# *Department of Pharmacology & Toxicology*

UNIVERSITY OF LOUISVILLE®

SCHOOL OF MEDICINE

# *2007 Annual Report*

# Department of Pharmacology and Toxicology-2007

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**APPENDIX**

## FACULTY APPOINTMENTS

- **Uma Sankar, PhD** was appointed Assistant Professor (primary appointment; tenure track) of Pharmacology and Toxicology. Dr. Sankar was recruited to the James Graham Brown Cancer Center in the Owensbor Cancer Research Program. Dr. Sakar received her PhD in Molecular, Cellular and Developmental Biology from the Ohio State University in 2003. She received further postdoctoral training in the Department of Pharmacology and Cancer Biology at Duke University Medical Center.

- **Albert Cunningham, PhD** was appointed Associate Professor (joint appointment) of Pharmacology and Toxicology with primary appointment in the James Graham Brown Cancer Center. Dr. Cunningham received his PhD in Environmental and Occupational Health from the University of Pittsburgh. Dr. Cunningham previously held positions as Assistant Professor of Environmental and Occupational Health at the University of Pittsburgh and Assistant Professor of Environmental Toxicology at Louisiana State University.

- **James Lillard, PhD, MBA** was appointed Smith & Lucile Gibson Endowed Chair in the James Graham Brown Cancer Center and Associate Professor of Microbiology and Immunology (primary) and Pharmacology and Toxicology (joint). Dr. Lillard received his Ph.D. in Microbiology & Immunology from the University of Kentucky and his MBA from Emory University. He completed a postdoctoral fellowship as a UNCF-Merck fellow in the Department of Microbiology at the University of Alabama at Birmingham. He previously was Associate Professor of Immunology at Morehouse School of Medicine.

- **Irene Litvan, MD** was appointed Raymond Lee Lebby Professor in Parkinson's Disease Research in the Department of Neurology and Professor (joint appointment) of Pharmacology and Toxicology. Dr. Litvan received her medical degree from the Universidad de la Republica in Montevideo, Uruguay. She completed her internship and residency training in Spain prior to additional training at the National Institutes of Health, and St. Elizabeth Hospital and Georgetown University. She has previously served as a Senior Staff Fellow at NIH and as Chief of the Neuropharmacology Unit Defense and Veteran Head Injury Program at the Henry M. Jackson Foundation in Bethesda. She was also Chief of the Cognitive Neuropharmacology Unit at Suburban Hospital in Bethesda.

- **Chin Ng, PhD** was appointed Associate Professor (joint appointment) of Pharmacology and Toxicology. Dr. Ng received his MS and PhD degrees from the University of Wisconsin. He subsequently received further postdoctoral research training at UCLA School of Medicine and then was recruited to Yale University School of Medicine where he held several academic positions. He was recruited to the James Graham Brown Cancer Center as Associate Professor and Head of the Section on Imaging Sciences in the Department of Diagnostic Radiology.

- **Manuel Martinez-Maldonado, MD** was appointed Professor (joint appointment) of Pharmacology and Toxicology with primary appointment in the Department of Medicine. Dr. Martinez was recruited to UofL as Executive Vice President for Research. He has held appointments as as President and Dean of Ponce School of Medicine. professor of medicine, vice provost and vice president for research at Oregon Health Sciences University; vice chair of the department of medicine at Emory University Medical School; and director of internal medicine and ambulatory care at the Atlanta VA Medical Center.

## FACULTY PROMOTIONS


**Jian Cai, PhD** to Assistant Professor of Pharmacology and Toxicology
**Lu Cai, MD, PhD** to Associate Professor of Medicine and Radiation Oncology

## ADMINISTRATIVE APPOINTMENTS


- **Gavin Arteel, PhD:** Appointment as Director of Graduate Program Management and Student Affairs.

- **J. Christopher States, PhD:** Appointment as Director of Graduate Program Admissions and Recruitment.

- **Craig McClain, MD**: Appointment as Associate Vice President for Translational Research.

- **William Pierce, PhD**: Appointments as Interim Vice Provost for Graduate Affairs and Interim Dean of the Graduate School.

## FACULTY AWARDS AND HONORS

- **Gavin Arteel, PhD:** Appointment as University Scholar and received first place research award at Research!Louisville.

- **Aruni Bhatnagar, PhD:** Selected as School of Medicine nominee for UofL's Outstanding Scholarship, Research and Creative Activity Award- Basic and Applied Sciences.

- **John Eaton, Ph.D**.: Scientist of the Year Award, James Graham Brown Cancer Center Mint Jubilee.

- **Y. James Kang, Ph.D. and Ramesh Gupta, PhD.:** Reappointments as Distinguished University Scholars.

- **Craig McClain, MD:** Lifetime Research Award, American Gastroenterology Association; VHA Advanced Clinical Access Champion Award, Louisville VAMC; AGA Foundtion Resaerch Scholar Award for Mentoring; Distinguished Investigator Award, UofL Department of Medicine.

- **George Rodgers, MD, PhD:** Appointment as Human Chair in International Pediatrics.

- **J. Christopher States, PhD:** Appointment as Distinguished University Scholar.

- **W. Michael Williams, MD, PhD:** Golden Apple Teaching Award from School of Medicine sophomore class.

## GRADUATE STUDENT/POSTDOC AWARDS AND HONORS

- **Sam McNeely** received the Guy Steven son Outstanding Graduate Student Award at the UofL commencement.

- **Kevyn Merten** received the John Houchens Outstanding Dissertation Award at the UofL commencement.

- **Philip Kaiser** received an individual National Institutes of Health predoctoral fellowship**.**

- **Jianxun Wang** received an individual American Heart Association predoctoral fellowship**.**

- **Frazier Taylor** received the KC Huang Outstanding Graduate Student in Pharmacology and Toxicology Award**.**

- **Sam McNeely and Jason Walraven** were selected for travel awards to present their research at annual meetings of the Federation of American Societies for Experimental Biology.

- **Alex Carrasquer** received a travel from the International Cannabinoid Research Society.

- **Jay Stallons** received a travel award from the Environmental Mutagen Society.

- **Sam McNeely, Frazier Taylor, and Thomas Schlierf** received graduate student research presentation awards at the annual meetings of the Society of Toxicology and the Ohio Valley Society of Toxicology.

- **Juliane Beier, Philip Kaiser and Claudia von Montfort** received Presidential Poster of Distinction Awards at the AASLD annual meeting.

- **Jay Stallons and Claudia von Montfort** received research awards at Research!Louisville.

- **Nick Watson** received the Condict Moore Graduate Student Research Prize at 2007 annual retreat of the James Graham Brown Cancer Center.

## PROGRAM DEVELOPMENT

- Addition of medical oncology/PhD training program track
- Expansion of the graduate committee and initiation of two subcommittees
    - Admissions and recruitment
    - Program management and student affairs
- Establishment of student honor code
- Initiation of new course (PhTx 651) Neonatal Pharmacology

## FACULTY DEPARTURES

- **Kevin Stansbury, PhD:** Assistant Professor, James Graham Brown Cancer Center and Associate in Pharmacology and Toxicology (appointment expired).

- **Yi Qi Liu, MD, PhD:** Assistant Professor of Pediatrics and Associate in Pharmacology and Toxicology (resigned to take a faculty position in the Department of Pediatrics at LSU-New Orleans).

- **Avital Schurr, PhD-:** Professor of Anesthesiology and Perioperative Medicine and Associate in Pharmacology and Toxicology (retirement).

## 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 Challenge for Excellence to become a preeminent metropolitan research university, the Department Strategic Plan 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 will be 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 active contribution to high quality research and other scholarly activities, particularly in pharmacology and toxicology and other areas of focus within the University of Louisville *Challenge for Excellence.*

- Provide high quality research and educational experiences in pharmacology and toxicology for the education and training of future biomedical scientists who can 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.

**Faculty Members with Primary Faculty Appointments**
**Department of Pharmacology and Toxicology**

Gavin E. Arteel
**Associate Professor**
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
**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
**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
**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
**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
**Professor and Agnes Brown Duggan Chair of Oncological Research**
502-852-3682
rcgupta@louisville.edu

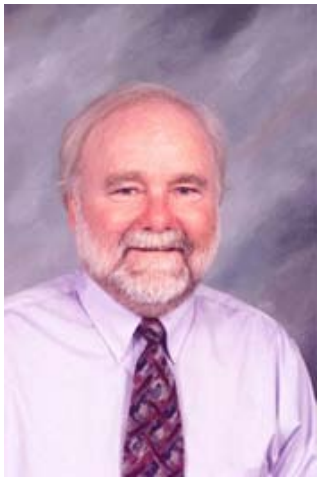
## Research Interests

Development and identification of intermediate biomarkers to investigate etiology and prevention of human cancers and novel delivery systems.

David W. Hein
**Professor and Peter K. Knoefel Chair of Pharmacology and Toxicology**
502-852-5141; d.hein@louisville.edu
www.louisville.edu/~dwhein01

## Research Interests

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



Harrell E. Hurst
**Professor**
502-852-5797; h.hurst@louisville.edu
www.louisville.edu./~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
**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.

W. Glenn McGregor
**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
**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
**Professor**
502-852-5560;denerl01@gwise.louisville.edu

## Research Interests

Biochemical toxicology; metabolism of drugs and environmental pollutants.

Kenneth E. Palmer
**Associate Professor**
270-691-5960; kepalm02@gwise.louisville.edu

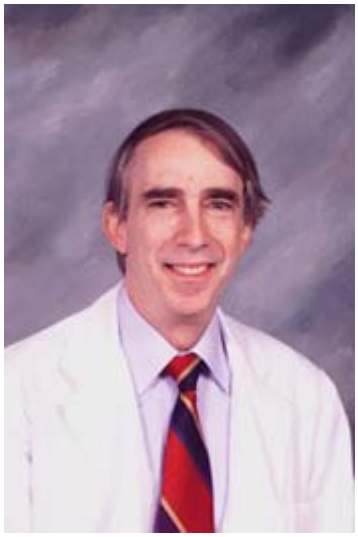
## Research Interests

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

William M. Pierce Jr
**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
**Professor**
502-852-5579; rowell@louisville.edu
www.louisville.edu/~pprowe01

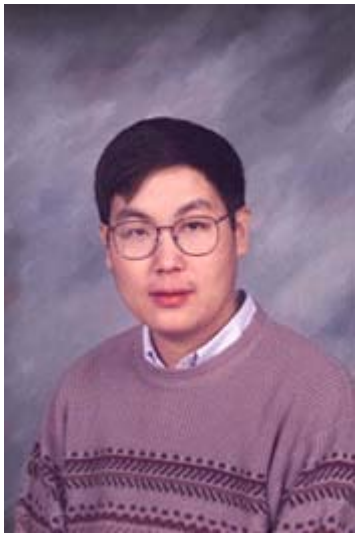
## Research Interests

Neuropharmacology; effect of drugs on brain neurotransmitters and receptors.

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

## Research Interests

Role of Calcium/Calmodulin-dependent protein kinase signaling in hematopoetic stem cell biology and cancer.



Zhao-Hui (Joe) Song
**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
**Professor**
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
**Professor and Vice-Chairman**
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
**Professor**
502-852-5348; wmwill01@gwise.louisville.edu

## Research Interests

Studies of drug elimination (metabolism and excretion).

**Faculty Members with Joint Faculty Appointments**
**Department of Pharmacology and Toxicology**

George R. Aronoff
**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
**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
**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
**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
**Assistant Professor of Medicine and Assistant 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**
**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
**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
**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.

Teresa Whei-Mei Fan
**Associate Professor of Chemistry and Associate Professor of Pharmacology and Toxicology**
502-852-6448; teresa.fan@louisville.edu

## Research Interests

Metabolomics, proteomics, ecotoxicology, contaminant bioavailability, transport, biotransformation, and bioremediation.

Richard E. Goldstein
**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
**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 adaptions to intermittent hypoxia: growth factors, intracellular signaling, and genomic implications.

Evelyne Gozal
**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

**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

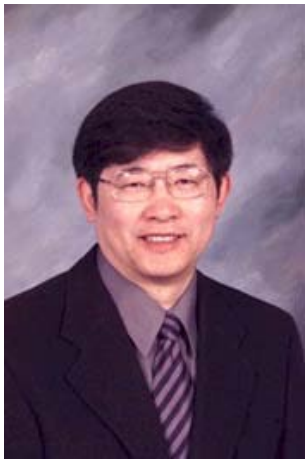
**Assistant Professor of Neurological Surgery Assistant and Professor of Pharmacology and Toxicology**

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

**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 antioxident systems in the heart. Biological functions and toxicological significance of metallothionein and glutathione in vivo.

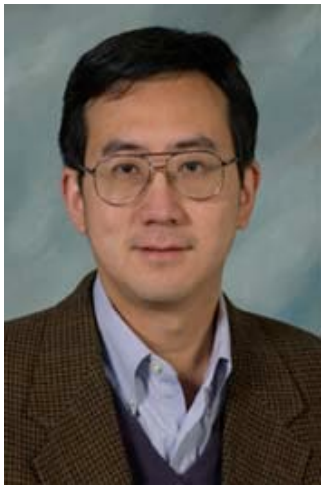
Mary Jayne Kennedy

**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
**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.

James W. Lillard, Jr.
**Associate Professor of Microbiology & Immunology and Associate Professor of Pharmacology & Toxicology**
Smith & Lucile Gibson Endowed Chair in Medicine
502-852-2174; james.lillard@louisville.edu

## Research Interests

Molecular and cellular mechanisms that affect inflammation and immunity.

Irene Litvan
**Professor of Neurology and Professor of Pharmacology and Toxicology**
**Raymond Lee Lebby 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
**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
**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
**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

**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

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

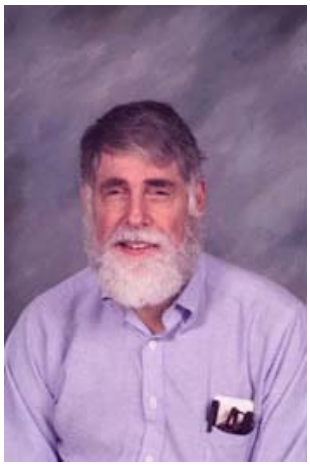
## Research Interests

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

M. Michele Pisano
**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
**Professor of Pediatrics and Professor of Pharmacology and Toxicology**
502-852-3720; gcrodgers@pol.net

## Research Interests

Toxicokinetics in drug overdoses and pharmacokinetics in pediatric disease states.

Janice E. Sullivan
**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.

David J. Tollerud
**Professor of Environmental and Occupational Health and Professor of Pharmacology and Toxicology**
502-852-2053; djtoll01@gwise.louisville.edu

## Research Interests

Occupational and environmental health; Occupational toxicology; molecular epidemiology.

Yang Wang

**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

**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. Trafficing of tail-anchored proteins.

Hong Ye

**Assistant Professor of Medicine and Assistant Professor of Pharmacology and Toxicology**
502-852-4047; hong.ye@louisville.edu
www.louisville.edu/~h0ye0001/

## Research Interests

Research to understand the structure and mechanism of tumorgenesis, 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

**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
**Assistant Professor of Radiation Oncology and Assistant Professor of Pharmacology and Toxicology**
502-852-3445; wz@bcc.louisville.edu

## Research Interests

Molecular oncology.

**Faculty Members with Associate Faculty Appointments**
**Department of Pharmacology and Toxicology**

**Lu Cai**
Associate Professor of Medicine and Radiation Oncology

**Daniel J. Conklin**
Assistant Professor of Medicine (Cardiology)

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

**William W. Young, Jr.**
Professor of Molecular, Cellular, and Craniofacial Biology

**Additional Associate Faculty**

- **Brier, Michael E.**, Professor of Medicine
- **Liu, Ye Qi**, Assistant Professor of Pediatrics
- **Schurr, Avital**, Professor of Anesthesiology
- **Stansbury, Kevin H.**, Assistant Professor, Brown Cancer Center
- **Wong, John L.**, Professor of Chemistry

## 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).

- **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., Molecular, Cellular, and Developmental 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.**, Assistant Professor of Medicine (Hematology/Oncology), and Pharmacology and Toxicology; Ph.D., Biomedical Sciences/Immunology, University of Minnesota (1997); M.D., University of Minnesota (1998).

- **Cunningham, Albert R.,** Associate Professor of Medicine (Hematology/Oncology) and Pharmacology and Toxicology; Ph.D., Environmental and Occupational Health, University of Pittsburgh (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).

- **Fan, Teresa**, Associate Professor of Chemistry, and Pharmacology and Toxicology; Ph.D., Biochemistry, University of California-Davis (1983).

- **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**, Assistant 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)

- **Lillard, James W.,** Smith & Lucile Gibson Endowed Chair; Associate Professor of Microbiology & Immunology and Pharmacology & Toxicology; Ph.D., Microbiology and Immunology, University of Kentucky (1996); M.B.A. Emory University (2002).

- **Martinez-Maldonado, Manuel**, Executive Vice President for Research, Profesor of Medicine and Professor of Pharmacology & Toxicology, M.D., Temple Medical School (1961).

- **Litvan, Irene,** Raymond Lee Lebby Professor in Parkinson's Disease Research; Professor of Neurology, and Pharmacology and Toxicology; M.D., Universidad de la Republica (1979)

- ***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., University of Medicine and Dentistry of New Jersey R.W. Johnson Medical School (1989).

- **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).

- **Tollerud, David J.,** Professor of Environmental and Occupational Health Sciences and Professor of Pharmacology and Toxicology; M.D., Mayo Medical School (1978); M.P.H., Harvard Medical School (1990).

- **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**, Associate 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.**, Associate Professor of Medicine; Ph.D., Industrial and Physical Pharmacy, Purdue University (1986).

- **Cai, Lu**, Associate Professor of Medicine and Radiation Oncology; 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).

- **Liu, Ye Qi**, Assistant Professor of Pediatrics; M.D., Guangxi Medical University (1983); Ph.D., Pharmacology, Osaka University (1993).

- **Scott, David A,** Associate Professor of Periodontics, Endodontics & Dental Hygiene: Ph.D., Microbiology and Immunology, McGill University (1997)

- **Schurr, Avital**, Professor of Anesthesiology; Ph.D., Biochemical Pharmacology, Ben Gurion University, Beer Sheva, Israel (1977).

- **Stansbury, Kevin H.**, Assistant Professor, Brown Cancer Center; Ph.D. University of Kentucky (1994).

- **Wong, John L.**, Professor of Chemistry; Ph.D., Chemistry, University of California at Berkeley (1966).

- **Young, William W.**, Professor of Molecular, Cellular, and Craniofacial Biology; Ph.D., Pharmacology, Washington University (1975).

**Faculty with Emeritus Appointments**

- **Carr, Laurence A.**, Professor Emeritus; Ph.D., Michigan StateUniversity (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).

- **Matyunas, Nancy**, Adjunct Instructor of Pharmacology and Toxicology; Pharm.D., University of Utah (1983).

- **Nicholson, John A.**, Adjunct Assistant Professor of Pharmacology and Toxicology; D.M.D., University of Louisville (1979); Ph.D., University of Louisville (1968).

- **Sessler, Daniel I.**, Adjunct Professor of Pharmacology and Toxicology, M.D., Columbia University (1980).

**STAFF AND STUDENTS**

**Research Staff**

- **Aiyer, Harini,** Research Assistant
- **Barker, David**, Research Scientist
- **Baumgarten, Sara**, Student Assistant
- **Benford, Marnita**, Laboratory Assistant
- **Burke, Tom**, Research Technologist II
- **Carpenter, Sharon**, Administrative Assistant
- **Das, Nundita,** Research Assistant
- **Doll, Mark**, Research Scientist
- **Ellis, James,** Administrative Assistant
- **Greca, Edie**, Business Manager Intermediate III
- **Guo, Luping**, Senior Research Associate
- **Jeyabalan, Jeyaprakash**, Research Assistant
- **Jiang, Guohui**, Senior Research Associate
- **Liu, Marcia,** Senior Research Associate
- **McClain, Marion,** Research Facilitator
- **Miller, Heather**, Senior Research Technologist
- **Mukhopadhyay, Suparna,** Research Associate

- **Noe, Anne,** Administrative Assistant
- **Ravoori, Srivani,** Instructor
- **Ristagno, Elizabeth,** Student Assistant
- **Rubin-Teitel, Heddy**, Administrative Assistant
- **Schlierf, Thomas,** Student Assistant
- **Sils, Brian,** Student Assistant
- **Simon, William Evan,** Student Assistant/Temporary Lab Assistant
- **Smith, Ned**, Technical Director Mass Spectrometry Lab
- **Spencer, Wendy**, Scientist
- **States, Gregory,** Temporary Lab Assistant
- **States, Vanessa,** Temporary La Assistant
- **Tatum, Shiloh,** Unit Business Manager
- **Taylor, Kevin G.,** Research Technician IV
- **Templeton, Tiva**, Research Technologist II
- **Turner, Delano**, Lab Research Technician III
- **Vadhanam, Manicka,** Assistant Professor
- **Venugopal, Praba,** Research Assistant

**Postdoctoral Fellows**

- Ali, Yeakub
- Aquil, Farrukh
- Ammunallah, Hina
- Bendaly, Jean
- Beier, Juliane
- He, Fang
- M'Bemba, Meka Prosper
- Munagal, Radhu
- Qiao, Zhuanhong
- Thaiparambil, J. Thomas
- von Montfort, Claudia
- Yang, Xiaonan

**Graduate Students**

| **Name** | **Advisor** |
|---|---|
| Cherone Anthony | A. Bhatnagar |
| Sheila (Mullins) Arnold | T. Hagg |
| Aisha Bagshaw | W. Pierce |
| Katie Bourcy | Y. J. Kang |
| Alex Carrasquer | Z-H. Song |
| Pengxiao Cao | R. Gupta |
| Eleana Chambers | S. Barve |
| Chad Dumstorf | W.G. McGregor |

| | |
|---|---|
| Emily Esposito | M. Pisano |
| Agata Habas | M. Hetman |
| Anwar Husain | D. Hein |
| Philip Kaiser | G. Arteel |
| Christelle Komguem Kamga | Z-H Song |
| Amanda Lasnik | K. Palmer |
| Nicole Lavender | L. Kidd |
| Shankang Ma | Y.J. Kang |
| Robert Martin | D. Hein |
| Stephanie Mathews | S. Barve |
| Sam McNeely | J.C. States |
| Mildred Menchu | W. Pierce |
| Kevyn Merten | Y.J. Kang |
| Kristin Metry | D. Hein |
| Lori Millner | D. Hein |
| Afsoon Moktar | R. Gupta |
| Lasharon Mosley | J. Lillard |
| Clarisse Muenyi | J.C. States |
| Olive Ngalame | J.C. States |
| YaFatou Njie | Z-H. Song |
| Jean Claude Nzimulinda | Z-H. Song |
| Madhu Patil | S. Barve |
| John Philipose | M. Pisano |
| Stephen Reeves | D. Gozal |
| Katie Richardson | W Zundel |
| Erica Rogers | J.C. States |
| Gilandra Russell | R. Gupta |
| Thomas Schlierf | D. Hein |
| Nason Schooler | J. Eaton |
| Sunder Shyam | R. Gupta |
| L. Jay Stallons | W.G. McGregor |
| Frazier Taylor | J.C. States |
| Joshua Thornburg | J. Chesney |
| Jason Walraven | D. Hein |
| Jianxun Wang | P. Epstein |
| Nick Watson | W.G. McGregor |
| Christina Clark (Weigand) | E. Gozal |
| Lu Yang | P. Epstein |
| Susan Zhang | D. Hein |
| Yang Zhou | Y.J. Kang |

## GRADUATES

| Graduate | Degree | Year | Mentor | Dissertation/Thesis Title |
|---|---|---|---|---|
| Ya Fatou Njie | Ph.D. | 2007 | Zhao-Hui (Joe) Song, Ph.D. | Cannabinoids as potential therapeutic agents for glaucoma |
| Christelle K. Kamga | M.S. | 2007 | Yang Wang, Ph.D. | UCP4 is a key regulator of mitochondrial antioxidant defense in rat PC12 cells |
| Jianxun Wang | M.S. | 2007 | Paul N. Epstein, Ph.D. | The changes of fructos-2,6-biphosphate level in transgenic mice causing cardiomyopathy |
| Joshua M. Thornburg | Ph.D. | 2007 | Jason A. Chesney, M.D., Ph.D. | Identification of aspartate aminotransferase as a novel target for anti-neoplastic research |
| Samuel C. McNeely | Ph.D. | 2007 | J. Christopher States, Ph.D. | Sensitivity to sodium arsenite depends upon susceptibility to mitotic arrest-associated apoptosis |
| Jason M. Walraven | Ph.D. | 2007 | David W. Hein, Ph.D. | Computational and functional analyses of human and rat N-acetyltransferase genetic variants |
| J. Phillip Kaiser | M.S. | 2007 | Gavin E. Arteel, Ph.D. | The role of PKC-Epsilon in alcoholic liver disease |
| Agata M. Habas | Ph.D. | 2007 | Michal Hetman, M.D., Ph.D. | The role of GSK3β and NFATc4 in NMDA-mediated neuronal survival |
| B. Frazier Taylor | Ph.D. | 2007 | J. Christopher States, Ph.D. | Arsenite inhibition of mitotic progression |
| LaSharon D. Mosley | M.S. | 2007 | Richard E. Goldstein, M.D., Ph.D. | Estrogen receptors in thyroid cell proliferation |

| Graduate | Degree | Year | Mentor | Dissertation/Thesis Title |
|---|---|---|---|---|
| Lu Yang | M.S. | 2007 | Paul N. Epstein, Ph.D. | Protection by metallothionein from adriamycin induced nephropathy in mice and gene expression profiling during progression of diabetic nephropathy |
| Chad A. Dumstorf | Ph.D. | 2007 | W. Glenn McGregor, M.D. | Participation of mouse DNA polymerases iota, eta, and rev1 in translesion synthesis of carcinogen induced DNA adducts and carcinogenesis |
| Kristin J. Metry | Ph.D. | 2007 | David W. Hein, Ph.D. | Role of N-acetyltransferase 2 polymorphism in DNA adduct formation and mutagenesis by aromatic and heterocyclic amine carcinogens |
| Jin Liu | Ph.D. | 2007 | Michael E. Brier, Ph.D. | Design evaluation for pharmacokinetic studies in patients with renal impairment |
| Kevyn E. Merten | Ph.D. | 2007 | Y. James Kang, Ph.D. | Effect of zinc on doxorubicin-induced activation of the calcineurin signaling pathway and the relation to myocardial cell death and hypertrophy |

## DEPARTMENTAL COURSES

### School of Medicine

The Department team-taught the Medical Pharmacology course to second year medical students. Dr. Mike Williams served as course director. Individual faculty contributions are identified in the faculty reports.

### 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. Individual faculty contributions are identified in the faculty reports. The Department team-taught a Pharmacology course to second year students in the Dental Hygiene Program. Dr. Leonard Waite served as course director. Individual faculty contributions are identified in the faculty reports.

### School of Nursing

The Department team-taught a Basic Pharmacology for Nursing course to second year nursing students. The course is also cross-listed as Biology 390 and is taken by other undergraduate students. Dr. Leonard Waite served as course director. Individual faculty contributions are identified in the faculty reports. The Department team-taught an Advanced Pharmacology course to graduate nursing students. Dr. Leonard Waite served as course director. Individual faculty contributions are identified in the faculty reports. 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.

### Graduate School

The Department team taught several courses for graduate students (directors in parenthesis):

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

## APPENDIX

## PUBLICATIONS (SALARIED FACULTY AND STAFF)


1. Ai J, Epstein PN, Gozal D, Yang B, Wurster R, Cheng ZJ. Morphology and topography of nucleus ambiguus projections to cardiac ganglia in rats and mice. Neuroscience 2007;149:845-60.

2. Ai J, Gozal D, Li L, Wead WB, Chapleau MW, Wurster R, Young B, Li H, Liu R, Cheng Z. Degeneration of vagal efferent axons and terminals in cardiac ganglia of aged rats. J Comp Neurol 2007;504:74-88.

3. Amunom I, Stephens LJ, Tamasi V, Cai J, Pierce WM Jr, Conklin DJ, Bhatnagar A, Srivastava S, Martin MV, Guenerich FP, Prough RA. Cytochromes P450 catalyze oxidation of alpha,beta-unsaturated aldehydes. Arch Biochem Biophys 2007;464:187-96.

4. Bass JL, Gozal D. Oxygen therapy for bronchiolitis. Pediatrics 2007;119:611.

5. Bendaly J, Zhao S, Neale JR, Metry KJ, Doll MA, States JC, Pierce WM Jr, Hein DW. 2-Amino-3,8-dimethylimidazo-[4,5-f]quinoxaline-induced DNA adduct formation and mutagenesis in DNA repair-deficient Chinese hamster ovary cells expressing human cytochrome P4501A1 and rapid or slow acetylator N-acetyltransferase 2. Cancer Epidemiol Biomarkers Prev 2007;16:1503-9.

6. Bravo ML, Serpero LD, Barcelo A, Barbe F, Agusti A, Gozal D. Inflammatory proteins in patients with obstructive sleep apnea with and without daytime sleepiness. Sleep Breath 2007;11:177-85.

7. Cave M, Deaciuc I, Mendez C, Song Z, Joshi-Barve S, Barve S, McClain C. Nonalcoholic fatty liver disease: predisposing factors and the role of nutrition. J Nutr Biochem 2007 Mar;18(3):184-95.

8. Dayyat E, Maarafeya MM, Capdevila OS, Kheirandish-Gozal L, Montgomery-Downs HE, Gozal D. Nocturnal body position in sleeping children with and without obstructive sleep apnea. Pediatr Pulmonol 2007;42:374-9.

9. de Villiers WJ, Song Z, Nasser MS, Deaciuc IV, McClain CJ. 4-Hydroxynonenal-induced apoptosis in rat hepatic stellate cells: mechanistic approach. J Gastroenterol Hepatol 2007;22:414-22.

10. DiMascio L, Voermans C, Uqoezwa M, Duncan A, Lu D, Wu J, Sankar U, Reya T. Identification of adiponectin as a novel hemopoietic stem cell growth factor. J Immunol 2007;178:3511-20.

11. Emau P, Tian B, O'keefe BR, Mori T, McMahon JB, Palmer KE, Jiang Y, Bekele G, Tsai CC. Griffithsin, a potent HIV entry inhibitor, is an excellent candidate for anti-HIV microbicide. J Med Primatol 2007;36:244-53.

12. Fang H, Qiao Z, Cai J, Pierce W, He D, Song ZH. Involvement of hsp-90 in CB2 cannabinoid receptor-m ediated cell migration--a new role of hsp-90 in migration signaling of a G protein-coupled receptor. Mol Pharmacol 2007;72:1289-300.

13. Fang H, Song ZH. Molecular and cellular changes induced by the activation of CB2 cannabinoid receptors in trabecular meshwork cells. Mol Vis 2007;13:1348-56.

14. Feng W, Wang Y, Cai L, Kang YJ. Metallothionein rescues hypoxia-inducible factor-1 transcriptional activity in cardiomyocytes under diabetic conditions. Biochem Biophys Res Commun 2007;360:286-9.

15. Goldbart AD, Mager E, Veling MC, Goldman JL, Khierandish-Gozal L, Serpero LD, Piedemonte G, Gozal D. Neurotrophins and tonsillar hypertrophy in children with obstructive sleep apnea. Pediatr Res 2007;62:489-94.

16. Gozal D, Kheirandish-Gozal L, Serpero LD, Sans CO, Dayyat E. Obstructive sleep apnea and endothelial function in school-aged nonobese children: effect of adenotonsillectomy. Circulation 2007;116:2307-14.

17. Gozal D, Kheirandish-Gozal L. Neurocognitive and behavioral morbidity in children with sleep disorders. Curr Opin Pulm Med 2007;13:505-9.

18. Gozal D, Capdevila OS, Kheirandish-Gozal L, Crabtree VM. APOE epsilon 4 allele, cognitive dysfunction, and obstructive sleep apnea in children. Neurology 2007;69:243-9.

19. Gozal D, Crabtree VM, Sans CO, Witcher LA, Kheirandish-Gozal L. C-reactive protein, obstructive sleep apnea, and cognitive dysfunction in school-aged children. Am J Respir Crit Care Med 2007;176:188-93.

20. Grigg-Damberger M, Gozal D, Marcus CL. Quan SF. Rosen C, Chervin RD, Wise M, Picchietti DL, Sheldon SH, Iber C. The visual scoring of sleep and arousal in infants and children. J Clin Sleep Med 2007;3:201-40.

21. Gu H, Lin M, Liu J, Gozal D, Scrogin KE,Wurster R, Chapleau MD, Ma X, Cheng ZJ. Selective impairment of central mediation of baroreflex in anesthetized young adult Fischer 344 rats after chronic intermittent hypoxia. Am J Physiol Heart Circ Physiol 2007;293:H2809-H2818.

22. Hambrecht VS, Vlisides PE, Row BW, Gozal D, Baghdoyan HA, Lydic R. Hypoxia modulates cholinergic but not opioid activation of G proteins in rat hippocampus. Hippocampus 2007;17:934-42.

23. Han J, Xu J, Long YS, Epstein PN, Liu YQ. Rat maternal diabetes impairs pancreatic beta-cell function in the offspring. Am J Physiol Endocrinol Metab 2007;293:E228-E236.

24. He F, Qiao ZH, Cai J, Pierce W, He DC, Song ZH. Involvement of the 90-kDa heat shock protein (Hsp-90) in CB2 cannabinoid receptor-mediated cell migration: a new role of Hsp-90 in migration signaling of a G protein-coupled receptor. Mol Pharmacol 2007;72: 289-300.

25. Hennig B, Ettinger AS, Jandacek RJ, Koos S, McClain C, Siefried H, Silverstone A, Watkins B, Suk WA. Using nutrition for the intervention and prevention against environmental chemical toxicity and associated diseases. Environ Health Perspect 2007 Apr;115(4):493-5. Epub 2007 Jan 16.

26. Hu R, Sharma SM, Bronisz A, Srinivasan R, Sankar U, Ostrowski MC. Eos, MITF, and PU.1 recruit corepressors to osteoclast-specific genes in committed myeloid progenitors. Mol Cell Biol 2007;27:4018-27.

27. Hur J, Buckley K, Lee S, Davis K. Transcriptional activator elements for curtovirus C1 expression reside in the 3' coding region of ORF C1. Mol Cells 2007;23:80-7.

28. Hurst H. Toxicology of 1,3-butadiene, chloroprene, and isoprene. Rev Environ Contam Toxicol 2007;189:131-79.

29. Hurst H, Ali MY. Analyses of (1-chloroethenyl)oxirane headspace and hemoglobin N-valine adducts in erythrocytes indicate selective detoxification of (1-chloroethenyl)oxirane enantiomers. Chem Biol Interact 2007;166:332-40.

30. Hurt RT, Frazier TH, Matheson PJ, Cave MC, Garrison RN, McClain CJ, McClave SA. Obesity and inflammation: III. Curr Gastroenterol Rep 2007;9:307-8.

31. Hurt RT, Frazier TH, Matheson PJ, Cave MC, Garrison RN, McClain CJ, McClave SA. Obesity and inflammation: II. Curr Gastroenterol Rep 2007;9:306-7.

32. Hurt RT, Frazier TH, Matheson PJ, Cave MC, Garrison RN, McClain CJ, McClave SA. Obesity and inflammation: should the principles of immunonutrition be applied to this disease process? Curr Gastroenterol Rep 2007;9:305-6.

33. Husain A, Loehle JA, Hein DW. Clinical pharmacogenetics in pediatric patients. Pharmacogenomics 2007;8:1403-11.

34. Husain A, Zhang X, Doll MA, States JC, Barker DF, Hein DW. Functional analysis of the human N-acetyltransferase 1 major promoter: quantitation of tissue expression and identification of critical sequence elements. Drug Metab Dispos 2007;35:1649-56.

35. Husain A, Zhang X, Doll MA, States JC, Barker DF, Hein DW. Identification of N-acetyltransferase 2 (NAT2) transcription start sites and quantitation of NAT2-specific mRNA in human tissues. Drug Metab Dispos 2007;35:721-7.

36. Jiang GC, Tidwell K, McLaughlin BA, Cai J, Gupta RC, Milatovic D, Nass R, Aschner H. Neurotoxic potential of depleted uranium effects in primary cortical neuron cultures and in Caenorhabditis elegans. Toxicol Sci 2007;99:553-65.

37. Jiang Y, Reynolds C, Xiao C, Feng W, Zhou Z, Rodriguez W, Tyagi SC, Eaton JW, Saari JT, Kang YJ. Dietary copper supplementation reverses hypertrophic cardiomyopathy induced by chronic pressure overload in mice. J Exp Med 2007;204:657-66.

38. Jiao L, Doll MA, Hein DW, Bendaly ML, Hassan MM, Hixon JE, Abbruzzese JL, Li D. Haplotype of N-acetyltransferase 1 and 2 and risk of pancreatic cancer. Cancer Epidemiol Biomarkers Prev 2007;16:2379-86.

39. Joshi-Barve S, Barve SS, Amancherla K, Gobejishvili L, Hill D, Cave M, Hote P, McClain CJ. Palmitic acid induces production of proinflammatory cytokine interleukin-8 from hepatocytes. Hepatology 2007;46:823-30.

40. Kakar S, Watson NB, McGregor WG. RAD18 signals DNA polymerase iota to stalled replication forks in cells entering S-phase with DNA damage. Adv Exp Med Biol 2007 614:137-143.

41. Kang YJ. Pharmacology and toxicology in the new era of biomedical research. Exp Biol Med 2007;232:385.

42. Kang YJ, Jiang Y, Saari JT. Changes in copper and zinc status and response to dietary copper deficiency in metallothionein-overexpressing transgenic mouse heart. J Nutr Biochem 2007;18:714-8.

43. Kang YJ. Antioxidant defense against anthracycline cardiotoxicity by metallothionein. Cardiovasc Toxicol 2007;7:95-100.

44. Katz-Sagi H, Gozal D, Ram D. Dental treatment of a 2-year-old victim of a suicide bomb attack. Dent Traumatol 2007;23:318-21.

45. Kheirandish-Gozal L, Miano S, Bruni O, Ferri R, Pagani J, Villa MP, Gozal D. Reduced NREM sleep instability in children with sleep disordered breathing. Sleep 2007;30:450-7.

46. Lin M, Liu R, Gozal D, Wead WB, Chapleau MW, Wurster R, Cheng ZJ. Chronic intermittent hypoxia impairs baroreflex control of heart rate but enhances heart rate responses to vagal efferent stimulation in anesthetized mice. Am J Physiol Heart Circ Physiol 2007; 293:H997-1006.

47. Lin S, Walker J, Xu L, Gozal D, Yu J. Behaviors of pulmonary sensory receptors during development of acute lung injury in the rabbit. Exp Physiol 2007;92:749-55.

48. Lubin JH, Kogevinas M, Silverman D, Melats N, Garcia-Closas M, Tordon A, Hein DW, Garcia-Closas R, Serra C, Dosemeci M, Carrato A, Rothman N. Evidence for an intensity-

dependent interaction of NAT2 acetylation genotype and cigarette smoking in the Spanish Bladder Cancer Study. Int J Epidemiol 2007;36:236-41.

49. Luo J, Hill BG, Gu Y, Cai J, Srivastava S, Bhatnagar A, Prabhu SD. Mechanisms of acrolein-induced myocardial dysfunction: implications for environmental and endogenous aldehyde exposure. Am J Physiol Heart Circ Physiol 2007;293:H3673-H3684.

50. Lynes MA, Kang YJ, Sensi SL, Perdrizet GA, Hightower LE. Heavy metal ions in normal physiology, toxic stress, and cytoprotection. Ann N Y Acad Sci 2007;1113:159-72.

51. Machaalani R, Arlotto M, Waters KA, Gozal E, Berger F, Dematteis M. A novel method of tissue collection and storage: validation using SELDI-TOF MS analysis. Clin Chem 2007;53:1387-9.

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**La Creis R Kidd, PhD, MPH**

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Poster Presentations

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**Craig McClain, MD**

1. Zhenyuan Song, Ion Deaciuc, Zhanxiang Zhou, Ming Song, Theresa Chen, and Craig J. McClain, Betaine Attenuated Hepatic Steatosis Induced By Long-term High-Carbohydrate Diet Feeding Via Increasing Hepatic AMP-activated Protein Kinase Activity**,** presented at FASEB, Washington, D.C., 4/28-5/2/07

2. Matt Cave M.D., Royce Groce M.D., Arpana Mahalingashetty, Swati Joshi-Barve Ph.D., Lark Reynolds, Craig J. McClain, M.D., Elevated Serum Hyaluronic Acid May Identify Vinyl

Chloride Workers at High Risk for the Subsequent Development of Hepatic Angiosarcoma. Presented at AASLD, Boston, 11/1-5/07

3. L. Gobejishvili, S. Barve, S. Joshi-Barve, Z. Song, C.J.McClain, Chronic Alcohol Consumption Increases Phosphodiesterase 4b (Pde 4b) Expression, Decreases Cellular Camp Levels And Primes Monocytes Leading To Augmented Lps-Inducible Tnf Expression: Relevence To Alcoholic Liver Disease. Presented at AASLD, Boston, 11/1-5/07

4. Matt Cave, M.D., Rehan Khan, M.D., Lark Reynolds, Mukunda Ray, M.D., Ph.D., Craig J. McClain, M.D., Vinyl Chloride Induced Hepatic Angiosarcoma: An Update of the Louisville Experience. Presented at AASLD, Boston, 11/1-5/07

5. Xinqin Kang, Jie Liu, Wenke Feng, Zhenyuan Song, Craig McClain, Y. James Kang, Zhanxiang Zhou . Zinc supplementation prevents alcohol-induced liver injury through modulation of gene expression, Presented at AASLD, Boston, 11/1-5/07

6. Matt Cave, Swati Joshi-Barve, Kiran Amancherla, David Redinger, Shirish Barve, Craig McClain, Perturbation of the Trans-Methylation Pathway Potentiates Lipotoxicity in Non-alcoholic Steatohepatitis, Presented at Research!Louisville, October 16-19, 2007

7. Kiranmayi Amancherla, David Redinger, Shirish Barve, , Swati Joshi-Barve, , Craig McClain. Decreased SAMe:SAH Ratio and Impaired Transmethylation Enhance Free Fatty Acid Induced Lipotoxicity in Hepatic Cells, Presented at Research Louisville, October 16-19, 2007

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10. Matt Cave, Royce Groce, Arpana Mahalingashetty, Swati Joshi-Barve, Lark Reynolds, Craig J. McClain. Elevated Serum Hyaluronic Acid May Identify Vinyl Chloride Workers at High Risk for the Subsequent Development of Hepatic Angiosarcoma. Presented at Research!Louisville, October 16-19, 2007

11. E. Chambers, L. Gobejishvili, S. Joshi-Barve, C. McClain, S. Barve. Involvement of Phosphodiesterase 4B (PDE 4B) in the Enhancement of Pro-Inflammatory Cytokine Expression during High Glucose Challenge in Human Monocytes. Presented at Research!Louisville, October 16-19, 2007

12. Irina A. Kirpich, Zhenyuan Song, C. J. McClain, Ion V. Deaciuc. Genome Wide Gene Profiling of the Steatotic Liver in High Carbohydrate and High Fat Diet-Fed Mice Unravels Novel Aspects of Fatty Liver Disease. Presented at Research!Louisville, October 16-19, 2007

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Acrolein, a derivative of endogenous lipid peroxidation and a common environmental pollutant, inhibits interferon-alpha mediated antiviral signaling in human hepatocytes: relevance for HCV therapy. Presented at Research!Louisville, October 16-19, 2007

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25. S. Joshi-Barve, S. Karandikar, Madhuvanti Patil , C. J. McClain and S. Barve**.** Ethanol affects TCR-mediated lipid raft formation and IL-2 expression in CD4+ T lymphocytes. Presented at Research Society on Alcohol 2007, Chicago, July 7-11, 2007

26. Ion V. Deaciuc, Zhenyuan Song, Ming Song, and Craig J. McClain. Large Scale Gene Profiling Of The Steatotic Liver Helps Determine The Origin Of Steatosis. Presented at Research Society on Alcohol 2007, Chicago, July 7-11, 2007

27. Swati Joshi-Barve, Leila Gobejishvili, Kiranmayi Amancherla, Shirish Barve, and Craig McClain Elevated lipid peroxidation and IL-8 production associated with hepatic steatosis. Presented at Research Society on Alcohol 2007, Chicago, July 7-11, 2007

28. Ming Song, Zhenyuan Song, Ion V Deaciuc, Marcia Liu, Theresa Chen**,** George Brewer, and Craig J McClain. Tetrathiomolybdate Protects Against Hepatic Fibrosis induced by Bile Duct Ligation in Mice. Presented at Digestive Diseases Week, Washington, D.C., May 19-24, 2007.

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30. M Cave, S Joshi-Barve, L Amancherla, D Redinger, S Barve, CJ McClain. Perterbation of the Trans-methylation Pathway Potentiates Lipotoxicity in Non-Alcoholic Liver Disease, Presented at NIH Single Topic Conference on Fatty Liver

**W Glenn McGregor, MD**

1. Stallons LJ, Burke TJ, McGregor WG. Evidence from mutation spectra that DNA polymerase eta is the preferred translesion polymerase and may be error-free or error-prone. Enviornmental Mutagen Society, Atlanta GA, October 2007

2. Watson NB, Digman M, McGregor WG. Intranuclear dynamics of proteins required for resolution of blocked DNA replication forks. Second Annual Workshop on Advanced Fluorescence Dynamics, Univ. of Cal., Irvine, October, 2007.

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4. Stallons LJ, Burke TJ, McGregor WG. Differential bypass characteristics of DNA polymerases eta and iota to chemical and physical mutagens. Research!Louisville, October, 2007.

5. Watson NB, Mukhopadhyay S, Digman M, McGregor WG. RAD 18 guides REV 1 to sites of stalled replication forks and are immobilized in nuclear foci. Research!Louisville, October, 2007.

**Steven R Myers, PhD**

1. Zamora, R. and Myers, S.R. *Amniotic Fluid Biomarkers of Tobacco Smoke Exposure During Pregnancy*, Research Louisville!, October, 2007.

2. 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.

3. 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.

4. 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.

5. 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.

6. 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.

**Kenneth Palmer, PhD**

1. Palmer KE, Vojdani F, Hume S, O'Keefe BR, Buffa V, Shattock RJ, Montefiori DC Griffithsin: a potent antiviral protein produced in plants. Proceedings of the Second Plant Based Vaccines and Antibodies Conference, Verona, Italy, June 2007.

2. Palmer KE, Buffa V, Shattock RJ, Vojdani F, Hume S, Bratcher B, Montefiori DC, O'Keefe BR. Agricultural scale production of griffithsin, a lectin-based candidate vaginal microbicide for prevention of sexual transmission of HIV-1. Proceedings of the James Graham Brown Cancer Center Annual Retreat, Louisville KY, November 2007

3. Barnett BW, Palmer KE. Expression and characterization of a lectin activity-deficient mutant of griffithsin. Proceedings of the James Graham Brown Cancer Center Annual Retreat, Louisville KY, November 2007.

4. Lasnik AB, Smith ML, Willer S, Ghim SJ, Jenson AB, Palmer KE. A plant produced papillomavirus minor capsid protein-based vaccine protects dogs against challenge with canine oral papillomavirus. Proceedings of the James Graham Brown Cancer Center Annual Retreat, Louisville KY, November 2007.

**William M Pierce, Jr, PhD**

1. Voor, MJ; Xu, Q; Burden, RL Jr; Neale, J; Carter, H; Yang, S; Waddell, SW; Pierce, WM. Alendronate is strongly anabolic in a young rat model of OVX-induced osteoporosis whereas hormones have little effect Transactions of the 53rd Annual Meeting of Orthopaedic Research Society, San Diego, California. 2007.

2. David W. Hein, Kristin J. Metry, Jean Bendaly, Ned B. Smith, Jason R. Neale, and William M. Pierce, Jr. N-acetyltransferase 2 genotype-dependent DNA adducts in rapid and slow acetylator congenic rats administered 2-amino-3,8-dimethylimidazo-[4,5-f] quinoxaline Presentation to the Symposium of the International Society for Polycyclic Aromatic Compounds., 2007

**Uma Sankar, PhD**

1. Sankar U, Chao H. E, Colomer-Font J, DiMascio L, Ribar T and Means A. R. "$Ca^{2+}$/Calmodulin-dependent protein kinase IV regulates hematopoietic stem cell homeostasis". $14^{th}$ Congress of Ca2+ Binding Proteins and Ca2+ Function in Health and Disease, October 16-21, 2007 La Palma, Spain. (Abstract Booklet in Preparation by Organizers)

**Zhao-hui Song, PhD**

1. N-arachidonylethanolamide-induced increase in aqueous humor outflow facility. Y F Njie, Z Qiao, Z Xiao, W Wang, and Z H Song. The Association for Research in Vision and Ophthalmology Annual Meeting, 2007.

2. CB2 cannabinoid receptor-mediated changes of trabecular meshwork cellular properties. Fang He and Zhao-Hui Song. The Association for Research in Vision and Ophthalmology Annual Meeting, 2007.

3. Heterogonous desensitization of the CXCR4 chemokine receptor by the CB2 cannabinoid receptor in HL-60 cells. A Carrasquer, X Yang and Z H Song. International Cannabinoid Research Society Conference, 2007.

4. The roles of lipid rafts in CB1 cannabinoid receptor signaling is cell type dependent. Z Qiao, F He, and Z H Song. The American Society for Cell Biology 47th Annual Meeting, 2007.

5. Residues accessible in the binding site crevice of Transmembrane helix 2 of CB2 cannabinoid receptor. Jean-Claude Nzimulinda, X Yang and Z H Song. Research!Louisville, 2007

**J Christopher States, PhD**

Published abstracts

1. Zhang, X, Barker, DF, Doll, MA, Martin, RC, States, JC, Klinge, CM and Hein, DW. Effect of estrogen on *NAT1* expression in breast tumor cells. AACR Proceedings (2007)

2. Taylor, BF and States, JC. Mechanism of arsenite-induced cell death is distinct from both nocodazole and Taxol.*Toxicologist* (2007) 96(1): 302 (#1459)

3. McNeely, SC and States, JC. Sodium Arsenite-Induced Cell Cycle Alterations and Apoptosis in Melanoma Cell Lines.*Toxicologist* (2007) 96(1): 305 (#1475)

4. States, JC, Srivastava, S, Sen, U and D'Souza, SE. Arsenic exposure exacerbates atherosclerosis in apoE-knockout mice. *Toxicologist* (2007) 96(1): 16 (#77)

5. Srivastava, S, D'Souza, SE and States, JC. Arsenic exposure exacerbates atherosclerosis in apoE-knockout mice. *Toxicologist* (2007) 96(1): 16 (#76)

6. McNeely, SC and States, JC. Sodium arsenite alters cell cycle progression and induces apoptosis in melanoma cell lines. *FASEB J.* 2007 21:728.7

7. Taylor, BF and States, JC. Arsenite-induced mitotic death is distinct from both nocodazole and Taxol. *FASEB J.* 2007 21:728.6

8. Husain, A, Barker, DF, Zhang, X, Doll, MA, States, JC and Hein, DW. Functional analysis of the human N-acetyltransferase 1 (NAT1) major promoter: Quantitation of tissue expression and identification of critical sequence elements. *FASEB J.* 2007 21:392.2

9. Husain, A, Barker, DF, Zhang, X, Doll, MA, States, JC and Hein, DW. Quantitation and characterization of N-acetyltransferase-2 mRNA in human tissues. *FASEB J.* 2007 21:886.1

10. Metry, KJ, Zhao, S, Neale, JR, Doll, MA, States, JC, McGregor, WG, Pierce, Jr, WM, and David W. Hein, DW. Human rapid acetylator N-acetyltransferase 2 (NAT2) genotype leads to greater mutagenesis and DNA damage than slow acetylator NAT2 genotype in DNA-deficient Chinese Hamster Ovary (CHO) cells treated with arylamine carcinogens. *FASEB J.* 2007

21:565.1

11. Bendaly, J, Neale, JR, Zhao, S, Metry, KJ, Doll, MA, States, JC, Pierce,WM and Hein, DW. Significantly higher 2-amino-3,8-dimethylimidazo-[4,5-f]quinoxaline–induced DNA adducts and mutagenesis in Chinese hamster ovary cells expressing human CYP1A1 and rapid or slow acetylator N-acetyltransferase 2. *FASEB J.* 2007 21:565.2

12. Lavender, NA, Komolafe, OO, Templeton, T, D, Thacker, B, States, C, Brock, G and Kidd, LC. Interplay between Xeroderma Pigmentosum Complimentary Group D and Multiple Drug Resistance 1 Genes (XPD and MDR1) in Relation to Prostate Cancer Risk. *FASEB J.* 2007 21:567.19

13. Srivastava, DS, Komolafe, O, Templeton, T, States, JC, Brock, G and Kidd, LC. Variant Base Excision Repair Genes (hOGG1, APE1, XRCC1) and Prostate Cancer Risk in African-American Men. *FASEB J.* 2007 21:567.20

14. States, JC, Srivastava, S, Sen, U, and D'Souza, SE. Early onset of atherosclerosis in ApoE-knockout mice is induced by *in utero* arsenic exposure. *FASEB J.* 2007 21:730.4

15. States, JC, Singh, AV, Miller, HL, Piao, Y, Ko, MSH, Srivastava, S and Knudsen, TB. Altered Developmental Programming of Fetal Liver by Prenatal Arsenic Exposure Associated with Accelerated Atherogenesis in ApoE-knockout Mice. *Birth Defects Res.* (Part A) 79: 378 (2007)

16. Singh, AV, Green, ML, States, JC, Knudsen, TB. Differential Programming of p53-deficient Enbryonic Cells During a Rotenone-Block Revealed by mRNA and MicroRNA Profiling. *Birth Defects Res.* (Part A) 79: 377 (2007)

International Conferences:

1. Salazar, AM, Miller, H, McNeely, S, Monserrat, S, Ostrosky-Wegman, P and States, HC. Reducción de la capacidad aneuploidogénica del arsenico por la supresion de la expresión de p53 con RNAi. VII Congreso Latinoamericano de Mutagénesis, Carcinogénesis y Teratogénesis Ambiental. Cartagena de Indias, Colombia. August 29-31, 2007

Abstracts at local/regional conferences:

1. Muenyi, C, Miller, HL, States, JC. Combating cisplatin-resistance in ovarian cancer: concurrent treatment with arsenic and/or hyperthermia. Midwest DNA Repair Symposium. Ohio State University, Columbus, OH. May 19-20, 2007.

2. Pandit, AA, Muenyi, CS and States, JC. Arsenic modifies the response to cisplatin chemotherapy in ovarian cancer cells. Research!Louisville, University of Louisville, Louisville, KY, Oct 15-19, 2007.

3. Taylor, BF and States, JC. Arsenite-Induced Mitotic Death Involves Stress Response and Is Independent of Tubulin Polymerization. Research!Louisville, University of Louisville, Louisville, KY, Oct 15-19, 2007.

4. Muenyi, C and States, JC. Resistance of ovarian cancer cells to cisplatin is not due to differential induction of XPC and DDB2. Research!Louisville, University of Louisville, Louisville, KY, Oct 15-19, 2007.

5. Rogers, EN, Jiang, GH, Belshoff, A and States, JC. Curcumin lowers the threshold of p53 activation and subsequent induction of DNA damage recognition proteins XPC and DDB2. Brown Cancer Center 6th Annual Retreat, Louisville, KY. October 31, 2007.

6. Bendaly, J, Zhao, S, Metry, K, Doll, M, States, C, Smith, N, Pierce, W, Hein, D. Role of Human Cytochrome P4501A1 and N-acetyltransferase Genetic Polymorphism on the Mutagenicity and DNA Damage of the Environmental Carcinogens 2-amino-1-methyl-6-phenylimidazo[4,5-b]pyridine and 4-aminobiphenyl. Research!Louisville, University of Louisville, Louisville, KY, Oct 15-19, 2007.

7. Arteel, GE, Guo, L, Schierf, T, Beier, JI, Kaiser, JP, Chen, TS, Conklin, DJ, Miller, HL, States, JC. Subhepatotoxic Exposure to Arsenic Enhances Lipopolysaccharide-induced Liver Injury in Mice. Research!Louisville, University of Louisville, Louisville, KY, Oct 15-19, 2007.

8. Zhang, X, Barker, D, Doll, MA, Martin, RC, States, JC, Klinge, CM, Hein, DW. Investigation of the mechanism of elevated N-acetyltransferase 1 (*NAT1*) expression in estrogen receptor positive breast cancer. Research!Louisville, University of Louisville, Louisville, KY, Oct 15-19, 2007.

9. Barker, DF, Husain, A, Neale, JR, Martini, BD, Zhang, X, Doll, MA, States, JC, Hein, DW. Functional Properties of an Alternative Tissue-specific Promoter for the N-Acetyltransferase Gene NAT1. Research!Louisville, University of Louisville, Louisville, KY, Oct 15-19, 2007.

10. Lavender, N, Komolafe, O, Brock, G, Moore, J, VanCleave, T, Srivastava, D, Benford, M, States, C, Kittles, R, Kidd, LC. Variant Base and Nucleotide Excision Repair Alleles and Prostate Cancer Risk among African-American Men. Research!Louisville, University of Louisville, Louisville, KY, Oct 15-19, 2007.

11. McNeely, SC, Belshoff, AC, McCabe, MJ, Taylor, BF, States, JC. Sensitivity to Sodium Arsenite Depends upon a Functional Spindle Checkpoint. Brown Cancer Center 6th Annual Retreat, Louisville, KY. October 31, 2007.

12. Millner, LM, Bendaly, J, Doll, MA, Barker, DF, States, JC, Hein, DW. Functional Effect Of N-Acetyltransferase 1 (Nat1*10) Polymorphism In DNA Adduct Formation And Mutagenesis Following Exposure To Aromatic And Heterocyclic Amine Carcinogens. Brown Cancer Center 6th Annual Retreat, Louisville, KY. October 31, 2007.

13. Zhang, X, Barker, DF, Doll, MA, Martin, RC, States, JC, Klinge, CM, Hein, DW. Investigation of the mechanism of elevated N-acetyltransferase 1 (*NAT1*) expression in estrogen

receptor positive breast cancer. Brown Cancer Center 6th Annual Retreat, Louisville, KY. October 31, 2007.

14. Lavender, N, Komolafe, O, Brock, G, Moore, J, VanCleave, T, Srivastava, D, Benford, M, States, JC, Kittles, R, Kidd, LC. Influence of High Order Interactions between Variant DNA Repair Genes on Prostate Cancer Risk among African-American Men. Brown Cancer Center 6th Annual Retreat, Louisville, KY. October 31, 2007.

15. Muenyi, C, Pandit, AA and States, JC. Arsenite modifies p53 mediated response to cisplatin-induced DNA damage in ovarian cancer cells. Brown Cancer Center 6th Annual Retreat, Louisville, KY. October 31, 2007.

16. Arteel, GE, Guo, L, Schierf, T, Kaiser, JP, Chen, TS, Liu, M, Conklin, DJ, Miller, HL, States, JC. Arsenic exposure synergistically enhances lipopolysaccharide-induced liver injury in mice. Brown Cancer Center 6th Annual Retreat, Louisville, KY. October 31, 2007.

17. Bendaly, J, Zhao, S, Metry, K, Doll, MA, States, JC, Smith, NB, Pierce, WM, Hein, DW. Role of Human Cytochrome P4501A1 and N-acetyltransferase Genetic Polymorphism on the Mutagenicity and DNA Damage of the Environmental Carcinogens 2-amino-1-methyl-6-phenylimidazo[4,5-b]pyridine and 4-aminobiphenyl. Brown Cancer Center 6th Annual Retreat, Louisville, KY. October 31, 2007.

18. Taylor, BF and States, JC. Arsenite-Induced Mitotic Death Involves Stress Response and Is Independent of Tubulin Polymerization. Brown Cancer Center 6th Annual Retreat, Louisville, KY. October 31, 2007.

19. Taylor, BF, States, JC. Arsenite-induced mitotic death involves stress response and is independent of tubulin polymerization. Ohio Valley Chapter Society of Toxicology, Eli Lilly Co., Indiannapolis, IN. Nov. 2, 2007

20. McNeely, SC, Belshoff, AC, McCabe, Taylor, BF, States, JC. Sensitivity to sodium arsenite depends upon a functional spindle checkpoint. Ohio Valley Chapter Society of Toxicology, Eli Lilly Co., Indiannapolis, IN. Nov. 2, 2007

21. Millner, LM, Bendaly, J, Doll, MA, Barker, DF, States, JC, Hein, DW. Functional Effect Of N-Acetyltransferase 1 (Nat1*10) Polymorphism In DNA Adduct Formation And Mutagenesis Following Exposure To Aromatic And Heterocyclic Amine Carcinogens. Ohio Valley Chapter Society of Toxicology, Eli Lilly Co., Indiannapolis, IN. Nov. 2, 2007.

22. Zhang, X, Barker, DF, Doll, MA, Martin, RC, States, JC, Klinge, CM, Hein, DW. Investigation of the mechanism of increased N-acetyltransferase 1 (*NAT1*) expression in estrogen receptor positive breast cancer. Ohio Valley Chapter Society of Toxicology, Eli Lilly Co., Indiannapolis, IN. Nov. 2, 2007

23. Muenyi, C, Pandit, AA, States, JC. Arsenite modifies p53 responsive gene products after cisplatin DNA damage in ovarian cancer cells. Ohio Valley Chapter Society of Toxicology,

Eli Lilly Co., Indiannapolis, IN. Nov. 2, 2007

24. Rogers, EN, Guo Hui Jiang[1], Alex Belshoff[1], and J. Christopher States Curcumin lowers the threshold of p53 activation and subsequent induction of DNA damage recognition proteins XPC and DDB2. Ohio Valley Chapter Society of Toxicology, Eli Lilly Co., Indiannapolis, IN. Nov. 2, 2007

25. J. Woods, H Miller and JC States. Resveratrol Induces G1-Arrest in Response to Low-Level DNA Damage in Lung Cancer Cells. Kentucky Academy of Science, Louisville, Nov 8-10, 2007.

## RESEARCH GRANTS FUNDED

**Grant Activity—Funded**

**Gavin Arteel, PhD**

| Agency/Number | Title | Role | PI | Project Period | Budget Request |
|---|---|---|---|---|---|
| NIH KO1 AA13099 | Hypoxia and free radicals in alcoholic pancreatitis | PI | Arteel | 08/01/01-07/31/07 | 555,846 |
| NIH R01 AA003624 | Control of drug and ethanol metabolism | PI | Arteel | 05/02/06-04/30/11 | 1,364,794 |
| NIH R44 HL073578 | Development of a direct cellular energy delivery system | Co-I | Ehringer | 05/15/03-01/31/08 | 1,655,671 |
| NIH R43 DK071354 | A new ATP delivery system for liver transplantation | Sub-PI | Ehringer | 10/10/05-02/28/07 | 100,000 |
| NIH R21 AA015611 | Matrix Metalloproteinases in Alcoholic Liver Injury | Co-I | Deaciuc | 08/01/06-05/31/08 | 250,000 |
| NIH F 31AA017346 | The role of PKCε in alcoholic liver disease | Mentor | Kaiser | 11/01/07-10/31/10 | 84,894 |
| UofL IRIG | Priming of liver disease by arsenic exposure | PI | Arteel | 08/01/07-07/31/08 | 15,000 |

**Jian Cai, PhD**

| Agency/Number | Title | Role | PI | Project Period | Budget Request |
|---|---|---|---|---|---|
| KSTC IB070345 | Pharmacodynamics of Bone Targeted Drugs. Part B | PI | | 9/10/06-9/9/07 | 104,500 |
| KSTC IB080452 | Pharmacodynamics of Bone Targeted Drugs. | PI | | 10/07-9/08 | 263,545 |
| NIH 1P01 ES011860-01A1 | Cardiovascular Toxicity of Environmental Aldehydes | Co-I | Bhatnagar | 7/1/03-6/31/08 | 5,015,729 |
| NIH R01 EY13813-05A1 | TNF-alpha in Cell Death & Neuroprotection in Glaucoma | Co-I | Tezel | 8/1/07-7/31/12 | 1,850,000 |
| NIH R01 DA11551-07 | Structure and Function of CB2 Cannabinoid Receptor | Co-I | ZHSong | 3/8/04-2/28/08 | 1,724,900 |

**Theresa Chen, PhD**

| Agency/Number | Title | Role | PI | Project Period | Budget Request |
|---|---|---|---|---|---|
| NIH/5 R01 AA14185-04 | Oral antioxidant/anticytokine therapy for alcoholic liver disease (ALD) | Co-I | Hill | 08/01/05-7/31/07 | 1,000,000 |
| NIH/5 R01 AA014371-03 | Mechanisms of alcohol-induced immunosuppression | Co-I | Barve | 7/1/06-6/30/09 | 298,000 |
| NIH/5 R01 | Podocytes and oxidative stress | Co-I | Epstein | 9/1/06-8/31/09 | |

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|---|---|---|---|---|---|
| DK072032-02 | in diabetic kidney | | | | |
| NIH/1R21AT001490-01A1 | A novel approach to IBD | Co-I | Oz | 5/1/05-4/30/07 | 250,000 |

**Paul Epstein, PhD**

| Agency/Number | Title | Role | PI | Project Period | Budget Request |
|---|---|---|---|---|---|
| NIH/NIDDK RO1-DK072032 | Podocytes and Oxidative Stress in Diabetic Kidney | PI | Epstein | 9/30/05-8/31/10 | $250,000 direct costs per year |
| NIH RO1-DK073586 | Prolonged diabetic damage to cardiac mitochondria | PI | Epstein | 12/15/05-9/30/2009 | $244,000 direct costs per year |
| JDRF Grant Number: 1-2005-88 | Podocyte Specific Antioxidant Protection in Diabetic Nephropathy | PI | Epstein | 4/1/2005-3/30/2008 | $68,000 direct costs |
| NIH R01 HL62892 | Antioxidant Transgenes In Diabetic Cardiomyopathy | PI | Epstein | 08/01/03-06/30/07 | $200,000 direct costs/yr |
| NIH R01 HL75080 | Altered glucose homeostasis by sleep impairment | PI | Epstein | 10/1/03-6/30/07 | $900,000 total direct costs |
| NIH R01 DK077624 | B-cells in pups of mild and severe STZ diabetic mothers; antioxidant protection | Collaborator | Liu | 9/15/06-9/14/10 | $200,000 DC/yr |
| NIH T32 HL076138 | Training Program in Transplantation | Mentor | Ildstad | 04/01/04-03/31/09 | $823,577 Total Project DC* |
| NIH/NIEHS T32 ES011564 | UofL Environmental Health Sciences Training Program | Mentor | Hein | 7/1/04-6/30/09 | $697,188 Total direct costs |

**David Gozal, MD**

| Agency/Number | Title | Role | PI | Project Period | Budget Request |
|---|---|---|---|---|---|
| NIH R01HL69932 | Brain Susceptibility to Intermittent Hypoxia | PI | D Gozal | 6/1/02-5/31/08 | $1,000,000 total direct costs |
| NIH R01 HL65270-09 | Neurocognitive Function in Snoring Children | PI | D Gozal | 9/1/03-6/30/08 | $1,200,000 total direct costs |
| NIH SCOR 5P5060296-06 | Project 2, MCT, Intermittent Hypoxia and Stroke | Proj. PI | Siegel | 6/1/03-5/31/08 | $1,000,000 total direct costs |
| NIH HL083075 | Tonsillectomy and Adenoidectomy in Children with Sleep Disordered Breathing | Site PI | Redline | 2006-2011 | $190,000 yearly direct site costs |
| NIH NS 045829 | Intermittent Hypoxia-Mediated Neuronal Cell Death | Co-I | Liu | 2/1/03-1/31/07 | $1,150,000 total direct costs |
| NIH R25CA44789 | Cancer Education Grant Program | Mentor | Burzinksi | 8/1/02-7/31/07 | $~$80,000 annual direct costs |
| NIH R01HL58727 | Role of Vagal Afferents in Hyperpnea | Co-I | Yu | 1/1/03-12/31/07 | $1,100,000 total direct costs |
| NIH R01 HL75080 | Altered glucose homeostasis by sleep impairment | Co-I | Epstein | 10/1/03-6/30/07 | $900,000 total direct costs |
| NIH R01 HL75034 | ROS in Episodic Hypoxia-Induced Cardiovascular Dysfunction | Co-I | Liu | 10/1/03-6/30/07 | $1,000,000 total direct costs |
| NIH 5R01 HL074369-04 | Monocarboxylate Transporter in Hypoxic Pre-Conditioning | Co-I | Wang | 2/1/04-1/31/08 | $1,000,000 total direct costs |
| DOD DARPA BAA | Surviving Blood Loss | Co-I | Wang | | $1,100,000 total direct costs |

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|---|---|---|---|---|---|
| NIH R01 HL070911-01 | Sleep and Sleep Disorders | Co-I | Molfese | 2/04-6/09 | $1,000,000 total direct costs |
| NASA | Sleep and Cognition in Space | Co-I | Molfese | 7/06-6/09 | $1,000,000 total direct costs |

**Evelyn 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 / NHLBI HL074296 | Hypoxia-induced Akt Signaling Module in Neuronal Cells | PI | E Gozal | No cost extension to 06/30/08 | $ 1,000,000 |

**Ramesh Gupta, PhD**

| Agency/Number | Title | Role | PI | Project Period | Budget Request |
|---|---|---|---|---|---|
| NIH CA-90892 | Breast Cancer Etiology | PI | Gupta | 12/01- 11/08 (under no-cost ext.) | $1,106,578 |
| KY Lung Cancer Res. Board | Etiology & Prevention of Lung Cancer: Biomarker development in clinical studies | PI | Gupta | 01/02- 02/08 (under no-cost ext.) | $270,000 |
| NIH CA-96310 | Chemoprevention of Experimental Tobacco Tumorigenesis | PI | Gupta | 05/02- 04/08 (under no-cost ext.) | $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**

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|---|---|---|---|---|---|
| NIH R01 CA034627 | Pharmacogenetics of drug and carcinogen metabolism | PI | Hein | 7/1/03-6/30/09 | $1,724,900 |
| NIH R01 CA034627-19S | Minority supplement to Pharmacogenetics of drug and carcinogen metabolism | PI | Hein | 7/1/04-6/30/08 | $509,635 |
| NIH T32 ES011564 | UofL Environmental Health Sciences Training Program | PI | Hein | 7/1/04-6/30/09 | $697,188 |
| NIH P20 CA97942 | James Graham Brown P20 Application | Program Leader | Miller | 8/2/02-7/31/08 | $1,328,613 |
| NIH R25 CA044789 | Cancer Education Grant Program | Mentor | Burzynski | 8/1/02-7/31/08 | $557,437 |
| NIH P30 ES014443 | Center for Environmental Genomics and Integrative Biology | Investigator | Ramos | 6/4/07-3/31/11 | $4,440,000 |
| NIH P01 ES011860 | Cardiovascular toxicity of environmental aldehydes | Proj. 1 Co-I | Bhatnagar | 7/1/03-6/30/08 | $6,986,060 |
| MD Anderson Cancer Center | NAT1 and NAT2 Genotype determination in cancer patients | PI | Hein | 1/1/04-12/31/09 | $60,000 |

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| (pass through NCI funding) | and controls | | | | |
| NIH U10 HD045934 | Center for Pediatric Clinical Pharmacology Research | Core Lab Director | Sullivan | 1/1/04-12/31/09 | $2,248,000 |
| NIH T35 ES014559 | Summer Environmental Health Sciences Training Program | Mentor | Prough | 4/1/06-3/31/11 | $158,355 |
| NIH R01 CA100374 | Nashville Breast Health Study | Subproj. PI | Zheng | 5/3/07-4/30/09 | $137,202 |
| NIH R02-CA128028 | A pharmacogenetic approach to prostate cancer susceptibility | Co-I | Kidd | 6/12/07-5/31/09 | $148,000 |
| NIH R01 ES11594 | Metabolism and detoxification of base propenals | Consultant | Srivastava | 6/1/03-3/31/08 | $1,559,485 |
| NIH P20 RR023523 | Planning Grant for Louisville Clinical and Translational Science Award | Mentor | McClain | 10/1/06-9/30/08 | $220,000 |
| Proctor & Gamble, Inc. Research Agreement #155482 | NAT1 and NAT2 Metabolism Studies with Hair Dye Arylamines | PI | Hein | 7/2/07-7/1/09 | $100,000 |
| NIH F30 ES012557 | Genetic polymorphisms in 5'UTR of human NAT1 and NAT2 | Mentor | Husain | 7/1/03-5/31/07 | $145,022 |
| Chemgenex Pharmaceuticals | Research in support of Amonafide study | PI | Hein | 2/1/05-1/31/07 | $5,670 |
| NIH COBRE P20 RR017702 | Molecular Determinants of Developmental Defects | Mentor | Greene | 7/1/05-4/30/07 | $120,00 |
| Procter and Gamble Research Agreement #107320 | Metabolism and toxicity of aromatic amines associated with hair dyes | PI | Hein | 7/1/02-6/30/07 | $310,885 |
| NIH R03 CA128028 | A pharmacogenetic approach to prostate cancer susceptibility | Co-I | Kidd | 6/12/07-5/31/09 | $148,000 |

**Harrell Hurst, PhD**

| Agency/Number | Title | Role | PI | Project Period | Budget Request |
|---|---|---|---|---|---|
| NIH-NCI CA-118114 | Breast cancer chemoprevention strategies | Co-I | Gupta | 04/07-02/11 | $1,875,529 |
| NIH-NCI CA-125152 | Breast cancer chemoprevention potential of common spices | Co-I | Gupta | 07/07 - 06/12 | $1,850,000 |
| 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 |

**Y James Kang, PhD**

| Agency/Number | Title | Role | PI | Project Period | Budget Request |
|---|---|---|---|---|---|
| NIH-NHLBI, 2R01 HL59225 | Metallothionein and Adriamycin cardiotoxicity | PI | Kang | 12/01/02-11/30/07 | $1,386,560 |
| NIH-NHLBI, 3R01 HL59225-S1 | Supplement to HL59225 for minority graduate student | PI | Kang | 12/01/04-11/30/07 | $88,000 |
| NIH-NHLBI, 2R01 HL063760 | Oxidative stress and heart failure by copper restriction | PI | Kang | 07/01/07-06/30/11 | $1,480,000 |

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|---|---|---|---|---|---|
| NIH-NIAAA, R01 AA014623 | Zinc and alcohol-induced oxidative liver injury | Co-PI | Zhou, Z | 08/10/05-05/31/09 | $1,139,252 |

**LaCreis Kidd, PhD**

| Agency/Number | Title | Role | PI | Project Period | Budget Request |
|---|---|---|---|---|---|
| NIH 1R03 CA128028-01 | A pharmacogenetic Approach to prostate cancer susceptibility | PI | Kidd | 4/1/2007-3/31/2009 | $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-American Men, National Cancer Institute | PI | Kidd | 9/15/04-6/30/08 | $509,635 |
| Research Committee, School of Medicine/ | Impact of DNA repair genes (hOGG1, XPA, XPD, XRCC1, and APE1) on prostate cancer risk among men of African descent. | PI | Kidd | 04/15/06-03/15/07 | $15,000 |

**Craig McClain, MD**

| Agency/Number | Title | Role | PI | Project Period | Budget Request |
|---|---|---|---|---|---|
| VA | Dysregulated TNF/Fas signaling in Alcoholic Liver Disease | PI | McClain | 04/01/2004-03/31/2009 | Total Direct Costs $746,500 |
| NIH 5R37AA010762-11 | Tumor Necrosis Factor and Alcoholic Liver Disease | PI | McClain | 03/01/1996-07/31/2011 | Total Direct Costs $2,500,000 |
| NIH 1R01DK071765-01 | Mechanisms of S-adenosylmethionine (SAMe) in NASH | PI | McClain | 09/15/2005-07/31/2010 | Total Direct Costs $1,125,000 |
| NIH 1RO1AA015970 | S-adenosylhomocysteine and S-adenosylmethionine in Alcoholic Liver Disease | PI | McClain | 09/30/2005-06/30/2010 | Total Direct Costs $1,250,000 |
| NIH P20 RR023523 | Planning Grant for Louisville Clinical and Translational Science Award | PI | McClain | 9/1/2006-8/31/2007, 1 year no cost extension | Total Direct Costs $150,000 |
| NIH 3R01AA015970-0351 | Administrative Supplement to S-adenosylhomocysteine and S-adenosylmethionine in Alcoholic Liver Disease | PI | McClain | 7/15/07 – 6/30/10 | Total Direct Costs $97,020 |
| NIH 3R01AA015920-0352 | Minority Supplement for S-adenosylmethionine and S-adenosylhomocysteine in Alcoholic Liver Disease | PI | McClain | 9/01/07 – 6/30/10 | Total Direct Costs $105,342 |
| NIH R01AA010762 | Alcoholic Liver Disease and S- | PI | McClain | 8/1/01-7/31/07 | Total Direct Costs |

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|---|---|---|---|---|---|
| | adenosylmethionine | | | | $1,000,000 |
| VA CLIM Award | Therapy for Non-Alcoholic Steatohepatitis | PI | McClain | 04/01/2004-03/31/2007 | Total Direct Costs $393,000 |
| NIH 1K01AA013099-01 | Hypoxia and free radicals in alcoholic pancreatitis. | Mentor | Arteel | 08/01/01-7/31/07 | Total Direct Costs $511,505 |
| NIH K23 AA014235 | Suppression of CYP2E1 in drug induced liver injury | Mentor | Linder | 7/1/03-3/31/08 | Total Direct Costs $774,255 |
| NIH RO1 GM65459-01 | Novel feedback-regulation of xenobiotic bioactivation | Co-I | Linder | 7/1/03-6/30/08 | Total Direct Costs $1,425,000 |
| NIH K23DK073750 | Evaluation of the Effect of Green Tea Polyphenols on IBD | Mentor | Dryden | 9/15/05-8/31/10 | Total Direct Costs $511,650 |
| NIH K01AA015344-01A1 | Mechanisms of Sensitization to TNF hepatotoxicity in ALD | Mentor | Song | 9/15/05-08/31/10 | Total Direct Costs $464,065 |
| NIH R01 AA014185 | Oral Antioxidant/Anticytokine Therapy for ALD | Co-I | Hill | 5/1/02-6/30/07 | Total Direct Costs $1,448,500 |

**W. Glenn McGregor, MD**

| Agency/Number | Title | Role | PI | Project Period | Budget Request |
|---|---|---|---|---|---|
| NIH 1 R01 CA112197-01 | Mutagenesis as a novel target for cancer prevention | PI | McGregor | 04/01/05-03/31-/09 | $700,000 total direct costs |
| NIH 1 R03 CA112664-01A1 | Novel strategies to prevent lung cancer | PI | McGregor | 7/01/05-6/30/07 (no-cost extension to 6/30/08) | $100,000 total direct costs |
| NIH R25 CA044789 | Cancer Education Grant Program | Mentor | Burzinski | 9/01/2002-8/31/2008 | $516,145 total direct costs |
| NIH NCRR018733 | Center of Biomedical Research Excellence in Molecular Targets | Co-I | Miller | 9/1/03-6/30/08 | $270,000 total costs |
| NIH 1P30ES014443-01A1 | Center for Environmental Genomics and Integrative Biology (CEGIB) | Co-I | Ramos | 06/04/2007-03/31/2011 | $600,000 annual direct costs |
| James Graham Brown Cancer Ctr | Molecular mechanisms of stalled replication fork resolution in human cells | PI | McGregor | 03/01/2007-02/28/2008 | $49,771 total direct costs |

**Steven Myers, PhD**

| Agency/Number | Title | Role | PI | Project Period | Budget Request |
|---|---|---|---|---|---|
| NIH (COBRE) 5 P20 RR017702 | Biomarkers of Tobacco Carcinogens | Co-I | | 06/01/05 – 04/31/07 | $120,000 |

**Kenneth Palmer, PhD**

| Agency/Number | Title | Role | PI | Project Period | Budget Request |
|---|---|---|---|---|---|
| EVP Research Office (MDR) | Broad spectrum antivirals against biodefense threats | PI | Palmer | 02/01/2007-06/30/2008 | $20,000 (total costs) |
| James Graham Brown Cancer Center Pilot Grant | Cost-effective papillomavirus vaccines | PI | Palmer | 04/01/2007-03/31/2008 | $50,000 (total costs) |
| EVP Research CEG Grant | Antiviral lectins as microbicides | PI | Palmer | 05/01/2007-04/30/2008 | $15,000 (total costs) |

**William Pierce, PhD**

| Agency/Number | Title | Role | PI | Project Period | Budget Request |
|---|---|---|---|---|---|
| KY Science and | Bone Targeting Agents | PI | Pierce | 3/22/07-3/21/09 | $100,000 total |

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|---|---|---|---|---|---|
| Technology Corp CIF-494-RD: 145-402-33 | | | | | direct costs |
| NSF EPSCoR | Center for Regulatory Metabolomics: From Molecules to Communities | Co-I | Fan | 2006-2009 | $904,229 total costs |
| KY Science and Technology Corp CIF-144-401-10 | Bone Anabolic Agents | PI | Pierce | 12/1/04-11/30/07 | $75,000 total direct costs |
| DOD | Mechanistic Studies of oligonucleotide Aptamers with Potent Antiproliferative and Pro-Apoptotic Activity against Prostate Cancer Cells | Co-I | Bates | 10/03-8/07 | $375,000 |
| NIH 5U 10HD 045932-02 | Center for Pediatric Pharmacological Research | Co-I | Sullivan | 3/8/04-12/31/08 | $50,000 to Dr. Pierce |
| NIH 1P01 ES011860-01A19901 | Cardiovascular Toxicity of Environmental Aldehydes | Co-I, Core Lab Leader | Bhatnagar | 7/1/03-6/30/08 | $1,437,222 |
| NIH R01DA11551-07 | Sturcture and Function of CB2 Cannabinoid Receptor | Co-I | Z-H Song | 3/8/04-12/31/08 | $257,250 |
| NIH 1P30 ES014443-01A1 | Center for Environmental Genomics and Integrative Biology (CEGIB) | Co-I | Ramos | 6/4/07-3/31/11 | $600,000 annual direct costs |
| NIH R01EY13813-05A1 | TNF-α in Cell Death & Neuroprotection in Glaucoma | Co-I | Tezel | 8/1/07-7/31/12 | $250,000 annual directs costs |
| NIH R01EY 017131-01A2 | Proteomic Analysis of Retinal Ganglion Cell death in Glaucoma | Co-I | Tezel | 12/1/07-1/31/12 | $250,00 annual direct costs |

**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 | Z-H Song | 5/1/04-4/30/09 | $1,286,104, total award |
| NIH R01 DA11551-09S1 | Minority Supplement | PI | Z-H Song | | $80,708, total award |
| NIH R01 EY13632 | Cannabinoid Receptors—Potential Targets for Novel Antiglaucoma Drugs | PI | Z-H Song | 8/1/03-7/31/08 | $1,174,166, total award |
| NIH T32ES11564 | UofL Environmental Health Sciences Training | Mentor | Hein | 7/1/04-6/30/09 | $1,240,452, total award |

**J. Christopher States, PhD**

| Agency/Number | Title | Role | PI | Project Period | Budget Request |
|---|---|---|---|---|---|
| NIEHS / R01 ES011314 | Arsenic Induced Miotic Arrest Associated Apoptosis | PI | States | 8/03 – 4/08 | $180,000 ADC |
| NCI / R03 CA119295 | Effects of chemopreventive agents on DNA damage | PI | States | 9/05 – 8/08 | $47,500 ADC |
| NIEHS / R01 ES011594 | Metabolism and detoxification of base propenals | Co-I | Srivastava | 06/03 - 03/08 | $213,000 ADC |

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|---|---|---|---|---|---|
| NCI / R01 CA34627 | Pharmacogenetics of drug and carcinogen metabolism | Co-I | Hein | 7/1/04-6/30/08 | $250,000 ADC |
| NIEHS / P30 ES014443 | Center for Environmental Genomics and Integrative Biology | Dep. Dir. | Ramos | 06/07 – 03/11 | $500,000 ADC |
| NIEHS / F30 ES013372 | Arsenite inhibition of mitotic progression | Sponsor | Taylor | 07/04 – 06/08 | $25,000 ADC |
| NIEHS / T32 ES011564 | UofL Environmental Health Sciences Training Program | Mentor | Hein | 0704 – 06/09 | $113,000 |
| NIEHS / T35 ES014559 | Summer Environmental Health Sciences Training Program | Mentor | Prough | 04/06 – 03/11 | $32,000 ADC |
| NCI / R25 CA044789 | Cancer Education Program | Mentor | Burzynski | 05/02 - 04/08 | ~$80,000 ADC |
| UofL, SoMRC | Xenograft model of ovarian carcinoma in nude mice with assessment of non-invasive imaging and tolerability of intraperitoneal cisplatin, sodium arsenite and mild hyperthermia | Co-I | Helm | 3/1/06-2/28/08 | $15,000 ADC |
| UofL, VPR | Priming of Liver Disease by Arsenic Exposure | Co-I | Arteel | 9/1/07 – 8/31/08 | $15,000 ADC |
| UofL, CEGIB | Genomic and epigenetic mechanisms for environmentally Cd-induced carcinogenesis | Co-I | Cai | 09/01/07 – 08/31/08 | $30,000 ADC |

## RESEARCH GRANTS SUBMITTED

**Gavin Arteel, PhD**

| Agency/Number | Title | Role | PI | Project Period | Budget Request |
|---|---|---|---|---|---|
| NIEHS | Transplacental Arsenic Induced Hepatic Dysfunction and Vascular Disease | Co-I | States | 12/01/07-11/30/09 | 407,000 |
| NIEHS/NIDDK | Priming of liver disease by arsenic exposure | PI | Arteel | 12/01/07-11/30/09 | 407,000 |
| KLCRP | Role of plasminogen activator inhibitor-1 in experimental lung cancer | PI | Arteel | 07/01/07-06/30/09 | 75,000 |
| NIAAA | Genomic And Proteomic Basis Of Alcohol-Induced Liver Injury | Co-I | Deaciuc | 12/01/07-11/30/09 | 407,000 |
| NIAAA | Zinc inhibition of endotoxemia in alcoholic liver injury | Co-I | Zhao | 12/01/07-11/30/12 | 1,837,500 |

**Frederick W. Benz, PhD**

| Agency/Number | Title | Role | PI | Project Period | Budget Request |
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| Department of Defense (DOD) | High Technology Mass Spectrometry Laboratory | Co-I | Pierce | One Year, Pending Start | $1,000,000 |

**Jian Cai, PhD**

| Agency/Number | Title | Role | PI | Project Period | Budget Request |
|---|---|---|---|---|---|
| DOD 07233001 | High Technology Mass Spectrometry Lab | CoI | Pierce | | 1,000,000 |

**Theresa Chen, PhD**

| Agency/Number | Title | Role | PI | Project Period | Budget Request |
|---|---|---|---|---|---|
| NIH/NIAAA/NIAID | Epigenetic regulation of CD4+ T cell survival by S-adenosylmethionine | CoI | | 4/1/08-3/31/13 | 1,250,000 |

**Evelyn Gozal, PhD**

| Agency/Number | Title | Role | PI | Project Period | Budget Request |
|---|---|---|---|---|---|
| NIH – RO1 | Role of Hsp 25 in the astrocyte response and recovery from spinal cord injury | PI | E Gozal | 12/01/08 – 11/30/13 | $1,250,000 |
| NIH- NIAID | *"Modulation of Neutrophil Apoptosis by Akt-Hsp27 Signalosome"* | Co-I | | 7/1/07- 6/30/11 | $ 900,000 |

**Ramesh Gupta, PhD**

| Agency/Number | Title | Role | PI | Project Period | Budget Request |
|---|---|---|---|---|---|
| NIH CA-120287 | Effect of Tobacco Smoke-Mediated Female Lung Cancer | Co-I | Clapper | 12/07 – 11/11 | $475,004 |
| RCA-131464[a] | Molecular Targets for Berries-mediated Breast Cancer Prevention | PI | Gupta | 12/07 – 11/12 | $2,248,759 |
| CA-123416 | Susceptibility to Ovarian Cancer is Related to Biotransformation Capacity | Co-I | Luderer | 12/07 – 11/12 | $100,416 |
| KY Lung Cancer Res. Board | Effect of Estrogen on Polycyclic Aromatic Hydrocarbon (PAH)-Mediated Lung Cancer | PI | Gupta | 09/07- 08/09 | $149,939 |
| KY Lung Cancer Res. Board | Prevention of lung cancer in the mouse model by tea polyphenols delivered by novel slow-release concept | Co-I | Gupta | 09/07 – 08/09 | $148,402 |
| NIH CA-133777 | Molecular Targets for Prevention of Lung Cancer by Berry Phytochemicals | PI | Gupta | 04/08-03/13 | $2,395,032 |
| TW008050 | Nanoparticle Formulations in Cancer Prevention | PI | Gupta | 04/08-03/11 | $101,600 |
| NIH CA-132742 | Application of New Adductomics Technology to Human Cervical Cancer Progression | PI | Gupta | 07/07-06/09 | $1,277,169 |

**David Hein, PhD**

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|---|---|---|---|---|---|
| NIH R25 CA 44789 | University of Louisville | M- PI | Hein/ | 7/1/08-6/30/13 | $1,443,850 |

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| | Cancer Education Program | | Burzynski | | |
| MD Anderson Cancer Center | NAT1 and NAT2 genotype determinations in cancer patients & controls (amendment) | PI | Hein | 1/1/04-12/31/09 | $40,000 |
| Procter and Gamble, Inc. Res. Agreement | NAT1 and NAT2 Metabolism studies with hair dye arylamines | PI | Hein | 7/2/07-7/1/09 | $100,000 |
| UofL CEGIB | Polymorphic genes of detoxification enzymes as risk factors for PSP | Co-PI | Litvan | 9/1/07-8/31/08 | $30,000 |
| NIH R25 GM079188 | Maximizing diversity in integrative graduate programs in biomedical sciences | Mentor | Joshua | 7/1/07-7/30/12 | $1,393,082 |
| American Cancer Society | Angiogenesis predictors of lung cancer risk and progression | Mentor/Co-I | Kidd | 1/1/08-12/31/10 | $466,205 |
| NIH R01 #S104943 | Biomarkers of in utero tobacco smoke carcinogens | Co-I | Myers | 1/1/08-12/31/12 | $3,099,116 |
| NIH | Reducing health disparities using personalized medicine | Miles/ Lillard | Mentor | 10/1/07-9/30/12 | $3,800,000 |
| KY Lung Cancer Research Program | Genomic approach to predicting lung cancer susceptibility and disease progression | Kidd | Mentor/Co-I | 7/1/07-6/30/09 | $150,000 |
| NIH | Center of Excellence in Diabetes and Obesity Research (CoBRE) | Bhatnagar | Internal advisory committee | 7/1/08-6/30/13 | $11,596,871 |
| NIH NIEHS Superfund basic science research program P42 E014528 | Early life exposure to hazardous waste substances | Knudsen | Collaborator | 4/1/08-3/31/13 | $13,563,139 |
| American Cancer Society | Manganese superoxide dismutase polymorphism as a risk factor for lung cancer | Martin | Co-I/ Mentor | 1/1/08-12/31/13 | $729,000 |
| American Surgical Association Foundation | Chemoprevention of Barrett's metaplastic conversion to esophageal adenocarcinoma | Martin | Co-I/ Mentor | 7/1/08-6/30/10 | $150,000 |
| NIH | Biosystems approach to prostate cancer detection among African-American men | Kidd | Mentor/ Co-I | 10/1/07-9/30/12 | $407,000 |
| NIH | Systematic approach to prostate cancer | Kidd | Mentor/ Co-I | 10/1/07-9/30/12 | $624,037 |

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| | susceptibility among African American men | | | | |
| NIH | Systematic approach luyng cancer outcomes | Kidd | Mentor/ Co-I | 4/1/07-3/31/10 | $407,000 |

**Harrell Hurst, PhD**

| Agency/Number | Title | Role | PI | Project Period | Budget Award |
|---|---|---|---|---|---|
| Dept. of Defense-US Army/ Proposal #07233001 | High Technology Mass Spectrometry Laboratory | Co-I | Pierce | 02/08-07/09 | $944,000 |
| NIH-NCI CA-120287 | Effect of Tobacco Smoke-Mediated Female Lung Cancer | Co-I | Clapper | 12/07 – 11/11 | $475,004 |
| NIH-NCI CA-131464A | Molecular Targets for Berries-mediated Breast Cancer Prevention | Co-I | Gupta | 12/07 – 11/12 | $2,248,759 |
| NIH NCRR 1S10RR024542 | Linear Ion Trap Mass Spectrometer for Biomarker Quantitation | PI | Hurst | Not funded | $485,670 |

**Y James Kang, PhD**

| Agency/Number | Title | Role | PI | Project Period | Budget Request |
|---|---|---|---|---|---|
| NIH-NHLBI, 1R01 HL084450 | Copper nutrition and heart failure | PI | Kang | 07/01/08-06/30/13 | $1,850,000 |
| NIH-NIAAA, R01 AA016013 | Zinc Inhibition of Endotoxemia in Alcoholic Liver Injury | Co-PI | Zhou, Z | | $1,653,750 |
| NIH-NIAAA, R01 GM78534 | The role of zinc in the control of hepatic oxidative stress (Subcontract from U Texas Medical Branch) | PI (Subcontract) | Maret, W UTexas Med Branch | | $607,400 (Subcontract) |

**LaCries Kidd, PhD**

| Agency/Number | Title | Role | PI | Project Period | Budget Request |
|---|---|---|---|---|---|
| UNCF-Merck Graduate Science Research Dissertation Fellowship | Joint Modifying Effects of Variant Oxidative Stress and Apoptosis Markers and Smoking in Relation to Prostate Cancer Risk in African-American Men | Men-tor | | 09/01/08-07/31/10 | **$42,000** |
| AACR Centennial Pre-doctoral Fellowship | Impact of Variant Oxidative Stress Response Genes on Prostate Cancer Risk | Mento r | | 07/01/08-06/30/11 | $90,000 |
| NCI Exploratory Studies (R21) | Systematic Approach to Lung Cancer Outcomes | PI | Kidd | 4/01/07-03/31/10 | $275,000 |
| American Cancer Society | Angiogenesis Predictors of Lung Cancer Risk Disease | PI | Kidd | 1/01/08-2/30/10 | $425,703 |

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|---|---|---|---|---|---|
| | Progression | | | | |
| Commonwealthof Kentucky Lung Cancer Research Fund | Genomic Approach to Predicting Lung Cancer Susceptibility and Disease Progression | PI | Kidd | 3/15/07-3/25/07 | $150,000 |
| NCI Exploratory Studies (R21) | Angiogenesis Biomarkers Predictive of Breast Cancer Prognosis | PI | Kidd | 7/01/07-6/30/07 | $275,000 |
| JGBCC Pilot 2007 | Prediction of Cervical Cancer Risk Using Angiogenesis Biomarkers | PI | Kidd | 02/01/07-01/31/08 | $50,000 |
| NIH National Center on Minority & Health Disparities (P20) | Reducing Health Disparities using Personalized Medicine | Co-I | Miles | 10/01/07-9/30/12 | $3,800,000 |

**Craig McClain, MD**

| Agency/Number | Title | Role | PI | Project Period | Budget Request |
|---|---|---|---|---|---|
| NIH P20AA017103A | Alcohol Liver Disease and Alcohol-Nutrient Interactions | PI | McClain | pending | Total Direct Costs $1,689,190 |
| NIH CA134283-01 | University of Louisville Cancer Education Program R25 application | Mentor | Hein | 07/01/08 - 06/30/13 | Total Direct cost $1,336,898 |

**Steven Myers, PhD**

| Agency/Number | Title | Role | PI | Project Period | Budget Request |
|---|---|---|---|---|---|
| NIH R01ES016324-01 | Chemorevention of dibenzo(a,l)pyrene Induced Mammary Carcinogenesis | PI | Myers | | $750,000 |
| NIH 1R03CA131594-01 | Characterization of Tobacco Smoke Hemoglobin Adducts by LCMS | PI | Myers | | $100,000 |
| NIH 1R21CA132009-01 | Assessment of Tobacco Carcinogen Protein Adducts | PI | Myers | | $250,000 |
| NIH 1R01ES014943-01A2 | Biomarkers of in utero Tobacco Smoke Carcinogens | PI | Myers | | $2,122,095 |

**Kenneth Palmer, PhD**

| Agency/Number | Title | Role | PI | Project Period | Budget Request |
|---|---|---|---|---|---|
| NIH/ 1R01AI076169-01A1 | Antiviral lectins as microbicides | PI | Palmer | 12/01/2007-11/20/2011 | $1,809,938 (total costs) |
| EVP Research CEG Grant | Antiviral lectins as microbicides | PI | Palmer | 05/01/2007-04/30/2008 | $15,000 (total costs) |
| James Graham Brown Cancer Center Pilot Grant | Cost-effective papillomavirus vaccines | PI | Palmer | 04/01/2007-03/31/2008 | $50,000 (total costs) |

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|---|---|---|---|---|---|
| NIH/1R01AI076169-01A2 | Antiviral lectins as microbicides | PI | Palmer | 04/01/2008-03/31/2012 | $1,760,628 (total costs) |
| NIH/ 1 U19 AI076986-01 | Preclincal risk/benefit profiles of two protein microbicides | PI of proj. 2 | | 02/01/2008-01/31/2011 | $688,462 (direct costs) |
| Kentucky Tobacco R & D Center | Griffithsin microbicide formulations for preclinical testing | PI | Palmer | 01/01/2008-12/31/2008 | $99,910 (direct costs) |

**William Pierce, PhD**

| Agency/Number | Title | Role | PI | Project Period | Budget Request |
|---|---|---|---|---|---|
| DOD | High Technology Mass Spectrometry Laboratory for the Identification of Chemical Signatures | PI | Pierce | 2008-2010 | pending |

**Peter Rowell, PhD**

| Agency/Number | Title | Role | PI | Project Period | Budget Request |
|---|---|---|---|---|---|
| Subcontract for NIH grant through VCU | Determination of receptor levels for basis of individual variability in responses to nicotine. | P.I. | Rowell | 1/1/2008-12/31/2010 | $31,393 |

**Uma Sankar, PhD**

| Agency/Number | Title | Role | PI | Project Period | Budget Request |
|---|---|---|---|---|---|
| NIH R01AI076169 | Antiviral lectins as microbicides | Co-I | Palmer | 04/01/2008-03/31/2012 | Pending, to be funded |
| NIH 1R21CA134979-01 | Regulation of Hematopoietic Stem Cell Quiescence by a CaMKIV Molecular Pathway | PI | Sankar | 07/01/2008-03/31/2010 | pending |

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

| Agency/Number | Title | Role | PI | Project Period | Budget Request |
|---|---|---|---|---|---|
| Brown Cancer Center | New Cannabinoid Receptors as Novel Therapeutic Targets for the Treatment of Lung Cancer | PI | Z-H Song | 3/1/07-2/29/08 | $50,000 |

**J. Christopher States, PhD**

| Agency/Number | Title | Role | PI | Project Period | Budget Request |
|---|---|---|---|---|---|
| NIEHS / R21 ES015812-01A1 | Transplacental Arsenic Induced Hepatic Dysfunction and Vascular Disease | PI | States | 4/08 – 3/10 | $175,000 ADC *to be funded* |
| NIH / DP1 OD003783-01 | In utero arsenic exposure as a tool to understand cardiovascular disease | PI | States | 09/08 – 07/13 | $500,000 ADC |
| NIH / R21 ES016367-01 | Priming of liver disease by arsenic exposure | Co-I | Arteel | 12/07 – 11/09 | $175,000 ADC |
| USAMRAA – OCRP | Arsenic Trioxide and Heat-shock Protein Inhibitors to Enhance the Effect of Intraperitoneal | Co-I | Helm | 04/2008 – 10/2009 | $111,000 total costs |

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|---|---|---|---|---|---|
| | Cisplatin and Paclitaxel in a Nude Mouse Model of Ovarian Cancer | | | | |

**INVITED SCIENTIFIC PRESENTATIONS (SALARIED FACULTY)**

**Gavin Arteel, PhD**

1. Research seminar, 03/07, "Arsenic and enhancement of liver disease," University of Louisville, Cytokines, Inflammation and Chemoprevention Group, Louisville, KY.
2. Research seminar, 04/07, "Modeling ALD," University of Louisville, GI residents research forum, Louisville, KY.
3. Research symposium, 04/07, "PAI-1 in chronic liver diseases." Coagulation disorders in liver diseases: Currents and counter currents. Charlottesville, VA.
4. Research symposium, 07/07, "New role of plasminogen activator inhibitor-1 (PAI-1) in alcohol-induced liver injury." Research Society on Alcoholism, annual meeting. Chicago, IL.
5. Research seminar, 08/07, "Fatty liver diseases: are you younger than your liver?" Institut für umweltmedizinische Forschung, Molekulare Präventivmedizin subgroup. Düsseldorf, Germany.
6. Research symposium, 10/07, "PAI-1 in alcohol-induced liver damage: new slices of the 'PAI'." 2nd International symposium on ALPD and cirrhosis. Kobe, Japan.
7. Research symposium, 11/07, "Role of plasminogen activator inhibitor-1 (PAI-1) in the initiation and progression of alcohol-induced liver disease." Alcohol and Immunology Research Interest Group (AIRIG) Meeting. Loyola University Medical Center. Maywood, IL.
8. Research symposium, 11/07, "Pathogenesis of NASH." ICoFF2007-International Conference on Food Factors for Health Promotion, Kyoto, Japan
9. Research symposium, 12/07, "Pathogenesis of NASH," Mie University School of Medicine, Tsu, Japan.

**Keith Davis, PhD**

1. Davis, KR The Owensboro Cancer Research Program- A New Academic Research Group Focused on Plant-Made Pharmaceutical Research & Development. Plant-Based Vaccines & Antibodies 2007 Conference, Verona, Italy, June 18-20, 2007.
2. Davis, KR The Owensboro Cancer Research Program- A New Academic Research Group Focused on Plant-Made Pharmaceutical Research and Development. Ohio Valley Society of Toxicology Annual Meeting, Indianapolis, IN, November 2, 2007.

**Paul Epstein, PhD**

1. Antioxidant transgene protection from diabetic nephropathy in OVE26 Mice, University of Texas Health Science Center, San Antonio. February 2007
2. Diabetic Neprhopathy and Antioxidant Protection. University of Kentucky September 2007.

**Ramesh Gupta, PhD**

1. Gupta RC, Gairola CG. Cigarette Smoke-mediated DNA Adducts and Their Inhibition. Tobacco Harm Reduction, International Meeting, Louisville, KY, March 8, 2007.
2. Gupta RC. Estrogen Metabolism, Breast Cancer and Its Prevention. University of Iowa, September 2007.
3. Gupta RC. Role of Phytochemicals in Cancer Prevention. Department of Biology, University of Louisville, October 2007.
4. Gupta RC, Srinivasan C, Aiyer H. Inhibition of Estrogen-mammary Carcinogenicity by Berries. Int'l J. Oncol., 12th World Congress on Advances in Oncology and 10th Annual Intl. Symposium on Mol. Medicine, Hersonissos, Crete, Greece, October 2007.
5. Gupta RC, Ravoori S, Aiyer H. Breast Cancer Chemoprevention Potential of Berry Phytochemicals. 2nd International Symposium on Translational Research, Lonavala, Mumbai, India, December 2007.

**David Hein, PhD**

1. Functional Characterization of Arylamine N-acetyltransferase Genetic Polymorphisms and Their Effects on Cancer Risk. New York Medical College, Valhalla, New York, April 2007.

**Harrell Hurst, PhD**

1. Hurst, H.E.: Industrial chemicals and public health risks in Louisville. Toxic Talk 2007 Symposium, University of Iowa Project on Rhetoric of Inquiry, Iowa City, November 3, 2007.
2. Hurst, H.E.: Biomarkers of human exposure to air pollutants in Louisville. Kentucky Academy of Science Symposium, Louisville, KY, November 8, 2007.
3. Hurst, H.E., Vadhanam, M.V., Gupta, R.C. Analysis of trimethylsilyl derivatives of oxidative estrogen metabolites by selected ion monitoring GC/MS, 55rd ASMS Conference on Mass Spectrometry and Allied Topics, Indianapolis, IN, June 6, 2007.

**Y James Kang, PhD, DVM**

1. Nov 27, 2007 Invited Seminar, New York University Department of Environmental Medicine, "Novel approaches to rescue the failing heart'
2. Oct 24, 2007 Invited Speaker, "The VIIIth Conference of the International Society for Trace Element Research in Humans" Crete, Greece, Oct 21-26, 2007. "Arsenic cardiomyopathy and molecular mechanisms."
3. Sept 20, 2007 Invited Speaker, China Life Sciences Summit, Beijing, China, "Novel application of traditional Chinese medicine in drug discovery and development"
4. Sept 19, 2007 Invited Lecture, China Chengdu Center for Safety Evaluation of Drugs, Chengdu, China, "Cardiac toxicity testing: principles and methods"
5. Sept 18, 2007 Invited Lecture, Sichuan University Hua-Xi Medical Center Graduate Forum, Chengdu, China, "Cardiac Toxicology: Research and Development"
6. Sept 18, 2007 Invited Lecture, Sichuan University Hua-Xi Medical Center, Chengdu, China, "Rescuing the failing heart by novel approaches"

7. Sept 14, 2007 Invited Speaker, Chinese Medical Association Guizhou Infectious Disease and Hepatology Association Annual meeting, Xingyi, Guizhou, China, "The current state of the medical science"
8. Sept 12, 2007 Invited Lecture, Guiyang College of traditional Chinese Medicine, Guiyang, China, "New era of traditional Chinese medicine"
9. Aug 25, 2007 Invited Speaker, The Second World Conference of Stress, August 23-26, Budapest, Hungary, "Copper metabolic disorder in myocardial pathogenesis"
10. July 18, 2007 Invited Speaker, "International Congress of Toxicology" Montreal, Canada, July 15-19, 2007, "Molecular mechanisms of cardiotoxicity: An overview"

**Craig McClain, MD**

1. Clinical Nutrition Week, "Evidenced Based Update of Complementary and Alternative Medicine in Gastroenterology and Liver Disease in 2007." Phoenix, AZ, January 29, 2007.
2. Amgen, "TNF and Liver Injury", Thousand Oaks, CA, March 23, 2007.
3. Cleveland Clinic, Visiting Professor, "Cytokines, Adipokines, and Lipotoxicity in ASH and NASH", Cleveland, OH, March 28-29, 2007.
4. NIH Peer Review Advisory Committee (PRAC, Bethesda, MD, April 20, 2007.
5. Saint Louis University, Visiting Professor, "Cytokines/Adipokines and Lipotoxicity in NASH", St. Louis, MO, April 25, 2007.
6. Digestive Disease Week 2007, "A National Pandemic: Obesity through the Ages", Washington, DC, May 19-24, 2007.
7 Dermatology Grand Rounds, University of Louisville, "Methotrexate Liver Disease", Louisville, KY, June 2, 2007.
8. Liver Forum, University of Cincinnati, OH, "Fatty Liver: Management Update", Cincinnati, OH, August 17-18, 2007.
9. AGA Fellows' Hepatology Update, "Ethanol-induced (ETOH) Liver Disease," Fort Worth, Texas, October 7, 2007.
10. KYSPEN, "Obesity and Fatty Liver," Louisville, KY, October 11, 2007.
11. International Symposium on ALPD, "Nutrient Interactions in Alcoholic Liver Disease: The Role of Altered Methionine and Zinc Metabolism", Kobe, Japan, October 18, 2007.
12. AASLD, Meet the Professor, "SAM and Alcoholic Liver Disease, Boston, MA, November 1-5, 2007.
13. AGA, 2nd Annual Fellows Nutrition Course, "Trace Metals", Rosemont, IL, November 9, 2007.
14. AGA, 2nd Annual Fellows Nutrition Course, "The Liver Patient and Alcohol", Rosemont, IL, November 10, 2007.

**W Glenn McGregor, MD**

1. Strand-specific activity of DNA polymerase iota and eta in the bypass of UV photooroducts, Laboratory of Molecular Genetics, NIEHS, March, 2007
2. New insights into the molecular mechanisms of carcinogen-induced mutagenesis in human cells. Indian Univesity Cancer Center Grand Rounds, November, 2007

**Steven R Myers, PhD**

1. "Potential Implications of PAH Exposure in the Etiology of Brain Cancer", Lebow Conference on Brain Cancer Etiology, March 11 – 14th, 2007, Chicago, IL
2. "Biomarkers of Exposure Assessment of Polycyclic Aromatic Hydrocarbons (PAH)", Lebow Conference on Brain Cancer Etiology, March 11 – 14th, 2007, Chicago, IL.
3. "Application of Biomarkers of Environmental Carcinogen Exposure during Fetal and Neonatal Development", University of Louisville, Department of Pediatrics, Neonatal Medicine Research Conference, June 1, 2007.
4. "Molecular Markers in Toxicology and Epidemiology: Development, Validation, and Application of Biomarkers in Humans" Kentucky Academy of Sciences annual meeting, November, 2007.
5. "Biomarkers of in utero tobacco exposure, applications in neonatal medicine, NICU nursing staff and residents", February, 2007, Nortons Hospital.
6. "Biomarkers of Polycyclic Aromatic Hydrocarbons, Applications for Biomonitoring Populations", March, 2007, University of Chicago, Illinois.
7. "Gastrointestinal Pharmacology: An Introduction", March 23, 2007, Jefferson County Community College Students.
8. "Biomarkers and their application to smoking status", October 9th, 2007, Department of Pediatrics, University of Louisville.

**Uma Sankar, PhD**

1. Talk on the "Role of Calcium Signaling in Hematopoietic Stem Cell Homeostasis", to the Department of Molecular Oncology and Endocrinology, University of Naples Federico II, Naples, Italy, June 2007.
2. Invited Lecture on "Cancer Stem Cells" to Graduate Students of the International Doctorate Program in Molecular Oncology and Endocrinology, University of Naples Federico II, Naples, Italy, June 2007.
3. Invited Lecture on "Calcium Signaling" to Biology Major Seniors at the Kentucky Wesleyan College, Owensboro, Kentucky, April 2007.

**J Christopher States, PhD**

1. 9/19/07, "In utero Arsenic Exposure-Induced Alterations in Liver Gene Expression Associated with Accelerated Atherogenesis", Institute of Biology, National Centre for Scientific Research "Demokritos", Athens, Greece
2. 12/6/07, "Arsenic in Drinking Water -How Bad Can It Be?", Department of Biology, Indiana University Southeast, New Albany, IN

**DEPARTMENTAL STANDING COMMITTEES**

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Dr. Glenn McGregor (Program and Student Affairs subcommittee)
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