

## Program Predoctoral Trainees



**Brian F. Clem, Ph.D.**

- **Dates of Appointment:** July 1, 2004 to January 31, 2005
- **Mentor:** Barbara J. Clark, Ph.D.
- **Graduate Program:** Biochemistry & Molecular Biology
- **Dissertation Project:** Mechanisms of transcriptional regulation of the mouse steroidogenic acute regulatory (StAR) protein gene promoter



**Kevyn E. Merten, Ph.D.**

- **Dates of Appointment:** February 1, 2005 to December 31, 2006
- **Mentor:** Y. James Kang, Ph.D.
- **Graduate Program:** Pharmacology & Toxicology
- **Dissertation Project:** Effect of zinc on doxorubicin-induced activation of the calcineurin signaling pathway and the relation to myocardial cell death and hypertrophy



**Jason M. Walraven, Ph.D.**

- **Dates of Appointment:** July 1, 2004 to August 31, 2007
- **Mentor:** David W. Hein, Ph.D.
- **Graduate Program:** Pharmacology & Toxicology
- **Dissertation Project:** Computational and functional analyses of human and rat N-acetyltransferase genetic variants



**Samuel C. McNeely, Ph.D.**

- **Dates of Appointment:** July 1, 2004 to October 31, 2007
- **Mentor:** J. Christopher States, Ph.D.
- **Graduate Program:** Pharmacology & Toxicology
- **Dissertation Project:** Sensitivity to sodium arsenite depends on susceptibility to mitotic arrest-associated apoptosis



**Krista A. Riggs, Ph.D.**

- **Dates of Appointment:** July 1, 2004 to December 31, 2007
- **Mentor:** Carolyn M. Klinge, Ph.D.
- **Graduate Program:** Biochemistry & Molecular Biology
- **Dissertation Project:** Role of COUP-TFII in tamoxifen-resistant human breast cancer



**Maia L. Green, Ph.D.**

- **Dates of Appointment:** January 1, 2008 to June 30, 2009
- **Mentors:** Russell A. Prough PhD and Thomas B. Knudsen, PhD
- **Graduate Program:** Biochemistry and Molecular Biology
- **Dissertation Project:** Pharmacological Intervention of stress-induced release of p53 from the mitochondria



**J. Philip Kaiser, Ph.D.**

- **Dates of Appointment:** September 1, 2007 to November 30, 2007\*
- **Mentor:** Gavin E. Arteel, Ph.D.
- **Graduate Program:** Pharmacology & Toxicology
- **Dissertation Project:** The role of PKC-epsilon in models of alcohol- and toxin-induced liver disease
- \*Recipient of individual NRSA fellowship F31-AA017346 effective December 1, 2007



**Afsoon Moktar, Ph.D.**

- **Dates of Appointment:** July 1, 2009 to June 30, 2010
- **Mentor:** Ramesh C. Gupta, PhD
- **Graduate Program:** Pharmacology and Toxicology
- **Dissertation Project:** The influence of cigarette smoke on DNA damage and repair in human cervical and vaginal cells in vitro and ex vivo



**Nicole A. Lavender, Ph.D.**

- **Dates of Appointment:** October 1, 2008 to September 30, 2010
- **Mentor:** La Creis R. Kidd, PhD
- **Graduate Program:** Pharmacology and Toxicology
- **Dissertation Project:** The role of genetic and environmental oxidative stress factors in prostate cancer



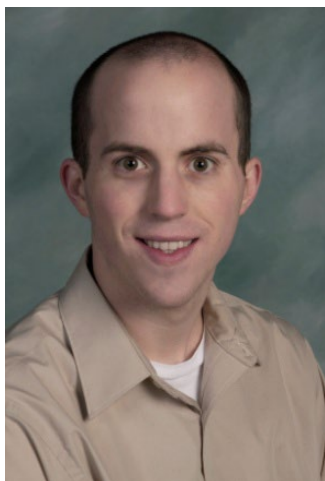
**Gilandra K. Russell, Ph.D**

- **Dates of Appointment:** January 1, 2007 to March 31, 2009
- **Mentor:** Ramesh C. Gupta, Ph.D.
- **Graduate Program:** Pharmacology & Toxicology
- **Dissertation Project:** Sustained systemic delivery of chemopreventive agents in inhibiting dibenzo[*a,h*]pyrene-induced DNA adducts in the lungs of A/J mice



**Erica N. Rogers, Ph.D.**

- **Dates of Appointment:** November 1, 2007 to April 30, 2008\*
- **Mentor:** J. Christopher States, Ph.D.
- **Graduate Program:** Pharmacology & Toxicology
- **Dissertation Project:** The role of curcumin in response to BPDE-induced DNA damage in human lung epithelial cells
- \*Recipient of individual NRSA fellowship F31-ES016719 effective May 1, 2008



**Lindsey Jay Stallons, Ph.D**

- **Dates of Appointment:** December 1, 2007 to November 30, 2010
- **Mentors:** W. Glenn McGregor, MD and J. Christopher States, PhD
- **Graduate Program:** Pharmacology & Toxicology
- **Dissertation Project:** DNA polymerase iota promotes G2/M checkpoint activation and genetic stability after UV-induced DNA damage



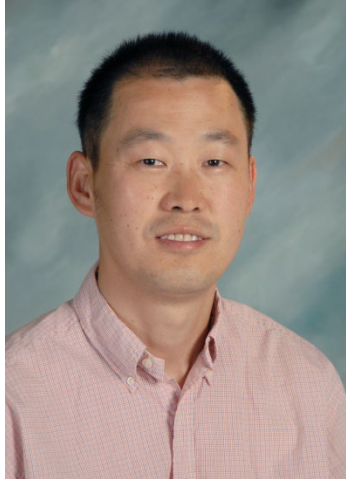
**Lori M. Millner, Ph.D.**

- **Dates of Appointment:** May 1, 2008 to September 30, 2008\*
- **Mentor:** David W. Hein, PhD
- **Graduate Program:** Pharmacology and Toxicology
- **Dissertation Project:** Functional analysis of *N*-acetyltransferase (*NAT1\*10* and *NAT1\*14B*) in complete NATb and NATa mRNA
- \*Recipient of individual United States Department of Defense predoctoral fellowship (BC083107) effective October 1, 2008



**Katherine S. Bourcy, Ph.D.**

- **Dates of Appointment:** July 1, 2009 to June 30, 2011
- **Mentor:** Y. James Kang, PhD
- **Graduate Program:** Pharmacology and Toxicology
- **Dissertation Project:** Mechanistic insights into copper-induced regression of heart hypertrophy



**Pengxiao Cao, Ph.D.**

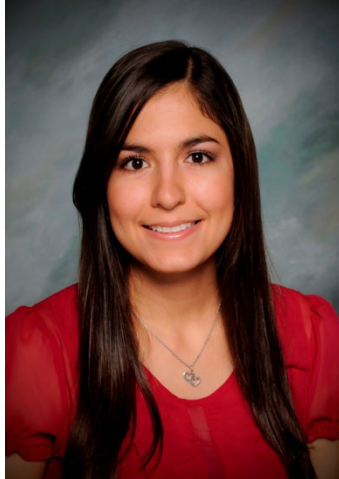
- **Dates of Appointment:** August 1, 2010 to July 31, 2011
- **Mentor:** Ramesh C. Gupta, PhD
- **Graduate Program:** Pharmacology & Toxicology
- **Dissertation Project:** Prevention and treatment of lung cancer by green tea polyphenols



**Stephanie A. Mathews, Ph.D.**

- **Dates of Appointment:** July 1, 2009 to June 30, 2011
- **Mentors:** Shirish Barve, PhD and Craig J. McClain, MD
- **Graduate Program:** Pharmacology and Toxicology
- **Dissertation Project:** Role of HDACS and SAM in Interferon-alpha signaling and epigenetic regulation of anti-HCV gene expression





**Lorena L. Canales, Ph.D.**

- **Dates of Appointment:** August 1, 2011 to December 31, 2011\*
- **Mentor:** Rachel E. Neal, Ph.D.
- **Graduate Program:** Environmental and Occupational Health Sciences
- **Research Project:** Impact of maternal diet on prenatal bisphenol A-induced metabolic syndrome

\*Left Louisville and transferred to Colorado State University for family reasons. Received PhD in Environmental and Radiological Health Sciences from Colorado State University.



**Mary Catherine Chan, Ph.D.**

- **Dates of Appointment:** July 1, 2009 to July 31, 2010\*
- **Mentor:** David J. Tollerud, MD, MPH
- **Graduate Program:** Environmental and Occupational Health Sciences
- **Research Project:** Building a dynamic model linking potential mercury regulations to risk to susceptible populations
- Recipient of individual EPA STAR predoctoral fellowship (FP-91711701-0) effective August 1, 2010.



**Carmine S. Leggett, Ph.D.**

- **Dates of Appointment:** December 1, 2010 to August 31, 2012
- **Mentor:** David W. Hein, PhD
- **Graduate Program:** Pharmacology and Toxicology
- **Research Project:** Role of human arylamine N-acetyltransferase in carcinogen metabolism and breast cancer progression



**Aaron D. DenDekker, Ph.D.**

- **Dates of Appointment:** July 1, 2010 to June 30, 2012
- **Mentor:** David J. Samuelson, PhD
- **Graduate Program:** Biochemistry and Molecular Biology
- **Research Project:** Genetic Mapping and mechanism of action of rat mammary carcinoma susceptibility quantitative trait locus *MCS1B*



**Lacey M. Litchfield, Ph.D.**

- **Dates of Appointment:** October 1, 2010 to September 30, 2012
- **Mentor:** Carolyn M. Klinge, Ph.D.
- **Graduate Program:** Biochemistry and Molecular Biology
- **Research Project:** COUP-TFII and its interacting proteins in breast cancer and endocrine resistance.



**Robin H. Schmidt, Ph.D.**

- **Dates of Appointment:** July 1, 2011 June 30, 2013
- **Mentor:** Gavin E. Arteel, PhD
- **Graduate Program:** Pharmacology and Toxicology
- **Research Project:** Olanzapine-induced liver injury: Direct metabolic effects, exacerbation by high-fat diet, and protection with sulforaphane



**Lindsey E. Becker, Ph.D.**

- **Dates of Appointment:** July 1, 2013 to May 14, 2014
- **Mentor:** Yong Li, PhD
- **Graduate Program:** Biochemistry and Molecular Biology
- **Research Project:** MicroRNA-200a cooperates with oncogene signaling to induce malignant cell transformation



**Jennifer Sanders, Ph.D.**

- **Dates of Appointment:** July 1, 2012 to June 30, 2014
- **Mentor:** David J. Samuelson, PhD
- **Graduate Program:** Biochemistry and Molecular Biology
- **Research Project:** Genetic and mechanistic analysis of rat mammary cancer susceptibility



**Christopher L. Barton, Ph.D.**

- **Dates of Appointment:** July 1, 2011 to June 30, 2013
- **Mentor:** Kenneth E. Palmer, PhD
- **Graduate Program:** Pharmacology and Toxicology
- **Research Project:** Evaluation of the safety and pharmacokinetic profile of the broad spectrum antiviral lectin griffithsin



**Veronica L. Massey, Ph.D.**

- **Dates of Appointment:** January 1, 2012 to December 31, 2014
- **Mentor:** Gavin E. Arteel, PhD
- **Graduate Program:** Pharmacology and Toxicology
- **Research Project:** Extracellular matrix proteins and the liver-lung axis in disease



**Pritesh P. Kumar, Ph.D.**

- **Dates of Appointment:** September 1, 2012 to June 30, 2014
- **Mentor:** Zhao-Hui (Joe) Song, PhD
- **Graduate Program:** Pharmacology and Toxicology
- **Research Project:** Searching for novel ligands for the cannabinoid and related receptors



**Keegan J. Baldauf, Ph.D.**

- **Dates of Appointment:** October 1, 2012 to December 31, 2014
- **Mentor:** Nobuyuki Matoba, PhD
- **Graduate Program:** Pharmacology and Toxicology
- **Research Project:** Studies on the impacts of a plant-made recombinant cholera toxin B subunit on the gastrointestinal tract



**Glenn W. Vicary, Ph.D.**

- **Dates of Appointment:** July 1, 2013 to June 30, 2016
- **Mentor:** Jesse Roman, MD
- **Graduate Program:** Pharmacology and Toxicology
- **Research Project:** The role of nicotine,  $\alpha 7$  nicotinic acetylcholine receptors and extracellular matrix remodeling in pulmonary fibrosis



**Marcus W. Stepp, Ph.D.**

- **Dates of Appointment:** July 1, 2016 to June 30, 2017
- **Mentor:** David W. Hein, PhD
- **Graduate Program:** Pharmacology and Toxicology
- **Research Project:** Role of human arylamine N-acetyltransferase 1 in tumorigenesis and cancer biology.





**Lauren G. Poole-Hardy, Ph.D.**

- **Dates of Appointment:** July 1, 2016 to July 31, 2017
- **Mentor:** Gavin E. Arteel, PhD
- **Graduate Program:** Pharmacology and Toxicology
- **Research Project:** Novel insight into the liver-lung axis in alcohol-enhanced acute lung injury



**Douglas J. O. Saforo, Ph.D.**

- **Dates of Appointment:** July 1, 2016 to August 1, 2016
- **Mentor:** Levi Beverly, PhD and Leah J. Siskind, PhD
- **Graduate Program:** Pharmacology and Toxicology
- **Research Project:** Characterizing the role of extracellular matrix in non-small cell lung carcinoma metastasis using a 3D microenvironment mimetic in-vitro culture system





**Collin S. Stocke**

- **Dates of Appointment:** July 1, 2016 to June 30, 2017
- **Mentor:** J. Christopher States, PhD
- **Graduate Program:** Public Health Sciences/ Environmental Health
- **Research Project:** Arsenic, DNA damage and cancer



**Anna L. Lang, Ph.D.**

- **Dates of Appointment:** July 1, 2016 to May 31, 2018
- **Mentor:** Julianne I. Beier, PhD
- **Graduate Program:** Pharmacology & Toxicology
- **Research Project:** Vinyl chloride enhances diet-induced liver injury via metabolic dyshomeostasis: Critical role of mitochondria



**Samantha M. Carlisle, Ph.D.**

- **Dates of Appointment:** July 1, 2016 to June 30, 2018
- **Mentor:** David W. Hein, PhD
- **Graduate Program:** Pharmacology & Toxicology
- **Research Project:** Deciphering the role of human arylamine N-acyltransferase 1 in breast cancer cell metabolism using a systems biology approach



**Desmond R. Harrell-Stewart, Ph.D.**

- **Dates of Appointment:** July 1, 2016 to June 30, 2018
- **Mentor:** Geoffrey Clark, PhD
- **Graduate Program:** Pharmacology & Toxicology
- **Research Project:** A novel role for RASSF1A in the regulation of RAS activation



**Jordan B. Lynch (nee Finch), Ph.D.**

- **Dates of Appointment:** October 1, 2016 to September 30, 2018
- **Mentor:** Daniel J. Conklin, PhD
- **Graduate Program:** Pharmacology & Toxicology
- **Research Project:** Tobacco product-derived aldehydes: Effects on circulating angiogenic cells & implications for cardiovascular disease



**Christine E. Dolin, Ph.D.**

- **Dates of Appointment:** July 1, 2017 to May 31, 2019
- **Mentor:** Gavin E. Arteel and Michael L. Merchant, PhD
- **Graduate Program:** Pharmacology & Toxicology
- **Research Project:** Novel mechanisms and biomarkers in alcohol-induced organ injury



**Ashley M. Mudd, Ph.D.**

- **Dates of Appointment:** August 1, 2017 to September 30, 2018
- **Mentor:** Ramesh Gupta, PhD
- **Graduate Program:** Pharmacology & Toxicology
- **Research Project:** Influence of bilberry-derived anthocyanidins on key regulators of colorectal cancer development



**Rachel M. Speer, Ph.D.**

- **Dates of Appointment:** August 1, 2017 to June 30, 2019
- **Mentor:** John P. Wise, Sr., PhD
- **Graduate Program:** Pharmacology & Toxicology
- **Research Project:** Mechanisms of chromate-induced suppression of RAD51: A one environmental health approach



**Jamie L. Young, Ph.D.**

- **Dates of Appointment:** June 1, 2018 to June 30, 2020
- **Mentor:** Lu Cai, M.D., Ph.D.
- **Graduate Program:** Pharmacology & Toxicology
- **Research Project:** The effects of whole life, low dose cadmium exposure on high fat diet-induced NAFLD and the role of zinc



**Alyssa S. Aebersold (nee Laun), Ph.D.**

- **Dates of Appointment:** July 1, 2018 to December 31, 2018
- **Mentor:** Zhao-hui Song, Ph.D.
- **Graduate Program:** Pharmacology & Toxicology
- **Research Project:** Characterization of ligands, downstream molecular signaling and functional impact for GPR3 and GPR6 in glaucoma.



**Jennifer H. Toyoda, Ph.D.**

- **Dates of Appointment:** July 1, 2018 to June 30, 2021
- **Mentor:** John P. Wise, Sr., Ph.D.
- **Graduate Program:** Pharmacology & Toxicology
- **Research Project:** Molecular mechanisms of particulate chromium-induced centrosome amplification



**Christine Kim, Ph.D.**

- **Dates of Appointment:** October 1, 2018 to February 28, 2021
- **Mentor:** Brian P. Ceresa, Ph.D.
- **Graduate Program:** Pharmacology & Toxicology
- **Research Project:** Assessing the role of arsenic in the EGFR signaling axis



**Katlyn E. McGraw, Ph.D.**

- **Dates of Appointment:** October 1, 2018 to June 30, 2020
- **Mentor:** Aruni Bhatnagar, Ph.D.
- **Graduate Program:** Public Health Sciences/Environmental Health
- **Research Project:** Exposure to volatile organic compounds contributes to cardiovascular disease risk



**Andre D. Richardson, Ph.D.**

- **Dates of Appointment:** January 1, 2019 to June 30, 2021
- **Mentor(s):** Daniel J. Conklin
- **Graduate Program:** Pharmacology & Toxicology
- **Research Project:** Effects of tobacco-derived aldehyde constituents and environmental pollutants on platelet biology



**Sarah H. Shrader, Ph.D.**

- **Dates of Appointment:** July 1, 2019 to December 31, 2019\*
- **Mentor(s):** Zhao-hui Song, Ph.D. and Gregory N. Barnes, M.D., Ph.D.
- **Graduate Program:** Pharmacology & Toxicology
- **Research Project:** Cannabidiol, behavior & the immune system in idiopathic autism spectrum disorder

\*T32 predoctoral fellowship terminated because recipient of individual predoctoral fellowship from Autism Speaks.



**Aaron G. Whitt, Ph.D.**

- **Dates of Appointment:** January 1, 2020 to December 31, 2021
- **Mentor(s):** Chi Li, Ph.D.
- **Graduate Program:** Pharmacology & Toxicology
- **Research Project:** Mechanism of paraoxonase 2 regulation of mitochondrial bioenergetics in non-small cell lung cancer cells





**Jeffrey B. Warner, Ph.D.**

- **Dates of Appointment:** July 1, 2020 to August 31, 2020\*
- **Mentor(s):** Irina A. Kirpich, Ph.D.
- **Graduate Program:** Pharmacology & Toxicology
- **Research Project:** Soluble expoxide hydrolase inhibition: A novel therapeutic strategy in alcoholic liver disease

\*T32 predoctoral fellowship terminated early due to receipt of individual NRSA fellowship F31 AA028423



**Matthew W. Dent, Ph.D.**

- **Dates of Appointment:** July 1, 2020 to December 31, 2021
- **Mentor(s):** Nobuyuki Matoba, Ph.D.
- **Graduate Program:** Pharmacology & Toxicology
- **Research Project:** Development of a novel lectin-Fc fusion protein with anticancer activity



**Belinda J. Petri, Ph.D.**

- **Dates of Appointment:** September 1, 2020 to February 15, 2021\*
- **Mentor(s):** Carolyn Klinge, Ph.D.
- **Graduate Program:** Biochemistry & Molecular Genetics
- **Research Project:** HNRNPA2B1 contributes to endocrine resistance in ER $\alpha$ + breast cancer by dysregulating miRNAs

\*T32 fellowship terminated due to receipt of diversity supplement on NIH R21ES031510-01S1



**Tyler C. Gripshover, Ph.D.**

- **Dates of Appointment:** June 15, 2021 to December 15, 2023
- **Mentor(s):** Matthew Cave, MD.
- **Graduate Program:** Pharmacology & Toxicology
- **Research Project:** The impact of environmental pollutants on alcohol-associated liver disease pathogenesis



**Kennedy M. Walls, Ph.D.**

- **Dates of Appointment:** June 15, 2021 to November 16, 2023
- **Mentor(s):** David W. Hein, Ph.D. and Kyung U. Hong, Ph.D
- **Graduate Program:** Pharmacology & Toxicology
- **Research Project:** Investigation of heterocyclic amines and N-acetyltransferase 2 gene polymorphism in dysregulation of hepatic energy homeostasis: A gene-environmental approach



**Aggie R. Williams**

- **Dates of Appointment:** July 14, 2021 to June 30, 2023
- **Mentor(s):** John P. Wise, Sr., Ph.D
- **Graduate Program:** Pharmacology & Toxicology
- **Research Project:** Particulate hexavalent chromium inhibits homologous recombination repair by targeting RAD51 paralogs in human lung fibroblasts



**Johnnie D. Newton**

- **Dates of Appointment:** July 14, 2021 to June 30, 2023
- **Mentor(s):** Natalie DuPré, ScD
- **Graduate Program:** Epidemiology and Population Health
- **Research Project:** Associations of PM<sub>2.5</sub> and natural vegetation in relation to colorectal cancer hot spots and colorectal cancer survival in Kentucky



**Breandon S. Taylor**

- **Dates of Appointment:** January 1, 2022 to present
- **Mentor(s):** Sanjay Srivastava, Ph.D.
- **Graduate Program:** Pharmacology & Toxicology
- **Research Project:** Nutritional imbalance affecting volatile organic compound-induced cardiometabolic toxicity



**Samantha A. McFall**

- **Dates of Appointment:** January 1, 2022 to present
- **Mentor(s):** Sanjay Srivastava, Ph.D
- **Graduate Program:** Pharmacology & Toxicology
- **Research Project:** Role of benzene in atherogenesis



**Samuel T. Vielee**

- **Dates of Appointment:** July 1, 2023 to present
- **Mentor(s):** Lu Cai, Ph.D. and Johnny Wise Jr., Ph.D.
- **Graduate Program:** Pharmacology & Toxicology
- **Research Project:** Hexavalent chromium-induced neurotoxicity



**Dakota Cathey**

- **Dates of Appointment:** July 1, 2023 to present
- **Mentor(s):** Lu Cai, Ph.D. and Jiapeng Huang, M.D. Ph.D.
- **Graduate Program:** Pharmacology & Toxicology
- **Research Project:** Effects of metals in pulmonary arterial hypertension



**Caitlin Wilkerson**

- **Dates of Appointment:** November 16, 2023 to present
- **Mentor(s):** Matthew Nystoriak, Ph.D and Brian Sansbury, PhD.
- **Graduate Program:** Pharmacology & Toxicology
- **Research Project:** Metabolic sensitivity of IKv is regulated through Kv $\beta$  catalytic function



**Kate Tarvestad Laise**

- **Dates of Appointment:** January 1, 2024 to March 31, 2024\*
- \*Terminated early to accept individual NIH F31 EY034730 fellowship
- **Mentor(s):** Brian Ceresa, Ph.D.
- **Graduate Program:** Pharmacology & Toxicology
- **Research Project:** Optimizing c-Met signaling to enhance corneal epithelial homeostasis



**Seamus Pugh**

- **Dates of Appointment:** April 1, 2024 to present
- **Mentor(s):** Leila Gobejishvili, Ph.D.
- **Graduate Program:** Physiology
- **Research Project:** Both *in vitro* and *in vivo* approaches to examine the underlying molecular and epigenetic mechanisms of steroid resistance