Department of
Pharmacology & Toxicology

UNIVERSITY OF
LOUISVILLE

SCHOOL OF MEDICINE

2007 Annual Report
Department of Pharmacology and Toxicology-2007
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  - Kenneth E. Palmer
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  - Peter P. Rowell
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  - J. Christopher States
  - Leonard C. Waite
  - Walter M. Williams
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 Owensboro 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
tochen01@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](mailto: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;  [wgmegr01@gwise.louisville.edu](mailto:wgmegr01@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 hematopoietic 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; pnest01@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 adaptations 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.

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

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**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

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; gcrogers@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
browncc.org/research/researcher.aspx?id=1650

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

Wolfgang Zacharias  
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. Knofel 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, Professor 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 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).

**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 Lab 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, Zhanhong
• Thaiparambil, J. Thomas
• von Montfort, Claudia
• Yang, Xiaonan

**Graduate Students**

<table>
<thead>
<tr>
<th>Name</th>
<th>Advisor</th>
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<tbody>
<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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<td>Katie Bourcy</td>
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<td>Alex Carrasquer</td>
<td>Z-H. Song</td>
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<td>Pengxiao Cao</td>
<td>R. Gupta</td>
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<td>Eleana Chambers</td>
<td>S. Barve</td>
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<tr>
<td>Chad Dumstorf</td>
<td>W.G. McGregor</td>
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<td>Name</td>
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<tr>
<td>Emily Esposito</td>
<td>M. Pisano</td>
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<td>Agata Habas</td>
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<td>Philip Kaiser</td>
<td>G. Arteel</td>
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<td>Christelle Komguem Kamga</td>
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<td>Amanda Lasnik</td>
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<td>Nicole Lavender</td>
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<td>Robert Martin</td>
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<td>Stephanie Mathews</td>
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<td>Sam McNeely</td>
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<td>Lasharon Mosley</td>
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<td>Clarisse Muenyi</td>
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<td>Olive Ngalame</td>
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<td>YaFatou Njie</td>
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<td>Frazier Taylor</td>
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<td>Jianxun Wang</td>
<td>P. Epstein</td>
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<td>Nick Watson</td>
<td>W.G. McGregor</td>
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<td>Christina Clark (Weigand)</td>
<td>E. Gozal</td>
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<tr>
<td>Lu Yang</td>
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<td>Susan Zhang</td>
<td>D. Hein</td>
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<td>Yang Zhou</td>
<td>Y.J. Kang</td>
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## GRADUATES

<table>
<thead>
<tr>
<th>Graduate</th>
<th>Degree</th>
<th>Year</th>
<th>Mentor</th>
<th>Dissertation/Thesis Title</th>
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<tbody>
<tr>
<td>Ya Fatou Njie</td>
<td>Ph.D.</td>
<td>2007</td>
<td>Zhao-Hui (Joe) Song, Ph.D.</td>
<td>Cannabinoids as potential therapeutic agents for glaucoma</td>
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<tr>
<td>Christelle K. Kamga</td>
<td>M.S.</td>
<td>2007</td>
<td>Yang Wang, Ph.D.</td>
<td>UCP4 is a key regulator of mitochondrial antioxidant defense in rat PC12 cells</td>
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<tr>
<td>Jianxun Wang</td>
<td>M.S.</td>
<td>2007</td>
<td>Paul N. Epstein, Ph.D.</td>
<td>The changes of fructos-2,6-biphosphate level in transgenic mice causing cardiomyopathy</td>
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<td>Joshua M. Thornburg</td>
<td>Ph.D.</td>
<td>2007</td>
<td>Jason A. Chesney, M.D., Ph.D.</td>
<td>Identification of aspartate aminotransferase as a novel target for anti-neoplastic research</td>
</tr>
<tr>
<td>Samuel C. McNeely</td>
<td>Ph.D.</td>
<td>2007</td>
<td>J. Christopher States, Ph.D.</td>
<td>Sensitivity to sodium arsenite depends upon susceptibility to mitotic arrest-associated apoptosis</td>
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<tr>
<td>Jason M. Walraven</td>
<td>Ph.D.</td>
<td>2007</td>
<td>David W. Hein, Ph.D.</td>
<td>Computational and functional analyses of human and rat N-acetyltransferase genetic variants</td>
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<td>J. Phillip Kaiser</td>
<td>M.S.</td>
<td>2007</td>
<td>Gavin E. Arteel, Ph.D.</td>
<td>The role of PKC-Epsilon in alcoholic liver disease</td>
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<td>Agata M. Habas</td>
<td>Ph.D.</td>
<td>2007</td>
<td>Michal Hetman, M.D., Ph.D.</td>
<td>The role of GSK3β and NFATc4 in NMDA-mediated neuronal survival</td>
</tr>
<tr>
<td>B. Frazier Taylor</td>
<td>Ph.D.</td>
<td>2007</td>
<td>J. Christopher States, Ph.D.</td>
<td>Arsenite inhibition of mitotic progression</td>
</tr>
<tr>
<td>LaSharon D. Mosley</td>
<td>M.S.</td>
<td>2007</td>
<td>Richard E. Goldstein, M.D., Ph.D.</td>
<td>Estrogen receptors in thyroid cell proliferation</td>
</tr>
<tr>
<td>Graduate</td>
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<td>Lu Yang</td>
<td>M.S.</td>
<td>2007</td>
<td>Paul N. Epstein, Ph.D.</td>
<td>Protection by metallothionein from adriamycin induced nephropathy in mice and gene expression profiling during progression of diabetic nephropathy</td>
</tr>
<tr>
<td>Chad A. Dumstorf</td>
<td>Ph.D.</td>
<td>2007</td>
<td>W. Glenn McGregor, M.D.</td>
<td>Participation of mouse DNA polymerases iota, eta, and rev1 in translesion synthesis of carcinogen induced DNA adducts and carcinogenesis</td>
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<tr>
<td>Kristin J. Metry</td>
<td>Ph.D.</td>
<td>2007</td>
<td>David W. Hein, Ph.D.</td>
<td>Role of N-acetyltransferase 2 polymorphism in DNA adduct formation and mutagenesis by aromatic and heterocyclic amine carcinogens</td>
</tr>
<tr>
<td>Jin Liu</td>
<td>Ph.D.</td>
<td>2007</td>
<td>Michael E. Brier, Ph.D.</td>
<td>Design evaluation for pharmacokinetic studies in patients with renal impairment</td>
</tr>
<tr>
<td>Kevyn E. Merten</td>
<td>Ph.D.</td>
<td>2007</td>
<td>Y. James Kang, Ph.D.</td>
<td>Effect of zinc on doxorubicin-induced activation of the calcineurin signaling pathway and the relation to myocardial cell death and hypertrophy</td>
</tr>
</tbody>
</table>
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)


75. Reeves SR, Gozal D. Protein kinase C activity in the nucleus tractus solitarii is critically involved in the acute hypoxic ventilatory response, but is not required for intermittent hypoxia-induced phrenic long-term facilitation in adult rats. Exp Physiol 2007;92:1057-66.


PUBLICATIONS (SELECTED OTHER FACULTY)

George Aronoff, MD


Aruni Bhatnagar, PhD


Haribabu Bodduluri, PhD

Mathis, S., Jala, VR, Haribabu, B. Role of Leukotriene B4 Receptors in Rheumatoid Arthritis. Autoimmunity Reviews. 7: 12-17 (2007).


**Lu Cai, MD, PhD**


Yu X, Li C, Li XK, Cai L. Activation of PPAR \( \alpha \) prevents advanced glycation endproducts induced nephropathy through suppression of plasminogen activator inhibitor-1. Toxicological Sciences 96: 346-356, 2007.


**Jason Chesney, MD, PhD**


**Daniel Conklin, PhD**


**Albert R Cunningham, PhD**

John Eaton, PhD


Paul Epstein, PhD


**Theresa Fan, PhD**


**Theo Hagg, PhD**


Michael Hetman, MD, PhD


Mary Jane Kennedy, Pharm D


Chi Li, PhD


James Lillard, PhD


Irene Litvan, MD


Chapters:


Manuel Martinez, MD


Kelly M. McMasters, M.D., Ph.D.


Donald Miller, MD, PhD


Michele Pisano, PhD


George Rodgers, MD, PhD

David Scott, PhD


Janice Sullivan, MD


Yang Wang, PhD


Brian Wattenberg, PhD

Invited Reviews/Book Chapters:


**Wolfgang Zaccharias, PhD**


**Wayne Zundel, PhD**


Book Chapters:

ABSTRACTS (SALARIED FACULTY AND STAFF)

Gavin Arteel, PhD


**Frederick W. Benz, PhD**


**Jian Cai, PhD**


**Theresa S. Chen, PhD**


**Paul N Epstein, PhD**

1. Jianxiang Xu, Hainan Chen, Xiaoyan Li, Yun Shi Long, David Gozal, Paul N. Epstein Metallothionein and Intermittent Hypoxia Promote Proliferation and Cell Death in Pancreatic Beta Cells American Diabetes Association 2007

Evelyne Gozal, PhD


Ramesh Gupta, PhD


David Hein, PhD


Harrell E Hurst, PhD


Y James Kang, PhD, DVM


2. Kang Y. Novel application of traditional Chinese medicine in drug discovery and Development. China Life Sciences Summit, Beijing, China,


La Creis R Kidd, PhD, MPH


Poster Presentations


**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
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: Relevance 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


8. Redinger David, Vos Miriam V, Barve Shirish, Joshi-Barve Swati, Sullivan Janice, Whittington Peter, McClain Craig J. Low Adiponectin is associated with increased cell death in Pediatric Nonalcoholic Fatty liver disease, Presented at Research!Louisville, October 16-19, 2007


17. Prachi T. Hote, Tanvi Modi (Jani), Swati Joshi-Barve, Craig McClain and Shirish Barve. Ethanol inhibits methionine adenosyltransferase II (MAT II) activity and S-adenosylmethionine (SAM) biosynthesis and enhances caspase-3 dependent cell death in T lymphocytes: relevance to alcohol induced immunosuppression. Presented at Research!Louisville, October 16-19, 2007


21. Ming Song, Zhenyuan Song, Ion Deaciuc, Craig McClain, Silymarin Attenuates Palmitate-induced Increase in IL-8 Secretion in HepG2 Cells, Presented at Research!Louisville, October 16-19, 2007

22. L. Gobejishvili, S. Barve, S. Joshi-Barve, and C.J.McClain. Chronic alcohol consumption enhances phosphodiesterase 4B (PDE 4B) expression, decreases cellular cAMP levels and primes monocytes leading to augmented LPS-inducible TNF expression: Relevance to


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


Steven R Myers, PhD


Kenneth Palmer, PhD


**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.


**Uma Sankar, PhD**


**Zhao-hui Song, PhD**


J Christopher States, PhD

Published abstracts


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


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


**International Conferences:**


**Abstracts at local/regional conferences:**


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., Indianapolis, IN. Nov. 2, 2007

24. Rogers, EN, Guo Hui Jiang¹, Alex Belshoff², 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., Indianapolis, IN. Nov. 2, 2007


**RESEARCH GRANTS FUNDED**

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**Jian Cai, PhD**

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**Theresa Chen, PhD**

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**David Gozal, MD**

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**Evelyn Gozal, PhD**

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**Ramesh Gupta, PhD**

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**David Hein, PhD**

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**Harrell Hurst, PhD**

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**Y James Kang, PhD**

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### LaCreis Kidd, PhD

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<td>Impact of DNA repair genes (hOGG1, XPA, XPD, XRCC1, and APE1) on prostate cancer risk among men of African descent.</td>
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### Craig McClain, MD

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### W. Glenn McGregor, MD

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### Steven Myers, PhD

**Agency/Number** | **Title**                                                                 | **Role** | **PI** | **Project Period**     | **Budget Request**         |
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### Kenneth Palmer, PhD

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### William Pierce, PhD

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

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J. Christopher States, PhD

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**RESEARCH GRANTS SUBMITTED**

**Gavin Arteel, PhD**

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**Frederick W. Benz, PhD**

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<td>DOD 07233001</td>
<td>High Technology Mass Spectrometry Lab</td>
<td>Col</td>
<td>Pierce</td>
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<td>1,000,000</td>
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<td>NIH/NIAAA/NIAID</td>
<td>Epigenetic regulation of CD4+ T cell survival by S-adenosylmethionine</td>
<td>Co-I</td>
<td>Pierce</td>
<td>4/1-08-3/31/13</td>
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<tr>
<td>NIH – RO1</td>
<td>Role of Hsp 25 in the astrocyte response and recovery from spinal cord injury</td>
<td>PI</td>
<td>E Gozal</td>
<td>12/01/08 – 11/30/13</td>
<td>$1,250,000</td>
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<td>NIH- NIAID</td>
<td>“Modulation of Neutrophil Apoptosis by Akt-Hsp27 Signalosome”</td>
<td>Co-I</td>
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<td>7/1/07- 6/30/11</td>
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<td>NIH CA-120287</td>
<td>Effect of Tobacco Smoke-Mediated Female Lung Cancer</td>
<td>Co-I</td>
<td>Clapper</td>
<td>12/07 – 11/11</td>
<td>$475,004</td>
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<td>RCA-131464a</td>
<td>Molecular Targets for Berries-mediated Breast Cancer Prevention</td>
<td>PI</td>
<td>Gupta</td>
<td>12/07 – 11/12</td>
<td>$2,248,759</td>
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<td>CA-123416</td>
<td>Susceptibility to Ovarian Cancer is Related to Biotransformation Capacity</td>
<td>Co-I</td>
<td>Luderer</td>
<td>12/07 – 11/12</td>
<td>$100,416</td>
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<td>KY Lung Cancer Res. Board</td>
<td>Effect of Estrogen on Polycyclic Aromatic Hydrocarbon (PAH)-Mediated Lung Cancer</td>
<td>PI</td>
<td>Gupta</td>
<td>09/07- 08/09</td>
<td>$149,939</td>
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<td>NIH CA-133777</td>
<td>Molecular Targets for Prevention of Lung Cancer by Berry Phytochemicals</td>
<td>PI</td>
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<td>04/08-03/13</td>
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<td>TW008050</td>
<td>Nanoparticle Formulations in Cancer Prevention</td>
<td>PI</td>
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<td>NIH CA-132742</td>
<td>Application of New Adductomics Technology to Human Cervical Cancer Progression</td>
<td>PI</td>
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<td>07/07-06/09</td>
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<td>NIH R25 CA 44789</td>
<td>University of Louisville</td>
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<td>Start Date/End Date</td>
<td>Amount</td>
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<td>MD Anderson Cancer Center</td>
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<td>1/1/04-12/31/09</td>
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<td>Procter and Gamble, Inc. Res. Agreement</td>
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<td>7/2/07-7/1/09</td>
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<td>UofL CEGiB</td>
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<td>9/1/07-8/31/08</td>
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<td>NIH R25 GM079188</td>
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<td>American Cancer Society</td>
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<td>1/1/08-12/31/10</td>
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<td>NIH R01 #S104943</td>
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<td>10/1/07-9/30/12</td>
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<td>KY Lung Cancer Research Program</td>
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<td>NIH NIEHS Superfund basic science research program P42 E014528</td>
<td>Burzynski</td>
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<td>4/1/08-3/31/13</td>
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<td>American Cancer Society</td>
<td>Burzynski</td>
<td>Martin</td>
<td>1/1/08-12/31/13</td>
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<td>American Surgical Association Foundation</td>
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<td>NIH NCRR 1S10RR024542</td>
<td>Linear Ion Trap Mass Spectrometer for Biomarker Quantitation</td>
<td>PI</td>
<td>Hurst</td>
<td>Not funded</td>
<td>$485,670</td>
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<tr>
<td>NIH-NHBLI, 1R01 HL084450</td>
<td>Copper nutrition and heart failure</td>
<td>PI</td>
<td>Kang</td>
<td>07/01/08-06/30/13</td>
<td>$1,850,000</td>
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<td>NIH-NIAAA, R01 AA016013</td>
<td>Zinc Inhibition of Endotoxemia in Alcoholic Liver Injury</td>
<td>Co-PI</td>
<td>Zhou, Z</td>
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<td>$1,653,750</td>
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<tr>
<td>NIH-NIAAA, R01 GM78534</td>
<td>The role of zinc in the control of hepatic oxidative stress (Subcontract from U Texas Medical Branch)</td>
<td>PI (Subcontract)</td>
<td>Maret, W UTexas Med Branch</td>
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<td>$607,400 (Subcontract)</td>
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<tr>
<td>UNCF-Merck Graduate Science Research Dissertation Fellowship</td>
<td>Joint Modifying Effects of Variant Oxidative Stress and Apoptosis Markers and Smoking in Relation to Prostate Cancer Risk in African-American Men</td>
<td>Mentor</td>
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<td>AACR Centennial Pre-doctoral Fellowship</td>
<td>Impact of Variant Oxidative Stress Response Genes on Prostate Cancer Risk</td>
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<td>NCI Exploratory Studies (R21)</td>
<td>Systematic Approach to Lung Cancer Outcomes</td>
<td>PI</td>
<td>Kidd</td>
<td>4/01/07-03/31/10</td>
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<td>American Cancer Society</td>
<td>Angiogenesis Predictors of Lung Cancer Risk Disease</td>
<td>PI</td>
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<tr>
<td>NCI Exploratory Studies (R21)</td>
<td>Genomic Approach to Predicting Lung Cancer Susceptibility and Disease Progression</td>
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<td>3/15/07-3/25/07</td>
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<td>JGBCC Pilot 2007</td>
<td>Prediction of Cervical Cancer Risk Using Angiogenesis Biomarkers</td>
<td>PI</td>
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<td>02/01/07-01/31/08</td>
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<tr>
<td>NIH National Center on Minority &amp; Health Disparities (P20)</td>
<td>Reducing Health Disparities using Personalized Medicine</td>
<td>Co-I</td>
<td>Miles</td>
<td>10/01/07-09/30/12</td>
<td>$3,800,000</td>
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**Craig McClain, MD**

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<tr>
<td>NIH P20AA017103A</td>
<td>Alcohol Liver Disease and Alcohol-Nutrient Interactions</td>
<td>PI</td>
<td>McClain</td>
<td>pending</td>
<td>Total Direct Costs $1,689,190</td>
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<tr>
<td>NIH CA134283-01</td>
<td>University of Louisville Cancer Education Program R25 application</td>
<td>Mento r</td>
<td>Hein</td>
<td>07/01/08 - 06/30/13</td>
<td>Total Direct cost $1,336,898</td>
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**Steven Myers, PhD**

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<tr>
<td>NIH R01ES016324-01</td>
<td>Chemorevention of dibenzo(a,l)pyrene Induced Mammary Carcinogenesis</td>
<td>PI</td>
<td>Myers</td>
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<td>$750,000</td>
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<tr>
<td>NIH 1R3CA131594-01</td>
<td>Characterization of Tobacco Smoke Hemoglobin Adducts by LCMS</td>
<td>PI</td>
<td>Myers</td>
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<tr>
<td>NIH 1R21CA132009-01</td>
<td>Assessment of Tobacco Carcinogen Protein Adducts</td>
<td>PI</td>
<td>Myers</td>
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<td>NIH 1R01ES014943-01A2</td>
<td>Biomarkers of in utero Tobacco Smoke Carcinogens</td>
<td>PI</td>
<td>Myers</td>
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**Kenneth Palmer, PhD**

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<tr>
<td>NIH/ 1R01AI076169-01A1</td>
<td>Antiviral lectins as microbicides</td>
<td>PI</td>
<td>Palmer</td>
<td>12/01/2007-11/20/2011</td>
<td>$1,809,938 (total costs)</td>
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<td>EVP Research CEG Grant</td>
<td>Antiviral lectins as microbicides</td>
<td>PI</td>
<td>Palmer</td>
<td>05/01/2007-04/30/2008</td>
<td>$15,000 (total costs)</td>
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<td>James Graham Brown Cancer Center Pilot Grant</td>
<td>Cost-effective papillomavirus vaccines</td>
<td>PI</td>
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<td>04/01/2007-03/31/2008</td>
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<td>NIH/1R01AI076169-01A2</td>
<td>Antiviral lectins as microbicides</td>
<td>PI</td>
<td>Palmer</td>
<td>04/01/2008-03/31/2012</td>
<td>$1,760,628 (total costs)</td>
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<td>NIH/1 U19 AI076986-01</td>
<td>Preclinical risk/benefit profiles of two protein microbicides</td>
<td>PI of proj. 2</td>
<td>02/01/2008-01/31/2011</td>
<td>$688,462 (direct costs)</td>
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<td>Kentucky Tobacco R &amp; D Center</td>
<td>Griffithsin microbicide formulations for preclinical testing</td>
<td>PI</td>
<td>Palmer</td>
<td>01/01/2008-12/31/2008</td>
<td>$99,910 (direct costs)</td>
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**William Pierce, PhD**

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<tr>
<td>DOD</td>
<td>High Technology Mass Spectrometry Laboratory for the Identification of Chemical Signatures</td>
<td>PI</td>
<td>Pierce</td>
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**Peter Rowell, PhD**

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<tr>
<td>Subcontract for NIH grant through VCU</td>
<td>Determination of receptor levels for basis of individual variability in responses to nicotine.</td>
<td>P.I.</td>
<td>Rowell</td>
<td>1/1/2008-12/31/2010</td>
<td>$31,393</td>
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**Uma Sankar, PhD**

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<td>NIH R01AI076169</td>
<td>Antiviral lectins as microbicides</td>
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<td>Palmer</td>
<td>04/01/2008-03/31/2012</td>
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<tr>
<td>NIH 1R21CA134979-01</td>
<td>Regulation of Hematopoietic Stem Cell Quiescence by a CaMKIV Molecular Pathway</td>
<td>PI</td>
<td>Sankar</td>
<td>07/01/2008-03/31/2010</td>
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**Zhao-Hui (Joe) Song, Ph. D.**

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<tr>
<td>Brown Cancer Center</td>
<td>New Cannabinoid Receptors as Novel Therapeutic Targets for the Treatment of Lung Cancer</td>
<td>PI</td>
<td>Z-H Song</td>
<td>3/1/07-2/29/08</td>
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**J. Christopher States, PhD**

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<tr>
<td>NIEHS / R21 ES015812-01A1</td>
<td>Transplacental Arsenic Induced Hepatic Dysfunction and Vascular Disease</td>
<td>PI</td>
<td>States</td>
<td>4/08 – 3/10</td>
<td>$175,000 ADC to be funded</td>
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<td>NIH / DP1 OD003783-01</td>
<td>In utero arsenic exposure as a tool to understand cardiovascular disease</td>
<td>PI</td>
<td>States</td>
<td>09/08 – 07/13</td>
<td>$500,000 ADC</td>
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<td>NIH / R21 ES016367-01</td>
<td>Priming of liver disease by arsenic exposure</td>
<td>Co-I</td>
<td>Arteel</td>
<td>12/07 – 11/09</td>
<td>$175,000 ADC</td>
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<td>USAMRAA – OCRP</td>
<td>Arsenic Trioxide and Heat-shock Protein Inhibitors to Enhance the Effect of Intraperitoneal</td>
<td>Co-I</td>
<td>Helm</td>
<td>04/2008 – 10/2009</td>
<td>$111,000 total costs</td>
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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.
5. Research seminar, 08/07, “Fatty liver diseases: are you younger than your liver?” Institut für umweltmedizinische Forschung, Molekulare Präventivmedizin subgroup. Düsseldorf, Germany.
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.
9. Research symposium, 12/07, “Pathogenesis of NASH,” Mie University School of Medicine, Tsu, Japan.

Keith Davis, PhD


Paul Epstein, PhD

1. Antioxidant transgene protection from diabetic nephropathy in OVE26 Mice, University of Texas Health Science Center, San Antonio. February 2007
Ramesh Gupta, PhD


David Hein, PhD


Harrell Hurst, PhD


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”
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”

Craig McClain, MD

4. NIH Peer Review Advisory Committee (PRAC, Bethesda, MD, April 20, 2007.
12. AASLD, Meet the Professor, “SAM and Alcoholic Liver Disease, Boston, MA, November 1-5, 2007.

W Glenn McGregor, MD

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

5. “Biomarkers of in utero tobacco exposure, applications in neonatal medicine, NICU nursing staff and residents”, February, 2007, Nortons Hospital.
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

**Graduate Committee**

Dr. Bill Pierce (Vice Chair for Graduate Education)  
Dr. Chris States (Graduate Director for Recruitment and Admissions)  
Dr. Gavin Arteel (Graduate Director for Program and Student Affairs)  
Dr. Paul Epstein (Recruitment and Admissions subcommittee)  
Dr. James Kang (Recruitment and Admissions subcommittee)  
Dr. Evelyne Gozal (Program and Student Affairs subcommittee)  
Dr. La Creis Kidd (Recruitment and Admissions subcommittee)  
Dr. Peter Rowell (Program and Student Affairs subcommittee)  
Dr. Glenn McGregor (Program and Student Affairs subcommittee)  
Phillip Kaiser (student representative)

**SIBUP/Grievance Committee**

Dr. Peter Rowell (Chair)  
Dr. Joe Song (2009)  
Dr. Don Nerland (2008)  
Dr. Harrell Hurst (2007)

**Teaching Evaluation Committee**

Dr. Mike Williams (Chair)  
Dr. Harrell Hurst (2009)  
Dr. Len Waite (2008)  
Dr. Fred Benz (2007)

**Seminar Committee**

Dr. Don Nerland (Chair)  
Dr. Ramesh Gupta (2009)  
Dr. Fred Benz (2008)  
Dr. Steve Myers (2007)

**Core Laboratories/Research Development Committee**

Dr. Chris States (Chair)  
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Dr. Glenn McGregor (2008)  
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Events Committee

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