CURRICULUM VITAE: DAVID W. HEIN PhD FAAPE

Peter K. Knoefel Endowed Chair of Pharmacology and Toxicology
Professor and Chair, Department of Pharmacology and Toxicology
Distinguished University Scholar
University of Louisville
Orchid ID: orcid.org/0000-0003-3261-9775
Best Scientists, Biology and Biochemistry, Research.Com
Scholar GPS: https://scholargps.com/scholars/94172117249108/david-w-hein.

Executive Summary

Dr. Hein serves as Peter K. Knoefel Endowed Chair of Pharmacology, Professor and Chair of the Department of Pharmacology & Toxicology, and Distinguished University Scholar at the University of Louisville. Numerous students have completed thesis and dissertation research training in his laboratory, and he contributes towards instruction of undergraduate, graduate and health professional students. From 2009-2017 he also served as Associate Provost for Strategic Planning and Vice Provost for Academic Strategy. Dr. Hein serves on several international expert panels related to N-acetyltransferase 2 (NAT2) gene nomenclature, NAT2 allele function, and implementation of pharmacogenomic-guided drug therapy for drugs metabolized by NAT2. Prior to recruitment to the University of Louisville, Dr. Hein served as chair of the Departments of Pharmacology & Toxicology at Morehouse School of Medicine and the University of North Dakota School of Medicine and Health Sciences. He has served as reviewer of grant proposals for the National Institutes of Health and other funding agencies and a consultant to numerous companies across the USA and the world.

Dr. Hein's research program incorporates precision environmental health and precision medicine. This includes research in personalized medicine and individual susceptibility to environmental diseases. Research in molecular epidemiology identifies individuals genetically susceptible to the development of cancer and other diseases from environmental and occupational chemicals to focus treatment and prevention public health strategies on those at greatest risk. Research in pharmacogenetics/genomics and personalized/precision medicine improves our understanding of the genetic causes for drug failure and/or drug toxicity to optimize clinical drug therapy for each individual patient. Research in functional genomics improves understanding of the mechanistic and clinical consequences of genetic variation in the biotransformation of environmental chemicals, carcinogens, and drugs. The research program has been funded by grants and contracts from the National Institutes of Health and other federal and private foundations and industry. He has coauthored 300 peer-reviewed journal articles and book chapters, 75 gene sequences, and over 700 abstracts (Google Scholar 18,000 citations (h-index=67) in the scientific literature. He has presented over 150 invited presentations in Australia, Austria, Canada, China, Costa Rica, Czech Republic, Egypt, France, Germany, Greece, Italy, Norway, Switzerland, the United Kingdom and across the USA.

Dr. Hein was appointed as Chester Fritz Distinguished Professor at the University of North Dakota, has received outstanding teaching awards awarded by the medical school class at both Morehouse School of Medicine and the University of North Dakota, the President's Faculty Achievement Award at Morehouse School of Medicine, the Thomas J. Clifford Faculty Achievement Award for Excellence in Research and the Burlington Northern Faculty Achievement Award for Excellence in Teaching, Research, and Creative Activity both from the University of North Dakota, an Outstanding Alumnus Award from the University of Michigan, the President's Award from the University of Wisconsin-Eau Claire, and President's Outstanding Scholarship, Research and Creative Activity Awards in Basic/Applied Sciences and Career Achievement from the University of Louisville. He presented the Astor Visiting Lectureship at the

University of Oxford (UK) and served as a Visiting Professor at the University of Paris Diderot. He has been elected as a fellow in the Academy of Pharmacology Educators of the American Society for Pharmacology and Experimental Therapeutics. As King David described in his prayer, honors are provided by the grace of our God.

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E-Mail:	david.hein@louisville.edu
Citizenship:	United States of America

EDUCATION

1969-1973	Wisconsin Lutheran High School Milwaukee, Wisconsin
1973-1977	University of Wisconsin-Eau Claire B.S. (Chemistry)
1977-1982	University of Michigan Ph.D. (Pharmacology)

ADMINISTRATIVE APPOINTMENTS (University of Louisville)

1997 –	Chair, Department of Pharmacology and Toxicology
2004 – 2024	Director (Founding), NIEHS Environmental Health Sciences Training Program
2024 –	Multi-PI, NIEHS Environmental Health Sciences Training Program
2017 –	Leader, Superfund Center Research Experiences & Training Coordination Core
2011 – 2025	Director, University of Louisville NCI Cancer Education Program
2022 – 2023	Interim Director Graduate Studies, Department of Pharmacology & Toxicology
2015 – 2017	Vice Provost for Academic Strategy
2009 – 2015	Associate Provost for Strategic Planning
2011 – 2012	Interim Chair, Department of Microbiology and Immunology
2008 – 2009	Special Assistant to the Provost for Strategic Planning

2003 – 2009	Leader, Cancer Prevention and Control Program, Brown Cancer Center
2002 – 2003	Leader, Molecular Epidemiology and Prevention Group, Brown Cancer Center
1999 – 2003	Interim Director, Center for Genetics and Molecular Medicine

ADMINISTRATIVE APPOINTMENTS (University of North Dakota)

1989 – 1997	Chair, Department of Pharmacology and Toxicology University of North Dakota School of Medicine and Health Sciences Grand Forks, North Dakota
1991 – 1997	Director, Graduate Program in Pharmacology and Toxicology University of North Dakota School of Medicine and Health Sciences
1989 – 1997	Director, Medical Pharmacology I and II courses for Medical Students University of North Dakota School of Medicine and Health Sciences
1992 – 1994	Director, Biomedical Research Support Program University of North Dakota School of Medicine and Health Sciences

ADMINISTRATIVE APPOINTMENTS (Morehouse School of Medicine)

1985 – 1989	Chair, Department of Pharmacology Morehouse School of Medicine, Atlanta, Georgia
1986 – 1989	Director (Founding), Minority Biomedical Research Program Morehouse School of Medicine
1983 – 1985	Interim Chair, Department of Pharmacology Morehouse School of Medicine

FACULTY APPOINTMENTS

1997 –	Professor of Pharmacology and Toxicology (Tenured); Graduate Faculty University of Louisville
1997 –	Distinguished University Scholar University of Louisville
2010 –	Professor of Medicine (Hematology/Oncology; secondary appointment) University of Louisville School of Medicine
2017 –	Member, University of Louisville Superfund Research Center
2018 –	Member, Christina L Brown Envirome Institute, University of Louisville
2020 –	Member, Center for Integrative Environmental Health Sciences University of Louisville

1999 –	Senior Member, Brown Cancer Center, University of Louisville
1997 –	Member, Center for Environmental and Occupational Health Sciences University of Louisville
2007– 2012	Investigator, Center for Environmental Genomics and Integrative Biology University of Louisville
2003 – 2009	Investigator, Center for Environmental Cardiology, University of Louisville
1999 – 2016	Member, Birth Defects Center, University of Louisville
1997 – 2018	Member, Center for Genetics and Molecular Medicine, University of Louisville
1997 – 1999	Distinguished Visiting Professor University of North Dakota School of Medicine and Health Sciences
1993 – 1997	Chester Fritz Distinguished Professor University of North Dakota School of Medicine and Health Sciences
1989 – 1997	Professor (Tenured), Department of Pharmacology and Toxicology University of North Dakota School of Medicine and Health Sciences
1989 – 1994	Adjunct Associate Professor, Department of Chemistry Georgia State University
1989	Professor, Department of Pharmacology Morehouse School of Medicine
1985 – 1989	Associate Professor, Department of Pharmacology, Morehouse School of Medicine
1986 – 1989	Adjunct Assistant Professor, Department of Pharmacology Emory University School of Medicine
1983 – 1989	Graduate Faculty, Department of Biology (Clark)-Atlanta University
1982 – 1985	Assistant Professor, Department of Pharmacology Morehouse School of Medicine
1980 – 1981	Biology Teacher (part-time), Huron Valley Lutheran High School

HONORS

- Peter K. Knoefel Endowed Chair of Pharmacology and Toxicology, University of Louisville (1997)
- Distinguished University Scholar, University of Louisville (1997)
- Outstanding Alumnus Award, Department of Pharmacology, University of Michigan (2002)
- President's Award, University of Wisconsin-Eau Claire (2011)
- Astor Visiting Lectureship, University of Oxford (2002)
- President's Outstanding Scholarship, Research, and Creative Activity Award, Basic and Applied Sciences, University of Louisville (2003)
- President's Outstanding Scholarship, Research, and Creative Activity Award, Career Achievement University of Louisville (2014)
- Election to Fellow of the Academy of Pharmacology Educators (FAAPE), American Society for Pharmacology and Experimental Therapeutics (2010)
- Visiting Professor, University of Paris Diderot (multiple years 2005-2016)
- Visiting Professor, Wenzhou Medical University (2013)
- Distinguished Visiting Professor, University of North Dakota School of Medicine and Health Sciences (1997-1999)
- Outstanding Professor (Portrait) Teaching Award, University of North Dakota School of Medicine (1990)
- UND Foundation Thomas J. Clifford Faculty Achievement Award for Excellence in Research, University of North Dakota (1992)
- Burlington Northern Faculty Achievement Award for Excellence in Teaching, Research and Creative Activity, and Service, University of North Dakota (1994)
- Sigma Xi Faculty Award for Outstanding Scientific Research, University of North Dakota (1996)
- Teacher of the Year Award, Morehouse School of Medicine (1983)
- University of North Dakota Fellows Award for Departmental Excellence in Research, (Awarded to Department of Pharmacology and Toxicology during term as Chair) (1993)
- Faculty Achievement Award, Morehouse School of Medicine (1986)
- Recognition Awards for Teaching Excellence, Morehouse School of Medicine

- Research Awards "Potential for Major Clinical Applications" (1998, 1999, 2000, 2001 and 2006) Jewish Hospital Foundation, Research!Louisville

- Resolution of Appreciation, Academic Policy Council, Morehouse School of Medicine (1989)

- NIH T32 predoctoral trainee, University of Michigan

- Outstanding Senior Award, University of Wisconsin - Eau Claire (1977)

- Best Scientists, Biology and Biochemistry, Research.Com

HONOR SOCIETIES

Omicron Delta Kappa (College senior leadership and scholarship)
Phi Kappa Phi (College senior scholarship)
Phi Eta Sigma (College freshman scholarship)
Full Member, World Academy of Sciences

HONOR BIOGRAPHIES

International Who's Who in Education
International Who's Who in Medicine
American Men and Women of Science
Inter. Directory of Distinguished Leadership
Who's Who in Science and Engineering
Who's Who in Amer. Colleges and Universities
Who's Who in Medicine and Health Care
International Who's Who of Professionals
Who's Who in the World
Lexington Who's Who
2000 Outstanding Scholars of the 21st Century
Who's Who Among America's Teachers
2000 Eminent Scientists of Today
Who's Who in American Education

RESEARCH AND PROFESSIONAL SOCIETIES (current and past)

American Society for Pharmacology and Experimental Therapeutics
Association of Medical School Pharmacology Chairs
Society of Toxicology
Ohio Valley Society of Toxicology
Pharmacogenomics Global Research Network
Southeastern Pharmacology Society
Kentucky Academy of Science
American Association for Cancer Education

SPONSORED RESEARCH SUPPORT AWARDED

Current Funding

Title: UofL Environmental Health Sciences Training Program
Role in Project: Contact PI (2021-2024); Multi-PI (2024-2026)
Funding Agency: NIH/NIEHS (T32- ES011564)
Project Period: July 14, 2021 to June 30, 2026
Project Award: $2,587,675 (total)

Title: Hepatobiology and Toxicology COBRE
Principal Investigator: Craig McClain (University of Louisville)
Role in Project: Deputy Director; Director of Faculty Career Development
Funding Agency: NIH (P20-GM113226)
Project Period: April 1, 2021 to March 31, 2026
Project Award: $11,356,981 (total)

Title: Environmental Exposure and Cardiometabolic Disease
Principal Investigator: Sanjay Srivastava (University of Louisville)
Role in Project: Leader, Research Experiences and Training Coordination Core
Funding Agency: NIEHS (P42-ES023716)
Project Period: September 1, 2022 to June 30, 2027
Project Award: $10,861,315 (total)

Title: University of Louisville Center for Integrative Environmental Health Sciences
Principal Investigator: J. Christopher States (University of Louisville)
Role in Project: Member
Funding Agency: NIH (P30-ES030283)
Project Period: July 15, 2020 to March 31, 2026
Project Award: $6,473,751 (total)

Title: Summer Environmental Health Sciences Training Program
Principal Investigator: J. Christopher States (University of Louisville)
Role in Project: Mentor
Funding Agency: NIEHS (T35- ES014559)
Project Period: August 13, 2021 to July 31, 2026
Project Award: $248,690 (total)

Title: Louisville Clinical and Translational Research Center (LCTRC)
Principal Investigator: Jon Klein (University of Louisville)
Role in Project: Translational Research Mentor
Funding Agency: NIH P20 GM155899
Project Period: July 9, 2024 to June 30, 2029
Project Award: $11,516,149 (total)

Completed Funding

Title: University of Louisville Cancer Education Program
Role in Project: Principal Investigator
Funding Agency: NIH/NCI (R25- CA134283)

Project Period: April 1, 2017 to March 31, 2025
Project Award: $1,593,000 (total)

Title: FII Workshop 2020
Role in Project: Principal Investigator
Funding Agency: Society of Toxicology
Project Period: November 1, 2019 to November 30, 2024
Project Award: $2,000 (total)

Title: Transcriptomic Analysis of Human Hepatocytes Exposed to Heterocyclic Amines
Principal Investigators: Kyung U. Hong and David W. Hein
Funding Agency: University of Louisville Center for Integrative Environmental Health Sciences
Project Period: January 17, 2023 to March 31, 2023
Project Award: $4,434 (total)

Title: Environmental Exposure and Cardiometabolic Disease
Principal Investigator: Sanjay Srivastava (University of Louisville)
Role in Project: Leader, Training Core
Funding Agency: NIEHS (P42-ES023716)
Project Period: September 1, 2017 to August 31, 2022
Project Award: $6,700,000 (total)

Title: Gene-environmental interactions of novel psychoactive chemicals substituting for illegal drugs of abuse
Role in Project: Principal Investigator
Funding Agency: University of Louisville Center for Integrative Environmental Health Sciences
Project Period: May 1, 2021 to June 30, 2022
Project Award: $40,000 (total)

Title: Effect of Heterocyclic Amines and NAT2 Metabolism on Insulin Sensitivity
Principal Investigator: Kyung U. Hong (University of Louisville)
Role in Project: Mentor/Collaborator
Funding Agency: University of Louisville School of Medicine
Project Period: October 1, 2020 to March 31, 2022
Project Award: $21,028 (total)

Title: UofL Environmental Health Sciences Training Program
Role in Project: Principal Investigator
Funding Agency: NIH/NIEHS (T32- ES011564)
Project Period: July 1, 2016 to July 13, 2021
Project Award: $2,314,825 (total)

Title: Hepatobiology and Toxicology COBRE
Principal Investigator: Craig McClain (University of Louisville)
Role in Project: Director, Faculty Career Development; Renovation & Alternations
Funding Agency: NIH (P20-GM113226)
Project Period: June 10, 2016 to March 31, 2021
Project Award: $11,530,145 (total)

Title:	Summer Environmental Health Sciences Training Program
Principal Investigator:	Russell Prough/Christopher States (University of Louisville)
Role in Project:	Mentor
Funding Agency:	NIEHS (T35- ES014559)
Project Period:	May 15, 2016 to August 12, 2021
Project Award:	$191,146 (total)

Title:	The interaction between NAT2 acetylator status and exposure to tobacco smoke on ovarian reserve and in vitro fertilization outcomes
Principal Investigator:	Kira Taylor (University of Louisville)
Role in Project:	Co-investigator
Funding Agency:	NIH (R15-HD087911)
Project Period:	July 8, 2016 to June 30, 2019
Project Award:	$460,018 (total)

Title:	Griffithsin-based rectal microbicides for PREvention of Viral Entry (PREVENT)
Principal Investigator:	Kenneth Palmer (University of Louisville)
Role in Project:	Co-Mentor for faculty supplement (J. Calvin Kouokam)
Funding Agency:	NIH (U19AI113182-03S1)
Project Period:	July 1, 2016 to June 30, 2017
Project Award:	$127,974 (total)

Title:	University of Louisville Cancer Education Program
Role in Project:	Principal Investigator
Funding Agency:	NIH/NCI (R25- CA134283)
Project Period:	September 14, 2011 to March 31, 2017
Project Award:	$1,543,610 (total)

Title:	Solithromycin metabolism in rapid and slow acetylators
Role in Project:	Principal Investigator
Funding Agency:	Cempra Pharmaceuticals (OIEB161211)
Project Period:	June 1, 2016 to September 30, 2016
Project Award:	$35,330 (total)

Title:	UofL Environmental Health Sciences Training Program
Role in Project:	Principal Investigator
Funding Agency:	NIH/NIEHS (T32- ES011564)
Project Period:	July 1, 2009 to June 30, 2016
Project Award:	$2,129,708 (total)

Title:	Summer Environmental Health Sciences Training Program
Principal Investigator:	Russell Prough (University of Louisville)
Funding Agency:	NIEHS (T35- ES014559)
Role in Project:	Mentor
Project Period:	April 1, 2011 to March 31, 2016
Project Award:	$175,814 (total)

Title:	Investigation into the N-acetylation of solithromycin
Role in Project:	Principal Investigator
Funding Agency:	Cempra Pharmaceuticals (OIEB160300)

Project Period: October 1, 2015 to January 31, 2016
Project Award: $24,450 (total)

Title: Study of Candidate Xenobiotic Metabolism Genes and Renal Cancer
Role in Project: Principal Investigator
Funding Agency: National Cancer Institute (Contract HHSN261201100383P)
Project Period: September 1, 2011 to August 30, 2012
Project Award: $7,913 (total)

Title: Center for Environmental Genomics and Integrative Biology
Principal Investigator: Kenneth Ramos (University of Louisville)
Funding Agency: NIH (P30-ES014443)
Role in Project: Center Investigator
Project Period: June 4, 2007 to March 31, 2012
Project Award: $4,440,000 (total)

Title: N-acetyltransferase 1 Polymorphism and Breast Cancer Risk
Principal Investigator: Lori Millner (University of Louisville)
Funding Agency: BC083107 Department of Defense Breast Cancer Research Program
Role in Project: Mentor
Project Period: September 29, 2008 to September 28, 2011
Project Award: $92,442 (total)

Title: Understanding and predicting individual cancer risk
Role in Project: Principal Investigator
Funding Agency: UofL Clinical & Translational Science Pilot Grant Program
Project Period: June 1, 2010 to May 31, 2011
Project Award: $50,000 (total)

Title: Summer Environmental Health Sciences Training Program
Principal Investigator: Russell A. Prough (University of Louisville)
Funding Agency: NIEHS (T35- ES014559)
Role in Project: Mentor
Project Period: April 1, 2006 to March 31, 2011
Project Award: $158,355 (total)

Title: Pharmacogenetics of drug and carcinogen metabolism
Role in Project: Principal Investigator
Funding Agency: NIH/NCI (R01-CA034627-23S1)
Project Period: July 1, 2008 to December 1, 2010
Project Award: $25,000 (total)

Title: Pharmacogenetics of drug and carcinogen metabolism
Role in Project: Principal Investigator
Funding Agency: NIH/NCI (R01-CA034627)
Project Period: July 1, 2003 to December 1, 2010
Project Award: $1,724,900 (total)

Title: NAT1 and NAT2 Genotype Determinations in Cancer Patients and Controls
Funding Agency: MD Anderson Cancer Center

Role in Project: Principal Investigator
Project Period: January 1, 2004 to December 31, 2009
Project Period: $60,000 (total)

Title: NAT1 and NAT2 Metabolism Studies with Hair Dye Arylamines
Role in Project: Principal Investigator
Funding Agency: Procter and Gamble, Inc. Research Agreement #155482
Project Period: July 2, 2007 to July 1, 2009
Project Award: $100,000 (total)

Title: UofL Environmental Health Sciences Training Program
Role in Project: Principal Investigator
Funding Agency: NIH/NIEHS (T32- ES011564)
Project Period: July 1, 2004 to June 30, 2009
Project Award: $697,188 (total)

Title: Cardiovascular toxicity of environmental aldehydes
Funding Agency: NIH/NIEHS (P01- ES011860)
Role in Project: Coinvestigator on Project 1
Prog. PI/Proj. Dir.: Aruni Bhatnagar/Russell Prough (University of Louisville)
Project Period: July 1, 2003 to June 30, 2009
Project Period: $6,986,060 (total)

Title: A pharmacogenetic approach to prostate cancer susceptibility
PI. La Creiss Kidd (University of Louisville)
Funding Agency: NCI (R03- CA128028)
Role in Project: Co-investigator
Subproject Period: June 12, 2007 to May 31, 2009
Subproject funding: $148,000

Title: Nashville Breast Health Study
PI. Wei Zheng (Vanderbilt University)
Funding Agency: Vanderbilt University (NCI R01-CA100374 subcontract)
Role in Project: Subproject Principal Investigator
Subproject Period: May 3, 2007 to April 30, 2009
Subproject funding: $134,006

Title: Polymorphic genes of detoxification enzymes as risk factors for PSP
Role in Project: Co-Principal Investigator
Funding Agency: UofL Center for Environmental Genomics and Integrative Biology
Project Period: April 1, 2008 to June 30, 2009
Project Award: $30,000 (total)

Title: Cancer Education Grant Program
PI Norbert J. Burzynski (University of Louisville)
Role in Project: Mentor
Funding Agency: NIH/NCI (R25- CA044789)
Project Period: August 1, 2002 to January 31, 2009
Project Award: $557,437 (total)

Title:	Center for Pediatric Clinical Pharmacology Research
PI:	Janice Sullivan (University of Louisville)
Role in Project:	Director, Pharmacogenetics Core Laboratory
Funding Agency:	NIH/NICHD (U10-HD045934)
Project Period:	January 1, 2004 to December 31, 2008
Project Award:	$2,248,000 (total)

Title:	Planning Grant for Louisville Clinical and Translational Science Award
Funding Agency:	NIH P20- RR023523
PI:	Craig J. McClain (University of Louisville)
Role in Project:	Investigator/Mentor
Project Period:	September 25, 2006 to September 24, 2008
Project Award:	$220,000 (total)

Title:	James Graham Brown P20 Application
PI	Donald M. Miller (University of Louisville)
Role in Project:	Program Leader (Cancer Prevention & Control)
Funding Agency:	NIH/NCI (P20- CA097942)
Project Period:	August 2, 2002 to July 31, 2008
Project Award:	$1,328,613 (total)

Title:	Pharmacogenetics of drug and carcinogen metabolism (faculty supplement)
Funding Agency:	NIH/NCI (R01-CA34627-19S to 22S)
Role in Project:	Principal Investigator
Project Period:	July 1, 2004 to June 30, 2008
Project Period:	$509,635 (total)

Title:	Metabolism and toxicity of aromatic amines associated with hair dyes
Role in Project:	Principal Investigator
Funding Agency:	Procter and Gamble, Inc. Research Agreement #107320
Project Period:	July 1, 2002 to December 31, 2007
Project Award:	$310,885 (total)

Title:	Characterization of NAT1 overexpression in breast tumors
Role in Project:	Principal Investigator
Funding Agency:	NIH/NCI (R01-CA034627) Supplement for the APRC Program
Project Period:	July 1, 2004 to July 31, 2007
Project Award:	$113,749 (total)

Title:	Genetic polymorphisms in 5′-UTR of human NAT1 and NAT2
PI:	Anwar Husain (University of Louisville)
Role in Project:	Mentor/Co-investigator
Funding Agency:	NIH/NIEHS (F30-ES012557)
Project Period:	July 1, 2003 to May 31, 2007
Project Award:	$145,022

Title:	Molecular Determinants of Developmental Defects
Funding Agency:	NIH COBRE P20 RR-017702
Role in Project:	Faculty mentor for project entitled "Tobacco exposure, biomarkers, and mutations of MSX1 and IRF6 genes in pregnancy”

Prog. PI/Proj. Dir.: Robert Greene/Steven Myers (University of Louisville)
Project Project Period: July 1, 2005 to April 30, 2007
Project Period: $120,000 (direct costs)

Title: Research in support of amonafide study
Funding Agency: Chemgenex Pharmaceuticals
Role in Project: Principal Investigator
Project Period: February 1, 2005 to January 31, 2007
Project Period: $5,670 (total)

Title: Effects of N-acetyltransferase phenotype and gender on the genotoxicity of the tobacco smoke carcinogen, 4-aminobiphenyl. (Postdoctoral Fellowship)
PI: Jason R. Neale (University of Louisville)
Role in Project: Mentor/Co-investigator
Funding Agency: James Graham Brown Cancer Center
Project Period: August 1, 2005 to July 31, 2006
Project Award: $35,100 (total)

Title: Mechanistic studies on the NAT2 genetic polymorphism: A potential factor that modifies individual breast cancer risk
Role in Project: Principal Investigator (Mentor for Yu (Janet) Zang)
Funding Agency: Susan G. Komen Breast Cancer Foundation (DISS0403147)
Project Period: May 1, 2004 to April 30, 2006
Project Award: $30,000 (total)

Title: Effect of acetylator genotype on genotoxicity from aromatic and heterocyclic amine carcinogens
Role in Project: Principal Investigator
Funding Agency: Philip Morris USA
Project Period: July 1, 2002 to March 31, 2006
Project Award: $615,848 (total)

Title: Environmental genomics and molecular epidemiology of lung cancer
Role in Project: Principal Investigator
Funding Agency: Kentucky Lung Cancer Research Program
Project Period: October 1, 2001 to September 30, 2005
Project Award: $299,949 (total)

Title: International conference on tobacco induced diseases
PI: Denis Kinane (University of Louisville)
Role in Project: Co-investigator (member of organizing committee)
Funding Agency: NCI (R13 CA110392)
Project Period: September 8, 2004 to September 7, 2005
Project Award: $3,500 (total)

Title: Xenobiotic metabolizing genes and prostate cancer
PI: La Creis Kidd (University of Louisville)
Role in Project: Coinvestigator
Funding Agency: James Graham Brown Cancer Center, University of Louisville
Project Period: July 1, 2004 to July 31, 2005

Project Award: $40,000 (total)

Title: Genetic polymorphisms in the 5'-UTR of human NAT1 and NAT2
Role in Project: Principal Investigator
Funding Agency: Center for Genetics and Molecular Medicine
Project Period: January 1, 2004 to December 31, 2004
Project Award: $30,000 (total)

Title: Histamine pharmacogenetics in children with atopic dermatitis
PI: Mary Jayne Kennedy (University of Louisville)
Role in Project: Collaborator/Mentor
Funding Agency: Research Institute of the American College of Pharmacy
Project Period: July 1, 2003 to June 30, 2005
Project Award: $12,500

Title: Research in support of Amonafide study
Role in Project: Principal Investigator
Funding Agency: Chemgenex Therapeutics
Project Period: January 1, 2002 to December 31, 2004
Project Award: $8,064 (total)

Title: Education in genetics ethics (EDGE)
PI: Mark Rothstein (University of Louisville)
Role in Project: Co-investigator
Funding Agency: NIH (R25 HG002503)
Project Period: May 3, 2002 to March 31, 2005
Project Award: $1,360,592 (total)

Title: Kosair Charities Birth Defects Research Fellowship
PI: Jason Neale (University of Louisville)
Role in Project: Mentor/Co-investigator
Funding Agency: Kosair Charities
Project Period: January 1, 2004 to December 31, 2004
Project Award: $25,000 (total)

Title: Human hepatocyte characterization
Role in Project: Principal Investigator
Funding Agency: Tissue Transformation Technologies
Project Period: March 1, 2004 to December 31, 2004
Project Award: $1,386 (total)

Title: Pharmacogenetics of drug and carcinogen metabolism
Role in Project: Principal Investigator
Funding Agency: NIH/NCI (R01-CA034627)
Project Period: September 1, 1997 to June 30, 2003
Project Award $1,859,936 (total)

Title: Hybrid quadrupole – Time of flight mass spectrometer
PI: William M. Pierce, Jr. (University of Louisville)
Role in Project: Major user and member of technical advisory committee

Funding Agency: NIH (1 S10 RR016636) Shared instrumentation grant
Project Period: April 1, 2002 to March 31, 2004
Project Award: $500,000 (total)

Title: Pharmacogenetics of drug and carcinogen metabolism (supplement)
Role in Project: Principal Investigator
Funding Agency: NIH/NCI (R01-CA34627-16S1)
Project Period: December 1, 2000 to June 30, 2003
Project Award: $16,183 (total)

Title: Genetic Polymorphisms in Manganese Superoxide Dismutase (MnSOD) as a Predictor of Lung Cancer
PI: Robert Martin (University of Louisville)
Role in Project: Co-Investigator
Funding Agency: James Graham Brown Cancer Center
Project Period: March 1, 2003 to February 28, 2004
Project Award: $30,000 (total)

Title: Biomarkers of maternal and fetal tobacco smoke exposure
PI: Steven R. Myers (University of Louisville)
Role in Project: Co-Investigator
Funding Agency: Kentucky Lung Cancer Research Program
Project Period: August 1, 2002 to June 30, 2004
Project Award: $93,016 (total)

Title: Functional genomics of the human N-acetyltransferase 1 polymorphism
Funding Agency: Center for Genetics and Molecular Medicine
Role in Project: Research Mentor (Yuanqi Zhu, PI)
Project Period: July 1, 2002 to June 30, 2003
Project Budget: $10,000

Title: Single nucleotide polymorphisms: Mechanisms for functional changes in N-acetyltransferase 2 (NAT2)
Funding Agency: Center for Genetics and Molecular Medicine
Role in Project: Research Mentor (Yu Zang, PI)
Project Period: July 1, 2002 to June 30, 2003
Project Budget: $10,000

Title: Genetic analysis of prostate cancer in Nigerian men
PI B. Folasade Ivun (University of Louisville)
Role in Project: Collaborator
Funding Agency: University of Louisville
Project Period: January 1, 2002 to December 31, 2002
Project Award: $4,000 (total)

Title: Pharmacogenetics of drug and carcinogen metabolism
Role in Project: Principal Investigator
Funding Agency: NIH/NCI (R01-CA034627)
Project Period: July 1, 1991 to July 31, 1997
Project Award: $712,940 (total)

Title: Pharmacogenetics of drug and carcinogen metabolism (Supplement)
Role in Project: Principal Investigator
Funding Agency: NIH/NCI (R01-CA034627)
Project Period: December 1, 1993 to June 30, 1997
Project Award: $212,463 (total)

Title: Molecular Mechanisms of Environmental Toxins
Role in Project: Principal Investigator of Subproject
Funding Agency: EPA/EPSCoR (R821836)
Project Period: October 1, 1994 to June 30, 1997
Project Award: $172,000 (total)
Subproject: Arylamine and Nitroarene Metabolism
Project Award: $92,534 (total)

Title: Small instrumentation grant
Role in Project: Principal Investigator
Funding Agency: National Institutes of Health (S15-DK49166)
Project Period: August 1, 1994 to July 31, 1995
Project Award: $9,249 (total)

Title: Small instrumentation grant
Role in Project: Principal Investigator
Funding Agency: National Institutes of Health (S15-DK47369)
Project Period: August 1, 1993 to July 31, 1994
Project Award: $13,175 (total)

Title: Biomedical research support
Role in Project: Principal Investigator
Funding Agency: NIH (S07-RR-05407)
Project Period: September 30, 1992 to September 30, 1994
Project Award: $50,000 (total)
Note: This was a competitive institutional award.

Title: Small instrumentation grant
Role in Project: Principal Investigator
Funding Agency: NIH/NCI (CA58777)
Project Period: July 1, 1992 to June 30, 1993
Project Award: $8,496 (total)

Title: Pharmacogenetics of drug and carcinogen metabolism (supplement)
Role in Project: Principal Investigator
Funding Agency: NIH/NCI (R01-CA034627)
Project Period: July 1, 1992 to June 30, 1993
Project Award: $4,895 (direct costs)

Title: Development of a simple, in vitro method for human acetylator genotype
Role in Project: Principal Investigator
Funding Agency: The Kroc Foundation
Project Period: October 1, 1983 - open
Project Award: $24,629 (direct costs)

Title: Pharmacogenetics of drug & carcinogen metabolism
Role in Project: Principal Investigator
Funding Agency: NIH/NCI (R01-CA034627)
Project Period: April 1, 1987 to June 30, 1991
Project Award: $325,658 (direct costs)

Title: Pharmacogenetics of isoniazid metabolism and toxicity
Role in Project: Principal Investigator
Funding Agency: Atlanta Lung Association
Project Period: July 1, 1984 to June 30, 1985
Project Award: $14,681 (direct costs)

Title: Genetic differences in drug and carcinogen biotransformation
Role in Project: Principal Investigator of Subproject
Funding Agency: NIH/MBRS/NCI (S06-RR-008006)
Project Period: September 1, 1983 to August 31, 1987
Project Award: $235,541 (direct costs only)
Note: This was a subproject of a multiproject grant award.

Title: Genetic differences in drug and carcinogen biotransformation
Role in Project: Principal Investigator of Subproject
Funding Agency: NIH/MBRS/NCI (S06-RR-008248)
Project Period: September 30, 1987 to July 31, 1989
Project Award: $167,086 (direct costs only)
Note: This was the subproject grant included in the overall project award below.

Title: Morehouse School of Medicine MBRS program
Role in Project: Principal Investigator
Funding Agency: NIH/DRR/MBRS (S06-RR-008248)
Project Period: September 30, 1987 to July 31, 1989
Project Award: $2,200,000 (direct costs only)
Note: This was the first MBRS program award to the Morehouse School of Medicine.

Title: Pharmacogenetics of drug and carcinogen metabolism
Role in Project: Principal Investigator
Funding Agency: NIH/NCI (R01-CA034627)
Project Period: September 30, 1983 to March 31, 1987
Project Award: $62,610 (direct costs)

Title: Metabolic basis of sulfonamide toxicity in AIDS patients
P.I.: Craig K. Svensson (Wayne State University)
Role in Project: Principal Investigator of subproject
Funding Agency: NIH (R01-AI041395)
Project Period: September 1, 1997 to May 31, 2001
Project Award: $768,169 (total)
Subcontract Award: $80,349 (total)

Title: Molecular basis of the hamster acetylation polymorphism
Funding Agency: NIH/BRSG
Role in Project: Principal Investigator

Project Period: January 1, 1993 to September 30, 1994
Project Award: $6,000 (total)

Title: Metabolic basis of sulfonamide toxicity in AIDS patients
P.I.: Craig K. Svensson (Wayne State University)
Role in Project: Principal Investigator of subproject
Funding Agency: NIH (R21-AI039386)
Project Period: September 1, 1996 to August 31, 1997
Project Award: $192,839 (total)
Subcontract Award: $10,532 (total)

Title: STORAGE PHOSPHORUS IMAGING SYSTEM
P.I.: Michael J. Blake (University of North Dakota)
Role in Project: Co-Investigator
Funding Agency: NIH (RR009024)
Project Period: April 1, 1995 to March 31, 1996
Project Award: $57,000 (total)

Title: Role of genetic polymorphism in liver toxicity
P.I. Theresa S. Chen (University of Louisville)
Role in Project: Co-Investigator
Funding Agency: Center for Genetics and Molecular Medicine
Project Period: September 1, 1998, to August 31, 1999
Project Budget: $8,077 (total)

Title: Toxicology Services
Role in Project: Principal Investigator
Funding Agency: North Dakota Department of Health
Project Period: January 1, 1995 to June 30, 1996
Project Award: $109,440 (total)

Title: Pharmacogenetic studies of xenobiotic metabolism and toxicity.
Role in Project: Principal Investigator
Funding Agency: Pharmaceutical Manufacturers Association Foundation
Project Period: January 1, 1983 to December 31, 1983
Project Award: $6,500 (direct costs)

Title: Pharmacogenetics of isoniazid metabolism and toxicity
Role in Project: Principal Investigator
Funding Agency: American Lung Association of Georgia
Project Period: July 1, 1983 to June 30, 1984
Project Award: $5,908 (direct costs)

Title: Use of caffeine metabolites as metabolic probe to assess N-acetylation capacity in congenic inbred hamsters
Funding Agency: NIH/BRSG
Role in Project: Principal Investigator
Project Period: November 7, 1988 to March 31, 1989
Project Award: $2,500 (total)

TEACHING ACTIVITIES

Huron Valley Lutheran High School (1980-1981)
- Taught entire year biology course to sophomore students

University of Michigan (1977-1982)
- Medical pharmacology lectures to pharmacy students (Team-taught)
- Medical pharmacology lectures to nursing students (Team-taught)

Morehouse School of Medicine (1982-1989)
- Medical pharmacology for medical and graduate students (Team-taught)

Emory University School of Medicine (1986-1989)
- Medical pharmacology lecture to medical students (Team-taught)

University of North Dakota (1989-1997)
- Director, Medical Pharmacology I and II courses for medical students
- Director, Drugs Subject to Abuse course for undergraduate students
- Director, Medical Pharmacology/Basic Principles and Toxicology course for graduate students
- Medical Pharmacology I and II courses for medical and graduate students (Team-taught)
- Human Pharmacology course for undergraduate nursing and science students (Team-taught)
- Principles of Pharmacology and Toxicology course for undergraduate students (Team-taught)
- Advanced undergraduate and graduate independent readings courses
- Medical pharmacology lectures to occupational therapy and physical therapy students (Team-taught)
- Pharmacology and toxicology graduate courses (Team-taught)
- Developed video "Drugs Subject to Abuse" course for Division of Correspondence Studies
- Developed and taught "Drugs Subject to Abuse" course over North Dakota Interactive Video Network to five sites in North Dakota

University of Louisville (1997-present; each course is team taught)

- Pharmacology and Dental Therapeutics (Course Director 2011-2022)
- Graduate Pharmacology
- Pharmacology for Dental Hygiene
- Advanced Nursing Pharmacology
- Medical Pharmacology
- Principles of Drug and Chemical Action
- Nursing Pharmacology
- Environmental Science and Technology
- Research Methods in Pharmacology and Toxicology
- Enzymology of Foreign Compound Metabolizing Enzymes
- Introduction to Environmental Health
- Introduction to Epidemiology and Public Health
- Molecular Toxicology
- Cancer Biology
- Summer Environmental Health Research Training Seminar Series
- Disease and Therapeutics
- Molecular Basis of Life, Defense, and Disease
- Research

INVITED SYMPOSIA AND SEMINARS

1. ***The Biochemical Basis of the N-Acetylation Polymorphism and its Toxicological Consequences***. Morehouse School of Medicine, Atlanta, Georgia, November 1981.

2. ***The Biochemical Basis of the N-Acetylation Polymorphism and its Toxicological Consequences***. Dept. of Pharmacology, Emory University School of Medicine, Atlanta, Georgia, September 1982.

3. ***Isoniazid Toxicity as Related to Acetylator Status***. Symposium: "Controversies in Pharmacology: Pharmacogenetics of N-Acetylation." Joint meetings of the American Society for Pharmacology and Experimental Therapeutics, and the Society of Toxicology, Louisville, Kentucky, August 1982.

4. ***Biochemical Basis of the N-Acetylation Polymorphism in the Inbred Hamster***. In workshop entitled Pharmacogenetics: The Study of Hereditary Traits Affecting the Disposition and Metabolism of Drugs and Environmental Chemicals. The American Society of Human Genetics, Norfolk, Virginia, October 1983.

5. ***The Rapid and Slow Acetylator Inbred Hamster Model: Fundamental Studies to Understand and Predict Genetic Predisposition to Chemical Carcinogenesis in Man***. Lawrence Livermore National Laboratory, University of California, Livermore, California, April 1985.

6. ***The Rapid and Slow Acetylator Hamster Model: Fundamental Studies to Understand and Predict Genetic Predisposition to Chemical Carcinogenesis in Man***. Joint Session of Centers of Disease Control and Morehouse School of Medicine, Atlanta, Georgia, July 1985.

7. ***The Rapid and Slow Acetylator Inbred Hamster Model: Fundamental Studies to Understand and Predict Genetic Predisposition to Chemical Carcinogenesis in Man***. Department of Environmental and Industrial Health, The University of Michigan, Ann Arbor, Michigan, September 1985.

8. ***The Rapid and Slow Acetylator Inbred Hamster Model: Prediction of Genetic Predisposition to Chemical Carcinogenesis***. Department of Biology, The Atlanta University, Atlanta, Georgia, October 1985.

9. ***Genetic Control of Acetyltransferases: Implications for Inherited Susceptibility to Cancer from Arylamine Chemicals***. Department of Chemistry, Georgia State University, Atlanta, Georgia, February 1988.

10. ***The Genetic Regulation of Acetyltransferases: Relationship to Genotoxicity of Arylamines***. Division of Biomedical and Environmental Sciences, Lawrence Livermore National Laboratory, University of California, Livermore, California, November 1988.

11. ***Genetic Polymorphism and Cancer Susceptibility: Acetyltransferase and Urinary Bladder Cancer***. Department of Biology, Morehouse College, Atlanta, Georgia, February 1989.

12. ***Characterization of the Acetylation Polymorphism and Heritable Predisposition to Cancers from Aromatic Amines***. University of North Dakota School of Medicine, Grand Forks, North Dakota, May 1989.

13. ***Genetic Regulation of Acetyltransferases in the Syrian Inbred Hamster***. Fifth International Conference on Environmental Mutagens, Cleveland, Ohio, July 1989.

14. ***Genetic Regulation of Acetyltransferase in the Inbred Hamster: A Model for Man***. Department of Pharmacology, Mayo Foundation Medical School, Rochester, Minnesota, March 1990.

15. ***Genetic Predisposition to Cancer from Environmental Chemicals***. Eighty-Fourth Annual Meeting of the North Dakota Academy of Sciences, Grand Forks, North Dakota May 1992.

16. ***N-Acetyltransferases and Susceptibility to Chemicals***. Sixth International Congress of Toxicology, Rome, Italy, July 1992.

17. ***Genetic Determinants of Chemical Toxicity***. School of Engineering and Mines, University of North Dakota, Grand Forks, North Dakota, September 1992.

18. ***Acetylator Genotype and Risk towards Cancers of the Urinary Bladder and Colon and Type I Diabetes Mellitus***. St. Luke's Hospital/Fargo Clinic, Fargo, North Dakota, December 1992.

19. ***Acetylator Genotype: A Risk Factor for Arylamine Carcinogenesis***. Eppley Institute for Research in Cancer and Allied Diseases, University of Nebraska Medical Center, Omaha, Nebraska, February 1993.

20. ***Role of Acetyltransferases in Genetic Predisposition to Cancer from Arylamines***. Department of Biology, Division of Molecular Genetics, Georgia State University, Atlanta, Georgia, March 1993.

21. ***Acetylator Genotype-Dependent Metabolic Activation of N-Hydroxy-2-Aminofluorene in Syrian Hamster Lines Congenic at the NAT2 Locus***. Fourteenth International Symposium on Polycyclic Aromatic Compounds, Osage Beach, Missouri, September 1993.

22. ***Molecular Genetics of N-Acetyltransferases***. Society of Sigma Xi, University of North Dakota, Grand Forks, North Dakota, October 1993.

23. ***Metabolic Activation and Deactivation of Arylamine Carcinogens by Native and Recombinant N-Acetyltransferases in Syrian Hamsters Congenic at the NAT2 Locus***. Department of Physiology, University of North Dakota School of Medicine, Grand Forks, North Dakota. December 1993.

24. ***Genetic Differences in Drug Response: The Past and Future***. Kiwanis Club, Grand Forks, North Dakota, February 1994.

25. ***N-Acetylation Pharmacogenetics: Implications of Genetic Susceptibility to Cancer from Aromatic Amines***. Department of Pharmaceutical Sciences, University of Colorado Health Sciences Center, Denver, Colorado, April 1994.

26. ***Strong Associations between the Catalytic Activation of N-Hydroxy-2-Aminofluorene and N-Hydroxy-2-Acetylaminofluorene with the N-Acetylation of 2-Aminofluorene by Fifteen Recombinant Human Wild-Type, Mutant, and Chimeric NAT2 Allozymes***. Tenth International Symposium on Microsomes and Drug Oxidations, Toronto, Canada, July 1994.

27. ***N-Acetylation Pharmacogenetics: Predisposition to Aromatic Amine Carcinogenesis***. Monsanto Lectureship Series, Cell and Molecular Biology Program, Saint Louis University Medical Center, St. Louis, Missouri, January 1995.

28. ***Molecular Epidemiology: Individual Cancer Risk Assessment***. Basic Science Conference, United Hospital, Grand Forks, North Dakota, August 1995.

29. ***Importance of Pharmacology and Toxicology in Medicine***. University of North Dakota Undergraduate Medical Association, Grand Forks, North Dakota, October 1995.

30. ***Acetyltransferase Polymorphisms in Rodent Animal Models***. Sixth International Conference on Carcinogenic and Mutagenic N-substituted Aryl Compounds, Monterey, California, November 1995.

31. ***Acetyltransferase Polymorphism-Role in Pharmacology and Toxicology***. Winter Meeting of the Norwegian Society of Pharmacology and Toxicology, Beitostolen, Norway, January 1996.

32. ***Molecular Determinants of the Acetylation Polymorphism***. National Institute of Public Health, Oslo, Norway, January 1996.

33. ***Acetylator Genotype as a Risk Factor for Urinary Bladder and Colon Cancers: Does it Extend to Prostate and Breast Cancers?*** University of North Dakota Medical Education Center, Fargo, North Dakota, May 1996.

34. ***Molecular Mechanisms of the Acetylation Polymorphisms: Implications for Cancer Risk Assessment***. Department of Physiology and Pharmacology, University of South Dakota School of Medicine, Vermillion, South Dakota, May 1996.

35. ***Molecular Epidemiology Investigations of Predisposition to Cancers from Aromatic and Heterocyclic Amines*.** University of Louisville School of Medicine, Louisville, Kentucky, February 1997.

36. ***Drugs and Diseases***. University of North Dakota Undergraduate Medical Association, Grand Forks, North Dakota, April 1997.

37. ***Acetyltransferases and Genetic Predisposition to Cancers from Aromatic and Heterocyclic Amines***. Department of Pharmaceutical Sciences, Wayne State University, Detroit, Michigan, October 1997.

38. ***Pharmacogenetics of N-Acetyltransferases: Implications for Genetic Predisposition to Cancer from Aromatic Amines***. Department of Pharmacology, University of Michigan, Ann Arbor, Michigan, October 1997.

39. ***Pharmacogenetics of N-Acetyltransferases: Implications for Genetic Predisposition to Cancer from Aromatic and Heterocyclic Amine Carcinogens***. Bicentennial Seminar Series, Center for Genetics and Molecular Medicine, University of Louisville Health Science Center, Louisville, Kentucky, December 1997.

40. ***Molecular Pharmacogenetics of Acetylation: Its Possible Role in Genetic Predisposition to Cancer from Aromatic and Heterocyclic Amine Carcinogens***. Department of Pharmacology and Graduate Center for Toxicology, University of Kentucky, Lexington, Kentucky, February 1998.

41. ***Role of N-Acetyltransferase Polymorphisms in Genetic Predisposition to Cancer***. Symposium on the Role of Genetic Polymorphisms and Repair Deficiencies in Environmental Disease, 37th Annual Meeting of the Society of Toxicology, Seattle, Washington, March 1998.

42. ***Metabolic Activation of N-Hydroxy-2-Amino-1-Methyl-6-Phenylimidazo[4,5-b]Pyridine (N-OH-PhIP) by Twenty-Three Recombinant Human NAT2 Allozymes***. Genetics of Cancer and Exposure Susceptibility Mini-symposium, Eighty-Ninth Annual Meeting of the American Association for Cancer Research, New Orleans, Louisiana, March 1998.

43. ***Structure/Function Studies on Metabolic Activation of Aromatic Amine Carcinogens by Recombinant Human N-Acetyltransferases***. Student Research Opportunity Program, University of Louisville, Louisville, Kentucky, July 1998.

44. ***Human N-Acetyltransferase-1 (NAT1) and –2 (NAT2) Genotype/Phenotype Determinations in Cytosolic Preparations from Surgical Human Colon Specimens***. First International Workshop on the Arylamine N-Acetyltransferases, Kuranda, Queensland, Australia, October 1998.

45. ***Role of the Acetylation Polymorphism in Genetic Susceptibility to Breast Cancer.*** Department of Ophthalmology and Visual Sciences, University of Louisville School of Medicine, Louisville, Kentucky, January 1999.

46. ***Molecular Epidemiology of Breast Cancer: Role of N-Acetyltransferase Polymorphisms, Cigarette Smoking, and Consumption of Well-Done Meats***. Department of Pharmacology and Toxicology, Indiana University School of Medicine, Indianapolis, Indiana, February 1999.

47. ***Gene/Environmental Interactions in Breast Cancer Risk.*** Center for Environmental Health Sciences, University of Louisville, Louisville, Kentucky, April 1999.

48. ***Acetyltransferases-Genetics and Role in Toxicology.*** Symposium on Recent Advances in Phase II Enzymes and Their Role in Toxicology. XXXVII European Congress of Toxicology, Oslo, Norway, June 1999.

49. ***Acetylation Polymorphisms as Genetic Risk Factors for Cancer.*** Department of Molecular, Developmental, and Craniofacial Biology, University of Louisville School of Dentistry, Louisville, Kentucky, September 1999.

50. ***Molecular Toxicology: N-Acetyltransferase Polymorphisms as Susceptibility Biomarkers of Cancer Risk from Aromatic and Heterocyclic Amine Carcinogens.*** Environmental Health Science Center, University of Wisconsin School of Medicine, Madison, Wisconsin, September 1999.

51. ***Post-Tenure Review***. Association for Medical School Pharmacology Chairs, Sea Island, Georgia, February 2000.

52. ***Molecular Genetic Investigations of Prostate Cancer Susceptibility***. Center for Environmental and Occupational Health Sciences, University of Louisville, Louisville, Kentucky, April 2000.

53. ***The Role of Arylamine N-Acetyltransferases in Genetic Predisposition to Breast Cancer***. Symposium on Pharmacogenetics of the Arylamine *N*-Acetyltransferases: A Symposium in Honor of Wendell W. Weber, Annual Meeting of the American Society for Pharmacology and Experimental

Therapeutics and the American Society of Biochemistry and Molecular Biology, Boston, Massachusetts, June 2000.

54. ***Genetic Predisposition to Breast Cancer-Relationship of N-acetyltransferase Genotypes, Diet, and Smoking.*** Center for Genetics and Molecular Medicine, University of Louisville, Louisville, Kentucky, September 2000.

55. ***Molecular Genetics of the Acetyltransferases: A Role in Genetic Predisposition to Breast Cancer***. University of Kentucky College of Pharmacy, Lexington, Kentucky, September 2000.

56. ***Role of Acetylation Polymorphisms in Breast Cancer Risk***. University of Cincinnati College of Pharmacy, Cincinnati, Ohio, October 2000.

57. ***Effect of Nucleotide Substitutions in N-Acetyltransferase-1 (NAT1) on Metabolic Deactivation (N-Acetylation) and Activation (O-Acetylation) of Arylamine Carcinogens: Implications for Cancer Predisposition***. Symposium entitled Genetic Predisposition. Presented at Fifth International Symposium on Predictive Oncology and Therapy, Impact of Biotechnology on Cancer, Geneva, Switzerland, October 2000.

58. ***The NAT1 and NAT2 Acetylation Polymorphisms as Modifiers of Breast Cancer Risk from Diet and Smoking***. Department of Pathology and Laboratory Medicine, University of Louisville School of Medicine, Louisville, Kentucky, January 2001.

59. ***Role of N-Acetyltransferase Polymorphisms in Cancer Risk from Environmental Carcinogens***. International Symposium on Environmental Genome and Pharmacogenetics, Shanghai, China, May 2001.

60. ***Molecular Genetics of NAT1 and NAT2 Acetyltransferases: A Possible Role in Breast Cancer Susceptibility.*** Institute of Materia Medica, Chinese Academy of Medical Sciences, Peking Union Medical College, Beijing, China, May 2001.

61. ***Molecular Genetics of NAT1 and NAT2 Acetyltransferases: Relationship to Breast Cancer***. Beijing Institute for Cancer Research, Peking University School of Oncology, Beijing, China, May 2001.

62. ***N-Acetyltransferase Polymorphisms: Biomarkers of Cancer Susceptibility***. Fred Hutchinson Cancer Center, Seattle, Washington, June 2001.

63. ***Strategies to Assess Potential Carcinogenicity of Hair Dyes***. Clairol, Inc., Stamford, Connecticut, June and December 2001.

64. ***Functional Characterization of Recombinant N-acetyltransferase 1 (NAT1) and 2 (NAT2) in the Rapid and Slow Acetylator Rat***. Second International NAT Workshop, Oxford, United Kingdom, October 2001.

65. ***Molecular Genetics and Function of NAT1 and NAT2: Role in Aromatic Amine Metabolism and Carcinogenesis***. Eighth International Conference on Carcinogenic and Mutagenic N-Substituted Aryl Compounds, Washington, DC, November 2001.

66. ***The Emerging Importance of Pharmacogenetics/genomics in Clinical Medicine***. University of Louisville. Pre-Medical/Pre-Health Honor Society (Alpha Epsilon Delta), Louisville, Kentucky, January 2002.

67. ***Pharmacogenomics***. 2002 Physician Champion Network Conference, "Genetics, Bridging the Gap Between Science and Medicine," Louisville, Kentucky, August 2002.

68. ***N-Acetyltransferase Genetic Polymorphisms and Cancer Risk***. Department of Pharmacology, University of Oxford, Oxford, United Kingdom, September 2002.

69. ***N-Acetylation Polymorphisms and Cancer Risk: Past, Present, and Future***. Department of Pharmacology, University of Michigan School of Medicine, Ann Arbor, Michigan, October 2002.

70. ***Genetic Predisposition for Cancer***. M.D./Ph.D. Program, University of Louisville, Louisville, Kentucky, November 2002.

71. ***N-Acetyltransferase Polymorphisms and Cancer Susceptibility***. University of Medicine and Dentistry of New Jersey, and Rutgers/The State University of New Jersey, Piscataway, New Jersey, December 2002.

72. ***NAT2 In Vitro Studies/Data***. Toxicology Peer Review, Proctor and Gamble Company, Cincinnati, Ohio, December 2002.

73. ***Recombinant Expression of Human N-Acetyltransferase 2 Alleles: Implications for Acetylator Phenotype.*** Symposium on Molecular and Genetic Epidemiology of Cancer, Co-Sponsored by the American Association for Cancer Research and Society of Toxicology, Waikoloa, Hawaii, January 2003.

73. ***Pharmacogenetics and Pharmacogenomics in Medicine and Public Health***. American Association of University Women, Louisville, Kentucky, January 2003.

74. ***Characterization of N-acetyltransferase-1 and –2 Genetic Polymorphisms***. Kentucky Lung Cancer Research Program 2003 Scientists Seminar, Frankfort, Kentucky, February 2003.

75. ***Environmental Health Sciences at the University of Louisville***. Life Sciences without Boundaries, Bridges to Collaboration Conference, Cincinnati, Ohio, March 2003.

76. ***Functional Characterization and Epidemiological Significance of N-Acetyltransferase Genetic Polymorphisms,*** Environmental Cardiology Group, University of Louisville, Louisville, Kentucky, May 2003.

77. ***Genes and the Environment in Cancer Risk,*** Optimists Club of Louisville, Louisville, Kentucky, June 2003.

78. ***Syrian Hamster and Rat Models of the N-Acetylation Polymorphism***, Department of Pharmacology, University of Oxford, United Kingdom, September 2003.

79. ***Pharmacogenetics: N-Acetyltransferase Genotype/phenotype Relationships and Implications for Chemical Carcinogenesis***, Department of Pharmacology, University of Oxford, United Kingdom, September 2003.

80. ***Genetic Polymorphisms in N-Acetyltransferases: A Possible Role in Cancer Predisposition,*** Wellcome Trust Centre for Human Genetics, Oxford, United Kingdom, September 2003.

81. ***Functional Genomics of the N-acetyltransferases: Improving Cancer Risk Assessments from Environmental Toxicants***, Annual Meeting of the Ohio Valley Society of Toxicology, Cincinnati, Ohio, November 2003.

82. ***Pharmacogenomics of N-acetyltransferases: Implications for Cancer Risk***, Center for Genetics and Molecular Medicine, University of Louisville, Louisville, Kentucky, December 2003.

83. ***Human and Rabbit NAT Metabolism of Arylamines,*** Toxicology Peer Review Panel Meeting, Procter and Gamble Company, Cincinnati, Ohio, March 2004.

84. ***Investigations of Arylamine N-acetyltransferase Genetic Polymorphisms in Animal Models***, Environmental Cardiology Program, University of Louisville, Louisville, Kentucky, June 2004.

85. ***NAT2 Genetic Polymorphisms: Effects on Cancer Risk (Many) and Treatment (Some)***, Poa Pratensis Seminar, James Graham Brown Cancer Center, University of Louisville, Louisville, Kentucky, July 2004.

86. ***NAT2 Metabolism and Hair Dyes.*** Epidemiology-Toxicology Workshop on Hair Dyes, Baltimore, Maryland, October 2004.

87. ***Update on N-acetylation of Hair Dye Chemicals by Human NAT1 and NAT2***. Procter and Gamble meetings, University of Louisville, Louisville, Kentucky, October 2004.

88. ***Cancer Center Support Grants: Cancer Prevention and Control Criteria for an NCI Comprehensive Cancer Center***. Cancer Prevention and Control Program, James Graham Brown Cancer Center, University of Louisville, Louisville, Kentucky, November 2004.

89. ***Functional Genomics of Human N-acetyltransferase 1 and their Effects on Breast Cancer Susceptibility.*** Environmental Cardiology Program, University of Louisville, Louisville, Kentucky March 2005.

90. ***Molecular Epidemiology Investigations from SNPs to Cancer Risks.*** Biomarkers, Genetics and Chemoprevention Seminar Program, James Graham Brown Cancer Center, University of Louisville, Louisville, Kentucky, March 2005.

91. ***Genetic Polymorphisms in Human NAT1 and NAT2.*** Center for Environmental Systems Biology, University of Louisville, Louisville, Kentucky, April 2005.

92. ***Functional Characterization of Syrian Hamsters Congenic at the NAT2 locus for the N-acetylation of the Tobacco Carcinogen 4-Aminobiphenyl and the O-acetylation of its N-Hydroxy-Metabolite.*** Fourth International Scientific Conference of the International Society for the Prevention of Tobacco Induced Diseases, Athens, Greece, September 2005.

93. ***Characterization of NAT1 Overexpression in Breast Tumors*** (with Dr. David Barker). Division of Cancer Biology, National Cancer Institute Activities to Promote Research Collaborations (APRC) Workshop, Gaithersburg, Maryland, October 2005.

94. ***Pharmacogenetics of N-acetyltransferases and their Role in Genetic Predisposition to Cancer.*** Public Health Seminar Series, University of Louisville, Louisville, Kentucky, October 2005.

95. ***Experimental Update.*** Procter and Gamble, Inc., Cincinnati, Ohio, November 2005.

96. ***Genes and Environment in Cancer Risk.*** St. Matthews Rotary Club, Louisville, Kentucky, December 2005.

97. ***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.

98. ***Arylamine N-acetyltransferases and their Role in Genetic Predisposition to Cancer.*** L'Oreal Research & Development, Asnieres, France, April 2006.

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

100. ***Role of N-acetyltransferase Genetic Polymorphisms in Cancer Risk***. In symposium entitled: Impact of Genetic Variation on Individual Susceptibility. Annual Meeting of the European Environmental Mutagen Society: From Genes to Molecular Epidemiology, Prague, Czech Republic, July 2006.

101. ***Cancer Prevention and Control Program***. Fifth Annual James Graham Brown Cancer Center Retreat, Louisville, Kentucky, November 2006.

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

103. ***Pharmacogenomics and Personalized Medicine.*** Phi Delta Epsilon Premedical Fraternity, University of Louisville, Louisville, Kentucky, January 2008.

104. ***Acetylation Pharmacogenomics and Molecular Epidemiology of Tobacco-Related Cancers***. Cancer Prevention and Control Seminar Series, James Graham Brown Cancer Center, University of Louisville, Louisville, Kentucky, January 2008.

105. ***Molecular Epidemiology: Pharmaco/toxicogenetics***. Universite Paris Diderot, Paris, France, May 2008.

106. ***Role of N-acetyltransferases in the Metabolism and Mutagenicity of Arylamines***. Procter and Gamble/Cosmital, Marly, Switzerland, May 2008.

107. ***Role of N-acetyltransferase Polymorphisms in Cancer Susceptibility.*** Pulmonary, Critical Care and Sleep Disorders Medicine, Department of Medicine, University of Louisville School of Medicine, Louisville, Kentucky, August 2008.

108. ***Acetylation Pharmacogenetics and Cancer Risk from Arylamine Carcinogens***. Division of Cancer Biology, National Cancer Institute, Rockville, Maryland, December 2008.

109. ***N-acetyltransferase Pharmacogenetics Modifies Individual Cancer Risk and James Graham Brown Cancer Center Research Stimulus***. James Graham Brown Cancer Center, University of Louisville, Louisville, Kentucky, April 2009.

110. ***Emerging Hypotheses on the Functional Effects of N-acetyltransferase Single Nucleotide Polymorphisms: A Paradigm for Understanding Complexities of Personalized Medicine***. Diabetes and Obesity Center, University of Louisville, Louisville, Kentucky, October 2009.

111. ***Acetylation Status and Bladder Cancer-Should NAT2 Slow Acetylators be Sub-classified for Risk Assessments***. Symposium entitled "Occupation, Aromatic Amines, Polycyclic Aromatic Hydrocarbons and Bladder Cancer, BFGA Research Institute of Occupational Medicine, Ruhr University Bochum, Germany, November 2009.

112. ***Should We Sub-Classify Slow NAT2 Acetylator Phenotypes for Cancer Risk Assessments?*** Department of Molecular, Cellular, and Craniofacial Biology and The Birth Defects Center, University of Louisville, Louisville, Kentucky, November 2009.

113. ***Pharmacogenetics: Past, Present and Future.*** Pulmonary, Critical Care and Sleep Disorders Medicine, Department of Medicine, University of Louisville School of Medicine, Louisville, Kentucky, January 2011.

114. ***Genes, Smoking, and Cancer Risk.*** Ninth Annual Conference of the International Society for the Prevention of Tobacco Induced Diseases. Vienna, Austria, September 2011.

115. ***Pharmacogenomic Investigations in Cryopreserved Human Hepatocytes: Understanding Functional Effects of Single Nucleotide Polymorphisms and Genotype/Phenotype Relationships for Human N-Acetyltransferase 2.*** Annual meetings of the North American Hepatocyte Research Association, Atlanta, Georgia, October 2011.

116. ***UofL NCI Cancer Education Program: Example Translational Research Project in Cancer Susceptibility.*** Distinction in Research Program, University of Louisville School of Medicine, Louisville, Kentucky, February 2012.

117. ***Role of Acetylation Polymorphisms in Tobacco-related Cancer Risk.*** Department of Microbiology & Immunology, University of Louisville School of Medicine, Louisville, Kentucky, March 2012.

118. ***Use of Cryopreserved Human Hepatocytes to Investigate Genetic Variability in Drug and Xenobiotic Metabolism and Toxicity.*** Annual meeting of the Society of Toxicology, San Antonio, Texas, March 2013.

119. ***Cryopreserved Human Hepatocytes to Investigate Genetic Variability in Drug and Xenobiotic Metabolism and Toxicity.*** West China Hospital at Sichuan University, Chengdu, China, May 2013.

120. ***Pharmacogenomics and Molecular Epidemiology: Personalized Medicine and Environmental Health.*** University of Paris-Diderot, Paris, France, September 2013.

121. ***Acetylation Polymorphisms as Modifiers of Environmental Disease.*** Department of Environmental Health, University of Cincinnati School of Medicine, Cincinnati, Ohio, October 2013.

122. ***NAT2 Polymorphisms and Disease Risk: Implications of Genetic Heterogeneity in the Slow Acetylator Phenotype.*** Sixth International Workshop on the Arylamine N-acetyltransferases Toronto, Canada, October 2013.

123. ***Translation of Laboratory Research Findings Towards the Assessment of Tobacco-related Cancer Risk in Populations and Individuals.*** School of Public Health and Information Sciences, University of Louisville, Louisville, Kentucky, October 2013.

124. ***Liver Phase 2 Drug and Xenobiotic Metabolism.*** NIEHS Tamburro Symposium on Environmental Chemicals and Liver Disease, University of Louisville, Louisville, Kentucky, September 2014.

125. ***Importance of Individual Susceptibility in Human Risk Assessments***. Plenary lecture, International Toxicology Conference, Regional Center for Food and Feed, Agricultural Research Center, Cairo, Egypt, May 2015.

126. ***PhD in Pharmacology & Toxicology Partnership between University of Louisville and Wenzhou Medical University.*** Second Affiliated Hospital of Wenzhou Medical University, Wenzhou, China, June 2015.

127. ***Translating Laboratory Findings Towards Assessment of Tobacco-related Cancer Risk in Populations and Individuals.*** Herbert and Nicole Wertheim Leadership in Healthcare and Medicine Lecture, Florida International University, Miami, Florida, January 2016.

128. ***Integration and Translation of Laboratory Research into Environmental Cancer Risks.*** University of Paris-Diderot, Paris, France, June 2016.

129. ***Genetic Heterogeneity in the Slow Acetylator N-Acetyltransferase 2 Phenotype in Human Hepatocytes.*** Seventh International Workshop on the Arylamine N-acetyltransferases, Trier, Germany, June 2016.

130. ***Arylamine and Alkylaniline Carcinogen Metabolism in Rapid and Slow Acetylators.*** Seventh International Workshop on the Arylamine N-acetyltransferases, Trier, Germany, June 2016.

131. ***PhD Program in Pharmacology and Toxicology at the University of Louisville: International Partnerships.*** Institute of Radiation Medicine, Chinese Academy of Medical Sciences/Peking Union Medical College, Tianjin, China, September 2016.

132. ***Applications from the Laboratory That Inform Molecular Epidemiology: The Example of Genetic Acetylation Polymorphism and Cancer Risk***. Division of Pharmacology, The Ohio State University, Columbus, Ohio, April 2017.

133. ***Interaction of N-acetyltransferase Genetic Polymorphism and Smoking on Individual Risk for Urinary Bladder and Breast Cancers.*** ISPTID Round Table, ENSP International Conference on Tobacco Control 2017, Athens, Greece, May 2017.

134. ***Pharmacogenomic Applications Improving Drug Therapy in the United States of America: Past, Present, and Future.*** Democritus University of Thrace, Alexandroupolis, Greece, May 2017.

135. ***Laboratory Findings Enhance Assessments of Cancer Risk from Arylamine Carcinogen Exposures.*** Democritus University of Thrace, Alexandroupolis, Greece, June 2017.

136. ***Bridging Experimental Laboratory Research Towards Population-Based Cancer Risk Assessments.*** University of Louisville, Louisville, Kentucky, July 2017.

137. ***Genetic Heterogeneity Among Slow Acetylator N-acetyltransferase 2 Phenotypes***. Keynote Forum***,*** Tenth Global Summit on Toxicology and Applied Pharmacology. Chicago, Illinois, July 2017.

138. ***Translation of Laboratory Research Findings Towards Risk Assessments from Environmental Chemicals.*** Environmental Health Sciences Seminar Series, University of Louisville, Louisville, Kentucky, September 2017.

139. ***The UofL NIEHS T32 Training Program in Environmental Health Sciences.*** Environmental Health Sciences Seminar Series, University of Louisville, Louisville, Kentucky, April 2018.

140. ***Enhanced Risk Assessment Using Principles of Molecular Epidemiology.*** Democritus University of Thrace, Alexandroupolis, Greece, April 2018.

141. ***Importance of Pharmacogenomics in the Success of Drug Therapy.*** Keynote Forum. International Pharma Conference and Expo, Rome Italy, May 2018.

142. ***Translation of Laboratory Research Findings Towards Cancer Risk Assessments from Environmental Chemicals.*** Third International Cancer Study and Therapy Conference, Rome, Italy, May 2018.

143. ***Translating Laboratory Research to Inform Human Risk Assessments Following Exposures to Environmental Chemicals.*** Keynote presentation: 7th International conference (15th Scientific Conference) Cairo University, One Health: Animal, Human, and Environment: Recent Applications, Ain Sokhna, Egypt, August 2018.

144. ***A Revamped Approach to Post-Tenure Review.*** Association of Medical School Pharmacology Chairs, Kauai, Hawaii, January 2019.

145. ***N-Acetyltransferase 2 Acetylator Genotype-dependent N-Acetylation of the Arylamine Carcinogens 4-Aminobiphenyl and Beta-naphthylamine in Cryopreserved Human Hepatocytes.*** Hepatobiology and Toxicology COBRE, University of Louisville, Louisville, Kentucky March 2019.

146. ***Role of Human NAT2 Acetylator Polymorphism on Cancer Risk Assessment from Arylamine Carcinogens.*** Southeast Regional IDeA Conference, Louisville, Kentucky, November 2019.

147. ***Identification and Characterization of Potent, Selective, and Efficacious Inhibitors of Human N-Acetyltransferase 1.*** Cancer Research Interest Group, Center for Integrative and Environmental Health Sciences, University of Louisville, December 2021.

148. ***Acetylation Pharmacogenomics: Paradigm for Informed Individual Risk Assessment Following Environmental Carcinogen Exposure.*** Association of Clinical Scientists Annual Meeting, Louisville, Kentucky May 2022.

149. ***Gene-Environmental Interactions of Novel Psychoactive Chemicals Substituting for Illegal Drugs of Abuse.*** CIEHS Presentations at Research!Louisville, University of Louisville, Louisville, Kentucky September 2022.

150. ***Precision Environmental Health: Informed Individual Risk Assessment Following Carcinogen Exposures.*** Brown Cancer Center Seminar Series, University of Louisville, Louisville, Kentucky, May 2023.

151. ***Pharmacogenomic-guided Therapy: Insights from N-Acetyltransferase 2 Genetic Polymorphism.*** International Precision Medicine and Orphan Drugs Conference, virtual, August 2023.

152. ***Translational Laboratory Research to Inform Cancer Risk Assessments.*** International Conference on Cancer Science, Prague, Czech Republic, September 2023.

153. ***Precision Environmental Health: Genetic Susceptibility to Insulin Resistance Following Heterocyclic Amine Exposures.*** Center for Integrative Environmental Health Sciences, Precision Environmental Health/Exposome research interest group, University of Louisville, Louisville, Kentucky January 2024.

154. ***Heterocyclic Amines Disrupt Lipid Homeostasis in Cryopreserved Human Hepatocytes,*** Central and Eastern European Conference on Health and the Environment, Aristotle University Research Dissemination Center, Thessaloniki, Greece, July 2024.

155. ***New Perspectives for Understanding Complex Environmental Exposures and Disease Risks and Possible Solutions to Prevent and Reduce Complex Environmental Exposures and Disease Risks,*** Panel discussion, Central and Eastern European Conference on Health and the Environment, Aristotle University Research Dissemination Center, Thessaloniki, Greece, July 2024.

156. ***CPIC Update on NAT2 Allele Function***. International Phase II/N-acetyltransferase Workshop, Ohio State University, Columbus, Ohio September 2024.

157. ***The Effect of the rs1799931 c.857G>A (p.Gly286Glu) Polymorphism on N-acetyltransferase 2-Mediated Carcinogen Metabolism and Genotoxicity Differs with Heterocyclic Amine Exposure.*** International Phase II/N-acetyltransferase Workshop, Ohio State University, Columbus, Ohio September 2024.

158. ***Precision Environmental Health: Substrate-dependent Expression of N-acetyltransferase 2 Genetic Polymorphism on Carcinogen Metabolism and Genotoxicity.*** Center for Integrative Environmental Health Sciences, Precision Environmental Health/Exposome research interest group, University of Louisville, Louisville, Kentucky January 2025.

159. ***"Seasoned" Chair: Scientific Presentations and Leadership Experience Overview***. Annual Meeting of the Association for Medical School Pharmacology Chairs, San Jose, Costa Rica, January 2025.

160. ***Introduction/Air Pollution***. Oldham County Community Event, John Black Community Center, La Grange, Kentucky May 2025.

161. ***Translating research in precision environmental health to pharmacogenomic-guided drug therapy: Example paradigm is the N-acetylation genetic polymorphism.*** Personalized Therapeutics Seminar, Division of Clinical Pharmacology, Indiana University School of Medicine, Indianapolis, Indiana June 2025.

162. ***Public health impacts associated with expansions of energy infrastructure***. Louisville Community Meeting, Southwest Regional Library, Louisville, Kentucky July 2025.

163. ***Superfund Center Research Experiences and Training Coordination Core***. Yale University, New Haven, Connecticut August 2025.

PROFESSIONAL SERVICE

Morehouse School of Medicine

MEMBER, Research and Development Committee (1982-1984)

MEMBER, Student Academic Progress and Promotions Committee (1986-1989)

MEMBER, Student Admissions Committee (1982-1985)

CHAIR, Pharmacology Faculty Search Committee (1982-1986)

MEMBER, Pediatrics Chair Search Committee (1982-1984)

MEMBER, Student Award's Committee (1983-1984)

MEMBER, Deans Committee, Veteran's Administration Medical Center,
Tuskegee, Alabama (1983-1989)

MEMBER, Coordinating Committee for Joint Graduate Program,
Morehouse School of Medicine/Atlanta University (1983-1989)

MEMBER, Academic Policy Council (1983-1989)

CHAIR, Curriculum Subcommittee for Course Evaluation (1987)

MEMBER, Institutional Budget Committee (1985)

CHAIR, Academic Policy Council Subcommittee on Tenure (1985)

MEMBER, Dean's Basic Science Advisory Committee (1985-1989)

MEMBER, Curriculum Committee (1986-1987)

MEMBER, Cancer Steering Committee (1986-1989)

CHAIR, NIH/Minority Biomedical Research Support Advisory Committee (1986-1989)

MEMBER, NIH/Research Centers in Minority Institutions Advisory Committee (1986-1989)

CHAIR, Chemical Pharmacology Graduate Committee (1988-1989)

Member, NRSA Advisory Committee, Clark Atlanta University (1986-1989)

University of North Dakota

MEMBER, Chairpersons Committee (1989-1997)

MEMBER, Faculty Academic Council (1989-1997)

MEMBER, Faculty Academic Council Executive Committee (1992-1997)

MEMBER, Phase II, Year 02 Curriculum Committee (1989-1997)

CHAIR, Pharmacology and Toxicology Faculty Search Committee (1989-1991; 1994)

MEMBER, Substance Abuse Task Force Committee (1989-1991)

MEMBER, Research Committee (1989-1995)

CHAIR, Research Committee (1990-1992)

MEMBER, Bush Foundation Administrative Committee (1989-1997)

MEMBER, Educational Policy and Curriculum Committee (1990-1991)

MEMBER, Institute for Agricultural Health Sciences
and Rural Medicine Building Phase I Subcommittee (1990-1994)

DELEGATE, United States Pharmacopeial Convention (1991-1997)

MEMBER, Faculty Bylaws Committee (1990-1994)

CHAIR, Thelin Fund Administrative Committee (1991)

DELEGATE, Faculty Senate Representing School of Medicine (1991-1995)

EX OFFICIO, Department of Pharmacology and Toxicology Faculty Evaluation,
Promotion, and Tenure Committee (1991-1997)

MEMBER, Department of Pharmacology and Toxicology Graduate Affairs Committee (1991-1997)

MEMBER, Dept. of Anthropology Faculty Evaluation and Promotion Committee (1991)

MEMBER, Dept. of Pediatrics Faculty Evaluation and Promotion Committee (1991)

MEMBER, University Senate Ad Hoc Committee on Faculty Grievances (1992)

MEMBER, Division of Biomedical Communications Advisory Committee (1993-1996)

MEMBER, Continuing Medical Education Committee (1993-1996)

MEMBER, Presidential Task Force on Regulated Materials Storage Facility (1993-1994)
MEMBER, University Advisory Board on Faculty Roles and Rewards (1993-1995)

MEMBER, Search Committee for Dean, School of Medicine (1993-1994)

MEMBER, Local Funding University Budget Review Committee (1993-1994)

MEMBER, Phase III/V Faculty Site Visit Teams (1994-1996)

CHAIR, Initial Screening Committee for Dean, School of Medicine (1993-1994)

MEMBER, University Planning Council, Office of the President (1994-1997)

MEMBER, Ireland Laboratory Task Force (1994)

CHAIR, Howard Hughes Medical Institute Grant Committee (1995)

MEMBER, Chester Fritz Distinguished Professorship Review and Recommendation Committee (1995-1996)

CHAIR, Search Committee, Chairperson of Department of Microbiology & Immunology (1995-1997)

MEMBER, Continuing Medical Education Subcommittee on Enduring Materials (1995-1996)

MEMBER, School of Medicine Personnel Hiring Assessment Committee (1995)

MEMBER, School of Medicine and Health Sciences Committee for Strategic Planning (1995-1997)

MEMBER, School of Medicine and Health Sciences Strategic Planning Subcommittee: Finances (1996)

MEMBER, School of Medicine and Health Sciences Strategic Planning Subcommittee: Research (1996)

CHAIR, School of Medicine and Health Sciences Strategic Planning Task Force for Finance and Research (1996)

MEMBER, Department of Pharmacology and Toxicology Faculty Search Committee (1996-1997)

University of Louisville

MEMBER, Medical Council (1997-)

CHAIR, Pharmacology and Toxicology Faculty Search Committee (1997-1999; 2001-2002; 2011-2013)

CHAIR, Strategic Planning Committee for Genetics and Molecular Medicine (1997-1998)

MEMBER, Clinical Research Advisory Committee, Clinical Research, Epidemiology and Statistics Training Program (1998-2005)

MEMBER, Council, School of Dentistry (1998-2005)

MEMBER, Search Committee, Vice-Chair for Research and Director of Kosair Children's Research Institute, Department of Pediatrics (1998-1999; 2009-2011)
Director of Kosair Children's Research Institute (2012)

MEMBER, Search Committee, Chairperson of Dept. Ophthalmology and Visual Sciences (1999-2000)

MEMBER, Advisory Board, Pediatric Clinical Trials Unit (1999-2008)

James Graham Brown Cancer Center
MEMBER, Executive Council (2000-2007)
CHAIR, Internal Advisory Board (2001)
MEMBER, Membership Committee (2002-2012)

Center for Genetics and Molecular Medicine
MEMBER, Education/Curriculum Committee (1999-2006)
MEMBER (Ex Officio), Financial Advisory Committee (2000-2003)
MEMBER, Rules Committee (2006-2013)

MENTOR, Junior Faculty Mentoring Program (2000)

MEMBER, Search Committee, Assistant Dean for Academic Affairs, School of Dentistry (2000)

MEMBER, Search Committee, Carol B. McFerran Endowed Chair in Pediatric Diabetes Research (2000)

CHAIR, Search Committee, Chair, Department of Biochemistry and Molecular Biology (2000-2002; 2007-2009).

MEMBER, M.D./Ph.D. Advisory Committee (2000-2008)

CHAIR, Integrated Programs in Biomedical Sciences Policy Committee (2000)

MEMBER, Search Committee, Research Assistant Professor of Pediatrics (2000-2001)

MEMBER, Planning Committee – Chairs Development Workshop (2001)

MEMBER, Microbiology, Clinical Practice Sciences II Interdisciplinary Curriculum Committee (2001-2002)

MEMBER, Search Committee, Associate Director, Pediatric Clinical Research Unit (2001-2002)

MEMBER, General Clinical Research Center Advisory Committee (2002-2007)

MEMBER, Selection Committee, Educator of the Year Award in Pediatrics (2002, 2004)

MEMBER, Search Committee, Radiation Safety Officer (2002)

CHAIR, Health Science Center Task Force, Committee 4: Productivity Issues Staff and Faculty (2002)

MEMBER, Search Committee, Associate Vice President for Health Affairs/
Research and Vice Dean for Research (2003)

MEMBER, Chair Review Committee, Department of Molecular, Cellular, and Craniofacial Biology, School of Dentistry (2003)

MEMBER, Search Committee, Chairman for Department of Surgery (2004)

MEMBER, LCME Task Force, School of Medicine (2004-2005; 2012-2015; 2019 -2021)

MEMBER, LCME Continuous Quality Improvement Committee (2015 - 2021)

MEMBER, Search Committee for Executive Vice President for Health Affairs (2004-2005; 2010-2011)

MEMBER, Search Committee Director of Cancer Biostatistics
Brown Cancer Center & School of Public Health and Information Sciences (2004-2007)

MEMBER, NIEHS "Early Life Exposure to Hazardous Waste" Advisory Committee (2005-2007)

MEMBER, Search Committee for Chair, Department of Urology (2005)

MEMBER, Selection Committee for External Search Firm; School of Medicine Dean search (2005)

MEMBER, Search Committee for Dean, School of Medicine (2012-2013)

MEMBER, Search Committee for Executive Vice President for Research (2006)

MEMBER, Epidemiology and Population Health Faculty Search Committee (2006-2008; 2013-2014)

MEMBER, Internal Advisory Committee, Louisville Clinical and Translational Sciences Institute (2006-)

MEMBER, Search Committee for Endowed Chair in Pediatric Outcomes (2006-2008)

MEMBER, Task force regarding faculty salary research incentive program (2006-2007)

VICE-CHAIR, Search committee for Vice Dean for Research, School of Medicine (2007-2008)

MEMBER, University of Louisville Graduate Education Strategic Planning Committee (2007)

MEMBER, Faculty Senate (2008)

MEMBER, Bylaws Revision Committee, School of Interdisciplinary and Graduate Studies (2008)

EX-OFFICIO, Faculty Senate Planning and Budget Committee (2008-2017)

MEMBER, Council of Academic Officers (2008-2017)

MEMBER, Budget Advisory Committee (2008-2015)

CHAIR, Budget Subcommittee on Business Practice Redesign (2009)

MEMBER, Budget New Ideas Subcommittee (2014)

MEMBER, Kentucky Council on Postsecondary Education Strategic Agenda Institutional Advisory Group (2010-2016)

MEMBER, President's Ad Hoc Committee to review and define position description and search process of Executive Vice President for Health Affairs (2010)

MEMBER, Distinction in Research Program Advisory Committee (2012-2015)

CHAIR, Search committee for Chair, Department of Microbiology & Immunology (2012-2013)

MEMBER, Faculty Advisory Committee, Office of Research and Innovation Improvement Project (2012-2013)

MEMBER, Advisory Committee on Research Training, Office of Research and Innovation (2013)

MEMBER, 21st Century University Steering Committee (2013-2015)

CHAIR, School of Medicine Strategic Planning Steering Committee (2013-2014); MEMBER (2019 -)

MEMBER, School of Medicine Strategic Planning Implementation Committee (2014-2016)

CHAIR, Wenzhou Medical University/Jilin University PhD partnership task force (2013-2016)

MEMBER, Provost Staff Program Proposal Review Committee (2014-2017)

MEMBER, Search Committee for Associate Dean for Graduate and Postdoctoral Studies (2014)

CO-CHAIR, SACS Subcommittee on University Mission, Governance and Administration (2014-2016)

MEMBER, UofL Partnership for Retention Improvement in Mathematics, Engineering and Science (2014-2017)

CHAIR, Search Committee for Director, Center for Predictive Medicine (2015-2016)

MEMBER (2015-2016) CHAIR (2016-2017) Office of the Provost Strategic Planning and Implementation Group

FACULTY, Erasmus+ programme for faculty and student exchange funded by the European Union (2017-2018)

MEMBER, School of Dentistry Curriculum Committee on Oral Surgery/ Medicine/ Pathology/ Anesthesia/ Pharmacology/Periodontics/Endodontics/Radiology (2017-)

MEMBER, School of Medicine Research Space Committee, School of Medicine (2018 -)

MEMBER, Physician Compensation Development Committee (2018)

Co-CHAIR, Executive Vice President for Research and Innovation Search Committee (2019-2020)

MEMBER, Search Committee for Chair of the Department of Internal Medicine (2021-2022)

MEMBER, Internal NSF ATHENA ADVANCE Steering Committee (2021- 2024)

MEMBER, School of Medicine Funds Flow Redesign Steering Committee (2021-2023)

MEMBER, School of Medicine Graduate Council (2022-2023).

MEMBER, Internal Advisory Committee, NIH-Funded Institutional Programs

- Center of Excellence in Biomedical Research in Molecular Targets P20 GM103482 (2003-2013)
- Center of Excellence in Diabetes and Obesity Research P20 RR024489 (2008-2013)
- Protection of Ischemic Myocardium P01 HL078825 (2004 - 2023)
- Center of Excellence in Diabetes and Obesity Research P30GM127607 (2013 -)
- Hepatobiology & Toxicology COBRE P20 GM113226 (2016 -)
- Current Trends in Stem Cell Therapeutics Postdoctoral Training Program T32HL134644 (2017-2023)
- UofL Bridges to Baccalaureate R25 GM133328 (2019 -)
- MARC at Washington State University T34-GM141971 (2020 -)
- KEEP summer undergraduate training program R25ES036039 (2024 -)

Chair, External Advisory Board, NIH-Funded Institutional Programs

- University of Kentucky Training Program T32-ES007266 (2021)

Research Grant Proposal Reviews and Study Sections

National Cancer Institute
National Institute of General Medical Sciences
National Institute of Environmental Health Sciences
National Institutes of Health
American Heart Association/Georgia Affiliate
Health Effects Institute
North Dakota EPSCoR Program
The Wellcome Trust (England)
The Cancer Research Society (Canada)
National Health and Medical Research Council (Australia)
United States Army Medical Research and Material Command
Pediatric Pharmacology Research Unit Network
Pennsylvania Department of Health
Research Competitiveness Program at the American Association for the Advancement of Science
Smithsonian Institution and Indo-US Science & Technology Forum

French National Alliance for Life and Health Sciences and the French National Cancer Institute

Regional/National/International Service

REVIEWER, Manuscripts for over 100 scientific journals (1980-)

MEMBER, Resolutions Committee, North Dakota Academy of Science (1993-1996)

MEMBER, United Health Services Corporation, Grand Forks, ND (1995-1997)

MEMBER, Bernard B. Brodie Award Selection Committee
American Society for Pharmacology and Experimental Therapeutics (1996-1997)

Ohio Valley Society of Toxicology; PRESIDENT ELECT (1998); PRESIDENT (1999); MEMBER, Executive Committee (1998-2001); MEMBER, Nominating Committee (2000-2002)
CHAIR (1998-2010) and MEMBER (1998-), Arylamine N-acetyltransferase Gene Nomenclature Committee

CHAIR and ORGANIZER, Symposium entitled "Pharmacogenetics of theArylamine *N*-Acetyltransferases: A Symposium in Honor of Wendell W. Weber" presented at the joint meetings of the American Society for Pharmacology and Experimental Therapeutics, the American Society of Biochemistry and Molecular Biology, the Pharmacological Society of Canada, and the French Pharmacological Society, Boston, MA, June 2000.

MEMBER, International Collaborative Study on Genetic Susceptibility to Environmental Carcinogens (1998)

COUNCILOR, Association for Medical School Pharmacology Chairs (2000-2002)

MEMBER, Work group to develop genetics plan for Kentucky (2001)

Co-CHAIR, Etiology and Pathogenesis, Kidney/Bladder Cancer Progress Review Group, National Cancer Institute (2001-2002)

CHAIR (2001) and Member (2002-2008), Knowledge Objectives General Principles Review Committee, Association for Medical School Pharmacology Chairs

MEMBER, Organizing Committee, International Conference on Tobacco-induced Diseases (2004)

MEMBER, Organizing Committees, International Workshops on Arylamine N-acetyltransferases Vancouver Canada (2004), Alexandroupolis Greece (2007), Paris France (2010); Toronto Canada (2013), Columbus USA (Chair: 2024).

MEMBER, Nominating Committee, Molecular Epidemiology Group, American Association for Cancer Research (2005)

WORKSHOP LEADER: Creating a Collaborative Environment that Fosters Clinical and Translational Science, Southern Group on Educational Affairs (SGEA) annual meeting, Louisville, Kentucky (2007)

CHAIR, Planning committee for trainee session at annual Superfund Research Program meeting (2019)

CHAIR, Local and External Organizing Committees, First Integrated International Workshop on Acetyltransferases, Sulfotransferases, and UDP- Glucuronosyltransferases (2019 - 2024)

MEMBER, Pharmacogene Variation (PharmVar) Consortium Expert Panel on Arylamine N-acetyltransferases (2022-)

MEMBER, Clinical Pharmacogenetics Implementation Consortium (CPIC) Expert Panel for N-Acetyltransferase 2/Hydralazine (2023-)

MEMBER, Clinical Pharmacogenetics Implementation Consortium (CPIC) *NAT2* Pharmacogene Curation Expert Panel (PCEP) to assign clinical function (2024-)

COMMUNITY SERVICE

MEMBER, School Board, Sola Scriptura Lutheran School, Decatur, GA (1983-1987)
VICE-PRESIDENT, Sola Scriptura Lutheran Church and School (1983-1985)
PRESIDENT, Sola Scriptura Lutheran Church and School (1986-1988)
TREASURER, Sola Scriptura Lutheran Church and School (1989)
ELDER, River Heights Lutheran Church and School, East Grand Forks, MN (1993-1997)
MEMBER, Board of Education, River Heights Lutheran Church and School (1990-1994)
CHAIR, Board of Education, River Heights Lutheran Church and School (1997)
SUNDAY SCHOOL SUPERINTENDENT, River Heights Lutheran Church (1991-1995)
CHAIR, Board of Elders, River Heights Lutheran Church (1995-1997)
MEMBER, Board of Directors, River Heights Lutheran Church (1995-1997)
MEMBER, Grand Forks Master Chorale, Grand Forks, ND (1992-1997)
SUPERINTENDENT, Hope Lutheran Church Sunday School, Louisville, KY (1999-2001)
MEMBER, Board of Elders, Hope Lutheran Church (1998)
VICE-PRESIDENT, Hope Lutheran Church (1999-2003)
PRESIDENT, Hope Lutheran Church (2006-2008)
MEMBER, Louisville Master Chorale, Louisville, KY (2013-2014)
MEMBER, Church Council, Hope Lutheran Church (1999-2003; 2006-2008; 2021-2023)
DEACON and CHAIR, Member Care Committee, Hope Lutheran Church (2016-2019; 2022 -)

GRADUATE STUDENT THESIS/DISSERTATION TRAINING (PRIMARY MENTOR)

Master of Science

1. **Linda K. Thompson** *Determination of Acetylation Genotypes Using Metabolites of Caffeine and Para Aminobenzoic Acid.* M.S. (Biology) Atlanta University, August 1986.

2. **Erik J. Furman**: *N-Acetylation in American Indians and other People with Diabetes Mellitus.* M.S. (Pharmacology & Toxicology) University of North Dakota, December 1993.

3. **Wen Jiang**: *N-Acetyltransferase Polymorphism and Susceptibility of Prostate Tumorigenesis.* M.S. (Pharmacology & Toxicology) University of North Dakota, August 1996.

4. **Kevin Gray:** *A Novel Procedure for the Rapid Isolation of Genomic DNA from Whole Blood and Tissues.* M.S. (Pharmacology & Toxicology) University of North Dakota, May 1997.

5. **Adrian J. Fretland:** *Cloning, Sequencing, and Recombinant Expression of NAT1, NAT2, and NAT3 Derived from C3H/HeJ (Rapid) and A/HeJ (Slow) Acetylator Inbred Mouse.* M.S. (Pharmacology & Toxicology) University of North Dakota, August 1997.

6. **Yuanqi Zhu**: *Functional Characterization of NAT Gene Polymorphisms*. M.S. (Pharmacology & Toxicology) University of Louisville, December 2002.

7. **Yu (Janet) Zang:** *Mechanistic Studies on the $T^{341}C$ ($Ile^{114}Thr$) Single Nucleotide Polymorphism of Human N-acetyltransferase 2.* M.S. (Pharmacology & Toxicology) University of Louisville, December 2003.

8. **Kristin J. Metry:** *NAT Polymorphisms in Breast Cancer Risk.* M.S. (Pharmacology and Toxicology), University of Louisville, August 2004.

9. **Jennifer A. Loehle:** *Pediatric Pharmacogenetic Studies: The Advent of Genomics, Clinical Implications, and Current Initiatives in Research.* M.S. (Pharmacology & Toxicology), University of Louisville, August 2004.

10. **Jason M. Walraven**: *Investigations of N-acetyltransferases in Human Hepatocytes and Rat Models*. M.S. (Pharmacology & Toxicology), University of Louisville, May 2005.

11. **Xiaoyan (Susan) Zhang:** *Role of N-acetyltransferase (NAT) Polymorphism on 4, 4'-Methylene bis (2-chloroaniline) and 4, 4'-Methylenedianiline (MDA) Acetylation, MDA Hepatotoxicity and a Proposal to Study NAT Expression in Breast Cancer.* M.S., (Pharmacology & Toxicology), University of Louisville, August 2005.

12. **Lori M. Millner**: *Effect of N-acetyltransferase (NAT1) Polymorphism on Mutagenesis and DNA Adduct Formation.* M.S., (Pharmacology & Toxicology), University of Louisville, May 2008.

13. **Thomas J. Schlierf:** *Role of N-acetyltransferase 1 (NAT1) and 2 (NAT2) Polymorphisms in Breast Cancer Risk with Exposure to Aromatic and Heterocyclic Amine Carcinogens.* M.S., (Pharmacology & Toxicology), University of Louisville, August 2008.

14. **Carmine S. Leggett:** *Effects of CYP1A2, NAT1, and NAT2 Genetic Variants in Nucleotide Excision Repair-deficient Human Fibroblasts: Implications for Toxicological Risk from Environmental Arylamines.* M.S., (Pharmacology & Toxicology), University of Louisville, December 2010.

15. **Marcus W. Stepp**: *Inducible Tumor Difference Between Rapid and Slow Rat Nat2 Congenic Fischer 344 Rats Administered Methyl-Nitrosourea.* M.S., (Pharmacology & Toxicology), University of Louisville, August 2014.

16. **Samantha M. Carlisle**: *Metabolomics of Transformed MDA-MB-231 Cell Lines Expressing Different Levels of Human Arylamine N-acetyltransferase 1 (NAT1).* M.S., (Pharmacology & Toxicology), University of Louisville, August 2015.

17. **Mariam R. Habil**: *N-Acetyltransferase 2 (NAT2) genotype polymorphism in cryopreserved human hepatocytes and Chinese hamster ovary (CHO) cells.* M.S., (Pharmacology & Toxicology), University of Louisville, August 2020.

18. **Kennedy M. Walls:** *Heterocyclic Amines and Arylamine* N-*Acetyltransferase 2 Polymorphism in Pathogenesis of Insulin Resistance.* M.S., (Pharmacology & Toxicology), University of Louisville, May 2021.

Doctor of Philosophy

1. **Alma Trinidad**: *Characterization of Acetylator Genotype Dependent and Independent Hamster Hepatic N-Acetyltransferases and their Role in the Metabolism of Arylamine and N-Hydroxyarylamine Carcinogens.* Ph.D. (Biology) Clark Atlanta University, July 1989.

2. **Tokunbo Yerokun**: *The Role of Acetylator Genotype in the Expression of Urothelial N-Acetyltransferases and Genotoxic Activation of Arylamines in the Inbred Hamster System.* Ph.D. (Biology) Clark Atlanta University, July 1989.

3. **Ronald J. Ferguson**: *Syrian Inbred Hamster Arylamine N-Acetyltransferase Genes: Isolation, Functional Expression, and Characterization of Gene Products and Relationship to the N-Acetylation Polymorphism.* Ph.D. (Molecular Genetics) Georgia State University, December 1994.

4. **Yi Feng**: *Hemoglobin Adducts, DNA Adducts, p53 Gene Mutations, and Aberrant Crypts Caused by 2-Aminofluorene and/or 3,2′-Dimethyl-4-Aminobiphenyl in Rapid and Slow Acetylator Syrian Hamsters Congenic at the NAT2 Locus.* Ph.D. (Pharmacology & Toxicology) University of North Dakota, May 1995.

5. **Anne C. Deitz**: *N-Acetyltransferase Genetic Polymorphisms and Breast Cancer Risk.* Ph.D. (Pharmacology & Toxicology) University of North Dakota, May 1999.

6. **Matthew A. Leff**: *Molecular Genetics of N-Acetyltransferases and Prostate Cancer*. Ph.D. (Pharmacology & Toxicology) University of Louisville, May 1999.

7. **Adrian J. Fretland**: *Pharmacogenetics of Heterocyclic Amine Carcinogenesis.* Ph.D. (Pharmacology & Toxicology) University of Louisville, May 2000.

8. **Yuanqi Zhu**: *Human NAT1 Genetic Polymorphisms: Coding Region and Non-coding Region*. Ph.D. (Pharmacology & Toxicology), University of Louisville, December 2004.

9. **Anwar Husain**: *Regulatory Control Regions of Human Arylamine N-acetyltransferase 1 and 2: Implications for Genetic Predisposition to Breast Cancer*. Ph.D. (Pharmacology & Toxicology), University of Louisville, December 2005.

10. **Yu (Janet) Zang**: *Functional Characterization and Mechanistic Studies on Single Nucleotide Polymorphisms of Human N-acetyltransferase 2.* Ph.D (Pharmacology & Toxicology), University of Louisville, May 2006.

11. **Kristin J. Metry (Baldauf)**: *Role of N-acetyltransferase 2 Polymorphism in DNA Adduct Formation and Mutagenesis by Aromatic and Heterocyclic Amine Carcinogens.* Ph.D. (Pharmacology & Toxicology), University of Louisville, May 2007.

12. **Jason M. Walraven**: *Computational and Functional Analyses of Human and Rat N-acetyltransferase Genetic Variants.* Ph.D. (Pharmacology & Toxicology), University of Louisville, December 2007.

13. **Xiaoyan (Susan) Zhang:** *Characterization of N-Acetyltransferase 1 Expression in Breast Cancer.* Ph.D. (Pharmacology & Toxicology), University of Louisville, May 2008.

14. **Robert C.G. Martin II:** *Polymorphisms in Manganese Superoxide Dismutase as a Risk Factor for Cancer.* Ph.D. (Pharmacology & Toxicology), University of Louisville, December 2008.

15. **Lori M. Millner:** *Functional Analysis of N-acetyltransferase (NAT1*14B and NAT1*10) in Complete NATb and NATa mRNA.* Ph.D. (Pharmacology & Toxicology), University of Louisville, August 2011.

16. **Carmine S. Leggett:** *Role of Human Arylamine N-Acetyltransferase in Carcinogen Metabolism and Breast Cancer Progression.* Ph.D. (Pharmacology & Toxicology), University of Louisville, December 2012.

17. **Marcus W. Stepp**: *Role of Human Arylamine N-acetyltransferase 1 in Tumorigenesis and Cancer Biology.* Ph.D. (Pharmacology & Toxicology), University of Louisville, December 2017.

18. **Samantha M. Carlisle**: *Deciphering the Role of Human Arylamine N-Acetyltransferase 1 in Breast Cancer Cell Metabolism Using a Systems Biology Approach.* Ph.D. (Pharmacology & Toxicology), University of Louisville, August 2018.

19. **Mariam R. Habil:** *Investigation of Human N-Acetyltransferases (NAT1 and NAT2) Genetic Polymorphisms in Susceptibility to Aromatic Amine and Alkylaniline Genotoxicity.* Ph.D. (Pharmacology & Toxicology), University of Louisville, December 2022.

20. **Kennedy M. Walls:** *Investigation of Heterocyclic Amines and N-Acetyltransferase 2 Polymorphism in the Dysregulation of Hepatic Energy Homeostasis: A Gene-Environment Approach.* Ph.D., (Pharmacology & Toxicology), University of Louisville, December 2023.

OTHER GRADUATE/UNDERGRADUATE STUDENT RESEARCH TRAINING

1. **Cendie Crawley** (Atlanta University)
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4. **Fredrick Ogolla** (Clark-Atlanta University)
5. **Mandi Mpezo** (Clark-Atlanta University)
6. **Paige Frankenberry** (Georgia State University)
7. **Larry Bull** (University of North Dakota)
8. **Timothy Wilkie** (University of North Dakota)
9. **Shelly Satran** (University of North Dakota)
10. **Kyle Bucher** (University of North Dakota)
11. **Venera Radu** (University of North Dakota)
12. **Matthew Ashmun** (Transylvania University)
13. **Norma Nangju** (University of Louisville)
14. **Jeremy Nosjean** (University of Montpellier, France)
15. **Leo Smith** (University of Louisville)
16. **Olga van der Hel** (University Medical Centre Utrecht, The Netherlands)
17. **Sook un Kim** (Seoul National University College of Medicine, Korea)
18. **Felicia A. Jefferson*** (University of Louisville)
19. **Benjamin D. Martini** (University of Louisville)
20. **Shadi Parsaei** (University of Louisville)
21. **Kalista Hughes** (University of Louisville)
22. **Jessica Holloman** (University of Louisville)
23. **Gerry-Lynn Wichmann** (University of Louisville)
24. **Ashley L. Howarth** (University of Louisville)
25. **Jeffrey M. Rice** (University of Louisville)
26. **Christy M. Denham** (University of Louisville)
27. **Elizabeth H Ristagno** (University of Louisville)
28. **Matthew R. Zajack** (University of Wisconsin-Stout)
29. **Susan M. Higdon** (University of Louisville)
30. **Sarah Clark** (University of Louisville)
31. **Lisa F. Potts** (University of Louisville)
32. **Emily Major** (George Washington University)
33. **Srineil Bodduluri** (Duke University)
34. **David J. Roach** (University of Louisville)
35. **Brandon C. Bunker** (University of Louisville)
36. **Samuel R. Aya** (University of Louisville)
37. **Aaron L. Carrithers** (Transylvania University)
38. **Nicole M. Jackson** (University of Louisville)
39. **James R. Uebel** (University of Louisville)
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41. **Corrine E. Sanford** (Milwaukee School of Engineering)
42. **Aditya Barve** (University of Louisville)
43. **Galina Mamaliga** (University of Louisville)
44. **Maggie Chang** (University of Louisville)
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46. **Yihong (Summer) Li** (University of Louisville)
47. **Angeliki Lykoudi** (Democritus University of Thrace)
48. **Cecily Allen** (University of Louisville)

49. **Jonathan Gardner** (University of Louisville)
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51. **Alaa Bakr** (Cairo University)
52. **Rasha Attia** (University of Louisville)
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59. **Makayla Stephens** (University of Louisville)
60. **Hemangi Patel** (University of Louisville)
61. **Ali Cass** (University of Louisville)
62. **Tessy Udoh** (University of Louisville)
63. **Alexandra Ellison** (University of Louisville)

POSTDOCTORAL RESEARCH TRAINING

1. **Yi Feng, M.D., Ph.D.** (1995-1996; 2003-2004)
2. **Stephanie J. Webb, Ph.D.** (1998-1999)
3. **Udaya S. Devanaboyina, Ph.D.** (1998-1999)
4. **Gong H. Xiao, Ph.D.** (1998-2002)
5. **Matthew A. Leff, Ph.D.** (1999)
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8. **Jean Bendaly, Ph.D**. (2005-2008)
9. **Katherine S. Bourcy, Ph.D.** (2011-2013)
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11. **James T. F. Wise, Ph.D.** (2020-2023)
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1. **Linda K. Thompson**: M.S. Biology, Atlanta University (1986)
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36. **Aaron D. DenDekker:** Ph.D., Biochemistry and Molecular Biology, University of Louisville (2013)
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GRADUATE STUDENT EXTERNAL EXAMINER (year)

1. **Neville J**. **Butcher**: Ph.D., University of Western Australia (2000)
2. **Geoffrey H. Goodfellow**: Ph.D., University of Toronto (2001)
3. **Olga L. van der Hel**: Ph.D., University Medical Centre Utrecht, The Netherlands (2002)
4. **Jacky M. Tiang,** Ph.D., University of Queensland, Australia (2010)

PEER-REVIEWED MANUSCRIPTS

1. Diven SS, Tarvestad-Laise K, Hein DW, Wise JTF. Arylamine N-acetyltransferase 1 knockout in immortalized human bronchial cells results in a reduction of cellular growth. Gene Rep. (in press).

2. Hein DW. Report on the 2024 international phase II/N-acetyltransferase workshop. Arch Toxicol. Aug 30, 2025. https://link.springer.com/article/10.1007/s00204-025-04180-3

3. Habil MR, Hein DW. Mini-review: Human N-acetyltransferase genetic polymorphisms in susceptibility to aromatic amine and alkylaniline genotoxicity. J Pharmacol Exp Ther. 2025 Jul 28;392(9):103670. doi: 10.1016/j.jpet.2025.103670. [Epub ahead of print] Review. PubMed PMID: 40834652.

4. Salazar-González RA, Wise JTF, Doll MA, Hein DW. Metabolism and genotoxicity of 4,4'-oxydianiline is dependent on N-acetyltransferase 2 genetic polymorphism. Environ Toxicol Pharmacol. 2025 Jun;116:104699. doi: 10.1016/j.etap.2025.104699. Epub 2025 Apr 15. PubMed PMID: 40246217; PubMed Central PMCID: PMC12129663.

5. Walls KM, Joh JY, Martinez MM, Hong KU, Hein DW. Metabolic effects of heterocyclic amines on insulin-induced AKT phosphorylation and gluconeogenic gene expression are modified by N -acetyltransferase 2 genetic polymorphism. Pharmacogenet Genomics. 2025 Jun 1;35(4):119-126. doi: 10.1097/FPC.0000000000000559. Epub 2025 Jan 29. PubMed PMID: 39878101; PubMed Central PMCID: PMC12043411.

6. Habil MR, Salazar-González RA, Doll MA, Hein DW. Bioactivation, Mutagenicity, DNA Damage, and Oxidative Stress Induced by 3,4-Dimethylaniline. Biomolecules. 2024 Dec 7;14(12). doi: 10.3390/biom14121562. PubMed PMID: 39766269. PubMed Central PMCID: PMC11674834.

7. Hong KU, Aureliano AP, Walls KM, Hein DW. Investigation on regulation of N-acetyltransferase 2 expression by nuclear receptors in human hepatocytes. Front Pharmacol. 2024; Nov 18; 15:1488367. doi: 10.3389/fphar.2024.1488367. eCollection 2024. PubMed PMID: 39624836; PubMed Central PMCID: PMC11608957.

8. Walls KM, Joh JY, Hong KU, Hein DW. Heterocyclic Amines Disrupt Lipid Homeostasis in Cryopreserved Human Hepatocytes. Cardiovasc Toxicol. 2024 Aug;24(8):747-756. doi: 10.1007/s12012-024-09874-1. Epub 2024 Jun 8. PubMed PMID: 38851663; PubMed Central PMCID: PMC11300155.

9. Wise JTF, Hein DW. N-acetyltransferase metabolism and DNA damage following exposure to 4,4'-oxydianiline in human bronchial epithelial cells. Toxicol Lett. 2024 Jul;398:65-68. doi: 10.1016/j.toxlet.2024.06.005. Epub 2024 Jun 19. PubMed PMID: 38906436; PubMed Central PMCID: PMC11299505

10. Hein DW, Salazar-González RA, Doll MA, Zang Y. The effect of the rs1799931 G857A (G286E) polymorphism on N-acetyltransferase 2-mediated carcinogen metabolism and genotoxicity differs with heterocyclic amine exposure. Arch Toxicol. 2023 Oct;97(10):2697-2705. doi: 10.1007/s00204-023-03577-2. Epub 2023 Aug 18. PubMed PMID: 37592049; PubMed Central PMCID: PMC10529816.

11. Hong KU, Hein DW. N -acetyltransferase 2 haplotype modifies risks for both dyslipidemia and urinary bladder cancer. Pharmacogenet Genomics. 2023 Aug 1;33(6):136-137. doi: 10.1097/FPC.0000000000000500. Epub 2023 May 29. PubMed PMID: 37306342; PubMed Central PMCID: PMC10524719.

12. Walls KM, Hong KU, Hein DW. Induction of glucose production by heterocyclic amines is dependent on N-acetyltransferase 2 genetic polymorphism in cryopreserved human hepatocytes. Toxicol Lett. 2023 Jul 1;383:192-195. doi: 10.1016/j.toxlet.2023.07.002. Epub 2023 Jul 7. PubMed PMID: 37423373; PubMed Central PMCID: PMC10528954.

13. Hong KU, Tagnedji AH, Doll MA, Walls KM, Hein DW. Upregulation of cytidine deaminase in NAT1 knockout breast cancer cells. J Cancer Res Clin Oncol. 2023 Jul;149(8):5047-5060. doi: 10.1007/s00432-022-04436-w. Epub 2022 Nov 3. PubMed PMID: 36329350; PubMed Central PMCID: PMC10193532.

14. Habil MR, Salazar-González RA, Doll MA, Hein DW. Effect of N-acetyltransferase 2 genetic polymorphism on 4,4'-methylenebis(2-chloroaniline)-induced genotoxicity and oxidative stress. Arch Toxicol. 2023 Jun;97(6):1773-1781. doi: 10.1007/s00204-023-03508-1. Epub 2023 May 4. PubMed PMID: 37142755; PubMed Central PMCID: PMC10259506.

15. Habil MR, Hein DW. Effects of dose and human N-acetyltransferase 1 genetic polymorphism in benzidine metabolism and genotoxicity. Arch Toxicol. 2023 Jun;97(6):1765-1772. doi: 10.1007/s00204-023-03497-1. Epub 2023 Apr 25. PubMed PMID: 37097310; PubMed Central PMCID: PMC10192036.

16. Walls KM, Hong KU, Hein DW. Heterocyclic amines reduce insulin-induced AKT phosphorylation and induce gluconeogenic gene expression in human hepatocytes. Arch Toxicol. 2023 Jun;97(6):1613-1626. doi: 10.1007/s00204-023-03488-2. Epub 2023 Apr 2. PubMed PMID: 37005939; PubMed Central PMCID: PMC10192068

17. Hong KU, Walls KM, Hein DW. Non-coding and intergenic genetic variants of human arylamine *N*-acetyltransferase 2 (NAT2) gene are associated with differential plasma lipid and cholesterol levels and cardiometabolic disorders. Front Pharmacol. 2023;14:1091976. doi: 10.3389/fphar.2023.1091976. eCollection 2023. Review. PubMed PMID: 37077812; PubMed Central PMCID: PMC10106703.

18. Wise JTF, Yin X, Ma X, Zhang X, Hein DW. Stable isotope tracing reveals an altered fate of glucose in *N*-acetyltransferase 1 knockout breast cancer cells. Genes. 2023 Mar 31;14(4); 843. doi: 10.3390/genes14040843. PubMed PMID: 37107601; PubMed Central PMCID: PMC10137864.

19. Salazar-González RA, Doll MA, Hein DW. N-acetyltransferase 2 genetic polymorphism modifies genotoxic and oxidative damage from new psychoactive substances. Arch Toxicol. 2023 Jan;97(1):189-199. doi: 10.1007/s00204-022-03383-2. Epub 2022 Sep 23. PubMed PMID: 36138126; PubMed Central PMCID: PMC10187882.

20. Oladipupo I, Ali T, Hein DW, Pagidas K, Bohler H, Doll MA, Mann ML, Gentry A, Chiang JL, Pierson RC, Torres S, Reece E, Taylor KC. Association between cigarette smoking and ovarian reserve among women seeking fertility care. PLoS One. 2022;17(12):e0278998. doi: 10.1371/journal.pone.0278998. eCollection 2022. PubMed PMID: 36512605. PubMed Central PMCID: PMC9746951.

21. Habil MR, Salazar-González RA, Doll MA, Hein DW. N-acetyltransferase 2 acetylator genotype-dependent N-acetylation and toxicity of the arylamine carcinogen β-naphthylamine in cryopreserved human hepatocytes. Arch Toxicol. 2022 Dec;96(12):3257-3263. doi: 10.1007/s00204-022-03381-4. Epub 2022 Sep 16. PubMed PMID: 36112171; PubMed Central PMCID: PMC9641657.

22. Hong KU, Gardner JQ, Doll MA, Stepp MW, Wilkey DW, Benz FW, Cai J, Merchant ML, Hein DW. Dataset for proteomic analysis of arylamine *N*-acetyltransferase 1 knockout MDA-MB-231 breast cancer cells. Data Brief. 2022 Dec;45:108634. doi: 10.1016/j.dib.2022.108634. eCollection 2022 Dec. PubMed PMID: 36426076; PubMed Central PMCID: PMC9679541.

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