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

**Dr. Zhiguo Li:** NIH R01 CA266579, “Targeting Polo-Like Kinase 1 in Prostate Cancer to Enhance Therapeutic Efficacy”. Total funding: $2,226,128 for 5 years. The studies of this proposal will dissect the role of Plk1/p62/Nrf2 signaling pathway in CRPC, and to exploit the potentially therapeutic strategies that could be benefit the CRPC patients. Specifically, the proposed study aims to test the central hypothesis that polo-like kinase 1 (Plk1) in the regulation of MDSC by activating p62/Nrf2 signaling pathway, eventually contributing to disease progression into castration-resistant stage. Co-Investigators include Drs. Derek Allison, Lutz, Charles, and Jinfeng Liu.

**Dr. Xiaoqi Liu:** 1. NIH R01 CA157429, “Overcoming Drug Resistance of Castration-Resistant Prostate Cancer”. Total funding: $1,447,357 for 5 years. The studies of this proposal will dissect how Plk1-associated kinase activity regulates epigenetic change. Specifically, the proposed study aims to test the central hypothesis that Plk1 phosphorylation of EZH2 leads to a functional switch from PRC2-dependent gene repression to PRC2-independent but AR-dependent transcription activation, eventually contributing to disease progression into castration-resistant stage. Most of the preliminary data of this grant was generated by Dr. Ricky Wang, a former graduate student of the lab. Co-Investigators include Drs. Derek Allison, Li Chen, and Christine Brainson. This is the second competitive renewal of an existing grant, originally started in 2011.

**2. COBRE COM pilot: Plk1 in serine metabolism of prostate cancer**

**Dr. Teresa Fan:**


2. COBRE CCM pilot QB She PI, T. Fan co-I. Metabolomics support for lipid metabolism reprogramming analysis.

3. COBRE CCM pilot BM Evers PI, T. Fan co-I

**Dr. Richard Higashi:** COBRE CCM pilot T. Barrett PI, R. Higashi co-I. Validation of peripheral blood exosome lipid biomarkers in lung cancer and IBD.

**Recently Accepted or Published Manuscripts:**

**Dr. Xiaoqi Liu:**


Recently Accepted or Published Manuscripts:

Dr. Changhai Tian:
1. Tian C, Gao L, Rudebush TL, Yu L and Zucker IH*. Extracellular vesicles regulate sympatho-excitation by Nrf2 in heart failure. Circulation Research. 2022; 131:00–00. DOI: 10.1161/CIRCRESAHA.122.320916 (#Corresponding authors) (IF:23.213)

Dr. Jin-Ming Yang:

Dr. Luksana Chaiswing:

Drs. Fan, Higashi and Lane:

Faculty Activity:

Dr. Xiaoqi Liu, Presentations:
2. August 18, 2022, University of Louisville, Department of Pharmacology and Toxicology, Louisville, KY 40202 “Plk1 in lung cancer”.
3. August 26, 2022, University of Georgia, Department of Environmental Health Science, Athens, GA 30602 “Plk1 in Cr (VI)-induced lung cancer progression”.

Dr. Teresa Fan, Presentations: Innate immune activation by checkpoint inhibition in human patient-derived lung cancer tissues. 7th CESB Metabolism on Metabolism, UKy
Faculty Activity:

Dr. Jin-Ming Yang: Oncological Sciences F09C fellowship study section. July 14-July 15, 2022

Dr. Nathan Vanderford, Awards - Congratulations on all of your amazing accomplishments!
1. Academy of Medical Educator Excellence in Medical Education Award, Teaching. Award recognizes members of the faculty who have made significant contributions in the educational programs in the College of Medicine at the University of Kentucky.
2. Society of Research Administrators International Excellence Award - Advanced. The award results from your ability to be a self-starter in both your workplace and in your own professional development, as well as your contributions as a speaker at SRAI Meetings.
3. Elected to fill one of two basic science seats on Faculty Council for the next three-year term.

Dr. Nathan Vanderford: Member/Co-chair, National Institutes of Health, Risk, Prevention and Health Behavior F16 Fellowship Special Emphasis Study Section (2022/10 ZRG1 F16-L (20) L)

Lab Activity:

The Wei Lab at 2022 ASBMB Meeting:

Left: Aziza Alshahrani
Right: Na Ding
Lab Activity:
The Zaytseva Lab at a Meeting:

The Goellner Lab at 2022 AACR Meeting:

The Xiaoqi Liu Lab at 2022 AACR Meeting:

Courtney Kelson
Mariah Geisen
Everyone!

Breanna Knicely
Hannah Daniels

Kristin Miller
Everyone!
2022 DTCB Annual Retreat
This year’s Retreat was held August 11, 2022 at UKY’s Gatton Student Center. This year’s Retreat was sponsored by Dr. David Li from MedChemExpress, LLC. Thank you everyone who helped organize it!

2022 Retreat Poster Awards ($50)

Senior Students (L to R):
Qiongsi Zhang (Xiaoqi Liu)
Xiaojing Cui (Ying Liang)
Kristin Miller (Eva Goellner)

Junior Student:
Chrispus Ngule (J. Yang)

Post Doctoral Scholar:
Dong Li (Xia Liu)
2022 DTCB Fellowships and Awards

Thesis Fellowship ($30,000): Xiaojing Cui (Liang)

Excellent Research Fellowship ($30,000): Na Ding (Wei)

Research Fellowship ($5,000): (L to R) Kristin Miller (Goellner), Yanning Hao (Wei), Mariah Geisen (Zaytseva), Hannah Daniels (Goellner)

Yulan Sun’s Early Publication Award ($500): (L to R) Kristin Miller (Goellner), Na Ding (Wei)

Yulan Sun’s Outstanding Graduate Student Award ($1,000): (L to R) Chaohao Li (Liu), Jenni Ho (St. Clair)

Dr. Matt Devalaraja Grad Student Travel Award ($500): (L to R) Chrispus Ngule (J. Yang), Kassandra Naughton (Brainson), Caitlin Miller (Chaiswing)
Welcome to our new students!

New PhD Students:
Tristin Miller, Hamed Maasoumyhaghghi, Han Cong, Rakibul Alam, Mohammad Esfini Farahani, Min Zhang, Avery Childress, Maria Edwin, Christian Gosser, Kahleel Guerrier, Cheng Zhang, Dave-Preston Esoe.

New Forensics Students:

New TOX MS Student:
Abigail Freeman

Lab Placement of Second Year PhD Students
Dr. Zhiguo Li Lab - Amos Akinyemi
Dr. Kate Zaytseva Lab - Jerika Durham
Dr. Ying Liang Lab - Kevin Fulp, Niyi Obaleye
Dr. Eva Goellner - Breanna Knicely
Dr. Xiaoqi Liu - Tempany Arbogast, Fatemeh Seilani, Maria Nur, Sai Wu

Congratulations to our PhD Students who passed their qualifying exam!
L to R: Tempany Arbogast, Charles Bailey, Mariah Geisen, Sarah Alqithami, Chrispus Ngule
The Student Forum has been coordinating some fun activities! Check it out -

July: Mammoth Cave Kayaking

Other Activities:

July: Tours of Mammoth Cave
August: General Meeting
September: Welcome Back Party!

Keep an eye on your email for future activities and meetings!

Cancer Biology T32 Fellows:

Congratulations to Courtney Kelson and Kate Jones on being awarded Predoctoral Fellowship positions on the Cancer Biology T32 (Markey Cancer Center)!

Recent PhD Graduation:

Dr. Chaohao Li (Xiaoqi Liu)
Dr. Li is now a Postdoctoral Scholar in Dr. Xiaoqi’s Lab

Congratulations!

Alumni Awarded K01:

Dr. Christina Wicker (Dr. Tadahide Izumi’s former student), now a postdoc at University of Cincinnati awarded K01.

Grant title: Mentored Career Development Award: Isothiocyanates to Improve response to Proton Radiotherapy

Funding agency: National Institute of Dental & Craniofacial Research

Total Award: $300K
Budget period: 2022-2025