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I. DEPARTMENT HIGHLIGHTS

The Department of Pharmacology and Toxicology advanced in all areas of education, research, and service as outlined in the 2006 annual report. Much of the details are provided in the individual faculty reports from each of the salaried faculty members. Notable achievements were the appointment of five new faculty members (two with primary appointments, two with joint appointments, and one with an associate appointment), the development of ten new courses, the revision of our graduate programs to improve flexibility, five faculty promotions and the receipt of many prestigious awards by faculty, staff, and students. Faculty awards included the top teaching and research awards available at the University of Louisville, including career awards to Professors Bill Pierce, Mike Williams and Len Waite. Under the leadership of Professor Mike Williams, the medical pharmacology course continues to receive acclaim as one of the best if not the best course in the medical school curriculum by students and faculty. Further details are described below.

NEW COURSES

- PhTx 625 – Scientific Writing
- PhTx 651 – Neonatal Pharmacology
- PhTx 652 – Geriatric Pharmacology
- PhTx 655 – Neuropharmacology
- PhTx 656 – Cardiovascular and Renal Pharmacology
- PhTx 657 – Selective Toxicity and Chemotherapy
- PhTx 672 – Research Methods in Pharmacology & Toxicology I
- PhTx 673 – Research Methods in Pharmacology & Toxicology II
- PhTx 674 – Research Methods in Pharmacology & Toxicology III
- PhTx 675 – Research Methods in Pharmacology & Toxicology IV

CURRICULAR AND POLICY CHANGES

Revisions were made in the graduate program requirements to facilitate a broader selection of courses that can be optimized to individual students. Revisions were also made in the Departmental SIBUP (Salary Increase Based Upon Performance) document.

FACULTY APPOINTMENTS

- **Keith R. Davis, PhD** was appointed Professor of Pharmacology and Toxicology. Dr. Davis received his PhD in Molecular, Cellular and Developmental Biology from the University of Colorado in 1985. Following postdoctoral training at the University of Georgia, he was appointed Research Fellow at the Massachusetts General Hospital and Harvard Medical School from 1986-1989. He was appointed assistant professor and promoted to associate professor with tenure at Ohio State University from 1989-1999 and also served as Director of Ohio State
University’s Plant Biotechnology Center from 1997-1999. In 1999, Dr. Davis was recruited to serve as Manager and then Director of the Plant Research Department at Paradigm Genetics, Inc. From 2002-2005, he served as Vice President for its successor company Agricultural Biotechnology and for the last year served as Executive Consultant. During this period, he also served as adjunct professor at North Carolina State University. Dr. Davis was recruited to the James Graham Brown Cancer Center to serve as Director of the Owensboro Cancer Research Program, a satellite of the Brown Cancer Center.

- **Kenneth E. Palmer, PhD** was appointed Associate Professor of Pharmacology and Toxicology. Dr. Palmer received his PhD in Microbiology from the University of Cape Town in 1997. Following postdoctoral training at Cornell University, he was appointed Senior Scientist (1998-2003) followed by promotion to Director of Vaccine Research (2003-2006) at Large Scale Biology Corporation. Dr. Palmer was recruited to the James Graham Brown Cancer Center to serve as a member of the Owensboro Cancer Research Program, a satellite of the Brown Cancer Center.

- **Chi Li, PhD** was appointed Assistant Professor of Pharmacology and Toxicology (joint appointment). Dr. Li received his M.A. and Ph.D. in Biological Sciences from Columbia University. He received further postdoctoral research training at the University of Chicago and the University of Pennsylvania Cancer Center. He was recruited to the University of Louisville as Assistant Professor in the James Graham Brown Cancer Center and the Department of Medicine (Division of Hematology/Oncology). Dr. Li is one of the junior principal investigators on the NIH COBRE grant in molecular targets awarded to the Cancer Center.

- **Brian (Binks) W. Wattenberg, PhD** was appointed Associate Professor of Pharmacology and Toxicology (joint appointment). Dr. Wattenberg received his PhD in Biological Chemistry from Washington University in 1981. Following postdoctoral training at Stanford University, he was appointed Research Scientist (1986-1992) followed by promotion to Senior Research Scientist (1992-1995) at the Upjohn Company. Dr. Wattenberg served as Senior Research Officer and Associate Member/Head-Molecular Cell Biology at the Hanson Centre for Cancer Research (1996-2002). In 2002, he was recruited to the University of Louisville as Associate Professor in the James Graham Brown Cancer Center and the Department of Medicine (Division of Hematology/Oncology).

- **David A. Scott, PhD** was appointed Associate faculty in pharmacology and toxicology. Dr. Scott received his PhD in Microbiology and Immunology from McGill University in Montreal. He continued with postdoctoral training at the Queen’s University of Belfast and as a Wellcome Trust Fellow at Kings College in London. He previously served as a Scientist at the Manitoba Institute for Child Health and as Assistant Professor of Oral Biology and Dental Diagnostic & Surgical Sciences at the University of Manitoba. In 2004, Dr. Scott was recruited
to the University of Louisville as Associate Professor of Periodontics, Endodontics, & Dental Hygiene in the School of Dentistry.

FACULTY PROMOTIONS

- Gavin Arteel to Associate Professor with tenure
- Shirish Barve to Professor
- Haribabbu Bodduluri to Professor
- Jan Sullivan to Professor
- Wolfgang Zacharias to Professor

FACULTY DEPARTURES

- Nicholas Delomere, PhD, Professor of Ophthalmology and Visual Sciences with joint appointment as Professor of Pharmacology and Toxicology left to accept the position as Professor and Chair, Department of Physiology, University of Arizona School of Medicine.

- Daniel Sessler, MD, Professor and Chair of Anesthesiology with joint appointment as Professor of Pharmacology and Toxicology left to accept a position at the Cleveland Clinic. His faculty status was changed from joint appointment to adjunct appointment.

ADMINISTRATIVE APPOINTMENTS

- Jason Chesney, MD, PhD was appointed Associate Director for Translational Research, James Graham Brown Cancer Center.

- Craig McClain, MD was appointed Director, Louisville Institute for Clinical and Translational Sciences

- William Pierce Jr., PhD was appointed Special Assistant to the UofL Provost for strategic planning.

FACULTY AWARDS AND HONORS

- Aruni Bhatnagar, PhD, was selected as the School of Medicine nominee for Outstanding Scholarship, Research and Creative Activity-Basic and Applied Sciences.

- Paul Epstein, PhD was appointed as Distinguished University Scholar, University of Louisville.

- David Hein, PhD was reappointed as Distinguished University Scholar, University of Louisville and appointed as Visiting Professor at Universite’ Paris 7- Denis Diderot, Paris, France.
• **Harrell Hurst, PhD** received the Health Sciences Center Award for Technology Innovations in Curriculum. His project title was: Excel pharmacokinetic simulations.

• **James Kang, PhD** was selected as a semi-finalist for an NIH Pioneer Award.

• **Craig McClain, MD** received the GI Fellow Teaching Award, University of Louisville School of Medicine. He was appointed as Distinguished University Scholar, University of Louisville. He was selected as the School of Medicine nominee for Outstanding Scholarship, Research, and Creative Activity - Career Achievement.

• **William Pierce Jr. PhD** received the University of Louisville President’s Distinguished Faculty Award for Outstanding Scholarship, Research, and Creative Activity – Career Achievement

• **Len Waite, PhD** received the Outstanding Teaching Award from the UofL School of Dentistry.

• **Mike Williams, MD, PhD** received the Golden Apple Award for teaching, University of Louisville School of Medicine, sophomore class and the Master Educator Award, *Distinguished Educator*, University of Louisville School of Medicine.

**STAFF AWARDS**

• **Sharon Carpenter** received the UofL Outstanding Staff Performance Award.
• **Ned Smith** received the UofL Outstanding Staff Performance Award.

**GRADUATE STUDENT AWARDS**

**Alex Carrasquer** received an IUPHAR 2006 Travel Award to present his work in Beijing, China at the 15th World Congress of Pharmacology (IUPHAR-2006).

**Kristin Metry** had her abstract selected for platform presentation at annual meeting of the Society of Toxicology.

**Steven Reeves** received three awards:
• Houchen’s Award;
• Dean’s Citation Award
• KC Huang Outstanding Graduate Student

**Frazier Taylor** received two awards:
• Society of Toxicology Metals Specialty Section, 2nd Place Graduate Student Poster
• Ohio Valley Society of Toxicology, 1st Place Graduate Student Oral Presentation
Janet Zang received three awards:
• Abstract selected for platform presentations at annual SOT meeting
• Blue Ribbon for Risk Assessment Speciality Section, SOT meeting
• Dean’s Citation Award

POSTDOCTORAL AWARDS

• **Juliane Beier** was selected for a travel award for the 2006 AMERICAN ASSOCIATION FOR THE STUDY OF LIVER DISEASES meeting.

**II. MISSION STATEMENT**

The Department of Pharmacology and Toxicology is committed to academic excellence and to the attainment of regional, national, and international recognition for the quality of its educational, research, and service activities. Guided by the University of Louisville 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.
III. PHOTOS OF PRIMARY FACULTY

Gavin E. Arteel
Associate Professor
garte01 at 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
benz at louisville.edu
www.louisville.edu/~fwbenz01

Research Interests: Biochemical pharmacology and toxicology; biochemical mechanisms of drug action and toxicity.
Jian Cai
Assistant Professor
j0cai001 at 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
tsch01 at gwise.louisville.edu

Research Interests: Biochemical toxicology; role of glutathione in aging toxicology; general and specific toxicity of environmental pollutants.
Keith R. Davis
Professor
krdavi16 at 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 Agnes Brown Duggan Chair of Oncological Research
rcgupta at louisville.edu

Research Interests: Development and identification of intermediate biomarkers to investigate etiology and prevention of human cancers resulting from both environmental and endogenous exposures.
David W. Hein  
Peter K. Knoefel Chair  
d.hein at 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  
h.hurst at louisville.edu www.louisville.edu/~hehrs01/

**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  
lrkidd01 at 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  
wgmegr01 at 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
sr.myers at 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
denerl01 at gwise.louisville.edu

Research Interests: Biochemical toxicology; metabolism of drugs and environmental pollutants.
Kenneth E. Palmer
Associate Professor
kepalm02 at 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
pierce at 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
rowell at louisville.edu www.louisville.edu/~pprowe01

Research Interests: Neuropharmacology; effect of drugs on brain neurotransmitters and receptors.

Zhao-Hui (Joe) Song
Associate Professor
z0song01 at 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  
jcstates at louisville.edu www.louisville.edu/~jstat01/  

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-Chair for Professional Education  
lcwait01 at gwise.louisville.edu  

Research Interests:  Endocrine pharmacology; mechanism of action of hormones; pharmacological modulation of hormone action; mineral homeostasis.
Walter M. Williams
Professor
wmwill01 at gwise.louisville.edu

Research Interests: Studies of drug elimination (metabolism and excretion).
IV. PHOTOS OF JOINT FACULTY

George R. Aronoff  
Professor  
gra at louisville.edu

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

Shirish Barve  
Professor  
www.uoflhealthcare.com/digestivehealth/fac_barve.htm

Research Interests: Effects of alcohol on molecular mechanisms of cytokine action, gene expression and liver injury.
Aruni Bhatnagar
Professor
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
h0bodd01 at gwise.louisville.edu

Research Interests:  Signal transduction and chemoreceptors. Role of leukotriene receptors in inflammation and host response.
Jason A. Chesney
Assistant Professor
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.

John W. Eaton
James Graham Brown Professor
eatonredox@aol.com www.bcc.louisville.edu/researchweb/eaton/eaton.html

Research Interests: Biological oxidation/reduction reactions with special emphasis on inflammatory diseases and neoplasia.
Paul N. Epstein
Professor and Carol B. McFerran Chair in Pediatric Diabetes Research
pnepst01 at 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
teresa.fan at louisville.edu

Research Interests: Metabolomics, proteomics, ecotoxicology, contaminant bioavailability, transport, biotransformation, and bioremediation.
Richard E. Goldstein  
Professor and vonRoenn Family Chair in Surgical Endocrinology  
richard.goldstein at louisville.edu

**Research Interests:** Surgical endocrinology; surgical oncology.

David Gozal  
Professor and Director, Kosair Children's Research Institute  
d0goza01 at gwise.louisville.edu

**Research Interests:** Signal transduction mechanisms underlying ventilatory response to hypoxia; neuronal adaptations to intermittent hypoxia: growth factors, intracellular signaling, and genomic implications.
Evelyne Gozal
Associate Professor
e0goza01 at 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
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 and Endowed Professor of Molecular Signaling  
www.uoflhealthcare.com/digestivehealth/fac_kang.htm  

**Research Interests:** Role of signaling kinases in neuronal repair and demise.

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Y. James Kang  
Professor  
www.uoflhealthcare.com/digestivehealth/fac_kang.htm  

**Research Interests:** Molecular and cardiac toxicology. Transgenic and knock-out animal models to study oxidative injury and antioxidant systems in the heart. Biological functions and toxicological significance of metallothionein and glutathione in vivo.
Mary Jayne Kennedy
Assistant Professor
mjkenn07 at louisville.edu

Research Interests: Pediatric clinical pharmacology; pharmacodynamics, pharmacokinetics; pharmacogenetics, and biotransformation.

Chi Li
Assistant Professor
chi.li at louisville.edu

Research Interests: Mechanisms of apoptotic pathways initiated from different intracellular organelles.
Craig J. McClain  
Professor  
www.uoflhealthcare.com/digestivehealth/fac_mcclain.htm  

**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  
kmmcmma01 at gwise.louisville.edu  

Donald M. Miller  
James Graham Brown Professor and Director, James Graham Brown Cancer Center  
[www.uoflhealthcare.org/JGBCancer/Administration/Miller.htm](http://www.uoflhealthcare.org/JGBCancer/Administration/Miller.htm)

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

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M. Michele Pisano  
Professor  
[www.louisville.edu/dental/bbs/pisano.htm](http://www.louisville.edu/dental/bbs/pisano.htm)

**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
gerodgers at pol.net

Research Interests: Toxicokinetics in drug overdoses and pharmacokinetics in pediatric disease states.

Janice E. Sullivan
Professor
sully at louisville.edu

Research Interests: Clinical pharmacology with a focus on developmental pharmacokinetics and pharmacodynamics.
David J. Tollerud
Professor
djtoll01 at gwise.louisville.edu

Research Interests: Occupational and environmental health; Occupational toxicology; molecular epidemiology.

Yang Wang
Associate Professor
www.louisville.edu/medschool/medicine/cardiology/Wang.htm

Research Interests: Molecular and cellular regulation of genes implicated in hypoxic/ischemic injury and protection in the cardiovascular system.
Brian (Binks) Wattenberg
Associate Professor
brownccancercenter.org/research/researcher.aspx?id=1650

Research Interests: Sphingosine-kinase and lipid signaling. Trafficing of tail-anchored proteins.

Hong Ye
Assistant Professor
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  
w0zach01 at 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  
wz at bcc.louisville.edu

Research Interests: Molecular oncology.
V. PHOTOS OF ASSOCIATE FACULTY

Lu Cai
Assistant Professor of Medicine

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.**, Associate 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
VI. FACULTY LISTINGS

Faculty with Primary Appointments

- **Arteel, Gavin E.**, Associate Professor; Ph.D., Toxicology, University of North Carolina-Chapel Hill (1997).

- **Benz, Frederick W.**, Professor; Ph.D., Pharmacology, University of Iowa (1970).

- **Cai, Jian**, Instructor; 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).
• **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).

• **Bodduhuri, 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).

• **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)

• **McClain, Craig J***, Professor of Medicine (Gastroenterology), and Pharmacology and Toxicology; M.D., University of Tennessee-Memphis (1972).

• **McMasters, Kelly M.**, Professor of Surgery, and Pharmacology and Toxicology; Ph.D., Cell and Developmental Biology, Rutgers University (1988); M.D., UMDNJ R.W. Johnson Medical School (1989).

• **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, Assistant Professor of Medicine; Ph.D., Radiation Biology/Oncology, Norman Bethune University of Medical Sciences (1987).

Conklin, Daniel J., Assistant Professor of Medicine (Cardiology); Ph.D., University of Notre Dame (1995).

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 State University (1969).

• **Dagirmanjian, Rose**, Professor Emerita; Ph.D., University of Rochester (1960).

• **Darby, Thomas D.**, Adjunct Professor Emeritus; Ph.D., Medical College of South Carolina (1957).

• **Jarboe, Charles H.**, Professor Emeritus; Ph.D., University of Louisville (1956).

• **Scharff, Thomas G.**, Professor Emeritus; Ph.D., University of Rochester (1956).

• **Waddell, William J.**, Professor and Chair Emeritus; M.D., University of North Carolina (1955).

• **Zimmerman, Thom J.**, Professor Emeritus of Ophthalmology and Visual Sciences, and Pharmacology and Toxicology; Ph.D., Pharmacology, University of Florida (1976); M.D., University of Illinois (1968).

**Faculty with Adjunct Appointments**

• **Friedman, Marvin A.**, Adjunct Professor of Pharmacology and Toxicology; Ph.D., Massachusetts Institute of Technology (1967).

• **Hayes, A. Wallace**, Adjunct Professor of Pharmacology and Toxicology; Ph.D., Auburn University (1967).

• **Hong, Jun-Yan**, Adjunct Professor of Pharmacology and Toxicology; Ph.D., University of Medicine and Dentistry of New Jersey (1987).

• **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).

VII. 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
• Chang, Wei-Yuan (Wendy), Temporary Lab Assistant
• Doll, Mark, Research Scientist
• Duveau, Ilanca, Lab Research Technician II
• Greca, Edie, Business Manager Intermediate III
• Guo, Luping, Senior Research Associate
• Howarth, Ashley L., Student Assistant
• Hollkamp, Judy, Administrative Assistant
• Jiang, Guohui, Senior Research Associate
• Liu, Marcia, Senior Research Associate
• Martini, Ben, Student Assistant
• Miller, Heather, Senior Research Technologist
• Mukhopadhyay, Suparna, Research Associate
• Rice, Jeffrey M., 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
• Stallons, L. Jay, Student Assistant
• States, Gregory, Temporary Lab Assistant
• States, Vanessa, Temporary Lab Assistant
• Taylor, Kevin G., Research Technician IV
• Templeton, Tiva, Research Technologist II
• Turner, Delano, Lab Research Technician III
• Wichman, Gerry-Lynn, Student Assistant

Postdoctoral Fellows

• Ali, Yeakub
• Bendaly, Jean
• Beier, Juliane
• He, Fang
• M’Bemba, Meka Prosper
• Neale, Jason
• Qiao, Zuanhong
• Thaiparambil, J. Thomas
• vonMontfort, Claudia
• Yang, Xiaonan
• Zhao, Shuang

New Graduate Students

• Katie Bourcy
• Elaina Chambers
• Nicole Lavender
• Lori Millner
• Clarisse Muenyi
• Nason Schooler
• Jay Stallons
• Thomas Schlierf

Graduate Students (New students bolded)

<table>
<thead>
<tr>
<th>Name</th>
<th>Advisor</th>
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<tr>
<td>Cherone Anthony</td>
<td>A. Bhatnagar</td>
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<tr>
<td>Sheila (Mullins) Arnold</td>
<td>T. Hagg</td>
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<tr>
<td>Aisha Bagshaw</td>
<td>W. Pierce</td>
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<tr>
<td><strong>Katie Bourcy</strong></td>
<td>S. Barve</td>
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<tr>
<td>Alex Carrasquer</td>
<td>Z-H. Song</td>
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<tr>
<td>Wendy Chang</td>
<td>T. Chen</td>
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<tr>
<td><strong>Eleana Chambers</strong></td>
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<tr>
<td>Molly Davis</td>
<td>G. Arteel</td>
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<tr>
<td>Chad Dumstorf</td>
<td>W.G. McGregor</td>
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<td>Emily Esposito</td>
<td>M. Pisano</td>
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<td>Agata Habas</td>
<td>M. Hetman</td>
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<td>Anwar Husain</td>
<td>D. Hein</td>
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<td>Y.J. Kang</td>
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<td>Philip Kaiser</td>
<td>G. Arteel</td>
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<td>Kristin Metry</td>
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<td><strong>Nicole Lavender</strong></td>
<td>L. Kidd</td>
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<td>Christell Komguem Kamga</td>
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<td>Shankang Ma</td>
<td>Y.J. Kang</td>
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<td>Robert Martin</td>
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<td><strong>Stephanie Mathews</strong></td>
<td>S. Barve</td>
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VIII. GRADUATES

Pharmacology and Toxicology Graduates

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<tr>
<th>Graduate</th>
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<th>Year</th>
<th>Mentor</th>
<th>Dissertation/Thesis Title</th>
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<tr>
<td>Alex Carrasquer</td>
<td>M.S.</td>
<td>2006</td>
<td>Zhao-Hui (Joe) Song, Ph.D.</td>
<td>The effects of polymorphisms on the function of the CB2 cannabinoid receptor</td>
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<td>Afsoon Moktar</td>
<td>M.S.</td>
<td>2006</td>
<td>Ramesh C. Gupta, Ph.D.</td>
<td>Cigarette smoking as a major cofactor in human cervical cancer</td>
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<td>Emily Roberts</td>
<td>M.S.</td>
<td>2006</td>
<td>M. Michele Pisano,</td>
<td>Low birth weight-Consequences of maternal tobacco smoke exposure during embryonic and</td>
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<tr>
<td>Name</td>
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<td>Supervisor</td>
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<td>Esposito</td>
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<td>2006</td>
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<td>fetal development</td>
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<td>Nstang Miranda Nebane</td>
<td>Ph.D.</td>
<td>2006</td>
<td>Zhao-Hui Song, Ph.D.</td>
<td>Structure-activity relationship of the CB1 and CB2 cannabinoid receptors</td>
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<td>Yang Zhou</td>
<td>M.S.</td>
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<td>Y. James Kang, Ph.D.</td>
<td>Copper inhibition of hydrogen peroxide-induced hypertrophy in H9C2 embryonic rat cardiac cells</td>
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<td>Xiaoqiang (Steven) Xu</td>
<td>M.S.</td>
<td>2006</td>
<td>Theresa Wei-Mei Fan, Ph.D.</td>
<td>TrxR SECIS RNA synthesis and biophysical characterization</td>
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<tr>
<td>Rundong (Ray) Zhang</td>
<td>Ph.D.</td>
<td>2006</td>
<td>Zhao-Hui Song, Ph.D.</td>
<td>Structure and function of CB2 cannabinoid receptors</td>
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<td>Sheila A. Mullins</td>
<td>M.S.</td>
<td>2006</td>
<td>Paul N. Epstein, Ph.D.</td>
<td>Effects of fructose-2,6-bisphosphate on Akt phosphorylation and insulin signaling in cardiomyocytes</td>
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<td>Joshua M. Thornburg</td>
<td>M.S.</td>
<td>2006</td>
<td>Jason A. Chesney, M.D., Ph.D.</td>
<td>Role of lactate dehydrogenase A (LDH-A) in oncogenic transformation; Revisiting a classic enzyme</td>
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<td>Wei (Wendy) Yuan Chang</td>
<td>Ph.D.</td>
<td>2006</td>
<td>Theresa S. Chen, Ph.D.</td>
<td>Mechanism of 4-hydroxynonenal induced toxicity in Jurkat CD4+ T lymphocytes</td>
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<td>Katharine S. Richardson</td>
<td>M.S.</td>
<td>2006</td>
<td>Wayne S. Zundel, Ph.D.</td>
<td>Impact of von Hippel-Lindau in regulating ribonuclease activity in renal cell carcinoma</td>
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<td>Yu (Janet) Zang</td>
<td>Ph.D.</td>
<td>2006</td>
<td>David W. Hein, Ph.D.</td>
<td>Functional characterization and mechanistic studies on single nucleotide polymorphisms of human N-acetyltransferase 2</td>
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<tr>
<td>Tanvi S. Jani</td>
<td>Ph.D.</td>
<td>2006</td>
<td>Shirish Barve, Ph.D.</td>
<td>Role of methionine adenosyltransferase II (MAT II) and S-adenosylmethionine (SAMe) in survival of CD4+ T lymphocytes: Relevance to immune dysfunction</td>
</tr>
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<td>Stephen R. Reeves</td>
<td>Ph.D.</td>
<td>2006</td>
<td>David Gozal, M.D.</td>
<td>Chronic intermittent hypoxia and respiratory plasticity</td>
</tr>
</tbody>
</table>
IX. PUBLICATIONS (SALARIED FACULTY AND STAFF)


X. PUBLICATIONS (OTHER JOINT FACULTY)


Books:

XI. ABSTRACTS (SALARIED FACULTY AND STAFF)


16. **Bendaly J, Zhao S, Doll MA, States JC, Hein DW.** Chinese hamster ovary cells expressing CYP1A1 or CYP1A2 and rapid or slow acetylator N-acetyltransferase 1 (NAT1): A model to investigate effects of NAT1 polymorphism on arylamine genotoxicity. Proceedings of the annual meeting of the Society of Toxicology, San Diego, CA, March 2006 (Toxicological Sciences 90: Supplement 1, abstract #799).


18. **Burckhardt IC, Row BW, Cheng Y, Dayyat E, Gozal D.** Oral Green tea Catechin Polyphenols (GTP) Attenuate Intermittent Hypoxia (IH)-Induced
Expression of NADPH Oxidase and Lipid Peroxidation in Rat Brain. SLEEP Vol. 29, 2006, Abstract Supplement 20th Anniversary Meeting of the APSS, LLC.


38. **Gobejishvilli L, Barve S, Joshi-Barve S, Song Z, McClain CJ.** Chronic Alcohol Consumption Decreases Cellular c-AMP Levels And Enhances LPS-Inducible NFκB Activity And TNF Expression in Monocytes: Relevance to Alcoholic Liver Disease. Digestive Disease Week, Chicago, IL, 2006

40. **Gobejishvili L, Barve S, Joshi-Barve S, Song Z, McClain CJ.** Chronic Alcohol Consumption Increases Phosphodiesterase 4b (Pde 4b) Expression, Decreases Cellular Camp Levels And Primes Monocytes Leading To Augmented Lps-Inducible TNF Expression: Relevance To Alcoholic Liver Disease. Research Louisville, 2006

41. **Goldstein JW, Chen T, Khan R, Lanter J, Barve S, McClain CJ, Hill DB.** Increased S-Adenosylhomocysteine (SAH) may Predispose to TNF Liver Injury in Human Alcoholic Liver Disease (ALD), ACG, 2006


45. **Hambrecht VS, Vlisides PE, Row BD, Gozal D, Baghdoyan HA, Lydic R.** Hypoxia Alters G-Protein Activation by Carbachol in the Hippocampus of Sprague-Dawley Rat. Neuroscience 2006, Oasis, Online Abstract Submission and Invitation System-Program Planner

46. **He F, Qiao Z-H, Cai J, Pierce W, He D, Song Z-H.** Proteomic analysis leads to the identification of hsp90 as a CB2 cannabinoid receptor interacting protein The 15th World Congress of Pharmacology (IUPHAR-2006), July 2-7, 2006


49. **Hein DW.** N-acetyltransferase genetic polymorphisms predispose cigarette smokers to pancreatic adenocarcinoma, colorectal adenoma, and non-Hodgkin


56. Joshi-Barve S, Hote P, Gobejishvili L, Cave M, McClain C, Barve S. Exposure of hepatocytes to the fatty acid, palmitate, stimulates IL-8 production: relevance to NASH, Digestive Disease Week, Chicago, IL 2006


69. Khan, R, Goldstein, G, Barve, S, McClain, CJ, Hill D., S-adenosylhomocysteine (SAH) may sensitze to TNF-induced liver injury in alcoholic liver disease patients with impaired mitochondrial methionine metabolism., Digestive Disease Week, Chicago, IL 2006
70. Khan, R, Barve, S, Joshi-Barve, S, Combon, A, McClain, CJ, Hill, D. Misoprostol, Novel Anti-Cytokine Therapy for Alcoholic Liver Disease (ALD), Digestive Disease Week, Chicago, IL 2006

71. Khan R, Goldstein J, Lanter J, Chen T, McClain C, Hill D. Methionine Breath Test and Serum Clearance as a Diagnostic Tool in Chronic Liver Disease, ACG, 2006


82. Liu R, Chen LH, McClain CJ. Betaine modulates high carbohydrate diet-induced fatty liver in mice. FASEB, 2006


84. Lominadze D, Gozal D, Roberts AM. Platelet Thrombogenesis During Intermittent Hypoxia in Mice. The FASEB Journal, Abstracts Part 1, March 6, 2006, Vol. 20, No.4

85. Louthan, M., Joshi-Barve, S, Barve, S, McClain, C. Adiponectin Deficiency in Mexican American Children with NAFLD more important than markers of insulin resistance, AMERICAN ASSOCIATION FOR THE STUDY OF LIVER DISEASES, 2006.


88. McGregor WG, Burke T, Miller I, Dumstorf CA. Cells from skin cancer-prone xeroderma pigmentosum variant patients have greatly reduced mutant frequencies induced by the environmental carcinogen BPDE. Research Louisville 2006; James Graham Brown Cancer Center Retreat, 2006

90. McNeely SC, States JC. Arsenic Resistance in Melanoma Cell Lines is Attenuated by both Buthionine Sulfoximine and the MRP Inhibitor MK571. 4th Conference on Molecular Mechanisms of Metal Toxicity and Carcinogenesis, Morgantown WV, September 24-27, 2006


110. Redinger D, Vos MV, Barve, Joshi-Barve S, Sullivan J, Whittington P, McClain CJ. Low Adiponectin is associated with increased cell death in Pediatric Nonalcoholic Fatty liver disease, Digestive Disease Week, Chicago, IL, 2006

111. Reeves SR, Gozal D. Platelet-Activating Factor Receptor Activity Mediates Critical Components of Induction but Not Maintenance of Intermittent Hypoxia-Induced Phrenic Long-Term Facilitation in the Rat. Neuroscience 2006, Oasis, Online Abstract Submission and Invitation System-Program Planner

112. Reeves SR, Gozal D. Protein Kinase C (PKC) Within the Nucleus of the Solitary Tract (nTS) Mediates Critical Components of the Hypoxic Ventilatory Response (HVR), but Has No Apparent Role in Intermittent Hypoxia-Induced Phrenic Long-Term Facilitation (pLTF) in Adult Rats. The FASEB Journal, Abstracts Part II, March 7, 2006, Vol. 20, No. 5


120. **Sans Capdevila O, Kheirandish-Gozal L, Tauman R, Gozal D.** Sleep Disordered Breathing (SDB) and Metabolic Dysfunction in Children: A Pre- Vs. Post- Adenotonsillectomy Study. SLEEP Vol. 29, 2006, Abstract Supplement 20th Anniversary Meeting of the APSS, LLC.


126. **Song, M, Song, Z, Uriarte, S, Chen, T, Deaciuc, I, Lee, D, McClain, CJ.** Silymarin attenuates palmitate-induced lipotoxicity in HepG2 cells by preventing Akt Kinase inhibition, Digestive Disease Week, Chicago, IL 2006
127. Song M, Song Z, Deaciuc IV, McClain CJ. Silymarin Attenuates Palmitate-Induced Increase in IL-8 Secretion in HepG2 Cells. American Association for the Study of Liver Diseases, 2006


133. Srivastava D, Komolafe O, Templeton T, States JC, Kidd L. Variant Oxidative Stress Gene (hOGG1) and Prostate Cancer Risk Among African-American Men. 11th Annual Research Louisville, University of Louisville, Louisville, KY, October 14, 2006


137. **Taylor BF, States JC.** Mechanism of arsenite induced cell death is distinct from both nocodazole and Taxol. 4th Conference on Molecular Mechanisms of Metal Toxicity and Carcinogenesis, Morgantown WV, September 24-27, 2006

138. **Taylor BF, States JC.** Mechanism of Arsenite Induced Cell Death is Distinct from both Nocodazole and Taxol, Research!Louisville, University of Louisville, Louisville, KY, Oct 10-13, 2006.

139. **Taylor BF, States JC.** Mechanism of Arsenite Induced Cell Death is Distinct from both Nocodazole and Taxol, Ohio Valley Society of Toxicology, Children’s Research Institute, Columbus, OH, Nov 10, 2006.

140. **Taylor BF, States JC.** Mechanism of arsenite-induced cell death is distinct from both nocodazole and Taxol. James Graham Brown Cancer Center 5th Annual Retreat, Louisville, KY, November 29, 2006.


143. **Tiu AC, Cave MC, McClain CJ.** Metabolic coma after bariatric surgery: two case reports, Research Louisville, 2006


147. **Vos M, Barve S, Joshi-Barve S, Redinger D, Sullivan J, Whittington P, McClain CJ.** Low Adiponectin is associated with increased cell death in Pediatric Nonalcoholic Fatty liver disease, AMERICAN ASSOCIATION FOR THE STUDY OF LIVER DISEASES, 2006


155. **Witcher La, Carter BD, Gozal D, Kronenberger WG, Crabtree VM.** Nurse-Reported Sleep in Hospitalizes Children. SLEEP Vol. 29, 2006, Abstract Supplement 20th Anniversary Meeting of the APSS, LLC.


## XII. RESEARCH GRANTS FUNDED

**Scholarly Activity—Active Grant Funding-2006**

### Gavin Arteel, PhD

<table>
<thead>
<tr>
<th>Agency and Number</th>
<th>Title</th>
<th>PI</th>
<th>Role on Project</th>
<th>Dates</th>
<th>Costs</th>
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<tr>
<td>NIH KO1 AA13099</td>
<td>Hypoxia and free radicals in alcoholic pancreatitis</td>
<td>G Arteel</td>
<td>PI</td>
<td>08/01/01-07/31/07</td>
<td>$555,846 (Total Costs)</td>
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<td>NIH R01 AA003624</td>
<td>Control of drug and ethanol metabolism</td>
<td>G Arteel</td>
<td>PI</td>
<td>05/02/06-04/30/11</td>
<td>$1,364,794 (Total Costs)</td>
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<td>NIH R44 HL073578</td>
<td>Development of a direct cellular energy delivery system</td>
<td>WD Ehringer</td>
<td>Co-I</td>
<td>05/15/03-01/31/08</td>
<td>$1,655,671 (Total Costs)</td>
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<td>NIH R43 DK071354</td>
<td>A new ATP delivery system for liver transplantation</td>
<td>WD Ehringer</td>
<td>Co-I</td>
<td>10/10/05-02/28/07</td>
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<td>NIH R21 AA015611</td>
<td>Matrix Metalloproteases in Alcoholic Liver Injury</td>
<td>I Deaciuc</td>
<td>Co-I</td>
<td>08/01/06-05/31/08</td>
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### Jian Cai, PhD

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<td>NIH 1P01ES 011860-01A1</td>
<td>Cardiovascular Toxicity of Environmental Aldehydes</td>
<td>A Bhatnagar</td>
<td>Core Lab PI</td>
<td>07/01/03 – 06/30/08</td>
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<td>KY Sci. &amp; Tech. Corporation</td>
<td>Pharmacodynamics of Bone Targeted Drugs. Part B (IB070345)</td>
<td>J Cai</td>
<td>PI</td>
<td>09/10/06-09/09/07</td>
<td>$104,500 (Total)</td>
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### Theresa Chen, PhD

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<td>NIH, RO1AA014371</td>
<td>Mechanisms of Alcohol-Induced Immunosupresion</td>
<td>S Barve</td>
<td>Co-I</td>
<td>09/1/04-8/30/09</td>
<td>$294,000 (Current Year Total)</td>
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<td>NIH SR21 AT001490-03</td>
<td>Green Tea Polyphenols: A Novel Approach to IBD</td>
<td>H Oz</td>
<td>Co-I</td>
<td>2/15/04-2/28/08</td>
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<td>Podocytes and oxidative stress in diabetic kidney</td>
<td>P Epstein</td>
<td>Co-I</td>
<td>9/1/05-7/31/10</td>
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### Paul Epstein, PhD

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<td>NIH R01 DK077624</td>
<td>B-cells in pups of mild and severe STZ diabetic mothers; antioxidant protection</td>
<td>YQ Liu</td>
<td>Co-I</td>
<td>9/15/06-9/14/10</td>
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<td>NIH R01 HL062892</td>
<td>Antioxidant Transgenes in Diabetic Cardiomyopathy</td>
<td>P Epstein</td>
<td>PI</td>
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<td>NIH R01 HL075080</td>
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<td>P Epstein</td>
<td>PI</td>
<td>9/30/03-4/30/07</td>
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<td>NGA</td>
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<td>YQ Liu</td>
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<td>Developmental Defects</td>
<td>9/29/07</td>
<td>(Direct Costs)</td>
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<td>NIH R01 DK073586</td>
<td>Podocytes and Oxidative Stress in Diabetic Kidney</td>
<td>P Epstein PI</td>
<td>9/30/05-8/31/10</td>
<td>$250,000/yr (Direct Costs)</td>
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<td>NIH R01 DK073586</td>
<td>Prolonged Diabetic Damage to Cardiac Mitochondria</td>
<td>P Epstein PI</td>
<td>12/05-9/30/09</td>
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<td>Podocyte Specific Antioxidant Protection in Diabetic Nephropathy</td>
<td>P Epstein PI</td>
<td>4/1/05-3/30/08</td>
<td>$149,000/yr (Direct Costs)</td>
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<td>NIH R01- HL69932</td>
<td>Postnatal Brain Susceptibility to Intermittent Hypoxia.</td>
<td>D Gozal PI</td>
<td>6/1/2002-5/31/2007</td>
<td>$1,000,000 (Total Direct Costs)</td>
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<td>Neurocognitive Function in Snoring Children.</td>
<td>D Gozal PI</td>
<td>9/1/03-6/30/08</td>
<td>$1,200,000 (Total Direct Costs)</td>
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<td>NIH HL-083075</td>
<td>Tonsillectomy and Adenoidectomy in Children with Sleep Disordered Breathing</td>
<td>S Redline Site PI</td>
<td>2006-11</td>
<td>Site direct costs: apx. $180,000/year</td>
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<td>NIH SCOR P50 HL60286-06</td>
<td>Intermittent Hypoxia and Stroke</td>
<td>J Siegel Project 2 PI</td>
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<td>NIH NS 045839</td>
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<td>R Liu Co-I</td>
<td>2/1/03-1/31/07</td>
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<td>8/1/02-7/31/07</td>
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<tr>
<td>NIH R01HL 56737</td>
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<td>J Yu Co-I</td>
<td>1/1/03-12/31/07</td>
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<td>NIH R01 HL 75080</td>
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<td>2/1/04-1/31/08</td>
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<td>7/04-6/09</td>
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<td>Sleep and Cognition in Space</td>
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David Gozal, MD

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<thead>
<tr>
<th>Project ID</th>
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<th>Title</th>
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<td>NIH R01- HL69932</td>
<td>Postnatal Brain Susceptibility to Intermittent Hypoxia.</td>
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<td>NIH R01 HL65270-05</td>
<td>Neurocognitive Function in Snoring Children.</td>
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<td>NIH HL-083075</td>
<td>Tonsillectomy and Adenoidectomy in Children with Sleep Disordered Breathing</td>
<td>S Redline Site PI</td>
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<td>N Burzinski Student Mentor</td>
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### Evelyn Gozal, PhD

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<td>NIH R01 HL074296</td>
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<td>NIH P20 RR015576</td>
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<td>S. Whittemore</td>
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<td>NIH R56 AI059165-01A2</td>
<td>Role of Hsp27 in regulation of Neutrophil Apoptosis</td>
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### Ramesh Gupta, PhD

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<td>Breast Cancer Etiology</td>
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<td>NIH R01 CA96310</td>
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<td>KY Lung Cancer Res. Board</td>
<td>Etiology &amp; Prevention of Lung Cancer: Biomarker development in clinical studies</td>
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<td>1/02-12/07</td>
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<td>U of L Competative Enh. Grant</td>
<td>Breast Cancer Chemoprevention Potential fo Common Spices</td>
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### David Hein, PhD

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<td>NIH R01 CA34627-S</td>
<td>Characterization of NAT1 overexpression in breast tumors</td>
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<td>NIH T32 ES011564</td>
<td>U of L Environmental Health Sciences Training Program</td>
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<td>Philip Morris, USA</td>
<td>Effect of acetylator genotype on genotoxicity from aromatic and heterocyclic amine carcinogens</td>
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<td>7/1/02-3/31/06</td>
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<td>Procter &amp; Gamble, Inc.</td>
<td>Metabolism and toxicity of aromatic amines associated with hair dyes</td>
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<td>NIH P20 CA97942</td>
<td>James Graham Brown P20 Application</td>
<td>D Miller</td>
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<td>NIH F30 ES012557</td>
<td>Genetic Polymorphisms in 5'UTR of human NAT1 and NAT2</td>
<td>A Husain</td>
<td>Sponsor/Mentor</td>
<td>7/1/03-5/31/07</td>
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<td>MD Anderson Cancer Ctr pafsthrough of NCI funding</td>
<td>NAT1 and NAT2 Genotype determinations in cancer patients and controls</td>
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<td>PI</td>
<td>1/1/04-12/31/09</td>
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<td>NIH R01 ES11594</td>
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<td>S Srivastava</td>
<td>Consulatant</td>
<td>6/1/03-3/31/08</td>
<td>$1,559,485 (Total Costs)</td>
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<td>NIH P01 ES011860</td>
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<td>A Bhatnagar</td>
<td>Co-I, Project 1</td>
<td>7/1/03-6/30/08</td>
<td>$6,986,060 (Total Costs)</td>
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<tr>
<td>NIH R01 CA34627-19S to 22S</td>
<td>Pharmacogenetics of drug and carcinogen metabolism (minority supplement for Dr. LaReis Kidd)</td>
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<td>7/1/04-6/30-08</td>
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<td>NIH U10 HD045934</td>
<td>Research in support of Amonafide study</td>
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<td>PI</td>
<td>2/1/05-1/31/07</td>
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<td>NIH COBRE P20 RR017702</td>
<td>Molecular Determinants of Developmental Defects</td>
<td>R Greene</td>
<td>Mentor</td>
<td>7/1/05-4/30/07</td>
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<td>NIH T35 ES014559</td>
<td>Summer Environmental Health Sciences Training Program</td>
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<td>Student Mentor</td>
<td>4/1/06-3/31/11</td>
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<td>W Zheng</td>
<td>Subproject PI</td>
<td>5/3/07-4/30/09 Subproject</td>
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<td>Tobacco exposure, biomarkers, and</td>
<td>S Myers</td>
<td>Co-I</td>
<td>7/1/06-6/30/09</td>
<td>$1,110,000 (Total Costs)</td>
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<td>NIH P20 RR023523</td>
<td>Planning Grant for Louisville Clinical and Translational Science Award</td>
<td>C McClain</td>
<td>Mentor/Taskforce Member</td>
<td>10/1/06-9/30/07</td>
<td>$220,000 (Total Costs)</td>
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**Harrell Hurst, PhD**

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<tr>
<th>NIH 1PO1 ES011860-01A1</th>
<th>Cardiovascular toxicity of environmental aldehydes</th>
<th>A Bhatnagar</th>
<th>Core Lab Co-I</th>
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<td>Center for Pediatric Clinical Pharmacology Research</td>
<td>J Sullivan</td>
<td>Analytic Core Co-Director</td>
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**Y James Kang, PhD**

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<th>NIH 2R01 HL59225</th>
<th>Metallothionein and Adriamycin cardiotoxicity</th>
<th>YJ Kang</th>
<th>PI</th>
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<td>Metallothionein and Adriamycin cardiotoxicity Minority supplement for graduate student</td>
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<td>PI</td>
<td>12/1/04-11/30/07</td>
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<td>NIH 1R01 HL63760</td>
<td>Oxidative Stress and Heart Failure by Copper Deficiency</td>
<td>YJ Kang</td>
<td>PI</td>
<td>7/1/01-5/30/06</td>
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<td>NIH R01 AA014623</td>
<td>Zinc and alcohol-induced oxidative liver injury</td>
<td>Z Zhou</td>
<td>Co-I</td>
<td>8/10/05-5/31/08</td>
<td>$1,139,252 (Total Costs)</td>
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**LaCreis Kidd, PhD, MPH**

<table>
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<th>NIH 3R01 CA034627-19S</th>
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<th>Co-I</th>
<th>9/15/04-6/30/08</th>
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<tr>
<td>U of L School of Medicine</td>
<td>Impact of DNA Repair Genes (hOGG1, XPA, XPD, XRCC1 and APE1) on Prostate Cancer Risk Among Men of African Descent</td>
<td>L Kidd</td>
<td>PI</td>
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**Craig McClain, MD**

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<tr>
<th>NIH R37 AA01762</th>
<th>Tumor necrosis factor and alcoholic liver disease</th>
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<td>NIH R01 AA010496</td>
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<td>1/1/01-7/31/07</td>
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<td>Dysregulated TNF/Fas Signaling in alcoholic Liver Disease</td>
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<td>NIH K23 AA014235</td>
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<td>NIH R01 GM65459</td>
<td>Novel Feedback Regulation of Xenobiotic Bioactivation</td>
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<td>NIH K23 DK073750</td>
<td>Evaluation of the Effect of Green Tea Polyphenols on IBD</td>
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**W Glenn McGregor, MD**

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<th>End Date</th>
<th>Total Costs</th>
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<td>Mutagenesis as a novel target for cancer prevention</td>
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<td>NIH R03 CA112664-01A1</td>
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<td>NASA Cell Science Prog.</td>
<td>Shared responses to DNA damage, space flight and aging</td>
<td>WG McGregor</td>
<td>5/1/03-9/30/06</td>
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<td>KY Lung Cancer Res. Board</td>
<td>Role of chemoattractant-mediated inflammation in development and progression of lung cancer</td>
<td>H Bodduluri/ WG McGregor</td>
<td>10/1/03-9/30/06</td>
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83
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<tr>
<th>Name</th>
<th>Project Description</th>
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<th>Start Date</th>
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<td>Steven R. Myers, Ph.D.</td>
<td>Establishment of Breast Milk Bank in Louisville/ Carcinogens in Breast Milk</td>
<td>D Adamkin</td>
<td>Co-I</td>
<td>7/1/05-6/30/06</td>
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<td>Tobacco exposure, biomarkers, and mutations of MSX1 and IRF6 genes in pregnancy</td>
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<td>PI</td>
<td>8/1/05-7/31/06</td>
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<td>William Pierce, PhD</td>
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<td>Bone Targeting of Pharmaceuticals</td>
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<td>Cardiovascular Toxicity of Environmental Aldehydes</td>
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<td>Z-H Song</td>
<td>Co-I</td>
<td>7/1/06-4/30/09</td>
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<td>Center for Regulatory Metabolomics: From Molecules to Communities</td>
<td>T Fan</td>
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<td>2005-2008</td>
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<td>Peter Rowell, PhD</td>
<td>Postnatal Brain susceptibility to Intermittent Hypoxia</td>
<td>D Gozal</td>
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<td>6/1/02-3/31/06</td>
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<td>Dose and time dependent effects of nicotine on bone blood flow</td>
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<td>Zhao-Hui (Joe) Song, PhD</td>
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<td>8/1/03-7/31/07</td>
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<td>U of L Environmental Health Sciences Training Program</td>
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<td>Mentor</td>
<td>7/1/04-6/30/09</td>
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### J Christopher States, PhD

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<tr>
<th>Grant Number</th>
<th>Title</th>
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<th>Role</th>
<th>Start Date</th>
<th>End Date</th>
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<td>Arsenic-Induced Mitotic Arrest Associated Apoptosis</td>
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<td>NIH F30 ES013372</td>
<td>Impact of DNA Repair Genes (hOGG1, XPA, XPD, XRCC1 and APE1) on Prostate Cancer Risk Among Men of African Descent</td>
<td>L Kidd</td>
<td>Collaborator</td>
<td>3/15/06</td>
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### Leonard Waite, PhD

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<th>Start Date</th>
<th>End Date</th>
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<tr>
<td>KY Sci and Tech Corp</td>
<td>Bone Targeting and Bone Anabolic Agents</td>
<td>W Pierce</td>
<td>Co-I</td>
<td>12/1/04</td>
<td>11/30/07</td>
<td>$225,000</td>
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<td>KY Sci and Tech Corp</td>
<td>Bone Targeting of Pharmaceuticals</td>
<td>W Pierce</td>
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<td>9/1/04</td>
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### XIII. RESEARCH GRANTS SUBMITTED

**Gavin Arteel, PhD**

<table>
<thead>
<tr>
<th>Agency and Number</th>
<th>Title</th>
<th>PI</th>
<th>Role on Project</th>
<th>Dates</th>
<th>Costs</th>
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<tr>
<td>NIH R21 ES015812</td>
<td>Transplacental Arsenic Induced Hepatic Dysfunction and Vascular Disease</td>
<td>JC States</td>
<td>Co-PI</td>
<td>7/1/07-6/30/09</td>
<td>$407,000 (Total Costs)</td>
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<tr>
<td>NIH P20 AA017103</td>
<td>Alcohol liver disease and alcohol-nutrient interactions</td>
<td>CJ McClain</td>
<td>Investigator</td>
<td>12/1/07-11/30/12</td>
<td>$2,500,000 (Total Costs)</td>
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<tr>
<td>NIH K12ES915847</td>
<td>University of Louisville’s Environmental Health Sciences K12</td>
<td>CJ McClain</td>
<td>Mentor</td>
<td>7/1/07-6/30/12</td>
<td>$5,255,751 (Total Costs)</td>
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<tr>
<td>UofL (Pilot Grant in Biodefense and Emerging Infectious Dis)</td>
<td>Impact of alcohol on macrophage susceptibility to M. Tuberculosis infection</td>
<td>G Arteel</td>
<td>PI</td>
<td>7/1/07-6/30/08</td>
<td>$20,000 (Total Costs)</td>
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**Fred Benz, PhD**

| NIH OGMB061415 | MT Interaction with Zn-Binding Proteins in the Heart | W. Feng | Col | 7/1/07-3/31/09 | $409,976 (Total costs) |

**Jian Cai, PhD**

| Dept of Defense | Tumor-specific isoforms of nucleolin: novel markers and targets for breast cancer? | P Bates | Co-I | 8/1/06-7/31/07 | $111,000 (Total Costs) |
| US EPA          | Genotoxic effects of transition metal nanoparticles                        | Q Zhang   | Co-I | 9/1/06-8/31/09 | $399,000 (Total Costs) |
| NIH NHLBI       | Eicosanoids, PPAR-γ and vascular inflammation associated with hypertension     | A Adeagbo | Co-I | 9/1/06-8/31/10 | $998,985 (Total Costs) |
| NIH             | MT interaction with Zn-binding proteins in the heart                         | W Feng    | Co-I | 4/1/07-3/31/09 | $407,000 (Total Costs) |
| KY Sci & Tech Corp. | PPAR-gamma and vascular inflammation during hypertension | A Adeagbo | Co-I | 6/1/07-5/31/09 | $61,914 (Total Costs) |
| NIH             | TNF in cell death & neuroprotection in glaucoma                              | G Tezel   | Co-I | 8/1/07-7/31/12 | $1,850,000 (Total costs) |

**Theresa Chen, PhD**

<p>| NIH | Efficacy of antioxidants against inflammatory bowel disease, a translational study | H Oz | Co-I | 12/06-11/08 |
| NIH | Compelmentary and alternative approach to                                          | H Oz | Co-I | 12/06-11/09 |</p>
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<tr>
<th>Grant #</th>
<th>Title</th>
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<th>Role</th>
<th>Start Date</th>
<th>End Date</th>
<th>Total Costs</th>
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<tr>
<td>NIH P20 AA017103</td>
<td>Alcohol liver disease and alcohol-nutrient interactions</td>
<td>CJ McClain</td>
<td>Investigator</td>
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<td>NIH K12ES915847</td>
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<td>7/1/07-6/30/12</td>
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<td>NIH NIAID</td>
<td>Modulation of neutrophil apoptosis by Akt-Hsp27 Signalosome</td>
<td>MJ Rane</td>
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<td>R Gupta</td>
<td>PI</td>
<td>12/1/06-11/30/11</td>
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<td>NIH R01 NCI</td>
<td>Effect of estrogen on tobacco smoke-mediated female lung cancer</td>
<td>M Clapper</td>
<td>Co-I</td>
<td>1/1/07-12/30/10</td>
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<td>NIH R01 CA118114-01A2</td>
<td>Breast cancer chemoprevention strategies</td>
<td>R Gupta</td>
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<td>4/1/07-2/28/11</td>
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<td>NIH R01 CA125152</td>
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<td>Alcohol liver disease and alcohol-nutrient interactions</td>
<td>CJ McClain</td>
<td>Investigator</td>
<td>12/1/07-11/30/12</td>
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<td>NIH R01</td>
<td>PAH Exposure &amp; Biomarkers Among Roadway Paving Workers</td>
<td>Herrick</td>
<td>Co-I</td>
<td>7/1/07-6/30/10</td>
<td>$309,184 (Total Costs)</td>
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<td>KLCRP Cycle 6</td>
<td>Prevention of Lung Cancer in the Mouse Model by Polyphenols Delivered by Novel Slow-</td>
<td>M Vadhanam</td>
<td>Co-I</td>
<td>7/1/07-6/30/09</td>
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<td>Dept. of Defense Concept Award</td>
<td>Chemoprevension of Mammary Tumorigenesis by Steady Low doses of Berries Extracts</td>
<td>R Gupta</td>
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<td>9/1/06-8/31/07</td>
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<td><strong>David Hein, PhD</strong></td>
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<td>Polymorphisms in MnSOD as a risk factor for lung cancer</td>
<td>RCG Martin</td>
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<td>NIH R25 GM079188</td>
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<td>US Dept of Defense</td>
<td>Predictive models of gene-gene interactions on prostate cancer susceptibility</td>
<td>L Kidd</td>
<td>Mentor/Co-I</td>
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<td>A pharmacogenetic approach to prostate cancer susceptibility</td>
<td>L Kidd</td>
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<td>4/1/07-3/31/09</td>
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<td>CJ McClain</td>
<td>Mentor</td>
<td>7/1/07-6/30/12</td>
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<tr>
<td>Am Cancer Soc</td>
<td>Pathway wide approach to prostate cancer detection in African-American men</td>
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<td>Mentor/Co-I</td>
<td>7/1/07-6/30/11</td>
<td>$948,100 (Total Costs)</td>
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<tr>
<td>Am Cancer Soc</td>
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<td>Co-I/Mentor</td>
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<td>Am Surgical Assoc Found</td>
<td>Predictors and biomarkers of Barrett’s metaplastic conversion to esophageal adenocarcinoma by novel esophageal cells</td>
<td>RCG Martin</td>
<td>Co-I/Mentor</td>
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<td>NIH</td>
<td>Biological markers of breast milk carcinogens</td>
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<td>Co-I</td>
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<td>10/1/07-9/30/12</td>
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**Harrell Hurst, PhD**

| NIH R01 CA125152 | Breast cancer chemoprevention potential of common spices | R Gupta | Co-I | 12/1/06-11/30/11 | $1,250,000 (Total Direct Costs) |
| NIH R01 NCI | Effect of estrogen on tobacco smoke-mediated female lung cancer | R Gupta | Co-I | 1/1/07-12/30/10 | $454,370 (Total Direct Costs) |
| NIH | Biomarker of in utero tobacco exposure | SR Myers | Co-I | 4/1/07-3/31/11 | $2,173,875 (Total Costs) |
| NIH R01 CA118114-01A2 | Breast cancer chemoprevention strategies | R Gupta | Co-I | 4/1/07-2/28/11 | $1,282,817 (Total Direct Costs) |

**Y James Kang, PhD**

<p>| NIH R01 HL085082 | Ventricular assist device therapy for heart failure | YJ Kang | PI | | $8,799,570 (Total Costs) |
| NIH R01 HL063760-05A1 | Oxidative stress and heart failure by copper restriction | YJ Kang | PI | | $1,850,000 (Total Costs) |
| NIH R01 HL084450-01A1 | Copper nutrition and heart failure | YJ Kang | PI | | $1,850,000 (Total Costs) |
| NIH R01 ES015755 | Dietary manipulation of mineral metabolism and heart disease | YJ Kang | PI | | $1,480,000 (Total Costs) |
| NIH R01 NIAAA | The role of zinc in the control of hepatic oxidative stress | W Maret | Subcontract PI | | $607,400 (Total Subcontract Costs) |
| NIH R01 AA016013 | Zinc inhibition of endotoxemia in alcoholic liver injury | Z Zhou | Co-I | | $1,653,750 (Total Costs) |
| NIH P20 AA017103 | Alcohol liver disease and alcohol-nutrient interactions | CJ McClain | Investigator | 12/1/07-11/3012 | $2,500,000 (Total Costs) |
| NIH | University of Louisville’s | CJ McClain | Mentor | 7/1/07- | $5,255,751 |</p>
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<th>6/30/12</th>
<th>(Total Costs)</th>
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**La Creis Kidd, PhD, MPH**

<table>
<thead>
<tr>
<th>US Dept of Defense</th>
<th>Predictive models of gene-gene interactions on prostate cancer susceptibility</th>
<th>L Kidd</th>
<th>PI</th>
<th>10/1/06-9/30/09</th>
<th>$333,000 (Total Costs)</th>
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<tr>
<td>NIH R03 CA128028</td>
<td>A pharmacogenetic approach to prostate cancer susceptibility</td>
<td>L Kidd</td>
<td>PI</td>
<td>4/1/07-3/31/09</td>
<td>$148,000 (Total Costs)</td>
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<td>NIH</td>
<td>National Center on Minority &amp; Heal Disparities (P20)</td>
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<td>Co-I</td>
<td>6/1/07-5/31/12</td>
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<td>PI</td>
<td>7/1/07-6/30/11</td>
<td>$948,100 (Total Costs)</td>
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<td>NIH NCI R21</td>
<td>A biosystems approach to prostate cancer susceptibility in African-American men</td>
<td>L Kidd</td>
<td>PI</td>
<td>10/1/07-9/30/12</td>
<td>$275,000 (Total Costs)</td>
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<tr>
<td>NIH NCI R03 CA128028</td>
<td>A pharmacogenetic approach to prostate cancer susceptibility</td>
<td>L Kidd</td>
<td>PI</td>
<td>4/1/07-3/31/09</td>
<td>$148,000 (Total Costs)</td>
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**Craig McClain, MD**

| NIH K12ES915847 | University of Louisville's Environmental Health Sciences K12 | CJ McClain | PI | 7/1/07-6/30/12 | $5,255,751 (Total Costs) |

**W. Glenn McGregor, MD**

<table>
<thead>
<tr>
<th>NIH R01</th>
<th>CA122259</th>
<th>Signaling mechanisms in DNA damage induced recombination</th>
<th>WG McGregor</th>
<th>PI</th>
<th>10/1/06-9/30/11</th>
<th>$1,470,000 (Total Costs)</th>
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<tbody>
<tr>
<td>NIH</td>
<td>Using nanochemistry for wound care</td>
<td>S Chien</td>
<td>Co-I</td>
<td>8/1/06-7/31/10</td>
<td>$2,908,090 (Total Costs)</td>
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<tr>
<td>NIH K12ES915847</td>
<td>University of Louisville’s Environmental Health Sciences K12</td>
<td>CJ McClain</td>
<td>Mentor</td>
<td>7/1/07-6/30/12</td>
<td>$5,255,751 (Total Costs)</td>
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</table>

**Steven Myers, PhD**

<p>| NIH | Biomarker of in utero tobacco exposure | SR Myers | Co-I | 4/1/07-3/31/11 | $2,173,875 (Total Costs) |
| UofL Res. | Biomarkers of in utero | SR Myers | PI | 2006 | |</p>
<table>
<thead>
<tr>
<th>Found</th>
<th>tobacco exposure</th>
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<tbody>
<tr>
<td>UofL Res. Found</td>
<td>Chemoprevention of Dibenzo(a,l)pyrene induced mammary carcinogenesis</td>
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</table>

**Donald E Nerland, PhD**

<table>
<thead>
<tr>
<th>U of L Internal Grant</th>
<th>Lung cancer chemoprevention</th>
<th>D Nerland</th>
<th>PI</th>
<th>$3,7000 (Total Costs)</th>
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</table>

**Kenneth E Palmer, PhD**

<table>
<thead>
<tr>
<th>U of L BSL3 pilot grant</th>
<th>Evaluation of griffithsin as a broad-spectrum antiviral</th>
<th>KE Palmer</th>
<th>PI</th>
<th>2/1/07-1/21/08</th>
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**William Pierce, PhD**

<table>
<thead>
<tr>
<th>Dept of Defense</th>
<th>High technology mass spectrometry laboratory for the identification of chemical signatures</th>
<th>W Pierce</th>
<th>PI</th>
<th>2007-2012</th>
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</thead>
<tbody>
<tr>
<td>NIH P20 AA017103</td>
<td>Alcohol liver disease and alcohol-nutrient interactions</td>
<td>CJ McClain</td>
<td>Investigator</td>
<td>12/1/07-11/3012</td>
</tr>
<tr>
<td>NIH K12ES915847</td>
<td>University of Louisville’s Environmental Health Sciences K12</td>
<td>CJ McClain</td>
<td>Mentor</td>
<td>7/1/07-6/30/12</td>
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<tr>
<td>NIH 2 R01 EY13813-05A1</td>
<td>TNF-α in Cell Death &amp; Neuroprotection in Glaucoma</td>
<td>G Tezel</td>
<td>Co-I</td>
<td>8/1/07-7/31/12</td>
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<tr>
<td>NIH R01 EY017131-01A2</td>
<td>Proteomic Analysis of Retinal Ganglion Cell Death in Glaucoma</td>
<td>G Tezel</td>
<td>Co-I</td>
<td>12/1/07-1/31/12</td>
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$1,500,000 (Total Costs)

$2,500,000 (Total Costs)

$5,255,751 (Total Costs)

$250,000 (Total Yearly Costs)

$250,000 (Total Yearly Costs)

$1,500,000 (Total Costs)

$29,990 (Total Subcontract Costs)

$29,990 (Total Subcontract Costs)

**Peter Rowell, PhD**

<table>
<thead>
<tr>
<th>NIH</th>
<th>Basis of individual variability in response to nicotine</th>
<th>Va. Commonwealth Univ</th>
<th>PI, Subcontract</th>
<th>$29,990 (Total Subcontract Costs)</th>
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<tbody>
<tr>
<td>NIH</td>
<td>Nicotine exposure and ontogeny of nicotinic receptor function</td>
<td>Va. Commonwealth Univ</td>
<td>PI, Subcontract</td>
<td>$29,990 (Total Subcontract Costs)</td>
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**Zhao-Hui (Joe) Song, PhD**

<table>
<thead>
<tr>
<th>NIH R21 NS059461</th>
<th>Assay development for HTS of ligands for GPR3 and CB2 receptors</th>
<th>Z-H Song</th>
<th>PI</th>
<th>3/1/07-2/28/08</th>
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<tr>
<td>Leukemia &amp; Lymphoma Soc</td>
<td>The roles of CB2 receptors in leukemia cell differentiation and migration</td>
<td>F He</td>
<td>Faculty Sponsor</td>
<td>7/1/07-6/30/10</td>
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$185,000 (Total Costs)

$150,000 (Total Costs)
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<th>NIH F32 DA023776</th>
<th>Effects of cannabinoids on cancer cells</th>
<th>A Carrasquer</th>
<th>Faculty Sponsor</th>
<th>7/1/07-12/31/09</th>
<th>$68,880 (Total Costs)</th>
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<tbody>
<tr>
<td><strong>J Christopher States, PhD</strong></td>
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<tr>
<td>NIH P30 ES014443</td>
<td>Center for environmental genomics and integrative biology</td>
<td>K Ramos</td>
<td>Investigator</td>
<td>4/1/07-3/31/11</td>
<td>$4,440,000 (Total Costs)</td>
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<td>NIH P20 AA017103</td>
<td>Alcohol liver disease and alcohol-nutrient interactions</td>
<td>CJ McClain</td>
<td>Investigator</td>
<td>12/1/07-11/30/12</td>
<td>$2,500,000 (Total Costs)</td>
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<tr>
<td>NIH K12ES915847</td>
<td>University of Louisville’s Environmental Health Sciences K12</td>
<td>CJ McClain</td>
<td>Mentor</td>
<td>7/1/07-6/30/12</td>
<td>$5,255,751 (Total Costs)</td>
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<td>NIH R21 ES015812</td>
<td>Transplacental arsenic induced hepatic dysfunction and vascular disease</td>
<td>JC States</td>
<td>PI</td>
<td>7/1/07-6/30/09</td>
<td>$407,000 (Total Costs)</td>
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<tr>
<td>NIH R21 ES014649</td>
<td>Arsenic, melanosis and melanoma</td>
<td>JC States</td>
<td>PI</td>
<td>7/1/07-6/30/09</td>
<td>$407,000 (Total Costs)</td>
</tr>
<tr>
<td>U of L School of Medicine</td>
<td>Xenograft model of ovarian carcinoma in nude mice with assessment of non-invasive imaging and tolerability of intraperitoneal cisplatin, sodium arsenite and mild hyperthermia</td>
<td>CW Helm</td>
<td>Collaborator</td>
<td>3/1/07-2/28/08</td>
<td>$15,000 (Total Costs)</td>
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<tr>
<td>KSEF-1098-RDE-009</td>
<td>Preclinical testing of combination intraperitoneal chemotherapy for ovarian cancer</td>
<td>JC States</td>
<td>PI</td>
<td>1/1/07-12/31/07</td>
<td>$59,999 (Total Costs)</td>
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<tr>
<td>CDMRP2006 OvCa IDEA preproposa</td>
<td>Enhancement of intraperitoneal cisplatin cytotoxic activity by co-treatment with arsenic and/or heat</td>
<td>JC States</td>
<td>PI</td>
<td>1/1/07-12/31/07</td>
<td>$300,000 (Total Costs)</td>
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<td>CDMRP2006 OvCa IDEA Concept</td>
<td>Whole genome expression profiling for platinum resistance</td>
<td>JC States</td>
<td>PI</td>
<td>1/1/07-12/31/07</td>
<td>$110,250 (Total Costs)</td>
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<td>KLCR</td>
<td>Chemopreventive modulation of DNA repair in human lung cells</td>
<td>JC States</td>
<td>PI</td>
<td>7/1/06-6/30/09</td>
<td>$225,000 (Total Costs)</td>
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</table>
XVI. INVITED SCIENTIFIC PRESENTATIONS (SALARIED FACULTY)

Gavin Arteel, Ph.D.

- Research seminar, 03/06, “Prevention of HCC by preventing cirrhosis,” University of Louisville GI/Liver research group, Louisville, KY.

- Research seminar, 03/06, “Blocking liver disease as prevention of HCC,” University of Louisville James Graham Brown Cancer Center, Cancer Control and Prevention group, Louisville, KY.

- Research seminar, 09/06, “Oxidative stress in ASH and NASH,” University of Louisville Alcohol Research Group, Louisville, KY.

- Research symposium, 09/06, “Oxidative stress in ASH and NASH (non-mitochondrial).” American Association for the Study of Liver Disease, Clinical Research Single Topic Conference, Atlanta, GA.

Paul Epstein, Ph.D.


- Diabetic Nephropathy and Cardiomyopathy Shanghai China, July 2006.

- Diabetic Nephropathy in OVE26 Mice, Lilly Company, Indianapolis, IN, September 2006

Evelyne Gozal, Ph.D.


Ramesh Gupta, Ph.D.

- Cancer Prevention & Control, Brown Cancer Center, May 2006

- 4th Int’l Conference on PCBs, Zakopane, Poland, September 2006

- JN Center for Advanced Research, Bangalore, India, November 2006

- Department of Biotechnology, Integral University, Lucknow, India, November 2006
David Hein, Ph.D.

- Regulation of the Human Arylamine N-acetyltransferases: Implications for Cancer Susceptibility. In symposium entitled: Regulation of Phase II Xenobiotic Metabolizing Enzymes: Implications for Health and Disease, annual meeting of the Society of Toxicology, San Diego, California, March 2006.


- Pharmacogenetics of N-acetyltransferases and Their Role in Genetic Predisposition to Cancer. Universite Paris 7- Denis Diderot, Paris, France, April 2006.


Y. James Kang, Ph.D.

- Nov 17, 2006 Invited Lecture, Guiyang Medicine College Senior Medical Students group, Guiyang, China, “Cardiac Toxicology Research and Development”

- Nov 17, 2006 Invited Lecture, Guiyang Medicine College Graduate Program, Guiyang, China, “Chinese herbal medicine modernization versus modernized approach to study Chinese herbal medicine”


- Nov 12, 2006 Invited Lecture, Department of Thoracic and Cardiovascular Surgery, Zunyi Medical College Affiliated Hospital, “Mineral metabolic disorder and hypertrophic cardiomyopathy”


LaCreis Kidd, Ph.D., M.P.H.

- Polymorphisms in $N$-Acetyltransferase Genes and Prostate Cancer Susceptibility Among Men of African Descent, August 2, 2006

Craig J. McClain, M.D.

- Allentown, PAGut Club, “NASH”, Allentown, PA, February 5, 2006
- University of Cincinnati, Grand Rounds, “NASH”, March, 29, 2006

W. Glenn McGregor, M.D.

• “RAD6 family members as targets for cancer prevention”. Gordon Research Conference on DNA Repair, Ventura CA 3/5-3/10/2006.

Steven R. Myers, Ph.D.

• “Hazards of Environmental Tobacco Exposure”, Metro Louisville City Council, 10/02/06

• “Aromatic Amine Hemoglobin Adducts in Smokers: Correlations with Gestational Age, Birthweight, and Genotype-Implications for Birth Defects”, Department of Molecular, Cellular, and Cranofacial Biology and the Birth Defects Center, University of Louisville, 10/31/06

• “Application of Hemoglobin as a Biomarker for Tobacco Exposure”, Norton Hospital Neonatal and OB/Gyn Nurses and Fellows, 03/23/06

Donald Nerland, Ph.D.

• The ARE/EpRE Motif. Department of Pharmacology & Toxicology Seminar Series, University of Louisville, November 21, 2006

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

• Invited Seminar: Cannabinoid Receptor as a Potential New Therapeutic Target for Glaucoma Peking University Eye Center, Beijing, China, November 2, 2006.

• Invited Seminar: Cannabinoid Receptors as Therapeutic Targets----Dreams and Realities Poa Pratensis Molecular Target Program, Brown Cancer Center, Louisville, KY ,December 7, 2006.

J. Christopher States, Ph.D.

• 3/16/06 “Arsenic and Cardiovascular Disease”, Department of Environmental Medicine, University of Rochester, Rochester, NY

• Arsenic Induced Mitotic Arrest and Apoptosis, 4th Conference on Molecular Mechanisms of Metal Toxicity and Carcinogenesis, Morgantown WV, September 24-27, 2006 (invited oral presentation)
XV. DEPARTMENTAL TEACHING

School of Medicine

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

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 Appendix.

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 Appendix.

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 Appendix.

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 Appendix.

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. The individual courses and course directors were as follows:

- Scientific Writing (Dr. Gavin Arteel)
- Principles of Drug and Chemical Action (Dr. Frederick Benz)
- Research Methods (Dr. Chris States and Dr. Joe Song)
- Pharmacology Seminar (Dr. Donald Nerland)
- Graduate Pharmacology (Dr. Len Waite)
- Molecular Toxicology (Dr. W. Glenn McGregor and Russell Prough)
XVI. DEPARTMENTAL STANDING COMMITTEES

**Graduate Program Committee**  
Dr. William Pierce (Chair)  
Dr. Chris States (2008)  
Dr. Gavin Arteel (2007)  
Dr. Evelyne Gozal (2006)  
Jason Walraven (student representative)

**SIBUP/Grievance Committee**  
Dr. Peter Rowell (Chair)  
Dr. Don Nerland (2008)  
Dr. Harrell Hurst (2007)  
Dr. Joe Song (2006)

**Teaching Evaluation Committee**  
Dr. Mike Williams (Chair)  
Dr. Len Waite (2008)  
Dr. Fred Benz (2007)  
Dr. Harrell Hurst (2006)

**Seminar Committee**  
Dr. Don Nerland (Chair)  
Dr. Fred Benz (2008)  
Dr. Steve Myers (2007)  
Dr. Ramesh Gupta (2006)

**Core Laboratories/Research Development Committee**  
Dr. Chris States (Chair)  
Dr. Glenn McGregor (2008)  
Dr. Theresa Chen (2007)  
Dr. Jian Cai (2006)

**Events Committee**  
Dr. Len Waite (Chair)  
Dr. Ramesh Gupta (2008)  
Dr. LaCreis Kidd (2007)  
Dr. Glenn McGregor (2006)

**Tier I Information Technology Committee**  
Dr. Gavin Arteel  
Dr. Fred Benz  
Dr Harrell Hurst