DEPT. OF TOXICOLOGY AND CANCER BIOLOGY NEWSLETTER

Volume 3, Issue 1

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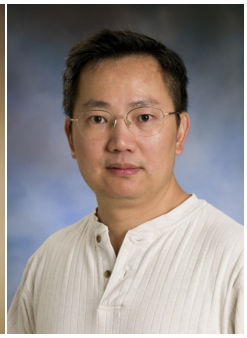
THANK YOU!

Dr. Alvin C. Bronstein gave $250.00 to the dept. Many thanks for your support!

Dr. Liyue Huang gifted $1,500 to the dept. Thank you for your generous gift!

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



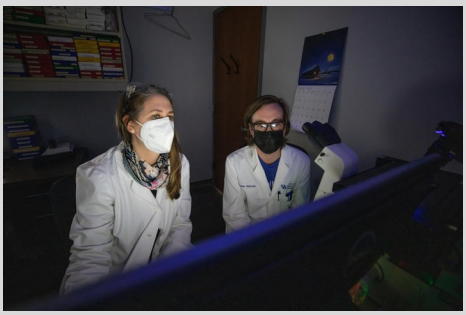


Daret St. Clair (MPI in grant below): Working with. Dr. Peter Zhou (MPI, Contact), Dept. of Molecular and Cellular Biochemistry, Dr. St. Clair and team have successfully renewed the COBRE Grant.

The University of Kentucky (UK) Center of Biomedical Research Excellence on Cancer and Metabolism (CCM) was established in March 2017 by a multidisciplinary team of basic and clinical scientists engaged in cutting- edge research on metabolic dysregulations in cancer, an emerging hallmark of disease responsible for tumor development, drug resistance and distant metastasis. The overarching goal of the Phase II CCM is to continue efforts to expand a thematically focused multidisciplinary infrastructure dedicated to defining the contribution of metabolism in the development and treatment of cancer and to use this novel multidisciplinary platform to develop promising project leaders with enhanced skills in an exciting new area of cancer research. With a dedicated team of mentors combining basic and clinical expertise in redox biology, cancer cell signaling, epigenetics, systems biochemistry and clinical trials, as well as core strengths in advanced metabolomics and sophisticated cancer imaging, we will accomplish this overall goal by conducting high-quality basic and translational research addressing metabolic reprogramming governing tumor initiation, metastasis, drug resistance and recurrence.

Funding: $2,289,653/year for 5 years.

Congratulations to everyone involved in earning this renewal!



Dr. Christine Brainson's lab is doing some really incredible work - check out how her lab is developing new treatment approaches for lung cancer in the article below!

Click here to view the UKNow article.

Recently Accepted or Published Manuscripts:

Jin-Ming Yang:
Das JK, Kumar A, Ren YJ, Peng HY, g Wang L, Xiong XF, Alaniz RC, De Figueiredo P, Ren XC, Liu XQ, Ryazonov AG, **Yang JM***, Song* JX. Elongation Factor-2 Kinase is a Critical Determinant of the Fate and Antitumor Immunity of CD8+ T Cells. Sci. Adv. 8(5): eabl9783, Feb. 4, 2022. PMID: 35108044; PMCID: PMC8809536

Teresa Fan and Andrew Lane:
X. Chen, B. Sunkel, M. Wang, S. Kang, T. Wang, JN Rashida Gnanaprakasam, L. Liu, T. A. Cassel, D. A. Scott, A. M. Muñoz-Cabello, J. Lopez-Barneo, J. Yang, **A. N. Lane**, B. Stanton*, T**. W.-M. Fan***, and R. Wang* (2022) Succinate dehydrogenase/complex II is critical for metabolic and epigenetic regulation of T cell proliferation and inflammation Science Immunology in press

Recently Accepted or Published Manuscripts (continued):

Teresa Fan and Daret St. Clair:
S.K. Dhar, T.L. Scott, Wang, C, **T. W-M. Fan**, **D. K. St. Clair***(2022) Mitochondrial superoxide targets energy metabolism to modulate epigenetic regulation of NRF2-mediated transcription. Free Rad. Biol.& Med. 79:181-189

Kate Zaytseva:
Lichao Guo, Wen Zhang, Yanqi Xie, Xi Chen, Emma E Olmstead, Mengqiang Lian, Baochen Zhang, **Yekaterina Y Zaytseva**, B. Mark Evers, Hans Peter Spielmann, Xifu Liu, David S Watt, and Chunming Liu. Diaminobutoxy-substituted Isoflavonoid (DBI-1) Enhances the Therapeutic Efficacy of GLUT1 inhibitor BAY-876 by Modulating Metabolic Pathways in Colon Cancer Cells. Accepted to Molecular Cancer Therapeutics Feb.7, 2022.

James Drury, Piotr G. Rychahou, Courtney O. Kelson, Mariah E. Geisen, Yuanyuan Wu, Daheng He, Chi Wang, Eun Y Lee, Mark B Evers, and **Zaytseva YY.** Upregulation of CD36, a Fatty Acid Translocase, Promotes Colorectal Cancer Metastasis by Increasing MMP28 and Decreasing E-Cadherin Expression. Cancers (Basel). 2022 Jan 5;14(1):252. doi:10.3390/cancers14010252.PMID: 35008415

Xiaoqi Liu:
Korns, J., **Liu, X.**, and Takiar, V. A review of Plk1: Thinking outside of the (polo) box, Molecular Carcinogenesis, 2022, 61, 254-263.

Zhang, Y., Mao, F., and **Liu, X**. Par-4 in cell cycle regulation, Springer Nature Switzerland AG 2022, 61. V. M. Rangnekar (ed.), Tumor Suppressor Par-4. https://doi.org/10.1007/978-3-030-73572-2_2

Faculty Activity:

Nathan Vanderford:
1. Selected to the American Society for Biochemistry and Molecular Biology (ASBMB) class of the ASBMB Fellows. This honor recognizes scientists for their meritorious efforts to advance the molecular life sciences through sustained outstanding accomplishments in areas including scientific research, education, mentorship, commitment to diversity, and service to the society and scientific community. Congratulations!
2. ACTION Program has released its second book! You can check out more information by **clicking here**.
3. Appointed to the COM Appointment, Promotions and Tenure Committee.

Jin-Ming Yang:
1. Serving on the University Senate
2. NIH Study Section: Molecular Oncogenesis (MONC). February 28-March 1, 2022.

Luksana Chaiswing:
1. Gave a talk at TCI Hybrid Seminar Series for the Tisch Cancer Institute at the Icahn School of Medicine (1/18/2022)
2. Presented research to the Prostate Cancer Center of Excellence at Mount Sinai (2/16/2022)
3. NIH Study Section: Cancer Health Disparity. February 2-3, 2022.

Andrew Lane:
1. Presented at Scientific Rigor (UKY). March 9, 2022.

Jian Fu:
1. NIH Study Section: Innate Immunity and Inflammation. March 10-11, 2022.

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Faculty Activity (continued):

Kate Zaytseva:

1. NIH Study Section: MCT2. February 28-March 1, 2022.

Ying Liang:

1. NIH Study Section: Basic Biology of Blood, Heart and Vasculature (BBHV). February 15-16, 2022.

Christine Brainson:

1. NIH Study Section: Immuno-Oncology Research OTC D08. February 2022.

Spring 2022 Semester: DTCB Monday Seminars
12:00-1:00 PM
MN 463

March 21: Dr. Yoannis Imbert-Fernandez, University of Louisville
(Dr. Kate Zaytseva)
March 28: Student seminar: Tanner DuCote
(Dr. Brainson)
April 4: Dr. Shawn Davidson, The Lewis-Sigler Institute
(Dr. Lane)
April 11: Dr. Mark Kester, University of Virginia
(Dr. JM Yang)
April 18: Dr. Kerry Burnstein, University of Miami
(Dr. Xiaoqi Liu)
April 25: Dr. Alicia Timme-Laragy, U of Massachusetts-Amherst
(Dr. Xiaoqi Liu)
May 2: Student seminar: Jenni Ho (via ZOOM)
(Dr. St. Clair)

Spring 2022 Semester: DTCB Faculty Grant Talk Series
12:00-1:00 PM
Via ZOOM

April 1: Dr. Eva Goellner
April 15: Dr. Changhai Tian

Spring 2022 Semester: DTCB Trainee Talk Series
12:00-1:00 PM
Via ZOOM

March 25: Caitlin Miller (Chaiswing) and Sapta Ganguly (Rangnekar)

April 8: First year students (12PM - 1:30PM)
Arbogast / Ayarick / Durham / Fulp / Obaleye

April 22: First year students (12PM - 1:30PM)
Akinyemi / Nur / Knicely / Seilani / Wu

Student Activity:

The Student forum enjoyed a couple of events in January and February!

January: Students enjoyed socializing and ice skating

February:

2/11: Made Valentines Day cards for Richmond Place Senior Living Community

2/24: Good Research Practices Resource Center Seminar on record keeping and SOPs

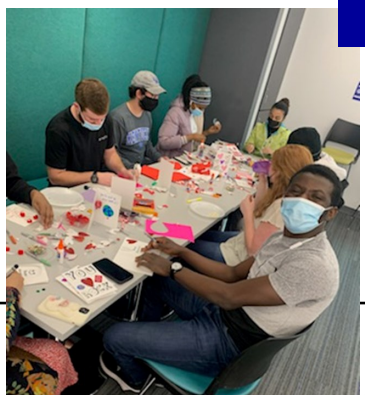
Upcoming Events:

3/24: Mental Health Seminar on Resiliency in Graduate School. Food will be provided for those who attend in person.

3/26: Volunteering for the Hope Center making sandwiches for food truck.









Forensic Students 2nd Internships for Spring 2022 Semester

KY Division of Labs - Environmental Chemical Branch
Sean Donaldson

KY Newborn Screening Lab:
Alexis Enriquez-Jones
Dave-Preston Esoe

Metro Nashville Police Dept. Crime Lab:
Olivia Fowler
Elena Shelepak

Dr. Kate Zaytseva's Lab (UKY):
Christian Gosser

ChemImage Corporation:
Genell Jasper

KY Energy & Environment Cabinet:
Marshall Heath

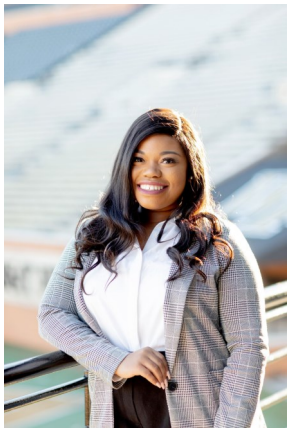
LGC Group:
Thu Nguyen

UKY Pathology - Genomics:
Kelly Rademacher

KY Division of Labs - Microbiology:
Jordan Brown

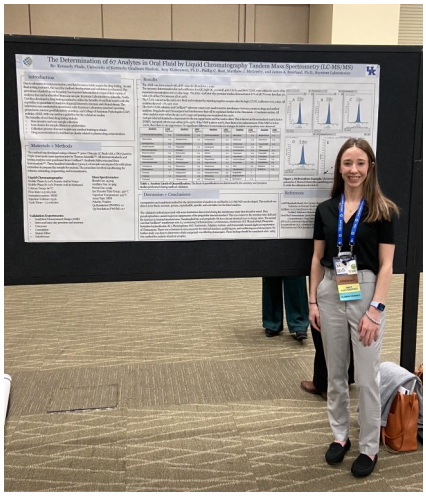
FL Dept. of Law Enforcement Forensic Services:
Jordyn Rose

Dr. Eunsook Lee's Lab (FL A&M):
Kaleigh Wingate



Kaleigh Wingate, second year forensic student, was recently inducted into Omicron Delta Kappa Honor Society and accepted into two medical school programs. Congratulations on both of your achievements, Kaleigh!

Click here to read more about the induction to Omicron Delta Kappa Honor Society.



Kennedy Plude, second year forensic student, recently attended the Annual American Academy of Forensic Sciences Conference and presented her poster for the method validation she did at Keystone Labs during her first internship.

She won Best Toxicology Poster. Congratulations, Kennedy!

Sireesha Gutti, a high school student doing research in Dr. Ying Liang's lab, received 1st Place in the KY Regional Science Fair. Her project is focused on the sex/gender difference in acute myeloid leukemia. She will represent KY at the International Science Fair in May.





Hannah Daniels and **Breanna Knicely**, PhD students in Dr. Eva Goellner's lab, were both awarded GMaP Region 1 North Travel Awards to support their attendance at the AACR Annual Meeting. Congratulations Hannah and Breanna!



Dr. Hami Hemati, Postdoc in Dr. Xia Liu's lab, was awarded a Pilot Grant by the Substance Use Disorder Research Priority Area, University of Kentucky. Titled, "The Role of Alcohol Abuse in Osteoclastogenesis-Mediated Impaired Neutrophil Function". Total Funding: $10,000 for 18 months.

Dr. Hami Hemati also won a Poster Presentation Award; 4th annual Substance Use Research Event (SURE), University of Kentucky, March 1, 2022. Title: Bone Marrow's Level of Heavy Alcohol Consumption Enhances Granulopoiesis and Osteoclastogenesis in vitro.