

*Department of
Pharmacology &
Toxicology*

UNIVERSITY OF
LOUISVILLE[®]

SCHOOL OF MEDICINE

2008 Annual Report



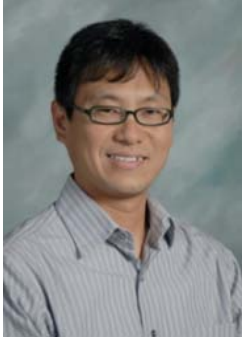
Department of Pharmacology and Toxicology-2008

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I. DEPARTMENT HIGHLIGHTS

FACULTY APPOINTMENTS



Matoba, Nobuyuki, Ph.D. was appointed as Assistant Professor of Pharmacology and Toxicology, effective October 1, 2008. Dr. Matoba received his Ph.D. in Applied Life Sciences from Kyoto University (Japan) in 2001. He subsequently was appointed Visiting Scientist (2001-2002), Postdoctoral Research Associate (2002-2004) and Research Assistant Professor (2006-present) at Arizona State University. Dr. Matoba has been recruited to the James Graham Brown Cancer Center to serve as a member of the Owensboro Cancer Research Program, a satellite of the Brown Cancer Center.



C. William Helm, MD was appointed as Associate in the Department of Pharmacology and Toxicology effective March 1, 2008. Dr. Helm received his BA in medical sciences and his MB, BChir from Cambridge University. Following additional training and faculty appointments at University of Alabama Hospital in Birmingham and Temple University School of Health Sciences, he was recruited to the University of Louisville School of Medicine in 2000 as Associate Professor in the Department of Obstetrics, Gynecology and Women's Health.

ADMINISTRATIVE APPOINTMENTS



William M. Pierce, Jr. PhD was appointed Vice Provost for Graduate Affairs in addition to his continuing role as Interim Dean of the School of Graduate and Interdisciplinary Studies.



David W. Hein, PhD was appointed Special Assistant to the Provost for Strategic Planning.

FACULTY PROMOTION AND TENURE



Jason Chesney, MD/PhD was promoted to associate professor with tenure.



Teresa Whei-Mei Fan, PhD was promoted to professor of chemistry.



Michal Hetman, PhD was promoted to associate professor with tenure.



Chin Ng, PhD was awarded tenure.



Irene Litvan, MD was awarded tenure.



Binks Wattenberg, PhD was awarded tenure.

FACULTY DEPARTURES

- **Mary Jayne Kennedy, PharmD**, Joint Appointment
- **John Wong, PhD**, Associate Appointment

IN MEMORIUM

- **Calvin Lang, PhD**, former associate faculty member
- **James Jumblatt, PhD**, former associate faculty member

FACULTY AWARDS AND HONORS

Frederick W. Benz, Ph.D.

- Honored for 30 years of service to UofL

David W. Hein, PhD

- Visiting Professor at Universite Paris 7- Denis Diderot, Paris, France.

Harrell E. Hurst, Ph.D.

- Honored for 30 years of service to UofL.

Y James Kang, PhD, DVM

- Daniel J. Zaffarano Lecture Award, Iowa State University, Ames, Iowa.

Uma Sankar, PhD

- Second Place, Roger H. Herzig Junior Faculty Research Award, 7th Annual JGBCC Retreat.

Walter M. Williams, PhD

- Thomas B. Calhoun Teaching Award, University of Louisville School of Medicine, fourth year class
- Golden Apple Award, University of Louisville School of Medicine, second year class

FACULTY PATENTS

Nobuyuki Matoba, PhD

- A patent issued from the U.S. Patent Office (Patent Number: 7438914; Title: Composition and Method for Enhancing Immune Response).

Kenneth Palmer, PhD

- Inventor on two patent applications “Compositions and Methods for Treatment of Papillomavirus Infection” licensed by the University of Louisville to Advanced Cancer Therapeutics LLC.
- Awarded United States Patent 7,432,049 “Plant virus coat protein fusions with GDF8 epitope and vaccines thereof”

William Pierce, PhD and Len Waite, PhD

- Pierce WM Jr., Waite LC, Taylor KG. Bone targeting compounds for delivering agents to bone for interaction therewith (II) US Patent 7,399,789.

GRADUATE STUDENT AWARDS

Lori Millner

- Received an AACR travel award and independent predoctoral fellowship funded by Department of Defense.

Clarisse Muenyi

- Batelle Award for Best Presentation by a Minority or Woman, Ohio Valley Chapter Society of Toxicology

Ntube Ngalame

- 1st Place Masters Basic Science ,Ohio Valley Chapter Society of Toxicology
- Best Poster by a Masters Student, Research!Louisville.

Jean-Claude Nzimulinda

- Received a travel award from National Institute of Drug Abuse.

Erica Rogers

- Best Oral Presentation, Ohio Valley Chapter Society of Toxicology.

Frazier Taylor

- Second place award at James Graham Brown Cancer Center Retreat

Jason Walraven

- KC Huang Outstanding Graduate Student Award.

Nick Watson

- Received the John Houchens Outstanding Dissertation Award at the UofL commencement.

Xiaoyan Zhang

- Received Graduate Dean’s Citation.

POSTDOCTORAL AWARDS

Julianne (Beier) Arteel

- Abstract selected for Travel Award, 3rd International Symposium on ALPD, Bilbao, Spain.
- Abstract selected for Travel Award, SLB 41st annual meeting, 2008, Denver, CO.

II. MISSION STATEMENT

The Department of Pharmacology and Toxicology is committed to academic excellence and to the attainment of regional, national, and international recognition for the quality of its educational, research, and service activities. Guided by the University of Louisville Strategic Plan (The 2020 Plan) to continue our path to national prominence, the mission of the Department of Pharmacology and Toxicology focuses on five broad objectives:

- Provide instruction in pharmacology and toxicology of the highest quality for the education and preparation of medical, dental, nursing, and other health care professional students. Emphasis is placed on the fundamental principles necessary for life-long learning and the essential knowledge required for rational, effective, and safe use of drug therapy.
- Advance biomedical knowledge through high quality research and other scholarly activities, particularly in pharmacology and toxicology and other areas of focus within the University of Louisville 2020 Plan.
- Provide high quality research and educational experiences in pharmacology and toxicology for the education and training of future biomedical scientists who will provide and advance biomedical education, research, and service.
- Provide instruction of the highest quality in pharmacology and toxicology that is appropriate for students at the undergraduate, graduate, and postgraduate levels.
- Provide high quality service to the School of Medicine, the Health Sciences Center, the University, the people of Louisville and the surrounding region, the Commonwealth of Kentucky, professional organizations, the nation, and the world.

III. FACULTY WITH PRIMARY APPOINTMENTS



Gavin E. Arteel, PhD

Associate Professor and Graduate Director: Program and Student Affairs

502-852-5157; gearte01@gwise.louisville.edu

www.uofl.edu/~gearte01

Research Interests

Mechanisms of oxidative stress; mechanisms of alcohol-induced hepatitis, pancreatitis, and hepatocellular carcinoma.



Frederick W. Benz, PhD

Professor

502-852-5611; benz@louisville.edu

www.louisville.edu/~fwbenz01

Research Interests

Biochemical pharmacology and toxicology; biochemical mechanisms of drug action and toxicity.



Jian Cai, PhD
Assistant Professor
502-852-5164
j0cai001@gwise.louisville.edu

Research Interests

Application of mass spectrometry in biomedical research. Drug and metabolite identification and quantification. Protein identification and post-translational modification. Hemoglobin adducts as biomarkers of chemical exposure and pathogenesis.



Theresa S. Chen, PhD
Professor
502-852-7887
tschen01@gwise.louisville.edu

Research Interests

Biochemical toxicology; role of glutathione in aging toxicology; general and specific toxicity of environmental pollutants.



Keith R. Davis, PhD

Professor

270-688-3694

krdavi16@gwise.louisville.edu

Research Interests

Development of plant-made pharmaceuticals, activation of gene expression by oxidative stress, and the role of innate immunity in cancer initiation and progression.



Ramesh C. Gupta, PhD

Professor and Agnes Brown Duggan Chair of Oncological Research

502-852-3682

rcgupta@louisville.edu

Research Interests

Development and identification of intermediate biomarkers to investigate etiology and prevention of human cancers resulting from both environmental and endogenous exposures.



David W. Hein, PhD

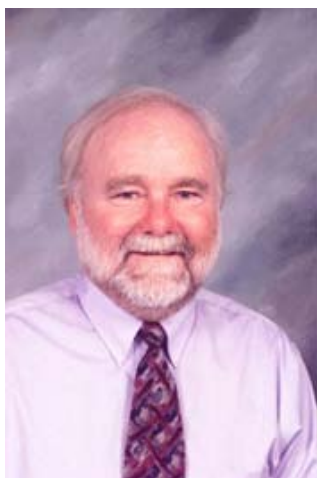
Professor and Peter K. Knoefel Chair of Pharmacology and Toxicology

502-852-5141; d.hein@louisville.edu

www.louisville.edu/faculty/dwhein01

Research Interests

Molecular pharmacogenetics; molecular epidemiology; functional genomics; genetic predisposition to chemical carcinogenesis and drug toxicity; molecular genetics; environmental toxicology.



Harrell E. Hurst, PhD

Professor

502-852-5797; h.hurst@louisville.edu

<http://louisville.edu/faculty/hehurs01>

Research Interests

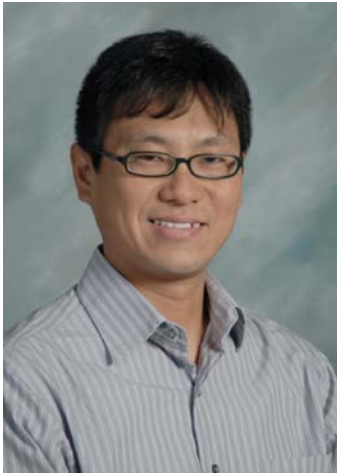
Analytical toxicology and kinetics with emphasis on qualitative and quantitative techniques, including gas chromatography, high pressure liquid chromatography and GC/mass spectrometry.



La Creis R. Kidd, PhD, MPH
Assistant Professor and Our Highest Potential Endowed Chair in Cancer Research
502-852-3465; lrkidd01@louisville.edu

Research Interests

Gene-gene and gene-environmental interactions; polymorphic xenobiotic metabolizing enzymes and prostate cancer susceptibility; cancer health disparities.



Nobuyuki Matoba, PhD
Assistant Professor
270-691-5955; n.matoba@louisville.edu

Research Interests

Development of vaccines and antivirals, mucosal immune response to foreign substances, and plant biotechnology for human health.



W. Glenn McGregor, MD

Professor

502-852-2564; wgmcgr01@gwise.louisville.edu

Research Interests

Molecular biology of DNA damage, repair and mutagenesis; molecular mechanisms of mutagenesis induced by model carcinogens; molecular mechanisms of replication of DNA templates containing well-defined site specific damage.



Steven R. Myers, PhD

Associate Professor

502-852-0928; sr.myers@louisville.edu

Research Interests

Drug metabolism, metabolism of xenobiotics and chemical carcinogens; use of hemoglobin as biomarker in exposure to xenobiotics.



Donald E. Nerland, PhD

Professor

502-852-5560; denerl01@gwise.louisville.edu

Research Interests

Biochemical toxicology; metabolism of drugs and environmental pollutants.



Kenneth E. Palmer, PhD

Associate Professor

270-691-5960; kepalm02@gwise.louisville.edu

Research Interests

Development of vaccines and antiviral proteins to prevent and treat viral diseases that predispose people to development of cancer.



William M. Pierce Jr, PhD
Professor and Vice Chair for Graduate Education
502-852-7424; pierce@louisville.edu
www.louisville.edu/~wmpier01/

Research Interests

Mechanisms of bone formation and resorption; design of novel drugs for management of osteoporosis; biomolecular mass spectrometry; proteomics in structural biology.



Peter P. Rowell, PhD
Professor
502-852-5579; rowell@louisville.edu
www.louisville.edu/~pprowe01

Research Interests

Neuropharmacology; effect of drugs on brain neurotransmitters and receptors.



Uma Sankar, PhD
Assistant Professor
270-691-5957
u0sank01@gwise.louisville.edu

Research Interests

Role of calcium/calmodulin-dependent protein kinase signaling in hematopoietic stem cell biology and cancer.



Zhao-Hui (Joe) Song, PhD
Associate Professor
502-852-5160; z0song01@gwise.louisville.edu

Research Interests

Molecular pharmacology; cloning and functional characterization of novel G protein-coupled receptors; molecular mechanisms of action and structure-function relationships of cannabinoid (marijuana) receptors.



J. Christopher States, PhD
Professor and Graduate Director: Recruitment and Admissions
502-852-5347; jcstates@louisville.edu
www.louisville.edu/~jcstat01/

Research Interests

Molecular biology and molecular genetics of DNA damage and repair in humans; mechanisms of chemoresistance; arsenic toxicity and cell cycle disruption.



Leonard C. Waite, PhD
Professor Vice-Chair for Education
502-852-5163; lcwait01@gwise.louisville.edu

Research Interests

Endocrine pharmacology; mechanism of action of hormones; pharmacological modulation of hormone action; mineral homeostasis.



Walter M. Williams, MD, PhD

Professor

502-852-5348; wmwill01@gwise.louisville.edu

Research Interests

Studies of drug elimination (metabolism and excretion).

IV. FACULTY WITH JOINT APPOINTMENTS



George R. Aronoff , MD
Professor of Medicine and Professor of Pharmacology and Toxicology
502-852-5760; gra@louisville.edu

Research Interests

Effects of uremia on drug disposition in humans; drug nephrotoxicity and renal drug metabolism, artificial intelligence.



Shirish Barve, PhD
Professor of Medicine and Professor of Pharmacology and Toxicology
502-852-5245; ssbarv01@gwise.louisville.edu

Research Interests

Effects of alcohol on molecular mechanisms of cytokine action, gene expression and liver injury.



Aruni Bhatnagar, PhD

Professor of Medicine and Professor of Pharmacology and Toxicology

502-852-4883; aruni@louisville.edu

www.louisville.edu/medschool/medicine/cardiology/Bhatnagar.htm

Research Interests

Cardiovascular toxicology; oxidative mechanisms of cardiovascular disease; lipid peroxidation in atherosclerosis; gene expression; secondary complications of diabetes.



Haribabu Bodduluri, PhD

Professor of Microbiology & Immunology and Professor of Pharmacology & Toxicology

502-852-7503; h0bodd01@gwise.louisville.edu

Research Interests

Signal transduction and chemoreceptors. Role of leukotriene receptors in inflammation and host response.



Jason A. Chesney, MD, PhD

Associate Professor of Medicine and Associate Professor of Pharmacology and Toxicology
502-852-3402; jasonchesney@louisville.edu

Research Interests

Novel regulators of cancer cell metabolism; identification of emerging viruses and the development of immune-based therapies against widely metastatic cancers.



Albert R. Cunningham, PhD

Associate Professor of Medicine and Associate Professor of Pharmacology and Toxicology
502-852-3346; al.cunningham@louisville.edu

Research Interests

Structure-Activity Relationship Modeling: Carcinogens, Chemotherapeutics, and Molecular Targets.



John W. Eaton, PhD

James Graham Brown Professor of Medicine and Professor of Pharmacology & Toxicology
502-852-1075; eatonredox@aol.com

Research Interests

Biological oxidation/reduction reactions with special emphasis on inflammatory diseases and neoplasia.



Paul N. Epstein, PhD

Professor of Pediatrics and Professor of Pharmacology and Toxicology
Carol B. McFerran Chair in Pediatric Diabetes Research
502-852-2655; pnepst01@gwise.louisville.edu

Research Interests

Molecular mechanisms of diabetogenesis. The use of transgenic animals to study genetics and molecular mechanisms in vivo.



Richard E. Goldstein, MD, PhD
Professor of Surgery and Professor of Pharmacology and Toxicology
vonRoenn Family Chair in Surgical Endocrinology
502-629-6950; richard.goldstein@louisville.edu

Research Interests

Surgical endocrinology; surgical oncology.



David Gozal, MD
Professor of Pediatrics and Professor of Pharmacology and Toxicology
Director, Kosair Children's Research Institute
502-852-2323; d0goza01@gwise.louisville.edu

Research Interests

Signal transduction mechanisms underlying ventilatory response to hypoxia; neuronal adaptations to intermittent hypoxia: growth factors, intracellular signaling, and genomic implications.



Evelyne Gozal, PhD

Associate Professor of Pediatrics and Associate Professor of Pharmacology and Toxicology

502-852-2213; e0goza01@gwise.louisville.edu

Research Interests

Signal transduction pathways involved in neuronal cell survival and neuronal cell death during hypoxia; cellular mechanisms underlying brain adaptation to chronic and intermittent hypoxia; identification of the kinases and transcription factors activated by hypoxia, leading to gene induction and to adaptation to oxygen deprivation.



Theo Hagg, MD, PhD

Professor and Endowed Chair of Neurological Surgery and Professor of Pharmacology & Toxicology

502-852-8058; theo.hagg@louisville.edu

www.kscirc.org/hagg/Hagg.html

Research Interests

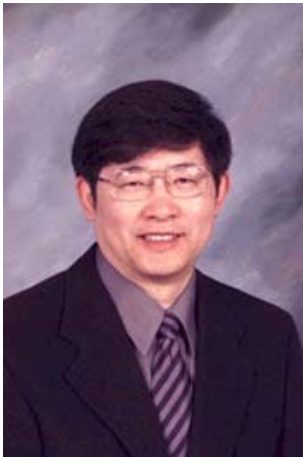
Neurotrophic factor receptors and endogenous stem cells as drug targets to develop repair strategies for neurological disorders, including spinal cord injury.



Michal Hetman, PhD
Associate Professor of Neurological Surgery
Associate Professor of Pharmacology and Toxicology
Endowed Professor of Molecular Signaling
502-852-3619; m0hetm01@gwise.louisville.edu

Research Interests

Role of signaling kinases in neuronal repair and demise.



Y. James Kang, PhD
Professor of Medicine and Professor of Pharmacology and Toxicology
502-852-8677; yjkang01@louisville.edu

Research Interests

Molecular and cardiac toxicology. Transgenic and knock-out animal models to study oxidative injury and antioxidant systems in the heart. Biological functions and toxicological significance of metallothionein and glutathione in vivo.

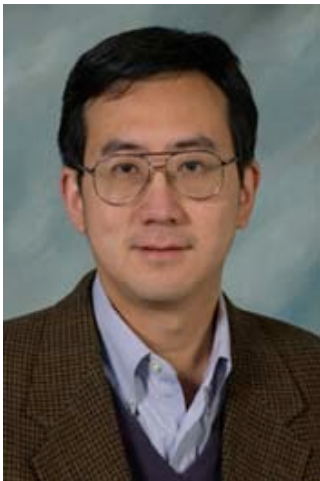


Mary Jayne Kennedy, PharmD

Assistant Professor of Pediatrics and Assistant Professor of Pharmacology and Toxicology
502-629-5608; mjkenn07@louisville.edu

Research Interests

Pediatric clinical pharmacology; pharmacodynamics, pharmacokinetics; pharmacogenetics, and biotransformation.



Chi Li, PhD

Assistant Professor of Medicine and Assistant Professor of Pharmacology and Toxicology
502-852-0600; chi.li@louisville.edu

Research Interests

Mechanisms of apoptotic pathways initiated from different intracellular organelles.
Molecular and cellular mechanisms that affect inflammation and immunity.



Irene Litvan, MD

**Professor of Neurology and Professor of Pharmacology and Toxicology
Raymond Lee Leiby Professor of Parkinson Disease Research**

502-561-3025; i.litvan@louisville.edu

louisville.edu/medschool/neuro/academics/faculty/litvan_2.html

Research Interests

Etiology and treatment of Parkinsonian, Dementia, and Dystonia movement disorders.



Manuel Martinez, MD

**Professor of Medicine and Professor of Pharmacology and Toxicology
Executive Vice President for Research**

502-852-8373; m0mart10@gwise.louisville.edu

Research Interests

Hypertension and its effects on the kidney.



Craig J. McClain, MD
Professor of Medicine and Professor of Pharmacology and Toxicology
Vice President for Translational Research
502-852-6189; craig.mcclain@louisville.edu

Research Interests

Role of cytokines in liver injury and other forms of hepatotoxicity, interactions with nutrition and toxicology.



Kelly M. McMasters, MD, PhD
Sam and Lolita Weakley Endowed Professor of Surgical Oncology and Professor of
Pharmacology and Toxicology
502-852-5447; kmmcma01@gwise.louisville.edu

Research Interests

Adenoviral vector cancer gene therapy. Development of vectors that selectively replicate in cancer cells. Mechanisms of E2F-1-induced apoptosis.



Donald M. Miller, MD, PhD

**James Graham Brown Professor of Medicine Professor of Pharmacology and Toxicology
Director, James Graham Brown Cancer Center James Graham Brown Foundation Chair**
502-562-4369; donaldmi@ulh.org

Research Interests

Molecular and clinical oncology; modulation of oncogene expression; triplex DNA based gene therapy; treatment of melanoma.



Chin K. Ng, PhD

Associate Professor of Radiology and Associate Professor of Pharmacology and Toxicology
502-852-5875; chin.ng@louisville.edu

Research Interests

Development, evaluation, and kinetic studies of radiopharmaceuticals; the use of molecular imaging for biomedical research.



M. Michele Pisano, PhD
Professor of Molecular, Cellular and Craniofacial Biology and Professor of Pharmacology and Toxicology
502-852-7507; pisano@louisville.edu

Research Interests

Molecular developmental toxicology; gene-environment interactions in normal and abnormal embryonic development; growth factor directed cellular signal transduction in embryonic cell growth and differentiation.



George C. Rodgers, MD, PhD
Professor of Pediatrics and Professor of Pharmacology and Toxicology
Humana Chair of International Pediatrics
502-852-3720; gcrodgers@pol.net

Research Interests

Toxicokinetics in drug overdoses and pharmacokinetics in pediatric disease states.



Janice E. Sullivan, MD
Professor of Pediatrics and Professor of Pharmacology and Toxicology
502-852-3720; sully@louisville.edu

Research Interests

Clinical pharmacology with a focus on developmental pharmacokinetics and pharmacodynamics.



Yang Wang, MD, PhD
Associate Professor of Pediatrics and Associate Professor of Pharmacology and Toxicology
502-852-8420; y.wang@louisville.edu

Research Interests

Molecular and cellular regulation of genes implicated in hypoxic/ischemic injury and protection in the cardiovascular system.



Brian (Binks) W. Wattenberg, PhD

Associate Professor of Medicine; Associate Professor of Biochemistry & Molecular Biology

Associate Professor of Pharmacology & Toxicology

502-852-7762; b0watt01@gwise.louisville.edu

browncancercenter.org/research/researcher.aspx?id=1650

Research Interests

Sphingosine-kinase and lipid signaling. Trafficking of tail-anchored proteins.



Hong Ye, PhD

Assistant Professor of Medicine and Assistant Professor of Pharmacology and Toxicology

502-852-4047; hong.ye@louisville.edu

Research Interests

Research to understand the structure and mechanism of tumorigenesis, with focus on Notch signaling pathway and chromosome DNA damage. X-ray crystallography, in combination with other biochemical and biophysics methods to understand the function of various molecular complexes.



Wolfgang Zacharias, PhD
Professor of Medicine and Professor of Pharmacology and Toxicology
502-852-2579; w0zach01@gwise.louisville.edu

Research Interests

Ribozymes for gene therapy in rheumatoid arthritis; involvement and roles of cathepsins in oral cancers; gene expression profiling with DNA microarray chip technology.



Wayne S. Zundel, PhD
Assistant Professor of Radiation Oncology and Assistant Professor of Pharmacology and Toxicology
502-852-3445; w0zund01@gwise.louisville.edu

Research Interests

Molecular oncology.

V. FACULTY WITH ASSOCIATE, EMERITUS & ADJUNCT APPOINTMENTS

Michael E. Brier, PhD
Professor of Medicine



Lu Cai, MD, PhD
Associate Professor of Medicine and Radiation Oncology



Daniel J. Conklin, PhD
Assistant Professor of Medicine (Cardiology)



Teresa Whei-Mei Fan, PhD
Professor of Chemistry



C. William Helm, MD
Associate Professor of Obstetrics, Gynecology and Women's Health



James W. Lillard, Jr. PhD, MBA
Associate Professor of Microbiology & Immunology
Smith & Lucile Gibson Endowed Chair in Medicine



David A. Scott, PhD
Associate Professor of Periodontics, Endodontics & Dental Hygiene



David J. Tollerud, MD
Professor of Environmental and Occupational Health

VI. FACULTY LISTINGS

Faculty with Primary Appointments

- **Arteel, Gavin E.**, Associate Professor; Ph.D., Toxicology, University of North Carolina-Chapel Hill (1997).
- **Benz, Frederick W.**, Professor; Ph.D., Pharmacology, University of Iowa (1970).
- **Cai, Jian**, Assistant Professor; Ph.D., Pharmacology and Toxicology, University of Louisville (1999).
- **Chen, Theresa S.**, Professor; Ph.D., Pharmacology, University of Louisville (1971).
- **Davis, Keith R., Professor**; Ph.D., Molecular, Cellular and Developmental Biology, University of Colorado (1985)
- **Gupta, Ramesh**, Professor and Agnes Brown Duggan Chair of Oncological Research; Ph.D. Analytical/Physical Chemistry, University of Roorkee (1972).
- **Hein, David W.**, Peter K. Knoefel Professor and Chair; Ph.D., Pharmacology, University of Michigan (1982).
- **Hurst, Harrell E.**, Professor; Ph.D., Toxicology, University of Kentucky (1978).
- **Kidd, LaCreis R.**, Assistant Professor, Ph.D., Toxicology, Massachusetts Institute of Technology (1997).
- **Matoba, Nobuyuki**, Assistant Professor, Ph.D., Applied Life Sciences, Kyoto University, Japan (2001).
- **McGregor, W. Glenn**, Professor; M.D., University of Michigan (1976).
- **Myers, Steven R.**, Associate Professor; Ph.D., Pharmacology, University of Kentucky (1986).
- **Nerland, Donald E.**, Professor; Ph.D., Medicinal Chemistry, University of Kansas (1974).
- **Palmer, Kenneth E., Associate Professor**; Ph.D., Microbiology, University of Cape Town (1997)
- **Pierce, William M., Jr.**, Professor and Vice Chair for Graduate Education; Ph.D., Pharmacology and Toxicology, University of Louisville (1981).

- **Rowell, Peter P.**, Professor; Ph.D., Pharmacology and Therapeutics, University of Florida (1975).
- **Sankar, Uma**, Assistant Professor, Ph.D., MCD Biology, Ohio State University (2003).
- **Song, Zhao-Hui (Joe)**, Associate Professor; Ph.D., Pharmacology, University of Minnesota (1992).
- **States, J. Christopher**, Professor; Ph.D., Molecular Biology and Pathology, Albany Medical College/Union University (1980).
- **Waite, Leonard C.**, Professor and Vice Chair for Professional Education; Ph.D., Pharmacology, University of Missouri (1969).
- **Williams, Walter M.**, Professor; Ph.D., Pharmacology, University of Louisville (1970); M.D., University of Louisville (1974).

Faculty with Joint Appointments

- **Aronoff, George R.**, Professor of Medicine, and Pharmacology and Toxicology; M.D., Indiana University (1975).
- **Barve, Shirish**, Professor of Medicine (Gastroenterology), and Pharmacology and Toxicology; Ph.D., Molecular Pathogenesis, University of Kentucky (1990).
- **Bhatnagar, Aruni**, Professor of Medicine (Cardiology), and Pharmacology and Toxicology; Ph.D., Chemistry, University of Kanpur (1985).
- **Bodduluri, Hari**, Professor of Microbiology and Immunology, and Pharmacology and Toxicology; Ph.D., Biochemistry, Indian Institute of Science (1983).
- **Chesney, Jason A.**, Associate Professor of Medicine (Hematology/Oncology), and Pharmacology and Toxicology; Ph.D., Biomedical Sciences/Immunology, University of Minnesota (1997); M.D., University of Minnesota (1998).
- **Eaton, John W.**, James Graham Brown Professor of Cancer Biology, Department of Medicine, and Professor of Pharmacology and Toxicology; Ph.D., Biological Anthropology and Human Genetics, University of Michigan (1969).
- **Epstein, Paul N.***, Carol B. McFerran Chair in Pediatric Diabetes Research and Professor of Pediatrics, and Pharmacology and Toxicology; Ph.D., Pharmacology, Baylor College of Medicine (1981).

- **Goldstein, Richard E.**, Professor of Surgery, and Pharmacology and Toxicology; M.D., Thomas Jefferson University (1982); Ph.D., Molecular Physiology and Biophysics, Vanderbilt University School of Medicine (1994).
- **Gozal, David***, Children's Hospital Foundation Pediatric Research Chair, Professor of Pediatrics, and Pharmacology and Toxicology; M.D., Hebrew University of Jerusalem, Hadassah Medical School (1979).
- **Gozal, Evelyne***, Associate Professor of Pediatrics, and Pharmacology and Toxicology; Ph.D., Toxicology, University of Southern California (1997).
- **Hagg, Theo**, Professor and Endowed Chair of Neurological Surgery, and Professor of Pharmacology and Toxicology; M.D., University of Leiden (1985), Ph.D., Neurosciences, University of California-San Diego (1998).
- **Hetman, Michal**, Associate Professor of Neurological Surgery, and Pharmacology and Toxicology; M.D., Warsaw Medical School (1994); Ph.D., Experimental and Clinical Medicine, Polish Academy of Sciences (1997).
- **Kang, Y. James***, Professor of Medicine, and Pharmacology and Toxicology; Ph.D., Cell Biology and Zoology, Iowa State University (1989).
- **Kennedy, Mary Jayne**, Assistant Professor of Pediatrics, and Pharmacology and Toxicology; Pharm.D, Medical University of South Carolina (1998).
- **Li, Chi**, Assistant Professor of Medicine (Hematology/Oncology) and Pharmacology and Toxicology; Ph.D, Molecular Biology, Columbia University (1998)
- **McClain, Craig J***, Professor of Medicine (Gastroenterology), and Pharmacology and Toxicology; M.D., University of Tennessee-Memphis (1972).
- **McMasters, Kelly M.**, Professor of Surgery, and Pharmacology and Toxicology; Ph.D., Cell and Developmental Biology, Rutgers University (1988); M.D., UMDNJ R.W. Johnson Medical School (1989).
- **Martinez-Maldonado, Manuel**, Professor of Medicine, and Pharmacology and Toxicology, M.D., Temple Medical School (1961).
- **Miller, Donald M.**, James Graham Brown Professor of Oncology, and Professor of Pharmacology and Toxicology; M.D., Duke University (1973); Ph.D., Biochemistry, Duke University (1973).
- **Pisano, M. Michele**, Professor of Molecular, Cellular and Craniofacial Biology, and Pharmacology and Toxicology; Ph.D., Anatomy, Thomas Jefferson University (1985).

- **Rodgers, George C., Jr.**, Professor of Pediatrics, and Pharmacology and Toxicology; Ph.D., Organic Chemistry, Yale University (1964); M.D., State University of New York (1975).
- **Sullivan, Janice E.**, Professor of Pediatrics, and Pharmacology and Toxicology; M.D., University of Minnesota (1988).
- **Wang, Yang**, Associate Professor of Pediatrics, and Pharmacology and Toxicology; M.D., Jiangxi Medical College (1982); Ph.D., Physiology, University of Toronto (1993).
- **Wattenberg, Brian (Binks) W.** Associate Professor of Medicine (Hematology/Oncology), and Pharmacology and Toxicology; Ph.D., Biological Chemistry, Washington University (1981)
- **Ye, Hong**, Assistant Professor of Medicine (Hematology/Oncology), and Pharmacology and Toxicology; Ph.D., Biophysics, Keele University (1998).
- **Zacharias, Wolfgang**, Professor of Medicine (Oncology), and Pharmacology and Toxicology; Ph.D., Biochemistry, Philipps-University, Marburg, Germany (1980).
- **Zundel, Wayne S.**, Assistant Professor of Radiation Oncology, and Pharmacology and Toxicology; Ph.D., Cancer Biology, Stanford University (2000).

*Partial salary from Department of Pharmacology and Toxicology

Faculty with Associate Appointments

- **Brier, Michael E.**, Professor of Medicine; Ph.D., Industrial and Physical Pharmacy, Purdue University (1986).
- **Cai, Lu**, Associate Professor of Medicine; Ph.D., Radiation Biology/Oncology, Norman Bethune University of Medical Sciences (1987).
- **Conklin, Daniel J.**, Assistant Professor of Medicine (Cardiology); Ph.D., University of Notre Dame (1995).
- **Fan, Teresa**, Professor of Chemistry, Biochemistry, University of California-Davis (1983).
- **Helm, Cyril William**, Associate Professor of Obstetrics and Gynecology, Division of Gynecologic Oncology; MB, BChir, Cambridge University (1977).
- **Lillard, James**, Associate Professor of Microbiology and Immunology; Ph.D., Microbiology and Immunology, University of Kentucky (1999).

- **Scott, David A.**, Associate Professor of Periodontics, Endodontics & Dental Hygiene: Ph.D., Microbiology and Immunology, McGill University (1997)
- **Tollerud, David J.**, Professor of Environmental and Occupational Health Sciences; M.D., Mayo Medical School (1978); M.P.H., Harvard Medical School (1990).
- **Wong, John L.**, Professor of Chemistry; Ph.D., Chemistry, University of California at Berkeley (1966).

Faculty with Emeritus Appointments

- **Carr, Laurence A.**, Professor Emeritus; Ph.D., Michigan State University (1969).
- **Dagirmanjian, Rose**, Professor Emerita; Ph.D., University of Rochester (1960).
- **Darby, Thomas D.**, Adjunct Professor Emeritus; Ph.D., Medical College of South Carolina (1957).
- **Jarboe, Charles H.**, Professor Emeritus; Ph.D., University of Louisville (1956).
- **Scharff, Thomas G.**, Professor Emeritus; Ph.D., University of Rochester (1956).
- **Waddell, William J.**, Professor and Chair Emeritus; M.D., University of North Carolina (1955).
- **Zimmerman, Thom J.**, Professor Emeritus of Ophthalmology and Visual Sciences, and Pharmacology and Toxicology; Ph.D., Pharmacology, University of Florida (1976); M.D., University of Illinois (1968).

Faculty with Adjunct Appointments

- **Friedman, Marvin A.**, Adjunct Professor of Pharmacology and Toxicology; Ph.D., Massachusetts Institute of Technology (1967).
- **Hayes, A. Wallace**, Adjunct Professor of Pharmacology and Toxicology; Ph.D., Auburn University (1967).
- **Hong, Jun-Yan**, Adjunct Professor of Pharmacology and Toxicology; Ph.D., University of Medicine and Dentistry of New Jersey (1987).

VII. STAFF AND STUDENTS

Research Staff

- **Barker, David**, Research Scientist
- **Belcher, Christopher**, Student Assistant

- **Benford, Marnita**, Laboratory Assistant
- **Burke, Tom**, Research Technologist II
- **Carpenter, Sharon**, Administrative Assistant
- **Doll, Mark**, Research Scientist
- **Greca, Edie**, Business Manager Intermediate III
- **Greenwell, John**, Student Assistant
- **Guo, Luping**, Senior Research Associate
- **Hodges, Amanda**, Student Assistant
- **Holloman**, Temporary Lab Assistant
- **Howarth, Ashley L.**, Student Assistant
- **Liu, Marcia**, Senior Research Associate
- **Massey, Veronica**, Temporary Summer Lab Assistant
- **Miller, Heather**, Senior Research Technologist
- **Rubin-Teitel, Hedly**, Administrative Assistant
- **Schlierf, Thomas**, Student Assistant
- **Sils, Brian**, Student Assistant
- **Skaggs, Robert**, Student Assistant
- **Smith, Anthony**, Student Assistant
- **Smith, Ned**, Technical Director Mass Spectrometry Lab
- **Taylor, Kevin G.**, Research Technician IV
- **Templeton, Tiva**, Research Technologist II
- **Turner, Delano**, Lab Research Technician III

Postdoctoral Fellows

- Arteel, Juliane
- Bendaly, Jean
- Kouokam, Joseph
- Qiao, Zhuanhong
- Zhu, Yuanqi

New Graduate Students

Adcock, Robert Scott (MS program)
 Cheng, Pei-hsin (Penny) (Ph.D. program)
 Clark, Sarah (MS program)
 Eno, Colins (Ph.D. Program)
 Harrison, Kristen (Ph.D. program)
 Leggett, Carmine (Ph.D. program)
 Moghe, Akshata (Ph.D. program)
 Schmidt, Robin (Ph.D. program)
 Zajack, Matt (Ph.D. program)

Graduate Students

Name	Advisor
Scott Adcock	Andrew Lane
Sheila Arnold	Theo Hagg
Aisha Bagshaw	William M. Pierce, Jr.
Katie Bourcy	Y. James Kang
Pengxiao Cao	Ramesh Gupta
Alex Carrasquer	Zhao-hui Song
Elaina Chambers	Shirish Barve
Pei-Hsin (Penny) Cheng	Kelly McMasters
Christina Wiegand Clark	Evelyne Gozal
Sarah Clark	David W. Hein
Colins Eno	Chi Li
Emily Esposito	M. Michele Pisano
Kristen Harrison	Evelyne Gozal
Philip Kaiser	Gavin E. Arteel
Christelle Komguem Kamga	Yang Wang
Amanda Lasnik	Kenneth E. Palmer
Nicole Lavender	LaCreis R. Kidd
Carmine Leggett	David W. Hein
Shankang Ma	Y. James Kang
Robert Martin	David W. Hein
Stephanie Mathews	Shirish Barve
Mildred Menchu-Johnson	William M. Pierce, Jr.
Lori Millner	David W. Hein
Akshata Moghe	Shirish Barve
Afsoon Moktar	Ramesh Gupta
Lasharon Mosley	James W. Lillard
Clarisse Muenyi	J. Christopher States
Olive Ngalame	J. Christopher States
Jean Claude Nzimulinda	Zhao-hui Song
Madhu Patil	Shirish Barve
John Philipose	M. Michele Pisano
Katie Richardson	Wayne Zundel
Erica Rogers	J. Christopher States
Gilandra Russell	Gavin E. Arteel
Thomas Schlierf	David W. Hein
Robin Schmidt	Gavin E. Arteel
Nason Schooler	John W. Eaton
L. Jay Stallons	W. Glenn McGregor
Shyam Sunder	Ramesh Gupta
Joshua Thornburg	Jason Chesney
Jianxun Wang	Paul E. Epstein
Nick Watson	W. Glenn McGregor

Lu Yang	Paul E. Epstein
Matt Zajack	J. Christopher States
Susan Zhang	David W. Hein
Yang Zhou	Y. James Kang

VIII. GRADUATES

Pharmacology and Toxicology Graduates

Last name	First name	Mentor	Degree	Dissertation/Thesis Title
Bourcy	Katherine	Y. James Kang, Ph.D.	M.S.	The role of vascular endothelial growth factor receptors in copper-induced regression of cardiac hypertrophy
Carrasquer	Carl Alexander	Zhao-Hui (Joe) Song, Ph.D.	Ph.D.	Activation and regulation of cannabinoid receptors
Chambers	Elaina	Shirish Barve, Ph.D.	M.S.	Immune dysregulation and diabetes: A potential role of phosphodiesterases
Clark	Christina Blume	Evelyne Gozal, Ph.D.	Ph.D.	The role of HSP90 in PC-12 cell survival
Esposito	Emily Roberts	Michele Pisano, Ph.D.	Ph.D.	<i>In vivo</i> and <i>in vitro</i> models for cigarette smoke-induced low birth weight and other adverse developmental outcomes
Lavender	Nicole	LaCreis R. Kidd, Ph.D.	M.S.	Joint modifying effects of variant oxidative stress factors in relation to prostate cancer
Ma	Shankang	Y. James Kang, Ph.D.	M.S.	Metallothionein gene therapy for chemically-induced liver fibrosis
Martin, III	Robert C.G.	David W. Hein, Ph.D.	Ph.D.	Polymorphisms in manganese superoxide dismutase as a risk factor for cancer
Mathews	Stephanie	Shirish Barve, Ph.D.	M.S.	Impaired SAM metabolism and IFN α antiviral signaling: Relevance to hepatitis C virus
Millner	Lori	David W. Hein, Ph.D.	M.S.	Effect of N-acetyltransferase (NAT1) polymorphism on mutagenesis and DNA adduct formation
Muenyi	Clarisse	J. Christopher States, Ph.D.	M.S.	Improving the efficacy of platinum chemotherapy against ovarian cancer
Nzimulinda	Jean-Claude	Zhao-Hui (Joe) Song, Ph.D.	M.S.	Residues accessible in the binding site crevice of transmembrane helix 2 of CB2 cannabinoid receptor
Richardson	Katharine	Wayne Zundel, Ph.D.	Ph.D.	Regulation of placental ribonuclease inhibitor by tumor suppressor Von Hippel-Lindau
Rogers	Erica	J. Christopher States, Ph.D.	M.S.	The modulation of DNA damage by curcumin
Schlierf	Thomas	David W. Hein, Ph.D.	M.S.	Role of N-acetyltransferase 1 (NAT1) and 2 (NAT2) polymorphisms in breast cancer risk with exposure to aromatic and heterocyclic amine carcinogens
Schooler	Nason	John W. Eaton, Ph.D.	M.S.	The use of the reducing agent N-(2-mercaptopropionyl)glycine to detoxify

				oxidized lipids in atherosclerotic lesions
Stallons	Lindsey Jay	W. Glenn McGregor, M.D.	M.S.	Mutagenic and tumor suppressor functions of DNA polymerase iota in mammalian cells
Watson	Nicholas	W. Glenn McGregor, M.D.	Ph.D.	RAD18 is recruited to stalled DNA replication forks and is required for recruitment of accessory translesion synthesis proteins
Zhang	Xiaoyan (Susan)	David W. Hein, Ph.D.	Ph.D.	Characterization of N-acetyltransferase 1 (NAT1) expression in breast cancer
Zhou	Yang	Y. James Kang, Ph.D.	Ph.D.	Copper-induced regression of cardiomyocyte hypertrophy through alteration of VEGF/VEGFR pathways

IX. PUBLICATIONS (SALARIED FACULTY AND STAFF)

1. Aiyer, H. S., Kichambare, S., and Gupta, R. C. Prevention of oxidative DNA damage by bioactive berry components. *Nutr. Cancer* 2008 60(Suppl 1): 36-42.
2. Aiyer, H. S., Srinivasan, C., and Gupta, R. C. Dietary berries and ellagic acid diminish estrogen-mediated mammary tumorigenesis in ACI rats. *Nutr. Cancer* 2008. 60:227-234.
3. Aiyer, H. S., Vadhanam, M. V., Stoyanova, R., Caprio, G. D., Clapper, M. L., and Gupta, R. C. Dietary berries and ellagic acid prevent oxidative DNA damage and modulate expression of DNA repair genes. *International Journal of Molecular Sciences* 2008. 9:327-341.
4. Aiyer, H. S., Ravoori, S., Vadhanam, M. V., Schultz, D., and Gupta, R. C. Effect of dietary berries and ellagic acid on cell proliferation, estrogen-metabolizing enzymes and tumor indices in an estrogen-induced rat mammary tumor model. *Proceedings of International Conference of New developments in Drug Discovery from Natural Products and Traditional Medicines* 2008. 50-55.
5. Arteel, G. E. New role of plasminogen activator inhibitor-1 in alcohol-induced liver injury. *J. Gastroenterol. Hepatol.* 2008. 23(Suppl 1):S54-S59.
6. Arteel, G. E. Alcohol-induced oxidative stress in the liver: in vivo measurements. *Methods Mol. Biol.* 2008. 447:185-197.
7. Arteel, G. E. Silencing a killer among us: ethanol impairs immune surveillance of activated stellate cells by natural killer cells. *Gastroenterology* 2008. 134: 351-353.
8. Arteel, G. E., Guo, L., Schlierf, T., Beier, J. I., Kaiser, J. P., Chen, T. S., Liu, M., Conklin, D. J., Miller, H. L., von, Montfort C., and States, J. C. Subhepatotoxic exposure to arsenic enhances lipopolysaccharide-induced liver injury in mice. *Toxicol. Appl. Pharmacol.* 2008. 226:128-139.

9. Barker, D. F., Walraven, J. M., Ristagno, E. H., Doll, M. A., States, J. C., and Hein, D. W. Quantitative tissue and gene-specific differences and developmental changes in Nat1, Nat2, and Nat3 mRNA expression in the rat. *Drug Metab Dispos.* 2008. 36:2445-2451.
10. Barve, A. S., Khan, R., Marsano, L., Avindra, K. V., and McClain, C. J. Treatment of Alcoholic Liver Disease. *Annals of Hepatology* 2008. 7:5-15.
11. Beier, J. I., Guo, L., von, Montfort C., Kaiser, J. P., Joshi-Barve, S., and Arteel, G. E. New role of resistin in lipopolysaccharide-induced liver damage in mice. *J.Pharmacol.Exp.Ther.* 2008. 325:801-808.
12. Bergheim, I., Weber, S., Vos, M., Kramer, S., Volynets, V., Kaserouni, S., McClain, C. J., and Bischoff, S. C. Antibiotics protect against fructose-induced hepatic lipid accumulation in mice: role of endotoxin. *J. Hepatol.* 2008. 48:983-992.
13. Boetticher, N. D., Peine, C. J., Kwo, P., Abrams, G. A., Patel, T., Aqel B., Boardman, L., Gores, G. J., Harmsen, W. S., McClain, C. J., Kamath P.S., and Shah, V. H. A randomized, double-blinded, placebo-controlled multicenter trial of etanercept in the treatment of alcoholic hepatitis. *Gastroenterology* 2008. 135:1953-1960.
14. Burckhardt, I. C., Gozal, D., Dayyat, E., Cheng, Y., Li, R. C., Goldbart, A. D., and Row, B. W. Oral green tea catechin polyphenols attenuate learning deficits and oxidative stress in rat brain following intermittent hypoxia during sleep. *American Journal of Respiratory and Critical Care Medicine* 2008. 177:1135-1141.
15. Cai, J., Hirai, Y., Bhatnagar, A., Pierce, W. M., Jr., and Prough, R. A. Bioactivation and protein modification reactions of unsaturated aldehydes. In: Elfarra, A. *Advances in Bioactivation Research.* New York: Springer Science and Business Media, 2008. 233-253.
16. Campian, E. C. and Benz, F. W. The acute lethality of acrylonitrile is not due to brain metabolic arrest. *Toxicology* 2008 253:104-109.
17. Capdevila, O. S., Kheirandish-Gozal, L., Dayyat, E., and Gozal, D. Pediatric obstructive sleep apnea: complications, management, and long-term outcomes. *Proc.Am.Thorac.Soc.* 2008. 5:274-282.
18. Capdevila, O. S., Dayyat, E., Kheirandish-Gozal, L., and Gozal, D. Prevalence of epileptiform activity in healthy children during sleep. *Sleep Med.* 2008. 9:303-309.
19. Cave, M. C., Hurt, R. T., Frazier, T. H., Matheson, P. J., Garrison, R. N., McClain, C. J., and McClave, S. A. Obesity, inflammation, and the potential application of pharmaconutrition. *Nutr.Clin.Pract.* 2008. 23:16-34.
20. Chang, W., McClain, C. J., Liu, M. C., Barve, S. S., and Chen, T. S. Effects of 2(RS)-n-propylthiazolidine-4(R)-carboxylic acid on 4-hydroxy-2-nonenal-induced apoptotic T cell death. *J.Nutr.Biochem.* 2008. 19:184-192.

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22. Datta, S., Turner, D., Singh, R., Ruest, L. B., Pierce, W. M., Jr., and Knudsen, T. B. Fetal alcohol syndrome (FAS) in C57BL/6 mice detected through proteomics screening of the amniotic fluid. *Birth Defects Res. A Clin. Mol. Teratol.* 2008. 82:177-186.
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26. Feng, Y., Neale, J. R., Doll, M. A., and Hein, D. W. Chemoprevention of arylamine-induced colorectal aberrant crypts. *Exp. Biol. Med. (Maywood)*. 2008. 233:71-75.
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29. Gozal, D. Matters of the heart: the brain in pediatric sleep apnea. *Am. J. Respir. Crit Care Med.* 2008. 178:785-786.
30. Gozal, D., Capdevila, O. S., and Kheirandish-Gozal, L. Metabolic alterations and systemic inflammation in obstructive sleep apnea among nonobese and obese prepubertal children. *Am. J. Respir. Crit Care Med.* 2008. 177:1142-1149.
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32. Gozal, D., Kheirandish-Gozal, L., Capdevila, O. S., Dayyat, E., and Kheirandish, E. Prevalence of recurrent otitis media in habitually snoring school-aged children. *Sleep Med.* 2008. 9:549-554.

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34. Gozal, D. and Kheirandish-Gozal, L. Obesity and excessive daytime sleepiness in pre pubertal children with obstructive sleep apnea. *Pediatrics.* 2008. 123:13-18.
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43. Kang, X., Song, Z., McClain, C. J., Kang, Y. J., and Zhou, Z. Zinc supplementation enhances hepatic regeneration by preserving hepatocyte nuclear factor-4alpha in mice subjected to long-term ethanol administration. *Am. J. Pathol.* 2008. 172:916-925.
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47. Kennedy, M. J., Loehle, J. A., Griffin, A. R., Doll, M. A., Kearns, G. L., Sullivan, J. E., and Hein, D. W. Association of the histamine N-methyltransferase C314T (Thr105Ile) polymorphism with atopic dermatitis in Caucasian children. *Pharmacotherapy*. 2008. 28:1495-1501.
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49. Kheirandish-Gozal, L. and Gozal, D. The multiple challenges of obstructive sleep apnea in children: diagnosis. *Curr. Opin. Pediatr*. 2008. 20:650-653.
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6. E. Chambers, L. Gobejishvili, S. Joshi-Barve, C. McClain, S. Mokshagundam and S. Barve. A Potential Pathogenic Role for Phosphodiesterases (PDEs) in the Development of Diabetic Complications. University of Dept. of Medicine, Pharmacology and Toxicology, Univ. of Louisville Medical Center
7. Ion V. Deaciuc¹, Zhenyuan Song¹, Irina A. Kirpich¹, Theresa Chen², and Craig J. McClain^{1,2,3}. Redox State Of The Nad+-Nadh System Modulates The Intracellular S-Adenosylmethionine And S-Adenosylhomocysteine Levels In The Isolated, Perfused Rat Liver.
8. ¹Division of Gastroenterology/Hepatology, Department of Medicine, ²Department of Pharmacology and Toxicology, University of Louisville School of Medicine, Louisville, KY, USA, and ³Veterans Medical Center, Louisville, KY, USA
9. Stephanie Mathews¹, Folasade Ademosu², Swati Joshi-Barve², Craig McClain^{1,2}, Shirish Barve^{1,2}. Epigenetic Modifications of Histones Play a Critical Role in Regulating IFN α -mediated Anti-HCV Gene Expression. University of Louisville, Departments of Pharmacology/Toxicology¹ and Medicine²
10. Folasade Ademosu², Stephanie Mathews¹, Swati Joshi-Barve², Craig McClain^{1,2}, Shirish Barve^{1,2}. Histone Deacetylase Activity is Essential for Interferon- α (IFN) Induced Anti-Hepatitis C Gene Expression in Hepatocytes. Departments of Pharmacology/Toxicology¹ and Medicine²
AASLD, October 31 – November 4, 2008, San Francisco, CA
11. Ming Song¹, Zhenyuan Song⁴, George Brewer⁵, and Craig J. McClain^{1,2,3}. Copper Modulates Collagen I α 1 mRNA Expression in Human Stellate Cells through p38 MAPK Signaling Pathway. ¹Department of Medicine, ²Department of Pharmacology and Toxicology, University of Louisville School of Medicine, Louisville, KY. ³Department of Veterans Affairs Medical Center, Louisville, KY. ⁴Department of Human Nutrition, University of Illinois at Chicago, Chicago, IL, ⁵Department of Internal Medicine, University of Michigan, Ann Arbor, Michigan.
12. Irina A. Kirpich, Zhenyuan Song, Ion V. Deaciuc, and Craig J. McClain. Liver Microarray Analysis Reveals Genes Potentially Involved In The Progression Of Nonalcoholic Liver Steatosis To Steatohepatitis. University of Louisville School of Medicine, Department of Medicine, Louisville, KY 40202
13. Ming Song¹, Zhenyuan Song¹, George Brewer⁴, and Craig J McClain^{1,2,3}. Anti-copper Therapy Protects Against Hepatic Fibrosis by Down-regulating Collagen I α 1 mRNA Expression in Hepatic Stellate Cells. ¹Division of Gastroenterology/Hepatology, ²Department of Internal Medicine, Department of Pharmacology and Toxicology, University of Louisville School of Medicine, Louisville, KY 40202; ³Veterans Administration, Louisville, KY, ⁴Department of Internal Medicine, University of Michigan, Ann Arbor, Michigan.
14. L. Gobejishvili, R. Khan, S. Joshi-Barve, S. Barve, C.J. McClain, D. Hill. Misoprostol, a Potential Therapeutic Agent for Alcoholic Hepatitis, Modulates Cytokine Activity through cAMP Pathway. Departments of Medicine and Pharmacology & Toxicology, University of Louisville

Society of Toxicology, Contemporary Concepts in Toxicology (CCT) Workshop, Hemangiosarcoma in Rodents: Mode of Action Evaluation and Human Relevance Workshop, December, 4-5,2008, Arlington, VA.

15. M. Cave, M. Patel, K. Falkner, S. Joshi-Barve, L. Reynolds, C. McClain. Toxicant Associated Steatohepatitis (TASH) in American Vinyl Chloride Workers. Department of Medicine, University of Louisville, Louisville, KY 40202.

16. M. Patel¹, K. Falkner¹, C. McClain^{1,2}, G. Brock³, S. Appana³, M.Cave¹. Pesticide And Heavy Metal Exposures Are Associated With Liver Disease.

¹Department of Medicine, ² Department of Pharmacology & Toxicology, ³ Department of Biostatistics and Bioinformatics, School of Public Health and Information Sciences, University of Louisville. Louisville, KY, 40202.

17. Cave, M., Falkner, K.C., Patel, M., Reynolds, L., Barve, S., McClain, C.J. Vinyl chloride-induced hepatic hemangiosarcoma: the Louisville experience [abstract]. Society of Toxicology, Contemporary Concepts in Toxicology (CCT) Workshop, Hemangiosarcoma in Rodents: Mode-of-Action Evaluation and Human Relevance Workshop, 2008.

18. Cave, M., Falkner, K.C., Patel, M., Reynolds, L., Barve, S., McClain, C.J. Biomarkers for vinyl chloride-induced hepatic hemangiosarcoma [abstract]. Society of Toxicology, Contemporary Concepts in Toxicology (CCT) Workshop, 2008
RSA, June 28-July 2, 2008, Washington, D.C.

19. ^{1,2}.Kirpich, ¹N.Solov'eva, ¹S.Lechter, ¹N.Bagjykova, ²S.Barve, ² C.McClain. Effect Of Probiotic Therapy On The Liver Enzyme Activity In Patient With Alcoholic Withdrawal Syndrome.

¹Northern State Medical University, School of Medicine, Arkhangelsk, Russian Federation,

²University of Louisville, School of Medicine, Louisville, KY, USA. Alcoholism Clinical and Experimental Research. 2008;32(S1): 100A

20. Craig McClain¹, Kalpana Ghoshal², Shirish Barve¹, Ion Deaciuc¹, Sam Jacobs². Epigenetics and Alcoholic Liver Disease.

¹University of Louisville, ²Ohio State University

21. I. A. Kirpich; I. V. Deaciuc; Z. Song; Y. Li; and C. J. McClain. Time Course Of Extracellular Matrix (Ecm) And Adhesion Molecule (Am) Expression Changes In The Liver Of A Mouse Model Of Chronic Alcohol Exposure.

University of Louisville School of Medicine, Louisville, KY 40292.

FASEB, April 5-9, 2008, San Diego, CA

22. Swati Joshi-Barve¹, Kiranmayi Amancherla¹, Madhuvanti Patil², Aruni Bhatnagar¹, Sanjay Srivastava¹, Leila Gobejishvili¹, Craig J. McClain^{1,2,3} and Shirish S. Barve^{1,2}
Environmental pollutant and lipid peroxidation product, acrolein, inhibits interferon-alpha mediated antiviral signaling in human hepatocytes: relevance for HCV therapy.

¹Department of Internal Medicine, ²Department of Pharmacology & Toxicology, University of Louisville Medical Center and ³Louisville VA Medical Center, Louisville, Kentucky

American Transplant Congress, September 19-20, 2008, Chicago, IL

23. Matt Cave, Rehan Khan, Arpana Mahalingashetty, Swati Joshi-Barve, Lark Reynolds, Craig J. McClain. Vinyl Chloride Induced Hepatic Angiosarcoma: An Update of the Louisville Experience.

Department of Medicine, University of Louisville

24. Matt Cave, Arpana Mahalingashetty, Swati Joshi-Barve, Lark Reynolds, Craig J. McClain. Elevated serum cytokeratin 18 identifies nonalcoholic steatohepatitis in chemical workers with normal routine liver enzymes.

Department of Medicine, University of Louisville

25. Cave, M., Falkner, K.C., Joshi-Barve, S., Khan, R., Ray, M., Reynolds, L., McClain, C.J. Industrial toxin associated steatohepatitis (TASH) develops in the absence of obesity and is

associated with many of the traditional biomarkers and mechanisms of NASH [abstract].

Hepatology. 2008; 48(4): 805A.

DDW, May 17-20, 2008, Boston, MA

26. L. Gobejishvili, R. Khan, S. Joshi-Barve, S. Barve, C.J. McClain, D. Hill. Misoprostol, a Potential Therapeutic Agent for Alcoholic Hepatitis, Modulates Cytokine Expression through cAMP Dependent Signaling Pathway

University of Louisville School of Medicine, Louisville, KY 40292.

27. Ming Song¹, Zhenyuan Song¹, George Brewer⁴, and Craig J McClain^{1,2,3} Anti-copper Therapy Protects Against Hepatic Fibrosis by Down-regulating Collagen I α 1 mRNA Expression in Hepatic Stellate Cells

¹Division of Gastroenterology/Hepatology, ²Department of Internal Medicine, Department of Pharmacology and Toxicology, University of Louisville School of Medicine, Louisville, KY 40202; ³the Veterans Administration, Louisville, KY and ⁴the Department of Internal Medicine, University of Michigan, Ann Arbor, Michigan.

28. Irina A. Kirpich, Zhenyuan Song, Ion V. Deaciuc, and Craig J. McClain. Liver Microarray Analysis Reveals Genes Potentially Involved In The Progression Of Nonalcoholic Liver Steatosis To Steatohepatitis

University of Louisville School of Medicine, Department of Medicine, Louisville, KY 40202

29. Ming Song¹, Zhenyuan Song¹, Ion V Deaciuc¹, Marcia Liu², Theresa Chen², George Brewer⁴, and Craig McClain^{1,2,3} Tetrathiomolybdate Protects Against Hepatic Fibrosis induced by Bile Duct Ligation in Mice

¹Division of Gastroenterology/Hepatology, ²Department of Internal Medicine, Department of Pharmacology and Toxicology, University of Louisville School of Medicine, Louisville, KY 40202; ³the Veterans Administration, Louisville, KY and ⁴the Department of Human Genetics and Internal Medicine, University of Michigan, Ann Arbor, Michigan.

W Glenn McGregor, MD

1. Stallons, L.J., Kalbfleisch, T. , and McGregor, W.G. Cell death and cell cycle pathways as potential targets for tumor suppression by pol iota: a systems biology approach. Environmental Mutagen Society, Atlanta GA October 2007. (LJS won a travel award and was invited to give a platform presentation).

2. Watson, N.B., Digman, and McGregor, W.G. Third Annual Workshop on Advanced Fluorescence Dynamics, University of California, Irvine October 2008. Intranuclear dynamics of proteins required for resolution of blocked DNA replication forks. Invited platform presentation
Abstracts at local or regional meetings

1. Stallons, L.J., Kalbfleisch, T. , and McGregor, W.G. The tumor suppressor activities of DNA polymerase iota. J. G. Brown Cancer Center Retreat. September 2008

Steven Myers, PhD

1. Radmacher, P., Adamkin, D., Myers, S.R., and Looney, S. *A Pilot Study of Polycyclic Aromatic Hydrocarbons (PAHs) in Maternal and Cord Blood Plasma*, Society of Perinatal Medicine Research, New Orleans, LA, February 21 – 25, 2008.

2. Myers, S.R., Ali, M. Y., Radmacher, P., and Adamkin, D. *Nitrosoamine Hemoglobin adducts in Maternal and Fetal Blood Samples from Smokers and Nonsmokers.*, Society of Perinatal Medicine Research, New Orleans, LA, February 21 – 25, 2008.

3. Myers, S.R., Ali, M. Y., Radmacher, P., and Adamkin, D. *Analysis of Polycyclic Aromatic Hydrocarbons in Breast Milk from Smokers and NonSmokers.* Society of Perinatal Medicine Research, New Orleans, LA, February 21 – 25, 2008.

4. Myers, S.R., Ali, M. Y., Radmacher, P., and Adamkin, D. *Amniotic Fluid as a Biomarker of Exposure to Tobacco Carcinogens.*, Society of Perinatal Medicine Research, New Orleans, LA, February 21 – 25, 2008.
5. Myers, S.R., Ali, M. Y., Radmacher, P., and Adamkin, D. *Maternal and Fetal Cytokine Concentrations in Smokers and Nonsmokers at Childbirth.*, Society of Perinatal Medicine Research, New Orleans, LA, February 21 – 25, 2008.

Donald Nerland, PhD

1. Nerland, D.E. Use of HaCaT Cells to Evaluate the Chemopreventive Properties of Coumarin Analogs. Abstracts of the 7th Annual James Graham Brown Cancer Center Retreat, p. 42, 2008

William Pierce, PhD

1. Bendaly, Jean¹; Zhao, Shuang¹; Metry, Kristin J.¹; Doll, Mark A.¹; States, J. Christopher¹; Smith, Ned B.¹; Pierce, William M.¹; Hein, David W.¹ Role of human cytochrome P4501a1 and N-acetyltransferase 2 genetic polymorphism on the mutagenicity and DNA damage of the environmental carcinogens 2-amino-phenylimidazo[4,5-B]pyridine and 4 aminobiphenyl. Society of Toxicology Annual Meeting, 2008.
2. Metry, Kristin J.¹; Doll, Mark A.¹; Smith, Ned B.¹; Zhao, Shuang¹; States, J. Christopher¹; McGregor, W. Glenn¹; Pierce, William M.¹; Hein, David W.¹ Role Of Human N-Acetyltransferase 2 Acetylation Polymorphism In Mutagenesis And Dna Adduct Formation By The Aromatic Amine Carcinogens 2-Aminofluorene And 4-Aminobiphenyl Society of Toxicology Annual Meeting, 2008.
3. Natali B. Richter, Qian Xu, Kathleen Hamilton, Michael Voor, Kevyn Merten, Jeff Falcone, Jian Cai, K. Grant Taylor and William M. Pierce, Jr. Targeting Drugs to Bone. American Chemical Society Meeting, Philadelphia, 2008.

Uma Sankar, PhD

1. Lance R. Todd, Matthew N. Damin, Sarah W. Grant, Anthony R. Means, and Uma Sankar. Regulation of hematopoietic stem cell self-renewal and embryonic stem cell pluripotency by GFER: A novel mitochondrial protein. *Midwest Blood Club Meeting*, The Ohio State University, Columbus, OH, April 2008.
2. Lance R Todd, Matthew N Damin, Sarah W. Grant, Vinitha R. Pai, and Uma Sankar. "Augmenter of Liver Regeneration: A Mitochondrial Sulphydril Oxidase Regulates Survival and Pluripotency of Multiple Stem Cells". Seventh Annual Brown Cancer Center Retreat, October 29, 2008, The Olmstead, Louisville, KY.

Zhao-Hui (Joe) Song, PhD

1. Ya Fatou Njie, Fang He, Zhuanhong Qiao, and Z H Song. 2-Arachidonylglycerol-Induced Increase in Aqueous Humor Outflow. World Ophthalmology Congress, 2008
2. Z H Song, Fang He, Zhuanhong Qiao, and Ya Fatou Njie. Aqueous Humor Outflow Effects of 2-Arachidonylglycerol. The Association for Research in Vision and Ophthalmology Annual Meeting, 2008.
3. Jean-Claude Nzimulinda, X Yang and Z H Song. Residues accessible in the binding site crevice of Transmembrane helix 2 of CB2 cannabinoid receptor. Society of Neuroscience Annual Meeting, 2008

XI. RESEARCH GRANTS FUNDED

Grant Activity—Funded

Gavin Arteel, PhD

Agency/Number	Title	Role	PI	Project Period	Budget Award
R01 AA003624	Control of drug and ethanol metabolism	PI	Arteel	05/02/06-04/30/11	1,364,794 (total)
UofL IRIG	Priming of liver disease by arsenic exposure	PI	Arteel	08/01/07-07/31/08	15,000 (total)
R21 AA015611	Matrix Metalloproteinases in Alcoholic Liver Injury	*Co-I/PI	*Deaciuc /Arteel	08/01/06-05/31/09	250,000 (direct)
F 31AA017346	The role of PKC ϵ in alcoholic liver disease	Mentor	Kaiser	11/01/07-10/31/10	84,894 (total)
R21 ES015812	Transplacental Arsenic Induced Hepatic Dysfunction and Vascular Disease	Co-I	States	04/01/08-03/31/10	250,000 (direct)
P01 AA017103	Alcohol liver disease and alcohol-nutrient interactions	Member and Animal Core Director	McClain	09/30/08-08/31/11	1,350,000 (total)

*NIH awarded Arteel PI status on this R21 after the death of the PI in July, 2008

Frederick W. Benz, PhD

Agency/Number	Title	Role	PI	Project Period	Budget Award
Department of Defense (DOD)	High Technology Mass Spectrometry Laboratory	Col	Pierce, W.M.	One Year	\$942,352.20

Jian Cai, PhD

Agency/Number	Title	Role	PI	Project Period	Budget Award
KSTC IB080452	Pharmacodynamics of Bone Targeted Drugs.	PI		10/07-5/09	263,545 total costs
DOD 07233001	High Technology Mass Spectrometry Lab	CoPI	WM Pierce	10/07-5/09	942,352 total costs
NIH R01 EY13813-05A1	TNF-alpha in Cell Death & Neuroprotection in Glaucoma	Col	G Tezel	8/1/07-7/31/12	1,850,000 total costs

Theresa Chen, PhD

Agency/Number	Title	Role	PI	Project Period	Budget Award
NIH/NIAAA R01 AA015970	S-adenosylchomocysteine and S-adenosylmethionine in Alcoholic Liver Disease	Co-I	McClain	09/30/05-6/30/10	357,500
NIH/NIAAA R01 AA014371-04	Mechanisms of alcohol-induced immunosuppression	Co-I	Barve	9/1/04-6/30/09	298,000
NIH R01 DK072032-03	Podocytes and oxidative stress in diabetic kidney	Co-I	Epstein	9/1/06-8/31/09	

Paul Epstein, PhD

Agency/Number	Title	Role	PI	Project Period	Budget Award
NIH R01 DK077624,	B-cells in pups of mild and severe STZ diabetic mothers; antioxidant protection	Co-I	YQ Liu	9/15/06-9/14/10	
NIH P20 RR024489 COBRE	Center of Excellence in Diabetes and Obesity Research	Mentor	Bhatnagar	10/1/08-9/30/13	
NIH DK072032	Podocytes and Oxidative Stress in Diabetic Kidney	PI	Epstein	9/30/05-8/31/10	\$218,000 direct costs per year
NIH DK073586	Prolonged diabetic damage to cardiac mitochondria	PI	Epstein	12-2005-9/30/2009	\$244,000 direct costs per year

David Gozal, MD

Agency/Number	Title	Role	PI	Project Period	Budget Award
NIH RO1-HL69932	Postnatal Brain Susceptibility to Intermittent Hypoxia	PI	Gozal	6/1/2002-5/31/2008	\$200,000 annual direct costs—1 year no cost extension
NIH RO-1 HL65270-09	Neurocognitive Function in Snoring Children	PI	Gozal	9/1/2003-6/30/2008	\$240,000 annual direct costs
NIH R01 HL086662	Oxidative stress in a murine model of sleep apnea	PI	Gozal	7/2008-6/2012	\$250,000 annual direct costs
NIH R01 HL083075	Tonsillectomy and Adenoidectomy in Children with Sleep Disordered Breathing	Site PI	Redline	2006-2011	\$190,000 annual direct costs
NIH SCOR HL60296-06, Project 2	MCT, Intermittent Hypoxia, and Stroke	PI, Project 2	Siegel	6/1/03-5/31/08	\$200,000 annual direct costs
NIH	Monocarboxylate Transporter in Hypoxic Pre-Conditioning	Co-I	Wang	02/01/04-01/31/08	\$250,000 annual direct costs
DOD DARPA BAA	Surviving blood loss	Co-I	Wang		
NIH R0-1 HL070911	Sleep and Sleep Disorders in Children	Co-I	Molfese	7/2004-6/2009	
NASA	Sleep and Cognition in Space	Co-I	Molfese	7/2006-6/2009	\$333,333 annual direct costs
NIH R01 AG21020-01	Aging, Episodic Hypoxia, and Vagal Cardiac Projections	Co-I	Cheng	5/1/03-4/30/08	\$250,000 annual direct costs
NIH/NCI R25 CA044789	Cancer Education Grant Program	Mentor	Burzynski	9/01/2002-8/31/2008	\$86,024 annual direct costs

Evelyne Gozal, PhD

Agency/Number	Title	Role	PI	Project Period	Budget Award
NIH/NCRR 2 P20 RR15576-06	Mechanisms of Plasticity and repair after SCI	PI	E Gozal	7/1/05 -6/30/10	\$ 902,020
NIH- NIAID R01AI075212	"Modulation of Neutrophil Apoptosis by Akt-Hsp27 Signalosome"	Co-investigator		08/08/2008-07/30/2012	\$ 1,397,000

Ramesh Gupta, PhD

Agency/Number	Title	Role	PI	Project Period	Budget Award
NIH CA-90892	Breast Cancer Etiology	PI	Gupta	12/01- 11/08	\$1,106,578

KY Lung Cancer Res. Board	Etiology & Prevention of Lung Cancer: Biomarker development in clinical studies	PI	Gupta	01/02- 02/08	\$270,000
NIH CA-96310	Chemoprevention of Experimental Tobacco Tumorigenesis	PI	Gupta	05/02- 04/08	\$1,325,254
NIH CA-118114	Breast Cancer Chemoprevention Strategies	PI	Gupta	04/07- 02/11	\$1,416,829
NIH CA-125152	Breast Cancer Chemoprevention Potential of Common Spices	PI	Gupta	07/07- 06/12	\$1,850,000
KY Lung Cancer Res. Board	Effect of Estrogen on Polycyclic Aromatic Hydrocarbon (PAH)-Mediated Lung Cancer	PI	Gupta	09/07- 08/09	\$149,939

David Hein, PhD

Agency/Number	Title	Role	PI	Project Period	Budget Award
NIH R01-CA34627	Pharmacogenetics of drug and carcinogen metabolism	PI	Hein	7/1/03-6/30/09	\$1,724,900 total
NIH T32 ES011564	UofL Environmental Health Sciences Training Program	PI	Hein	7/1/04-6/30/09	\$697,188 total
NIH P20 CA97942	James Graham Brown P20 Application	Program Leader	Miller	8/2/02-7/31/08	\$1,328,613 total
NIH R25 CA 44789	Cancer Education Grant Program	Mentor	Burzynski	8/1/02-1/1/09	\$557,437
NIH R01 ES11594	Metabolism and Detoxification of Base Propenals	Consultant	Srivastava	6/1/03-3/31/08	\$1,559,485
NIH PO1 ES011860	Cardiovascular toxicity of environmental aldehydes	Co-I on Proj 1	Bhatnagar	7/1/03-6/30/08	\$6,986,060 total
MD Anderson Cancer Center	NAT1 and NAT2 Genotype Determinations in Cancer Patients & Controls	PI	Hein	1/1/04-12/31/09	\$60,000 total
NIH R01-CA34627-19S to 22S	Pharmacogenetics of drug and carcinogen metabolism (minority supplement for Dr. La Creis Kidd)	PI	Hein	7/1/04-6/30/08	\$509,635 total
NIH U10-HD045934	Center for Pediatric Clinical Pharmacology Research	Dir. Pharmacogenetics lab	Sullivan	1/1/04-12/31/08	\$1,845,463 total
NIH T35 ES014559	Summer Environmental Health Sciences Training Program	Mentor	Prough	4/1/06-3/31/11	\$158,355 total
Vanderbilt University (NCI subcontract to R01 CA100374)	Nashville Breast Health Study	Subproj PI	W Zheng	5/3/07-4/31/09	\$134,006
NIH P20 RR023523	Planning Grant for Louisville Clinical and Translational Science Award	Mentor	McClain	10/1/06-9/30/08	\$220,000 total
NIH P30-ES014443	Center for Environmental Genomics and Integrative Biology	Investigator	Ramos	6/4/07-3/31/11	\$4,400,000 total
NCI R03- CA128028	A pharmacogenetic approach to	Co-I	Kidd	6/12/07-5/31/09	\$148,000

	prostate cancer susceptibility				
Procter and Gamble, Inc. Research Agreement #155482	NAT1 and NAT2 Metabolism Studies with Hair Dye Arylamines	PI	Hein	7/2/07-7/1/09	\$100,000 total
UofL Center for Environmental Genomics and Integrative Biology	Polymorphic genes of detoxification enzymes as risk factors for PSP	Co-PI	Hein, Litvan	4/1/08-3/31/09	\$30,000
BC083107 Department of Defense Breast Cancer Research Program	N-acetyltransferase 1 polymorphism and breast cancer risk	Mentor	Milner	9/29/08-9/28/11	\$92,442 total

Harrell Hurst, PhD

Agency/Number	Title	Role	PI	Project Period	Budget Award
NIH-NCI 5R01CA118114-02	Breast Cancer Chemoprevention Strategies	Co-I	Gupta	04/01/07 – 02/28/11	\$246,049 Ann. Direct
NIH-NCI 5R01CA125152-02	Breast Cancer Chemoprevention Potential of Common Spices	Co-I	Gupta	07/01/07 – 06/30/12	\$190,000 Ann. Direct
KY Lung Cancer Research Board	Effect of Estrogen on Polycyclic Aromatic Hydrocarbon (PAH)-Mediated Lung Cancer	Co-I	Gupta	09/07-08/09	\$149,939 Total
Dept Defense/Army Prop #07233001	High Technology Mass Spectrometry Laboratory	Co-I	Pierce	02/08-07/09	\$944,000

Y James Kang, PhD, DVM

Agency/Number	Title	Role	PI	Project Period	Budget Award
NIH-NHLBI, 2R01 HL063760	Oxidative stress and heart failure by copper restriction	PI	Kang	07/01/07-06/30/11	\$1,480,000
NIH-NIAAA, R01 AA014623	Zinc and alcohol-induced oxidative liver injury	Co-PI	Zhou, Z	08/10/05-05/31/09	\$1,139,252
NIH-NIAAA, P01 AA017103	Alcohol Liver Disease and Alcohol-Nutrient Interaction	Co-I	McClain C	10/01/08-09/30/12	\$450,000 yearly total award

La Creis Kidd, PhD, MPH

Agency/Number	Title	Role	PI	Project Period	Budget Award
NIH 1R03CA128028-01	A pharmacogenetic Approach to prostate cancer susceptibility	PI	Kidd	6/1/2007-5/31/2009	\$100,000
JGBCC Pilot 2007	Genomic Approach to Predicting Breast Cancer Recurrence	PI	Kidd	02/01/07-01/31/08	\$50,000
Prostate Cancer Foundation	Combined Genetic Assessment of Angiogenesis Pathway Variants Predictive of Prostate Cancer Risk.	PI	Kidd	2/1/07-1/31/08	\$100,000
NIH 3R01 CA034627-19S	Polymorphic N-acetyltransferase Genes and Prostate Cancer Susceptibility among African-	PI	Kidd	9/15/04-6/30/08	\$509,635

	American Men, National Cancer Institute				
NIH T32 ES011564	UofL Environmental Health Science Training Program	Mentor		07/01/04-06/30/09	\$667,160

Nobuyuki Matoba, PhD

Agency/Number	Title	Role	PI	Project Period	Budget Award
NIH NIAID/1R03AI073157-01A1	Expression of Deconstructed Virus-Like Particles in Bioengineered Plants.	PI	Matoba	03/15/07-02/28/09	\$149,000 (total costs)

Craig McClain, M.D.

Agency/Number	Title	Role	PI	Project Period	Budget Award
NIH 1P01 AA017103-01	Alcohol Liver Disease and Alcohol-Nutrient Interactions	PI	McClain	10/1/08-9/30/11	\$450,000 yearly total award
NIH 1P01 AA017103-015419	Administrative Core	PI	McClain	10/1/08-9/30/11	\$450,000 yearly total award
NIH 5R01 AA 015970-04	S-adenosylhomocysteine and S-adenosylmethionine in Alcoholic Liver Disease	PI	McClain	09/30/2005-06/30/2010	\$394,478 yearly total award
NIH 1R01AA018016-01	The role of Alcohol in HIV Therapy Hepatotoxicity	PI	Multiple (McClain, Barve, Eaton)	12/1/08-11/30/13	\$333,000 yearly total award
NIH R01 DK071765-04	Mechanisms of S-adenosylmethionine in NASH	PI	McClain	09/15/2005-07/31/2010	\$286,850 yearly total award
NIH R37 AA010762-14	TNF and Mitochondrial Dysfunction in ALD	PI	McClain	03/01/1996-07/31/2011	\$367,003 yearly total award
VA Merit	Dysregulated TNF/Fas signaling in Alcoholic Liver Disease	PI	McClain	04/01/2004-03/31/2009	\$149,300 yearly total award
NIH K23DK073750	Evaluation of the Effect of Green Tea Polyphenols on IBD	Mentor	Dryden	9/15/05-8/41/10	\$102,330 yearly direct costs
NIH K01AA015344-01A1	Mechanisms of Sensitization to TNF hepatotoxicity in ALD	Mentor	Song	9/15/05-08/31/10	\$92,813 yearly direct costs
1K23DK080953-01A1	Dietary Fructose and Redox Effects in Pediatric Nonalcoholic Fatty Liver Disease	Mentor	Vos	9/20/08-8/31/13	\$110,000 yearly direct costs
AASLD	Sheila Sherlock Award	Mentor	Cave	7/1/07-6/30/09	\$75,000 yearly direct costs
NIH P20 RR023523	Planning Grant for Louisville Clinical and Translational Science Award	PI	McClain	10/1/06-9/30/08	\$220,000 total

W. Glenn McGregor, MD

Agency/Number	Title	Role	PI	Project Period	Budget Award
NIH/NCI 1 R01 CA112197-04	Mutagenesis as a novel target for cancer prevention	PI	McGregor	04/01/05- 02/28/09 (No cost extension until 2/28/10)	\$175,000 annual direct costs
NIH/NCI 1 R03 CA112664-01A1	Novel strategies to prevent lung cancer	PI	McGregor	7/01/05-6/30/07 (no-cost extension)	\$50,000 annual direct costs

				to 6/30/08)	
James Graham Brown Cancer Center	Molecular mechanisms of stalled replication fork resolution in human cells	PI	McGregor	03/01/2007-02/28/2008	\$49,771
NIH/NCI R25 CA044789	Cancer Education Grant Program	Mentor	Burzynski	9/01/2002-8/31/2008	\$86,024 annual direct costs
NIH NCRR	Biacore 3000 shared Instrument Grant	Participating Investigator	Miller		\$270,000 total costs
NIH 1P30ES014443-01A1	Center for Environmental Genomics and Integrative Biology (CEGIB)	Participating Investigator	Ramos	06/04/2007-03/31/2011	\$ 600,000 Annual Direct Cost

Steven Myers, PhD

Agency/Number	Title	Role	PI	Project Period	Budget Award
University of California Tobacco Related Disease Research Program	Measuring prenatal tobacco exposure in newborn blood spots	Co-Principal Investigator	10%	07/01/2008 – 06/30/2011	\$506,927

Donald Nerland, PhD

Agency/Number	Title	Role	PI	Project Period	Budget Award
Competitive Enhancement Grant/VP Research	Transcriptional Control Mechanisms in Chemoprevention	PI	Nerland	2/1/07-2/28/08	\$5,400
Department of Defense (DOD)	High Technology Mass Spectrometry Laboratory	Col	Pierce W.M.	4/1/08-1/31/09	\$942,352

Kenneth Palmer, PhD

Agency/Number	Title	Role	PI	Project Period	Budget Award
NIH/R01AI076169-01	Antiviral Lectins as Microbicides	PI	Palmer	04/15/2008 – 03/31/2012	\$1,760,628 (total costs)
Starpharma Ltd/IB081330	Evaluation of viral entry-inhibitory activity of SPL7013 against human genital papillomavirus types	PI	Palmer	09/01/2008 – 02/28/2009	\$36,878
Advanced Cancer Therapeutics/OICB080771	Preclinical research on HPV vaccine candidate OCRP3302	PI	Palmer	10/01/2008 – 07/01/2009	\$199,357

William Pierce, PhD

Agency/Number	Title	Role	PI	Project Period	Budget Award
U.S. Department of Defense W81XWH-08-1-0047	High Technology Mass Spectrometry Laboratory for the Identification of Chemical Signatures	PI	Pierce	2008-2009	\$944,000 total costs
National Science Foundation - EPSCoR	Center for Regulatory Metabolomics: From Molecules to Communities	Co-I	Fan	2005 – 2008	\$940,229 total costs
NIH 5U10HD045934	Center for Pediatric	Co-I	Sullivan	3/08/04 – 02/28/08	\$257,250 annual

	Pharmacological Research			(1 year no cost extension--2/09)	direct costs
NIH 1P01ES011860-01A19001	Cardiovascular Toxicity of Environmental Aldehydes	Co-I/Core Lab Dir.	Bhatnagar,	7/1/2003 – 6/30/2008	\$287,444 annual direct costs
NIH R01DA11551-07	Structure and Function of CB2 Cannabinoid Receptor	Co-I	Z-H Song	3/08/04 – 02/29/09	\$257,250 annual costs
NIH 1P30ES014443-01A1	Center for Environmental Genomics and Integrative Biology (CEGIB)	Participating Investigator	Ramos	06/04/2007-03/31/2011	\$ 600,000 Annual Direct Cost
NIH R01 EY13813-05A1	TNF-a in Cell Death & Neuroprotection in Glaucoma	Consultant	Tezel	8/1/2007 - 7/31/2012	\$250,000 annual direct costs
NIH R01 EY017131-01A2	Proteomic Analysis of Retinal Ganglion Cell Death in Glaucoma	Consultant	Tezel	12/1/2007 - 1/31/2012	\$250,000 annual direct costs

Uma Sankar, PhD

Agency/Number	Title	Role	PI	Project Period	Budget Award
NIH R01AI076169	Antiviral lectins as microbicides	Co-I	Palmer	4/1/08-3/31/12	\$1,760,728 total direct costs
James Graham Brown Cancer Center Pilot	Role of Impaired Calmodulin-Dependent Protein Kinase Signaling in Lung Cancer	PI	Sankar	5/1/07-5/31/09	\$50,000 total direct costs

Zhao-Hui (Joe) Song, Ph. D.

Agency/Number	Title	Role	PI	Project Period	Budget Award
NIH R01DA11551-07	Structure and Function of CB2 Cannabinoid Receptor	P-I	Z-H Song	3/08/04 – 02/29/09	\$257,250 annual costs
NIH R01DA11551-09S1	minority supplement for Jean-Claude Nzimulinda to Structure and Function of CB2 Cannabinoid Receptor	P-I	Z-H Song	3/08/04 – 02/29/09	\$257,250 annual costs
NIH R01EY13632	Cannabinoid Receptors-Potential Targets for Novel Antiglaucoma Drugs	P-I	Z-H Song	August 1, 2003- July 31, 2008	\$1,174,166
NIH T32ES11564	Molecular Epidemiology - Environmental/Occupational Diseases	Faculty mentor	Hein	July 1, 2004 – June 30, 2009	\$ 1,240,452

J Christopher States, PhD

Agency/Number	Title	Role	PI	Project Period	Budget Award
NIH R01 ES011314	Arsenic Induced Mitotic Arrest Associated Apoptosis	PI	States	8/03-4/09	\$1,385,850 total costs
NIH R03 CA119295	Effects of chemopreventive agents on DNA damage	PI	States	9/05-8/08	\$147,000 total costs
NIH R21 ES015812-01A1	Transplacental arsenic induced hepatic dysfunction and vascular disease	PI	States	4/08-3/10	\$407,000 total costs
NIH R01 CA34627	Pharmacogenetics of drug and carcinogen metabolism	Co-I	Hein	4/1/03-3/31/08	\$1,250,000 total direct costs
NIH R01 ES011594	Metabolism and detoxification of	Co-I	Srivastava	6/1/03-3/31/08	\$1,559,485

	base prepenals				
NIH P30 ES014443-01A1	Center ofr Environmental Genomics and Integrative Biology	Deputy Director	Ramos	6/4/07-3/31/11	\$4,410,000
NIH F30ES013372	Arsenite inhibition of mitotic progression	Mentor	B Frazier Taylor	7/1/04-6/14/08	\$97,650
NIH F32 ES016719	Curcumin inhibits BPDE-induced damage by lowering the threshold of p53 activation	Mentor	E. Rogers	5/1/08-3/31/11	\$78,147
NIH T32 ES011564	UofL Environmental Health Sciences Training Program	Mentor	Hein	7/1/04-6/30/09	\$697,188
NIH T35 ES014559	Summer Environmental Health Sciences Training Program	Mentor	Prough	4/1/06-3/31/11	\$158,355

XII. RESEARCH GRANTS SUBMITTED

A. Research Grants Submitted or Pending

Gavin Arteel, PhD

Agency/Number	Title	Role	PI	Project Period	Budget Request
NIAAA	Zinc inhibition of endotoxemia in alcoholic liver injury	Co-I	Zhao	12/01/07-11/30/12	1,837,500 (total)
NIAAA	TNF α and recovery from alcoholic liver injury	Subcontract PI	Diehl (Duke)	08/01/09-07/31/14	140,256 (total subcontract costs)

Jian Cai, PhD

Agency/Number	Title	Role	PI	Project Period	Budget Request
NIH	O-GlcNAc Signaling in Heart Failure.	Co-I	SJ	7/1/09-6/30/14	1,250,000
NIH	Arsenic Induced Mitotic Arrest Associated Apoptosis	Co-I	JCS	7/1/10-6/30/15	1,250,000

Theresa Chen, PhD

Agency/Number	Title	Role	PI	Project Period	Budget Request
NIH/NIAAA/NIHAI	Epigenetic regulation of CD4+ T cell survival by S-adenosylmethionine	Co-I	Barve	4/1/08-3/31/13	1,250,000
NIH	Priming of liver disease by arsenic exposure.	Co-I	States	12/01/08-11/30/10	407,000

Keith R Davis, PhD

Agency/Number	Title	Role	PI	Project Period	Budget Request
<i>Pending</i>					
DoD/USAMRMC 08116003	Development of Novel Vaccines and Therapeutics Using Plant-Based Expression Systems	PI	K. R. Davis	~3/1/09 – 2/28/12	\$1,680,000
Komen for the Cure	Targeting Aggressive Breast Cancer Phenotypes Utilizing	Collaborator	Brian Czerniec	4/1/09-3/31/11	Subcontract \$100,221

	Activated Innate Transfer		ki Univ. of Pennsylvania		
<i>Submitted, not funded</i>					
Kentucky Lung Cancer Research Program, Cycle 8	The Role of Cadmium in Lung Cancer Initiation and Progression	PI	K. R. Davis	1/1/09-12/31/11	\$149,487

Evelyne Gozal, PhD

Agency/Number	Title	Role	PI	Project Period	Budget Award
NIH – RO1	Role of Hsp 25 in the astrocyte response and recovery from spinal cord injury	PI		12/01/08 – 11/30/13	\$1,250,000

Ramesh Gupta, PhD

Agency/Number	Title	Role	PI	Project Period	Budget Request
CA125152-02	Breast Cancer Chemoprevention Potential of Common Spices	PI	Gupta	07/07-05/12	\$219,626
CA-138395-01	Nano-curcumin for Breast Cancer Prevention	PI	Gupta	04/09-03/11	\$138,574
CA-140930-01	Nano-EGCG for Breast Cancer Prevention	Co-PI	Gupta/RaviKumar	07/09-06/11	\$138,574
CA-123416-01	Susceptibility to Ovarian Cancer is Related to Biotransformation Capacity	Co-I	Luderer	04/09-03/14	\$138,003
UofL	UofL Translational Oncology Training Program	Mentor	Miller	07/09-06/14	\$0.00
	A Novel Mouse Model for Colon Cancer Studies	Co-I	Bodduluri	07/09-06/14	\$1,373,315

David Hein, PhD

Agency/Number	Title	Role	PI	Project Period	Budget Award
UofL; CEGIB	Polymorphic genes of detoxification enzymes as risk factors for PSP	Co-PI	Litvan and Hein	04/01/2008 - 03/31/2009	\$30,000
Department of Defense BC083107	N-acetyltransferase 1 polymorphism and cancer risk	Mentor	Millner	09/29/2008-09/28/2011	\$92,442
NCI R25CA011564	University of Louisville Cancer Education Program	PI	Hein & Burzynski	04/01/2009 - 03/31/2014	\$1,490,617
NIEHS T32 ES011564	UofL Environmental Health Sciences Training Program	PI	Hein	07/01/2009 - 06/30/2014	\$2,117,610
NCI R01CA034617	Pharmacogenetics of drug and carcinogen metabolism	PI	Hein	07/01/2009 - 06/30/2014	\$1,842,381
American Association for Cancer Research	Arylamine N-acetyltransferase type 1 in breast cancer	PI	Hein	07/01/2009 - 06/30/2011	\$100,000
NCI	UofL Translational Oncology	Mentor	Miller	07/01/2009 -	\$1,268,151

	Training Program			06/30/2014	
NIH 1U54 RR026087	University of Louisville's Clinical and Translational Sciences Institute	Investig- ator	McClain	07/01/2009 - 06/30/2014	\$20,000,000

Y James Kang, PhD, DVM

Agency/Number	Title	Role	PI	Project Period	Budget Request
NIH-NHLBI, 1R01 HL084450	Copper nutrition and heart failure	PI		5 years	\$1,850,000
NIH-NIAAAA, R01 AA016013	Zinc Inhibition of Alcoholic Liver Injury	Co-PI	Zhou, Z	5 years	\$1,653,750
NIH-R01	Cruciferous dithiolethione: Intervention of chronic heart failure and mechanisms	PI (Sub- contr)	Li, Y; EV Virginia Col Osteopat hic Medicine	4 years	\$78,396 (5% Effort as consultant)

La Creis Kidd, PhD, MPH

Agency/Number	Title	Role	PI	Project Period	Budget Request
NCI R21	Apoptosis Predictors of Breast Cancer Detection, Prognosis and Drug Response	PI	Kidd	7/01/09-6/30/09	\$407,000
DOD Breast Cancer Concept Award	Apoptosis Predictors of Breast Cancer Detection, Prognosis and Survival Outcomes following Chemotherapy	PI	Kidd	10/01/09-9/30/10	\$112,119
DOD New Investigator Award	Pathway-wide approach to finding apoptosis-related predictors of prostate cancer risk and prognosis	PI	Kidd	10/01/08-9/30/12	\$225,000
Komen Foundation	"Finding Apoptosis Markers Predictive of Breast Cancer Prognosis and Chemotherapy Responsiveness Among African-American Women"	PI	Kidd	2/1/09-1/31/12	\$449,302
Prostate Cancer Foundation 2008 Competitive Award	Comprehensive Approach to Finding Predictors of PCA progression	PI	Kidd	7/01/08-6/30/11	\$2,185,740
Prostate Cancer Foundation 2008 Creativity Award	Apoptosis Predictors of Prostate Cancer Detection and Prognosis	PI	Kidd	2/1/09-1/31/10	\$150,000
American Cancer Society	Apoptosis Predictors of Breast Cancer Outcomes	PI	Kidd	7/1/09-6/30/13	\$395,421
Center for Environmental & Integrative Biological Award	Integrative Approach to Finding Predictors of PCA Prognosis	PI	Kidd	5/1/08-4/31/09	\$29,985
T32/ES011564	UofL Environmental Health	Mentor	Kidd	07/1/09-06/30/14	\$1,999,550

NIH, NIEHS	Science Training Program				
NCI R25CA044789	Cancer Education Grant	Mentor	Hein/ Burzynski	4/1/02-3/31/14	\$1,490,617
P20	Center for Action Research in Disparities Science – Center of Excellence	Fellow	Miles	5/5/09-4/30/14	6,891,752
Pre-doctoral Research Fellowship	Joint Modifying Effects of Variant Oxidative Stress and Apoptosis Markers and Smoking in Relation to Prostate Cancer Risk in African-American Men	Mentor	Lavender	09/1/08-07/31/10	\$99,526

Nobuyuki Matoba, PhD

Agency/Number	Title	Role	PI	Project Period	Budget Request
Grand Challenges in Global Health/Grand Challenges Explorations Round 2	A plant-made mucosal vaccine targeting HIV-1 surface glycans.	PI	Matoba	03/01/09 – 02/28/10	\$100,000 (total costs)

Craig McClain, MD

Agency/Number	Title	Role	PI	Project Period	Budget Request
NIH 1U54 RR026087-01	University of Louisville's Clinical and Translational Sciences Institute	PI	McClain	7/1/09-6/30/14	\$20,000,000
NIH CA R25134283-01	University of Louisville Cancer Education Program R25 application	Mentor	Hein	07/01/08 - 06/30/13	
T32/ES011564 NIH, NIEHS	UofL Environmental Health Science Training Program	Mentor	Kidd	07/1/09-06/30/14	\$1,999,550

Steven Myers, PhD

Agency/Number	Title	Role	PI	Project Period	Budget Request
National Instituted of Health (R01ES016324-01)	Chemorevention of Dibenzo(a,l)pyrene Induced Mammary Carcinogenesis	Principal Investigator	Myers	11/01/2007 - 10/31/2010	\$750,000
National Instituted of Health (1R03CA131594-01)	Characterization of Tobacco Smoke Hemoglobin Adducts by LCMS	Principal Investigator	Myers	12/01/2007 - 11/30/2009	\$100,000
National Instituted of Health (1R21CA132009-01)	Assessment of Tobacco Carcinogen Protein Adducts	Principal Investigator	Myers	12/01/2007 - 11/30/2009	\$250,000
NIH OGM13081369	Preclinical model to study the molecular effects of smoke in reflux induced Barrett's Esophagus	Co-I	Martin	6/1/08-5/31/11	\$1,811,600

Uma Sankar, PhD

Agency/Number	Title	Role	PI	Project Period	Budget Request
American Cancer Society	Research Scholar Award	PI	Sankar	07/01/2009-06/30/2013	\$786,044 Total direct costs
UofL School of Med. Basic Grant Program	Hematopoietic Stem Cells as Targets of Cadmium Toxicity	PI	Sankar	4/1/09-4/1/10	\$15,000—Not funded
NIH. R01DK083353-01	Regulation of Stem Cell Function by a Molecular Pathway Containing CaMKIV and Gfer	PI	Sankar	04/01/2009-03/31/2014	\$1,200,000 Total direct costs—not funded
KY Lung Cancer Program	Calcium/Calmodulin-Dependent Survival Pathway in Small Cell Lung Cancer	PI	Sankar	10/1/2008-09/30/2010	\$150,000 Total direct costs—not funded
DOD Congressionally Directed Med. Res. Prog. (PRMRP)	CaMKIV in Normal Hematopoiesis and Myelodysplasia	PI	Sankar	05/01/2009-04/30/2012	\$900,000 Total direct costs—not funded
UofL CEG	Regulation of Stem Cell Function by a Molecular Pathway Containing CaMKIV and Gfer	PI	Sankar	12/01/08-12/01/09	\$15,000 Total costs—not funded

Zhao-Hui (Joe) Song, Ph. D

Agency/Number	Title	Role	PI	Project Period	Budget Request
NIH R01 DA11551-09	Structure and Function of CB2 Cannabinoid Receptor	PI	Song	5/1/09-4/30/14	
NIH R01EY13632	Cannabinoid Receptors-Potential Targets for Novel Antiglaucoma Drugs	PI	Song	8/1/09-7/31/14	
NIH R01 DA11551	Structure and Function of CB2 Cannabinoid Receptor	PI	Song	7/1/09-6/30/14	\$ 1,665,000
NIH R01EY13632	Cannabinoid Receptors-Potential Targets for Novel Antiglaucoma Drugs	PI	Song	4/1/09-3/31/14	\$1,850,000
NIH R21NS 66474	Assay Development for High Throughput Screening of Ligands for Novel Cannabinoid Receptor GPR55	PI	Song	6/1/09-5/31/10	\$185,000

J Christopher States, PhD

Agency/Number	Title	Role	PI	Project Period	Budget Request
NIH R01 ES011314 (competitive renewal)	Arsenic induced mitotic arrest associated apoptosis	PI	States	7/09-6/14	\$1,250,000 total direct costs
CEGIB biomarker pilot project	miRNA biomarkers for ovarian cancer	Co-I	Helm	1/1/09-12/31/09	\$60,000, funded with \$20,000 match from School of Med
DOD Ovarian Cancer Research Program, OC080319	Plasma microRNA biomarkers for metastatic ovarian cancer	Co-PI	States, Helm	7/1/09-6/31/12	\$750,000 direct costs—not funded

XIII. INVITED SCIENTIFIC PRESENTATIONS (SALARIED FACULTY)

Gavin Arteel, PhD

1. Research seminar, 05/08, "New role of PAI-1 in mediating acute and chronic liver injury," University of Louisville, Pulmonary Grand Rounds.
2. Research symposium, 07/08, "PAI-1 at the crossroads of the innate immunity and coagulation." Research Society of Alcoholism, annual meeting, Washington, DC.
3. Research symposium, 11/08, "PAI-1 and its role in innate immunity and liver damage." Society of Leukocyte Biology, "Alcohol, Leukocytes and Host Defense" satellite symposia, Denver, CO.

Frederick Benz, PhD

1. Acrylonitrile: An Industrial Chemical, What it does, doesn't and could do. Dept. Pharmacology and Toxicology, UofL, 3/12/2008

Jian Cai, PhD

1. Research seminar, 03/08. "Mass Spectrometry: Techniques and Applications" Biophysical and Structural Biology Meetings (BCC), Louisville, KY.

Keith R Davis, PhD

1. The Owensboro Cancer Research Program. 2008. Seventh Annual Retreat, James Graham Brown Cancer Center, University of Louisville, Louisville, Kentucky

Paul Epstein, PhD

1. American Heart Association November 2008

David Gozal, MD

1. Keynote Speaker, Sleep 2008, June 2008, Baltimore, MD

Evelyne Gozal, PhD

1. *Hsp25, a Multitasking Protein: Multiple Functions in Different Pathologies*. Invited research seminar, Department of Cell Biology, University of Geneva, February 22 2008
2. *Astroglial Cells in injury Role in CNS Function, Adaptation, and Metabolism* Invited research seminar, Department of Physiology and Biophysics, University of Louisville, November 25, 2008.

Ramesh Gupta, PhD

1. 2008 Linda H. Chen Symposium on Nutrition and Oxidative Stress, University of Kentucky, Lexington, KY, May 19, 2008 (Plenary Speaker)

2. 2nd International Conference on New developments in Drug Discovery from Natural Products and Traditional Medicines, NIPER, Chandigarh, India, November 2008 (Plenary Speaker as well as Chair of an afternoon session)

David Hein, PhD

1. Pharmacogenomics and Personalized Medicine. Phi Delta Epsilon Premedical Fraternity, University of Louisville, Louisville, Kentucky, January 2008.
2. Acetylation Pharmacogenomics and Molecular Epidemiology of Tobacco-Related Cancers. Cancer Prevention and Control Seminar Series, James Graham Brown Cancer Center, University of Louisville, Louisville, Kentucky, January 2008.
3. Molecular Epidemiology: Pharmaco/toxicogenetics. Universite Paris 7- Denis Diderot, Paris, France, May 2008.
4. Role of N-acetyltransferases in the Metabolism and Mutagenicity of Arylamines. Procter and Gamble/Cosmital, Marly, Switzerland, May 2008.
5. Role of N-acetyltransferase Polymorphisms in Cancer Susceptibility. Pulmonary, Critical Care and Sleep Disorders Medicine, Department of Medicine, University of Louisville School of Medicine, Louisville, Kentucky, August 2008.
6. Acetylation Pharmacogenetics and Cancer Risk from Arylamine Carcinogens. Division of Cancer Biology, National Cancer Institute, Rockville, Maryland, December 2008.

Harrell Hurst, PhD

1. Feb. 26, 2008, Brown Cancer Center Cancer Prevention and Control Seminar, "Alkene air pollutants in Louisville: Environmental monitoring and biomarker research"

Y James Kang, PhD, DVM

1. Nov 12, 2008 Invited Speaker, International Conference of Trace Elements in Man and Animals, Pucan, Chile, Nov 9-13, 2008. "Copper metabolic disorder in heart failure"
2. Oct 13, 2008 Invited Speaker, International Copper Meeting, Sardinia, Italy, Oct 12-15, 2008. "Molecular mechanisms for dietary copper supplementation reversal of hypertrophic cardiomyopathy"
3. May 29, 2008 Invited Speaker, Shanghai Bio-Forum 2008, Shanghai, China, May 28-30, 2008. "Biomarkers for cardiotoxicity in drug development"
4. Apr 26, 2008 2008 Daniel J. Zaffarano Lecture Award, Iowa State University, Ames, Iowa "Cardiac Toxicology, a new 'species' in Toxicology"
5. Apr 3, 2008, Invited Plenary Lecture, Joint Scientific Meeting of Microscopy Society (Singapore) and Singapore Neuroscience Association, April 3-4, 2008, "Metallothionein regulation of zinc trafficking and neurodegenerative disease"
6. Apr 1, 2008 Invited Seminar, Department of Anatomy, National University of Singapore Yong Loo Lin School of Medicine, "Regression of hypertrophic cardiomyopathy by dietary copper supplementation"
7. Mar 20, 2008 Invited Speaker, Symposium "Cellular redox status and zinc signaling" at the 47th annual meeting of the Society of Toxicology, Seattle, WA, March 16-20, 2008. "Metallothionein redox cycle and zinc signaling"

LaCreis Kidd, PhD, MPH

1. James Graham Brown Memorial Lecture Series, Cancer Prevention & Control Program, *University of Louisville, Louisville, KY*, Lecturer, "Clinical Relevance of Angiogenesis SnP Profiles in Breast Cancer Recurrence", December 9, 2008
2. Pre-matriculation Medical Students, *University of Louisville, School of Medicine, Louisville, KY*, Lecturer, "A Multi-faceted Approach to Analyzing Gene-Gene Interactions", January 22, 2008

Craig McClain, MD

1. Clinical Nutrition Week, "Obesity, Liver Disease and Immune Function", Chicago, IL, February 8-10, 2008.
2. 16th Annual Pre-Derby University of Louisville Alumni Conference, "Chronic Hepatitis to Hepatocellular Carcinoma", Louisville, KY, April 26, 2008.
3. NIH Peer Review Advisory Committee (PRAC, Bethesda, MD, April 30, 2008.
4. Digestive Disease Week 2008, "Steatohepatitis", San Diego, TX, May 17-22, 2008.
5. Digestive Disease Week 2008, "Nutrition", San Diego, TX, May 17-22, 2008. University of Louisville, Grand Rounds, "Nutritional Deficiency: Diagnose that Deficiency," Louisville, KY, June 5, 2008.
6. International Meeting on Alcoholic Liver Disease, "Cytokine Modulation in the Treatment of Alcoholic Liver Disease", Bilbao, Spain, July 17-18, 2008.
7. University of Cincinnati Liver Forum, "Fatty Liver: Up to Date in Diagnosis and Management," Mason, OH, August 1, 2008.
8. Transplant Hepatology Review Course, "Alcoholic Disease – 2008", Chicago, IL, September 19-20, 2008.
9. HIV & Liver Disease Conference, "HIV and Alcohol", Jackson Hole, WY, September 25-27, 2008.
10. Ocera Therapeutics Planning Meeting, "NASH", Chicago, IL, September 29, 2008.
11. Gilead-Acute Alcohol Hepatitis Meeting, Durham, NC, October 13, 2008.
12. NIAAA Center Director's Meeting, "Alcohol-Nutrient Interactions", Farmington, CT, October 16-17, 2008.
13. AASLD Annual Meeting, "Basic Research for Junior Investigator-MD perspective", San Francisco, CA, October 31, 2008.
14. AASLD Annual Meeting, "Pathogenesis of Alcoholic Liver Disease", San Francisco, CA, October 31, 2008.
15. AASLD Liver Wrap-up Symposium, Jewish Hospital, "Drug-Induced Liver Disease", Louisville, KY, November 15, 2008

W Glenn McGregor, MD

1. Intranuclear dynamics of proteins required for mutagenesis, Molecular Targets Program, James Graham Brown Cancer Center. May 2008.
2. New insights into the molecular mechanisms of carc-induced mutagenesis in human cells. Indiana University Department of Dermatology, November 2008.

Steven Myers, PhD

1. February, 2008, University of Louisville Department of Pediatrics Pediatric Neonatal Fellows, "Application of Breast Milk as a Biomarker of Exposure to Environmental Carcinogens"

2. February 21 – 25, 2008. Society of Perinatal Medicine Research, New Orleans, LA
3. February 28, 2008, University of Louisville, Department of Pharmacology and Toxicology Department Seminar, "It all started with a chimney sweep (Analysis, metabolism and biomarkers of polycyclic aromatic hydrocarbons)"
4. March, 2008, University of Louisville Department of Pediatrics, NICU Fellows Seminar, "Application of Biomarkers in Neonates"
5. April, 2008, Sequoia Foundation, University of California Tobacco Related Disease Program Web Seminar, "Application of Biomarkers in the Exposure Assessment of Environmental Carcinogens"

Donald Nerland, PhD

1. Use of HaCaT Cells to Evaluate the Chemopreventive Properties of Coumarin Analogs. Seventh Annual James Graham Brown Cancer Center Retreat, Louisville, KY,

Kenneth Palmer, PhD

1. "Beating Cervical Cancer". Owensboro Medical Health System Annual Women's Health Forum. River Park Center, Owensboro, KY 09/30/2008.
2. "Molecular Farming for Cancer Prevention" James Graham Brown Cancer Center, University of Louisville Annual Retreat. Louisville, KY 10/29/2008.

William Pierce, PhD

1. Novel drugs for treatment of hard tissue disorders. Presented at the University of Louisville School of Dentistry, May 6, 2008.
2. Bone targeting strategies in drug design. Presented at the Musculoskeletal New Ventures Conference, Memphis, TN October 28-29, 2008.
3. Bone targeting strategies in drug design. Presented at the annual Southeast BIO conference, Palm Beach, FL, December 3-5, 2008.

Uma Sankar, PhD

1. Regulation of hematopoietic stem cell self-renewal and embryonic stem cell pluripotency by GFER: A novel mitochondrial protein. Midwest Blood Club Meeting, The Ohio State University, Columbus, OH, April 2008.
2. Augmenter of Liver Regeneration: A Novel Mitochondrial Protein Involved in Hematopoietic Stem Cell Self-Renewal and Embryonic Stem Pluripotency. The Poa Pratensis Molecular Targets Program and Brown Cancer Center Joan Cralle Day Cancer Research Fund; University of Louisville, KY, June 2008.
3. Augmenter of Liver Regeneration: A Mitochondrial Sulphydryl Oxidase Regulates Survival and Pluripotency of Stem Cells. Seventh Annual Brown Cancer Center Retreat, October 29, 2008, The Olmstead, Louisville, KY
4. Regulation of hematopoietic stem cell self-renewal and embryonic stem cell pluripotency by GFER: A novel mitochondrial protein. *Midwest Blood Club Meeting*, The Ohio State University, Columbus, OH, April 2008.
5. "Augmenter of Liver Regeneration: A Mitochondrial Sulphydryl Oxidase Regulates Survival and Pluripotency of Multiple Stem Cells". Seventh Annual Brown Cancer Center Retreat, October 29, 2008, The Olmstead, Louisville, KY.

Zhao-Hui (Joe) Song, Ph. D.

1. Expression and Characterization of Cannabinoid Receptors in Yeast, Dyax Corp, Boston, June, 2008.
2. Novel Cannabinoid Receptors---Structure, Function, and Potentials as Therapeutic Targets, School of Pharmacy, Southern Medical University, Guangzhou, China, July, 2008.
3. Cannabinoid Receptor Structure and Function-An Update, Department of Pharmacology and Toxicology, University of Louisville, July 2008.
4. 2-Arachidonylglycerol-Induced Increase in Aqueous Humor Outflow, World Ophthalmology Congress, 2008
5. Aqueous Humor Outflow Effects of 2-Arachidonylglycerol, The Association for Research in Vision and Ophthalmology Annual Meeting, 2008.
6. Residues accessible in the binding site crevice of Transmembrane helix 2 of CB2 cannabinoid receptor, Society of Neuroscience Annual Meeting, 2008

J Christopher States, PhD

1. 10/9/08, "Molecular Determinants of Arsenic Induced Mitotic Arrest Associated Apoptosis", Department of Applied Medical Sciences, University of Southern Maine, Portland, ME
2. Transplacental arsenic induced changes in liver gene expression. 14th Alexander Hollaender Course on Genetic Toxicology, Indian Institute of Chemical Biology, Kolkata, India, December 10 - 12, 2008
3. Molecular Determinants of Arsenic Induced Mitotic Arrest Associated Apoptosis. International Conference of Translational Pharmacology & 41st Annual Conference of Indian Pharmacological Society, All India Institute of Medical Sciences, New Delhi, India, December 18 - 20, 2008

XIV. DEPARTMENTAL TEACHING

School of Medicine

The Department team-taught the Medical Pharmacology course to second year medical students. Dr. Mike Williams served as course director.

School of Dentistry

The Department team-taught the Dental Pharmacology and Therapeutics course and a Dental Review Course to dental students. Dr. Leonard Waite served as course director.

The Department team-taught a Pharmacology course to second year students in the Dental Hygiene Program. Dr. Leonard Waite served as course director.

School of Nursing

The Department team-taught an Advanced Pharmacology course to graduate nursing students. Dr. Leonard Waite served as course director.

The Department provided an online pharmacology course in basic pharmacology for undergraduate nursing students. The Department provided online Neonatal and Geriatric Pharmacology courses for graduate nursing students. Dr. Steve Myers developed and served as course director for each of these courses.

College of Arts and Sciences

The Department team-taught a Basic Pharmacology course cross-listed as Biology 390 and is taken by other undergraduate students. Dr. Leonard Waite served as course director.

Graduate School

The Department team taught several courses for graduate students. The individual courses and course directors were as follows:

- Scientific Writing (Dr. Gavin Arteel)
- Principles of Drug and Chemical Action (Dr. Frederick Benz)
- Research Methods (Dr. Chris States and Dr. Joe Song)
- Pharmacology Seminar (Dr. Donald Nerland)
- Neuropharmacology (Dr. Peter Rowell)
- Selective Toxicity and Chemotherapeutics (Drs. Don Nerland and Harrell Hurst)
- Cardiovascular and Renal Pharmacology (Drs. Mike Williams and James Kang)
- Endocrine and Metabolic Pharmacology (Drs. Bill Pierce and Gavin Arteel)
- Molecular Toxicology (Dr. W. Glenn McGregor and Russell Prough)

XV. DEPARTMENTAL STANDING COMMITTEES

Graduate Program Committee

Dr. William Pierce (Chair)

Student Affairs

Dr. Gavin Arteel
Dr. Uma Sankar (2011)
Dr. Peter Rowell (2010)
Dr. Glenn McGregor (2009)

Student Admissions

Dr. Chris States
Dr. LaCreis Kidd (2011)
Dr. Paul Epstein (2010)
Dr. James Kang (2009)

Jay Stallons (student representative)

SIBUP/Grievance Committee

Dr. Peter Rowell (Chair)
Dr. Don Nerland (2011)
Dr. Harrell Hurst (2010)
Dr. Joe Song (2009)

Teaching Evaluation Committee

Dr. Mike Williams (Chair)
Dr. Len Waite (2011)
Dr. Fred Benz (2010)
Dr. Harrell Hurst (2009)

Seminar Committee

Dr. Don Nerland (Chair)
Dr. Fred Benz (2011)
Dr. Steve Myers (2010)
Dr. Ramesh Gupta (2009)

Core Laboratories/Research Development Committee

Dr. Chris States (Chair)
Dr. Glenn McGregor (2011)
Dr. Theresa Chen (2010)
Dr. Jian Cai (2009)

Events Committee

Dr. Len Waite (Chair)
Dr. Nobuyuki Matoba (2011)
Dr. LaCreis Kidd (2010)
Dr. Glenn McGregor (2009)
Student- Phillip Kaiser

Information Technology Committee

Dr. Gavin Arteel
Dr. Fred Benz
Dr Harrell Hurst