial epithelial cells, oxidative stress and other biomarkers of toxicity associated with exposure to filtered cigar condensates.



Mary Mohrin (PI in grant below):

National Cancer Institute, CCSG Pilot: "The Hidden Cost of Chronic Drinking: How Alcohol Abuse Ages Hematopoietic Stem Cells & Paves the Way For Cancer" Total funding: $38,250 for 1 year. In collaboration with Dr. Ilhem Messaoudi and her postdoc Dr. Hami Hemati, Dr. Chih-Ling Wang and Dr. Mohrin will study how chronic alcohol consumption (CAC) ages hematopoietic stem cells (HSCs) and reduces immunosurveillance of solid tumors.

The primary goals of this pilot proposal are to untangle the complex effects of CAC on the hematopoietic system to understand the implications for cancer of solid tissues. To achieve these goals, they will: (1) investigate the effects of CAC on HSC aging, and (2) elucidate the molecular pathways linking CAC to CHIP and immune dysfunction. Capitalizing on the unique response of the hematopoietic system to CAC may allow for the development of novel therapies to prevent the morbidity and mortality associated with CAC.

AIM 1: INVESTIGATE THE EFFECTS OF CAC ON HSC BIOLOGICAL AGING

They hypothesize that CAC accelerates HSC biological aging through continuous activation of the DDR. To test this, they will develop an CAC exposure model and measure acute and chronic damage in HSCs using FACS, microscopy, and transcriptomics.

AIM 2: ELUCIDATE THE MOLECULAR PATHWAYS LINKING CAC TO CHIP & CANCER

They hypothesize that CAC exacerbates CHIP and reduces immune surveillance and anti-tumor immunity. They will expose their established TET2 KO model of CHIP to CAC and using FACS, microscopy, and molecular analyses monitor disease progression and peripheral tissue damage.

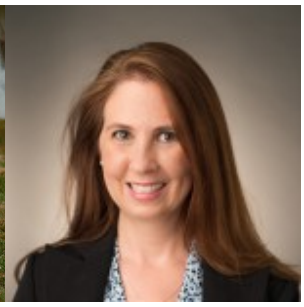
SUPPORT THE DEPARTMENT

Gifts to the department will be directed toward emerging needs and opportunities for our students, faculty research support, and unrestricted support for the department.

Click here to learn more and donate.

New Grants (continued): (New grants are shared once the department receives PADR 1 stating the account has been created)**:**





Daniel Plaugher (PI in grant below) and Christine Brainson (Co-I in grant below):

National Cancer Institute, "Enhancing TIL Efficacy in NSCLC through Epigenetic Reprogramming and Computational Modeling" Total funding: $124,546 for 1 year. Using his background in mathematics and computational modeling, Dr. Plaugher is investigating avenues to improve tumor-infiltrating lymphocyte (TIL) therapy efficacy for lung cancer patients by merging epigenetic modulation with computational discovery. TIL therapy is a form of adoptive cell therapy where a patient's own tumor-reactive T cells are expanded ex vivo, then reinfused to target and destroy their cancer. Dr. Plaugher's project aims to identify and target mechanisms that govern T-cell fitness, function, and therapeutic durability.

Recently Accepted or Published Manuscripts:

Center for Environmental and Systems Biochemistry (CESB): Teresa Fan, Rick Higashi, and Andrew Lane:

1. Banerjee, M., Song, J., Yan, B., Wu, H., Norouzi, S., Sengogu, T., Sharma, S., **Fan, T. W-M.**, Lee, E., He, D., Wang, C., Liu, J., Schmitt, T.M., Galo, T., Weiss, H.L., Li. J., Evers, B.M. (2025) Neurotensin promotes hepatic steatosis by regulating lipid uptake and mitochondrial adaptation in hepatocytes. *Cell Death Dis* **16**, 347.

2. J C Romero, S Tonapi, M. Parihar, E Loranc, H E. Miller, LA. Lawrence, N Bassani, D G. Robledo, L Cao, J Nie, K Kanda, A. Stoja, N. Garcia, A Gorthi, B.J. Stoveken, **T. W-M. Fan**, T. A. Cassel, S. Zha, J.D. Lechleiter, L.Q.Dong, N. Musi, **A. N. Lane**, A. J. R. Bishop (2025). Loss of CD98HC phosphorylation by ATM impairs antiporter trafficking and drives glutamate toxicity in Ataxia Telangiectasia. *Nature Commun* **16**:5109.

3. S. Daneshmandi, Q. Yan, E. Cortes Gomez, J. E. Choi, E. Katsuta, E. Gharib, P. Singh, **R. M. Higashi**, **A.N. Lane**, **T. W-M. Fan**, J. Wang, E. Repasky, P. McCarthy, H. Mohammadpour (2025). 6-Phosphogluconate dehydrogenase promotes mitochondrial fusion and immune suppression in tumor-associated monocytic suppressor cells. *Nat Commun*. in press.

4. S. Vicente-Muñoz, S. Summer, T. Galletta, **A.N. Lane**, S. Davies, L. Romick-Rosendale (2025). Altered energy metabolism in Fanconi Anemia patients revealed by stable isotope tracing. *Sci. Adv.* **11**, eady6117.

5. S. Daneshmandi, E. Ko, Q. Yan, J. E. Choi, P. K. Singh, **R. M. Higashi**, **A. N. Lane**, **T. W-M. Fan**, J. Qiu, S. Hani, K.L. Hippen, J. Wang, P. L. McCarthy, B. R Blazar, H. Mohammadpour (2025). Targeting the pentose phosphate pathway mitigates graft versus host disease by reducing glycolytic function in alloreactive T cells. *JCI Insights* **10**: e192774

Xiaoqi Liu:

1. Farahani, M. E., Zhang, Y., Akinyemi, A. O., Seilani, F., Alam, M. R., and **Liu, X.** (2025) Unlocking the Role of OCT4 in Cancer Lineage Plasticity: A Cross-Cancer Perspective with an Emphasis on Prostate Cancer. *Biomedicines*, 13(7), 1642; https://www.mdpi.com/2227-9059/13/7/1642.

2. Wang, X., Li, Z., and **Liu, X.** (2025) Mechanisms and Therapeutic Strategies to Overcome Enzalutamide Resistance in Advanced Prostate Cancer, *Serican Journal of Medicine*, 2(4), 24058. https://doi.org/10.17161/sjm.v2i4.24058.

3. Zhang, Q., Peng, J., Li, Z., Rao, X., Allison, D.B., Qiao, Q., Zhang, Z., Kong, Y., Zhang, Y., Wang, R., Liu, J., Wang, X., Li, C., Mao, F., Shao, Q., Gao, T., and **Liu, X.** (2025) PLK1-mediated PDHA1 phosphorylation drives mitochondrial dysregulation, mitophagy, and cancer progression in Cr (VI)-associated lung cancer. *J. Biol. Chem*. 301(7):110406. doi: 10.1016/j.jbc.2025.110406. PMID: 40544996.

Recently Accepted or Published Manuscripts (continued):

Xiaoqi Liu (continued):

4. **Liu, X.** and Li, B. (2025) 2025 SAU Annual Meeting Report: Unraveling the Molecular Complexities of Urologic Malignancies. *Serican Journal of Medicine*, 2(4), 24314. https://doi.org/10.17161/sjm.v2i4.24314.

5. Peng, J., Zhang, Q., Rao, X., Allison, D.B., Kong, Y., Wang, R., Liu, J., Zhang, Y., Katz, W., Li, Z., and **Liu, X.** (2025) PLK1-mediated PDHA1 phosphorylation drives metabolic reprogramming in lung cancer. *Oncogene* 44(43): 4190-4204. doi: 10.1038/s41388-025-03571-1. PMID: 40957950. PMCID; PMC12503065.

David Orren and Amrita Machwe:

1. **Orren DK** and **Machwe A**. Response to Replication Stress and Maintenance of Genome Stability by WRN, the Werner Syndrome Protein. *Int J Mol Sci* **25**:8300, 2024.

2. Alqithami SM, **Machwe A**, and **Orren DK**. Cigarette Smoke-Induced Epithelial-to-Mesenchymal Transition: Insights into Cellular Mechanisms and Signaling Pathways. *Cells* **13**:1453, 2024.

3. **Machwe A** and **Orren DK**. Post-translational modifications of the Werner syndrome protein (WRN), *Cytogenet Genome Res*. 2025 Jul 2:1-7.

4. Reusch E, Peh KH, Morgan R, Momo H, **Orren D**, Rock S, Pittman T, Neltner J, Kolesar J, Villano J. Case Report: Advanced grade 2 meningioma with PBRM1 inactivation with prolonged response to immunotherapy. *Front Oncol*. 2025 Oct 22;15:1587752.

Nathan Vanderford:

1. Book: **Vanderford NL** and Burke H (Editors). *Cancer in Appalachia: A Collection of Youth-Told Stories (Volume II).* Louisville, KY: Butler Books, 2025. Print ISBN: 9781964530178.

2. Kim J, Kim Y, Ausin J, Bakhos A, Bowens H, Flynn A, Mott T, Simpkinson E, Sowders T, Turner R and **Vanderford NL**. Peer-led Cancer Education Intervention in Appalachian Kentucky: Evaluating Effects on Participants' Cancer Knowledge and Perspectives. *Journal of Cancer Education*. Published ahead of print.

Will Fong:

1. Kim M, Cong H, Goettl R, Liu J, **Fong KW**. Bone Metastatic Progression of Prostate Cancer is Regulated by TRIM28-LDHA Mediated Metabolism. *Mol Cancer Res*. 2025 Oct 17;. doi: 10.1158/1541-7786.MCR-25-0676. [Epub ahead of print] PubMed PMID: 41105391.

2. Jennifer Grasso, Cheng Zhang and **Ka-wing Fong**. Aurora kinase A in urological cancers. *Serican Journal of Medicine*. 2025, VOL. 2, NO. 3, 23694. https://doi.org/10.17161/sjm.v2i3.23694.

3. **Ka-wing Fong**. FOXA2, NKX2-1, and p300/CBP Orchestrate Neuroendocrine Lineage Plasticity in Prostate Cancer. *Serican Journal of Medicine*. 2025, VOL. 2, NO. 4, 24269. https://journals.ku.edu/sjm/article/view/24269.

Featured Publications:



Dr. Xiaoqi Liu Publication in *PLOS Biology*

Mao, F., Wu, S., Allison, D. B., He, D., Kong, Y., Li, C., Li, Z., Zhang, Y., Wang, X., Zhang, Q., Wang, C., and **Liu, X.** (2025) The cell cycle regulator PLK1 promotes murine melanoma progression by regulating the transcription factor BACH1. *PLoS Biol*. 23(11): e3003490. doi: 10.1371/journal.pbio.3003490. PMID: 41284701. PMCID; PMC12643297.

Abstract: Polo-like kinase 1 (PLK1), a critical cell cycle regulator, is associated with cancer progression and negatively correlates with patient survival in cutaneous melanoma based on clinical database analysis. In a melanoma mouse model induced by BRafCA mutation and Pten-deficiency, we observed that PLK1 overexpression mediated metabolic reprogramming to markedly accelerate tumor growth, promote metastasis, and shortened mice survival. Mechanistically, PLK1 stabilizes BTB domain and CNC homolog 1 (BACH1), which serves as a crucial transcription factor for genes involved in cancer metabolism and metastasis. Moreover, the PLK1/BACH1 axis confers resis-tance to Vemurafenib, a BRAFV600E inhibitor, in melanoma. In light of this finding, we attempted an innovative pharmacological combination targeting both BRAFV600E and PLK1, identifying a synergistic efficiency to this approach to suppress tumor growth. Overall, we have discovered a novel function of PLK1 that is independent of the cell cycle, which could pave new ways for melanoma therapies.



Dr. Will Fong Publication in the *Journal of Clinical Investigation*

Kim M, Liu J, Zhang Y, Wang R, Goettl R, Grasso J, Allison DB, Wang C, Gao T, Liu X, **Fong KW**. RSK1-driven TRIM28/E2F1 feedback loop promotes castration-resistant prostate cancer progression. *J Clin Invest*. 2025 Jun 16;135(12). doi: 10.1172/JCI185119. eCollection 2025 Jun 16. PubMed PMID: 40519166; PubMed Central PMCID: PMC12165809.

Abstract: Castration-resistant prostate cancer (CRPC) marks the advanced and lethal stage of prostate cancer (PCa). TRIM28, also known as KAP1, is a transcriptional regulator recently shown to promote CRPC cell proliferation and xenograft tumor growth. Nonetheless, knowledge gaps persist regarding the mechanisms underlying TRIM28 upregulation in CRPC as well as the genomic targets regulated by TRIM28. Here, we report that TRIM28 is a E2F1 target in CRPC. Using an integrated genomic approach, we have demonstrated that TRIM28 forms a positive feedback loop to promote the transcriptional activation and genomic function of E2F1 independent of retinoblastoma (Rb) status. Furthermore, we identified RSK1 as a kinase that directly phosphorylates TRIM28 at S473, and, as such, RSK1 drives the TRIM28/E2F1 feedback loop. Accordingly, pS473-TRIM28 promotes CRPC progression, which is mitigated by RSK inhibition. In summary, our study reveals a critical role of the RSK1-TRIM28-E2F1 axis in CRPC progression, which may be exploited as a vulnerability in treating Rb-deficient CRPC.

Faculty Activity:

Center for Environmental and Systems Biochemistry (CESB): Teresa Fan, Rick Higashi, and Andrew Lane:

1. Oral Presentation: T. E. Lange, S. Vicente-Muñoz, K.Vairamani, M. Radecki, K. Mehta, M. Watanabe-Chailland, M.Spurgeon, M. C. Matrka, K. Chetal, P. F. Lambert, N. Salomonis, K. A. Wikenheiser-Brokamp, L. E. Romick, K. D.R. Setchell, X. Zhao, **A.N. Lane**, **R. M. Higashi**, S. I. Wells. *Contributions of DEK oncogene activities to HPV-induced cellular metabolism and proliferation*. DNA Tumor Virus Conference, Madison WI. July 14-18, 2025.
2. Oral Presentation: **T. W-M. Fan**. "Patient-derived models for probing metabolic interactions in tumor microenvironment" COBRE Metabolism Symposium. UKY. Nov 20, 2025.
3. Poster: N. Rashid, P.Lin, M. Kaddah, T.Cassel, **A. N Lane**, **R. M Higashi**, N. Hasan, P., M. Hodges, K.H. Chhabra (2025). MON-591 Elevated Glycosuria Triggers Metabolic Stress Response in Renal Glut2 Knockout Mice Through the Activator Protein-1 Family of Transcription Factors Involved in Maintaining Glucose Homeostasis. *Journal of the Endocrine Society*, **9**, Issue Supplement_1, bvaf149.954.
4. Poster: M. M.Y. Kaddah, J. Islam, Pe. Lin, T. Cassel, R. Cunningham, T. Brown, **R. M. Higashi**, **A. N. Lane**, **T. W-M. Fan**. "Reprogramming of Nucleic Acid and Protein Methylation by EZH2" COBRE Metabolism Symposium. UKY. Nov 20, 2025.
5. Poster: P. Lin, **R. M. Higashi**, **An. N. Lane**, **T. W-M. Fan** "Application of LAICPMS on Tumor Slices". UKY. Nov 20, 2025.

Xiaoqi Liu:

1. University of Arkansas for Medical Sciences, Winthrop P. Rockefeller Cancer Institute, Little Rock, AR 72205. "Plk1 in prostate cancer progression". Oct 27, 2025.
2. The University of Texas, MD Anderson Cancer Center, Department of Experimental Radiation Oncology, Houston, TX 77030. "Plk1 in prostate cancer progression". Nov 6, 2025.
3. University at Buffalo, Department of Pharmacology and Toxicology, Buffalo, NY 14203. "Moving PLK1 Beyond Mitosis". Nov 13, 2025.

Tadahide Izumi:

Served on the review board for the NIH/NIAID review meeting: BAA program "Development of Radiation/Nuclear Medical Countermeasures (MCMs) and Biodosimetry Devices (N01)". July 31-Aug 1, 2025.

David Orren:

Gave talk to Appalachian Tobacco Regulatory Science Team (AppalTRUST). Seminar title was "Tobacco Regulatory Science: Cigar Products and ENDS." June 2025.

Nathan Vanderford:

1. Presentation: **Vanderford NL**. Designing Inclusive Healthcare Career Pathway Programming. MaineHealth, Department of Medicine. Portland, ME. Sept 17, 2025.
2. Presentation: **Vanderford NL**. Addressing Cancer Health Equity in a Unique Rural Population. MaineHealth, Department of Medicine. Portland, ME. (Given as a Ground Round Presentation). Sept 17, 2025.

Faculty Activity (continued):

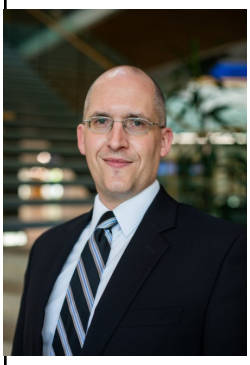
Luksana Chaiswing:

1. Director, Redox Metabolism Shared Resource, Markey Cancer Center, University of Kentucky-Lexington. July 2025-Present.
2. Ad-hoc reviewer European Science Foundation (ESF). July 2025.
3. "Radiation-induced mitochondrial ROS and TFAM-enriched EVs promote cancer regrowth and CD45$^+$ cell infiltration in prostate cancer" The 71st Radiation Research Society Annual Meeting, San Juan, Puerto Rico. (Selected from Abstract). Sept 2025.
4. Study session "Department of Defense, CDMRP, Prostate Cancer". Oct 2025.
5. Attended the 71st The SfRBM25 32nd Annual Conference, Washington, DC, USA. Nov 2025.
   - Poster Presentation: Miller CE, Xu F, Luo W, Jayswal R, Weiss HL, St Clair WH, St Clair DK, Chaiswing L Radiation-induced mitochondrial ROS and TFAM-enriched EVs promote cancer regrowth and CD45$^+$ cell infiltration in prostate cancer
   - Poster Presentation: Redox Metabolism Shared Resource (RM SR), Markey Cancer Center, UKY
6. Grant Reviewer for Mike Slive Foundation for Prostate Cancer Research. Nov 2025.

Changhai Tian:

1. Presentation: Li, Q, Bhaskar, VB, Hamdalla, R and **Tian, CH**. *Extracellular vesicle-mediated Nrf2 secretion and potential therapeutic application*. Department retreat at University of Kentucky. (Corresponding author). Aug 15, 2025.
2. Serve as an Ad hoc reviewer for AHA Scientific Sessions 2025 Abstracts which was held in New Orleans, LA. Nov 7-10, 2025.
3. 2025 Fall semester, serve as moderator of DTCB Trainee Talk Series of University of Kentucky, 2:00PM-3:00 PM, MN 463. Sept 19 to Nov 21, 2025.
4. Presentation: **Tian, CH**. *Cardiac Extracellular Vesicles Interrupt Brain Homeostasis Following Myocardial Injury*. Department of Neurology, LSU Health Shreveport, LA. Nov 25, 2025.
5. Serve as an outside member of Doctoral Advisory Committee for Zhihai Huang (LSUHS PhD program), Louisiana State University Health Shreveport, LA. Nov 25, 2025.

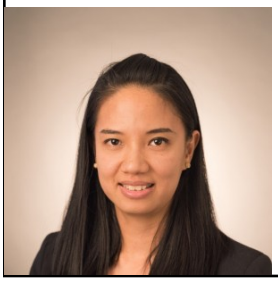
Faculty Awards and Recognitions:



Nathan Vanderford:
Foundation for a Healthy Kentucky,
Healthy Kentucky Champion Award.



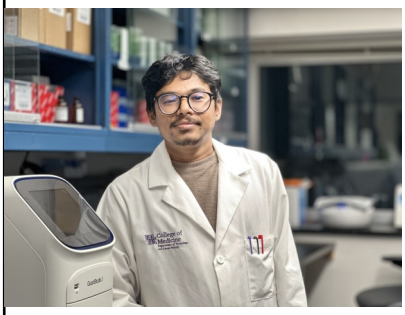
Will Fong:
2025 Society for Basic Urologic Research (SBUR)
Young Investigator Award.



Luksana Chaiswing:
Early Career Investigator Travel Award,
Radiation Research Society, San Juan,
Puerto Rico. Sept 2025.



Welcome New Lab Members:



Md. Monowarul Islam is a Research Analyst Principal in the Department of Toxicology and Cancer Biology at the University of Kentucky in Dr. Changhai Tian's lab. His research focuses on host–pathogen interactions, bacterial pathogenesis, and cell–cell communication. He holds a DVM and a master's degree in microbiology and veterinary sciences from the University of Kentucky and is passionate about collaborative research, mentoring, and advancing biomedical science. His current work investigates extracellular vesicle–mediated communication in cardiac injury and neuroinflammation. Outside the lab, he enjoys spending time with his family and exploring ideas that bridge science with real-world impact.

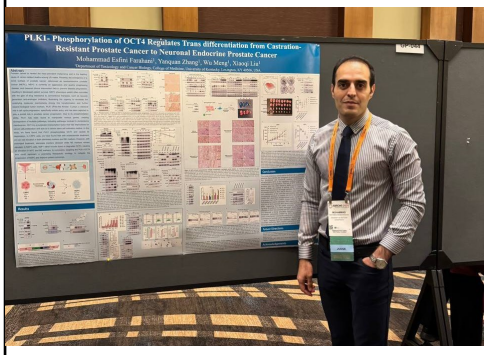


Dr. Chun Li joined the Department of Toxicology & Cancer Biology at the University of Kentucky as a Post-Doctoral Scholar in Dr. Zhiguo Li's lab in August 2025. Dr. Chun Li conducts research on prostate cancer biology, with a focus on studies using genetically engineered mouse models and investigations in cancer immunotherapy. Their work involves experimental design, data analysis, and the preparation of scientific manuscripts, with an interest in translational cancer research.

Lab Activity:

Xiaoqi Liu's Lab:

Dr. Xiongjian "James" Rao, Scientist II:
Received second place in Poster Presentation, Postdoctoral/Staff, at the 2025 Cancer & Metabolism Symposium.



Mohammad Esfini Farahani, PhD Student:
Attended ABRCMS 2025 with his COM travel award and the MCC travel award. The title of his poster was "PLK1-Phosphorylation of OCT4 Regulates Transdifferentiation from Castration-Resistant Prostate Cancer to Neuroendocrine Prostate Cancer." Nov 19-22, 2025.



Fatemeh Seilani, PhD Student:
Selected for the Scientist Mentoring & Diversity Program (SMDP) and attended their one-week training held during the BIO International Convention in early June 2025. The program provided industry-focused workshops, leadership training, and the opportunity to connect with mentors and professionals from major biotech and pharmaceutical companies.



Lab Activity (continued):

Luksana Chaiswing's Lab:

Sara Macias Palacio, PhD Student:



1. Markey Cancer Center Travel Award for RRS meeting. Aug 2025.
2. Dr. Matt Devalaraja Graduate Student Career Support Award, DTCB. Aug 2025
3. Outstanding Scholar Awardee (Top12), Radiation Research Society, San Juan, Puerto Rico. Sept 2025.
4. First place for poster presentation, Bioelectronics and Nanomedicine Research Center Symposium, Uky. Oct 2025.
5. Travel Award and Young Investigator award (highest score in cancer category) , SfRBM25 32nd Annual Conference, Washington, DC, USA. Nov 2025.

Kahleel Guerrier, PhD Student:



1. Dr. Matt Devalaraja Graduate Student Career Support Award, DTCB. Aug 2025.
2. Young Investigator award, SfRBM25 32nd Annual Conference, Washington, DC, USA. Nov 2025.
3. Markey Cancer Center Travel Award for SFRBM meeting. Dec 2025.





Sophia Roth, Undergraduate Student:

Honorable Mention for the Glenn B. Collins Undergraduate Research Achievement Award. Dec 2025.

Lab Activity (continued):

Zhiguo Li's Lab:

Amos Akinyemi, PhD Student:

Participated in the FIRST Program at Procter & Gamble (P&G). Amos was selected to present in the program and the departmental travel grant supported his participation.







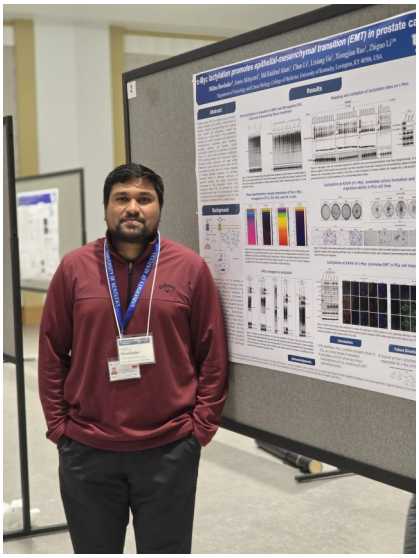






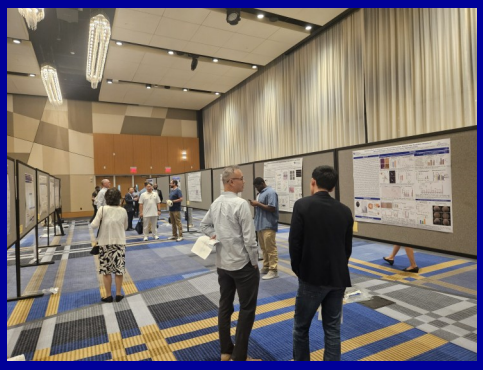
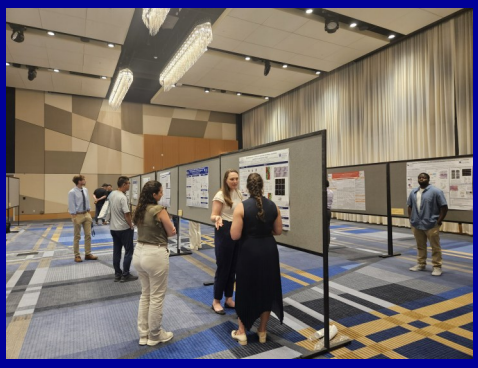
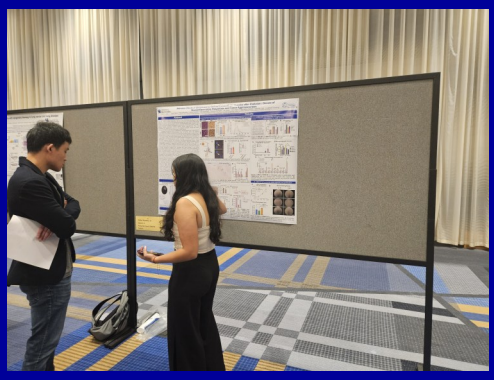
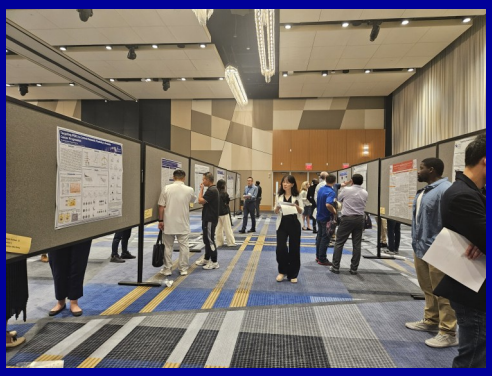
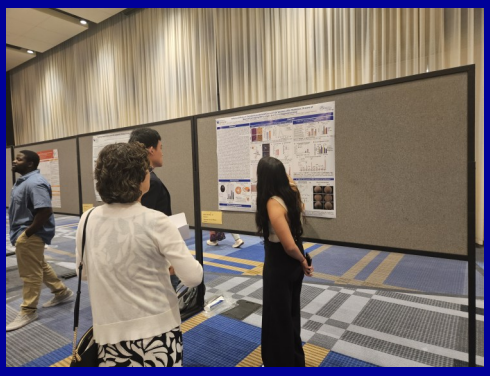
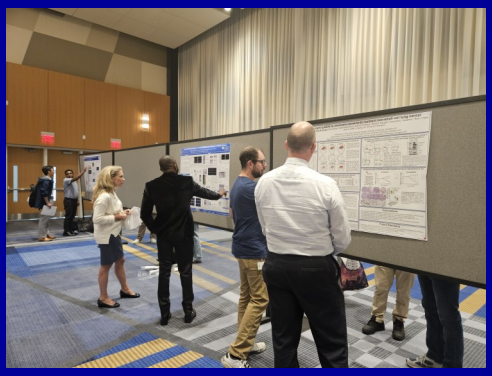
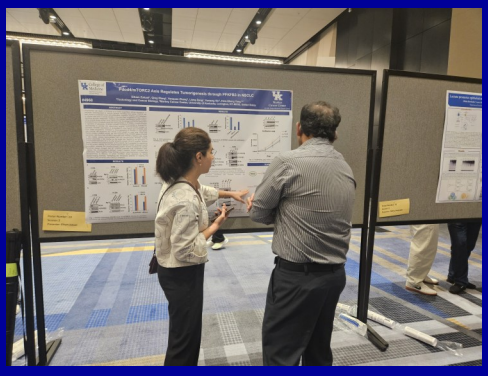
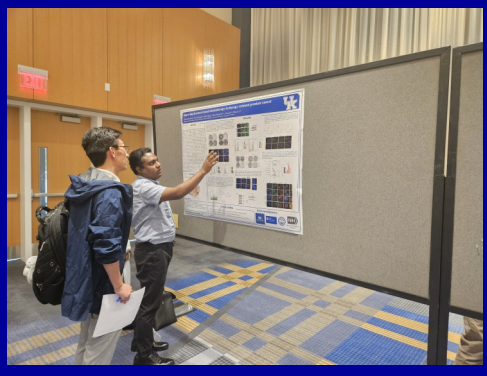
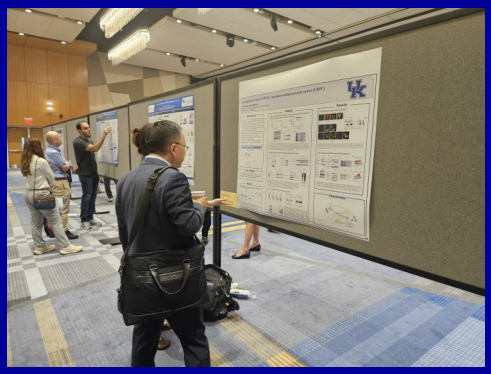
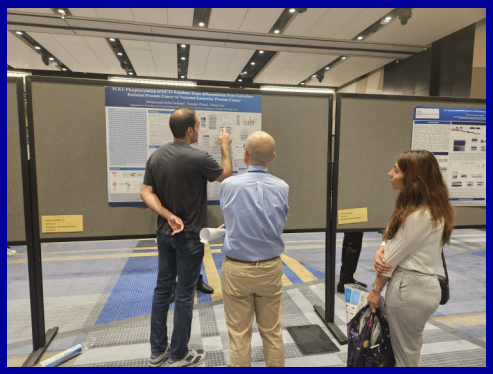
Mithu Howlader, PhD Student:

Received first place in the Poster Presentation, Student, at the 2025 Cancer & Metabolism Symposium. This wonderful event was hosted by the University of Kentucky COBRE for Cancer and Metabolism, in collaboration with COBRE programs from the University of Arkansas, University of Oklahoma Health Sciences Center, University of Louisville, and Tulane University.

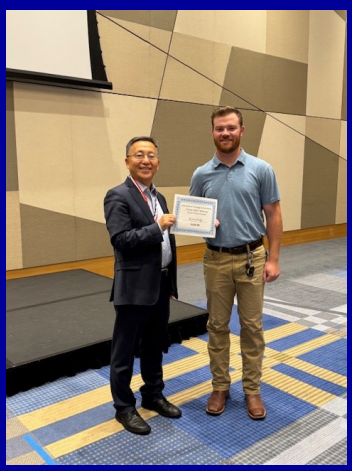


DTCB Annual Retreat

The DTCB Annual Retreat was held on Friday, August 15th, 2025 at UKY's Gatton Student Center. Thank you everyone who helped organize it!

2025 DTCB Annual Retreat Award Winners—Congratulations!



Tristin Miller Memorial Good Citizen Award:
Kevin Fulp



Dr. Matt Devalaraja
Graduate Student Career Support Award:
Amos Akinyemi



Dr. Matt Devalaraja
Graduate Student Career Support Award:
Sara Macias Palacio



Dr. Matt Devalaraja
Graduate Student Career Support Award:
Elham Zokaei



Outstanding Poster Presentation
Overall Winner:
Mohammad Esfini Farahani



Outstanding Poster Presentation
1st Place—Post-Doc:
Dr. Josiane Weber Tessmann



Outstanding Poster Presentation
1st Place—Student:
Mohammad Esfini Farahani



Outstanding Poster Presentation
2nd Place—Student:
Amos Akinyemi



Outstanding Poster Presentation
3rd Place—Student:
Felix Oyelami

Photos of the 2025 DTCB Annual Retreat Olympic Games























Photos of the 2025 DTCB Annual Retreat Olympic Games Award Winners—Congratulations!
Thank you to Kevin Fulp and Amos Akinyemi for organizing the games!



Glove Relay Game 1st Place:
L to R: Niyi Obaleye, Christian Gosser, Sara Macias Palacio, Dave-Preston Esoe, Felix Oyelami, Andrew Shinkle



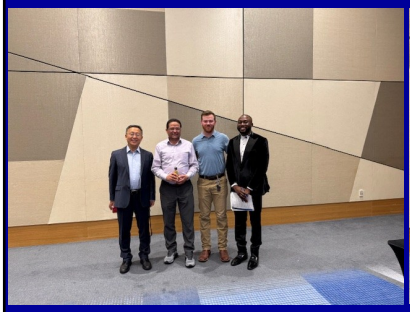
Glove Relay Game 2nd Place:
L to R: Fatemeh Seilani, Mansoureh Nouri, Dr. Yanquan Zhang, Dr. Xiaoqi Liu, Mohammad Esfini Farahani, Dr. Pingli Mo



96 Well Plates Game 1st Place:
Christian Gosser and Elham Zokaei



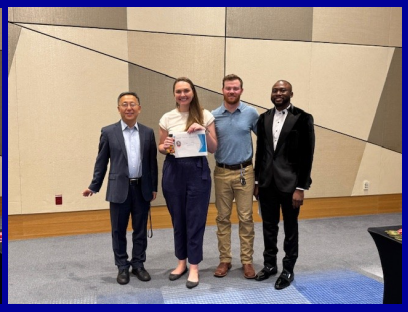
96 Well Plates Game 2nd Place:
Sara Macias Palacio



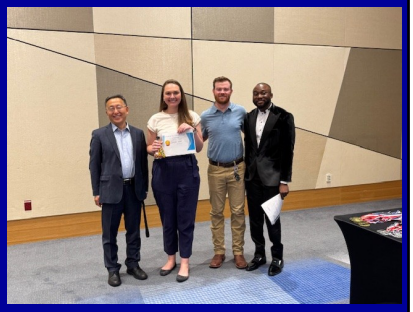
96 Well Plates Game 2nd Place:
Dr. Mohamed Kaddah



Beaker Transfer Game 1st Place:
Mansoureh Nouri



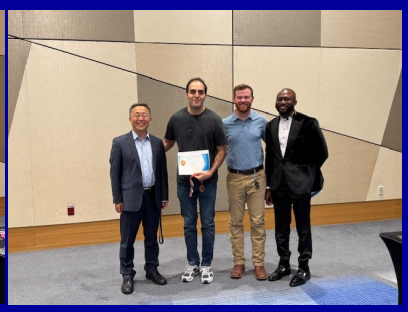
Beaker Transfer Game 2nd Place:
Dr. Josiane Weber Tessmann



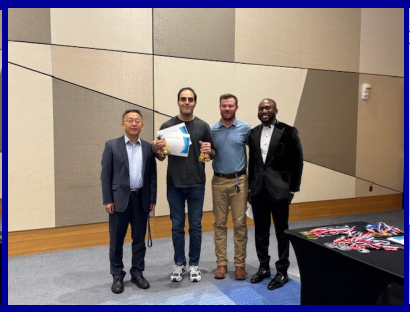
Pipette Game 1st Place:
Dr. Josiane Weber Tessmann



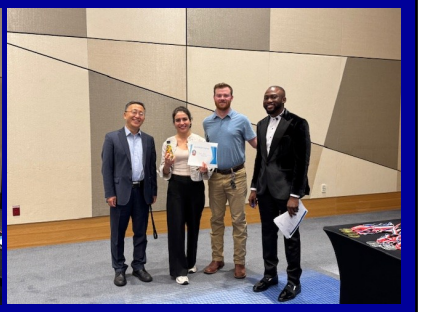
Pipette Game 2nd Place:
Felix Oyelami



Pipette Game 3rd Place:
Mohammad Esfini Farahani



Blind Weight Game 1st Place:
Mohammad Esfini Farahani



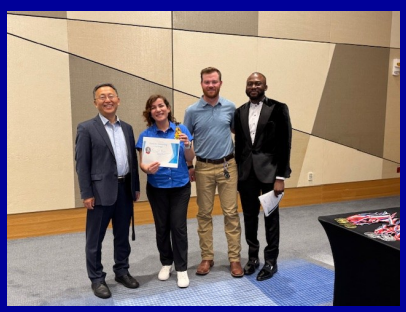
Blind Weight Game 2nd Place:
Elham Zokaei



Blind Weight Game 3rd Place:
Emily Ferguson



Parafilm Stretching Game 1st Place:
Mohammad Esfini Farahani



Parafilm Stretching Game 2nd Place:
Mansoureh Nouri



Parafilm Stretching Game 3rd Place:
Fatemeh Seilani

Fall 2025 Semester: DTCB Monday Seminars
12:00-1:00 PM
MN 463

Aug 25, 2025: Dee Mazzetti and Dr. Noe Tirado-Muniz, University of Kentucky
(Dr. Xiaoqi Liu)
Sept 8, 2025: Sara Macias Palacio, PhD Candidate
(Dr. Chaiswing)
Sept 15, 2025: Dr. Qingding Wang, University of Kentucky
(Dr. Li)
Sept 22, 2025: Avery Childress, PhD Candidate
(Dr. Brainson)

Sept 29, 2025: Dr. Sheng Tong, University of Kentucky, Biomedical Engineering
(Dr. Li)
Oct 6, 2025: Dr. Ling Cai, Duke University
(Dr. Fong)
Oct 13, 2025: Dr. Hao Chang, University of Wisconsin at Madison
(Dr. Mohrin)

Oct 20, 2025: Dr. Jason Liu, University of Texas Health San Antonio
(Dr. HS Yang)

Nov 3, 2025: Kevin Fulp, PhD Candidate
(Dr. Xiao)
Nov 10, 2025: Dr. Jinpeng Liu, University of Kentucky
(Dr. Li)

Nov 17, 2025: Dr. Derek Allison, University of Kentucky
(Dr. Xiaoqi Liu)
Nov 24, 2025: Oluwafunminiyi Obaleye, PhD Candidate
(Dr. Xiao)
Dec 1, 2025: Dr. Samuel Awuah, University of Kentucky
(Dr. Xiaoqi Liu)
Dec 8, 2025: Dr. Hai Wang, Roswell Park Comprehensive Cancer Center
(Dr. Wei)

Fall 2025 Semester: DTCB Faculty Grant Talk Series

12:00-1:00 PM

HKRB 410A

Sept 26, 2025: Eunus Ali

Sept 30, 2025: Luksana Chaiswing (* at 2:00 PM)

Oct 10, 2025: Mary Mohrin

Oct 24, 2025: Zhiguo Li

Nov 14, 2025: Kate Zaytseva

Fall 2025 Semester: DTCB Trainee Talk Series
12:00-1:00 PM
MN 463

Sept 19, 2025: Mansoureh Nouri (Dr. Xiaoqi Liu) and Mithu Howlader (Dr. Li)

Oct 3, 2025: Liang Zeng (Dr. HS Yang) and Elham Zokaei (Dr. HS Yang)

Oct 17, 2025: Kahleel Guerrier (Dr. Chaiswing) and Felix Oyelami (Dr. J. Yang)

Nov 21, 2025: Andrew Shinkle (Dr. J. Yang) and Cheng Zhang (Dr. Fong)

Annual DTCB Holiday Party

The 2025 Department of Toxicology and Cancer Biology Holiday Party took place December 12, 2025 at Sedona Taphouse in Lexington, KY. It was an festive evening filled with socializing, food, and drink!



Congratulations!

Dr. Tempany Arbogast successfully defended her thesis in August 2025. Congrats to her and her mentors Drs. Xiaoqi Liu and Christine Brainson, and her other committee members Drs. Jian Fu and Gang Chen!

Dr. Arbogast is now working at the WV Department of Environmental Protection.





Welcome to Our New Students!

New Forensics Students:

Front Row (L to R): Abby Noren, Laura Hoskins, Presley Richardson, Kealy Stephens, Olivia Watson, Alessandra Bonavita, Abigail Dumbauld, Wintana Demoz

Back Row (L to R): Martin Escalera-Padron, Katie Riley, Tatum Snyder, Jaden Minix, Daniel Daly, Kevin Mochengo

Not pictured: Terrisha Buckley, Ananya Maria Paul, Madelyn Czuba, Tay Davenport, Jan Wilson



New TOX MS Student:

Seth Brahney



Student Forum Events:

The Student Forum continues to coordinate activities for <u>all students</u> to participate in! Keep an eye on your email for future activities and meetings. Below are photos from recent events.

Sept 12, 2025: Welcome Back Cookout at Shillito Park
Oct 18, 2025: Natural Bridge Hike



Photos from the Welcome Back Cookout at Shillito Park:











Photos from the Natural Bridge Hike:







In the large group picture:

Back Row, Left to Right: Kealy Stephens, Abigail Dumbauld, Jaden Minix, Alessandra Bonavita, Rakibul Alam, Mithu Howlader, Kevin Fulp, Dave Esoe, Botao Zhang, Amos Akinyemi
Front Row: Christian Gosser

Our MS in Forensic Toxicology and Analytical Genetics second year students start their required internships next semester. Check out where they are all going!

Destiny Addison
Lexington Police Department
UKY Gluck Equine Research Center — Genetic Testing

Farzam Alavi
California State University, Northridge (CSUN): Dr. Mariano Loza-Coll's Lab (Completed Summer 2025)
Lexington Police Department

Ryan Asmann
UKY Harm Reduction Hub (Completed Summer 2025)
EQIAS Labs

Terrisha Buckley
Rood & Riddle Equine Hospital
UKHC Special Chemistry/ Toxicology Lab (Summer 2026)

Wintana Demoz
UKY Harm Reduction Hub
UKHC Special Chemistry/ Toxicology Lab

Ariel Harris
UKY Harm Reduction Hub
Integrated DX

Ashlyn Mallory
TN Bureau of Investigation
Metro Nashville Police Dept. Crime Lab

Ananya Maria Paul
Lexington Police Department
UKHC Clinical Moleculer & Genomic Pathology Lab

Aj McCondichie
TruDiagnostic
University of Chicago- Cytogenetics & Cytogenomics Laboratory

Amber Nguyen
UKY: Dr. Christine Brainson's Lab
UKY: Dr. Tadahide Izumi's Lab

Sydney SIngh
Luxor Scientific
South Carolina Law Enforcement Division (SLED)

Lexi Ward
Integrated DX (Completed Summer 2025)
UKHC Special Chemistry/ Toxicology Lab

Good luck to each of you! We can't wait to hear about your experiences at the poster presentation at the end of the next semester (May 2026)!

Student Activity:

Jan Wilson, MS in Forensic Toxicology and Analytical Genetics student:

September 2025: Jan was a recipient and awarded "Exceptional Results Through Teamwork".

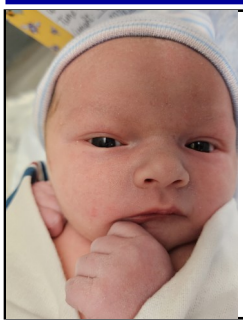
Jan worked at the Jackson County Medical Examiner's Office in Kansas City, Missouri under Chief Medical Examiner: Dr. Lindsey Haldiman, D.O. Jan and the Forensic Autopsy Team were honored to receive the "Best Teamwork" award for their efforts in supporting forensic cases. Jan's department won out of seven nominated.
Through their dedication and collaboration, they assist pathologists, law enforcement, and all those who rely on forensic evidence by providing clear, accurate answers in their autopsy reports.



Left to Right: Cindy Lazo, Jan Wilson, County Executive Frank White Jr., Priscilla Acero-Villasenor, Roe Ahern, Nicole Stueve, Forensic Supervisor Holly Cass



Baby Watch 2025



Ashley Cowan, Department Administrator II for Toxicology & Cancer Biology, and her family, welcomed their fourth child on September 19, 2025. A healthy baby boy – Finn Riley Cowan. Finn joins a big sister, Liliana, and 2 big brothers, Ezra and Callum. Congratulations Cowan family!

NEWSLETTER ITEMS

Want to include something in the next newsletter? Send your stuff to ToxAndCancerBio@uky.edu



Thank you all for a great semester and have a nice Winter Break!