

Curriculum Vitae

Name: Serrine S. Lau

Title: Professor

Citizenship: U.S.A. (Naturalized)

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Education: August 1974, B.S., University of Houston
(Major: Mathematics and Chemistry)
December 1980, Ph.D. University of Michigan
(Major: Pharmacology)

Positions Held:

1971-1975	Research Assistant - Institute for Lipid Research, Baylor College of Medicine, Houston, Texas
1981-1983	Visiting Fellow, Laboratory of Chemical Pharmacology, National Heart, Lung, and Blood Institute, NIH, Bethesda, Maryland
1983-1986	Senior Staff Fellow, Laboratory of Experimental Therapeutics and Metabolism, National Cancer Institute, NIH, Bethesda, Maryland
1986-1990	Assistant Professor, Division of Pharmacology and Toxicology, College of Pharmacy, The University of Texas, Austin, Texas
1990-1995	Associate Professor, Division of Pharmacology and Toxicology, College of Pharmacy, The University of Texas, Austin, Texas
1995-2003	Professor, Division of Pharmacology and Toxicology, College of Pharmacy, The University of Texas, Austin, Texas
1996-2003	Director, Toxicology Training Program, College of Pharmacy, The University of Texas, Austin, Texas
1996-2003	Adjunct Professor, Department of Carcinogenesis, The University of Texas M.D. Anderson Cancer Center, Science Park Research Division, Smithville, Texas
1996-2003	Director, Analytical Instrumentation Facility Core, Center for Research on Environmental Disease
2003-present	Professor, Department of Pharmacology and Toxicology, College of Pharmacy, University of Arizona, Tucson, Arizona.
2003-present	Director, Southwest Environmental Health Sciences Center, Center for Toxicology, University of Arizona, Tucson, Arizona.
2013-present	Director, Arizona Board of Reagents Center for Toxicology, College of Pharmacy, University of Arizona, Tucson, Arizona.

Professional Societies:

Phi Kappa Phi
 Mortar Board
 Alpha Lamda Delta
 Rho Chi
 American Association of Colleges of Pharmacy
 American Association for the Advancement of Science
 American Society of Mass Spectrometry
 American Society of Pharmacology and Experimental Therapeutics
 International Society for the Study of Xenobiotics
 Society of Toxicology
 American Chemical Society
 American Association for Cancer Research
 Association of Biomolecular Resource Facilities

Teaching:***University of Texas at Austin:***

1986-1997 PHR 473M 4th year undergraduate Pharmacology-4 credits (team taught, 25%; **course coordinator**)
 1990-2003 4th year undergraduate Pharmacy Honors Course-1 credit (team taught, 34%)
 1986-1999 PHR 687Ka, Methods in Drug Evaluations I, graduate course - 3 credits (team taught, 12%)
 1986-2003 PHR 687Kb, Methods in Drug Evaluations II, graduate course - 3 credits (team taught, 25%)
 1986-2003 PHR 284K, Fundamental Toxicology, graduate course - 2 credits (team taught, 14%)
 1986-2003 PHR 490N, Biochemical Toxicology, graduate course - 4 credits (team taught, 14%)
 1990-2003 PHR 196T, Toxicology Training Seminar, graduate course -1 credit (**course coordinator 1990-1997**)
 1994-2003 PHR 185D, The Responsible Conduct of Science, graduate course-1 credit (team taught. 10%; 1994-1997; **course coordinator; 1998-1999**)
 1998-2003 PHR 357G Pharmacotherapeutics 2c, Doctor of Pharmacy require course-3 credit (team taught, 8 %; **course coordinator; 1998-1999**)
 1998-2003 PHR 390P, Experimental Design and Statistics in Pharmacology, graduate course-3 credit (**course coordinator**)
 1999-2003 Faculty advisor, Asian Pharmacy Student Association, College of Pharmacy

University of Arizona:

2004-present PCOL601 Genomics and Proteomics (graduate course-2 credit (**course coordinator**, and team taught 40%))
 2004-present PCOL573 Environmental Toxicology Colloquium (1-hr lecture)
 2004-present PCOL596C Advanced Toxicology (1-hr lecture, Fall)
 2004-present PCOL596C Current Topics in Toxicology (1-hr lecture, Spring)
 2004-present PCOL 820, 821 Case Studies in Biochemical Pharmacology (facilitator)
 2005-present PCOL871A Pharmacology (2-hr lectures)
 2005-present PCOL 631 Pharmacogenetics/Pharmacogenomics (1-hr lecture)
 2005 PLS530 Methods in Genomics and Cell Biology (1-hr lecture)
 2006-present PCOL871C Pharmacology (5-hr lectures)
 2007-present PCOL602A General and Systems Toxicology (3-1.5 hr lectures)

2007 CHEM520 Advanced Topics in Analytical Chemistry (1-1.5 hr lecture)

Honors and other Special Scientific Recognition:

Rackham Block Grant, University of Michigan, 1975-1976.

Pharmacology Fellowship, University of Michigan, 1975-1976.

Barbour Scholarship, University of Michigan, 1976-1978.

University of Michigan Cancer Research Grant, 1977.

Hoffman-LaRoche Fellowship, University of Michigan, 1978-1980.

Rackham Dissertation Grant, University of Michigan, 1979.

Best Paper Award of Drug Metabolism and Disposition, 1985. Awarded by the Drug Metabolism Division of American Society of Pharmacology and Experimental Therapeutics. Paper entitled "Glutathione Conjugates of 2-Bromohydroquinone are Nephrotoxic."

Nominated for the Best Paper Award of Drug Metabolism and Disposition, 1987, paper title: Cooxidation of 2-bromohydroquinone by renal prostaglandin synthase.

Modulation of prostaglandin synthesis by 2-bromohydroquinone and glutathione.

Nominated for the Texas Excellent Teaching Award of the College of Pharmacy, The University of Texas for the years of 1989 and 1990.

Alfred and Dorothy Mannino Fellow of College of Pharmacy, University of Texas at Austin, 1988-1993. She represents the first Endowed Assistant Professor in the history of the College of Pharmacy at the University of Texas.

Alan W. Hamm Centennial Fellow of College of Pharmacy, University of Texas at Austin, 1993-1995.

Behrens Centennial Professor in Pharmacy, University of Texas at Austin, 1995-1996.

Johnson and Johnson Centennial Professor in Pharmacy, University of Texas at Austin, 1996-2003.

Society of Toxicology Education Award, 2009.

Distinguished Chinese Toxicologist Lectureship Award, sponsored by the American Association of Chinese in Toxicology, SOT special interest group, 2009.

Professional Activities:

1985-1996	Member of Editorial Advisory Board, Drug Metabolism and Disposition
1988-1989	Field Reader for the Food and Drug Administration, DHHS
1991	Reviewer of grant applications for NIH/PHS Foreign Currency Program, Fogarty International Center, NIH, 1991.
1992-1996	Member, NIH Pharmacology Study Section
1993	Special member, NIH Surgery and Bioengineering Study Section
March, 1994	Team member, Site Visit Committee for Program Project, NIDDK
April, 1995	Team member, Site Visit Committee for Program Project, NIDDK
1996,1997	Special member, NIH Hematology-2 Special Emphasis Panel Study Section
1996	Chairperson, Session on "Drug Metabolism Data Blitz" at the Gordon Research Conference on Drug Metabolism.
April, 1998	Team member, Academic Program Review Committee for Pharmacology and Toxicology Interdisciplinary Graduate Program of at The University of Arizona.
1997-2006	Member of Editorial Advisory Board of Chemical Research in Toxicology.
1998-2000	Organizing Committee of the 7 th International Congress on the Mechanisms of Nephrotoxicity and Nephrocarcinogenicity.

- 1998 -1999 Scientific Advisory Committee on the 1999 ISSX/Am. Chem. Soc. Div. Chem. Toxicol. Meeting.
- 1998-2000 Member of Editorial Advisory Board of Journal of Pharmacology and Experimental Therapeutics.
- 2000 Member of an advisory committee for the NIH Center for Scientific Review on the organization and management of peer review within the Cardiovascular Sciences Integrated Review Group.
- 2002 Chair, session on “Cell Cycle Control and Signaling” at the 2002 Gordon Research Conference on Mechanisms of Toxicity, July 21-26, Bates College, Lewiston, Maine.
- 2002 Member of The Digestive Sciences IRG Study Section Boundaries Team, an advisory committee for the NIH Center for Scientific Review.
- 2002-2004 Member of the Committee on Emerging Issues and Data on Environmental Contaminants, an advisory committee under the National Research Council of the National Academy of Sciences.
- 2003-2004 Organize and chair session on “Protein Structure and Function” at the 2004 Gordon Research Conference on Mechanisms of Toxicity, July 25-30, Colby College, Waterville, Maine.
- 2004 Team member, Cancer Biology Academic Program Review Committee, the University of Arizona.
- 2004 Team member, Review committee for small grants in support of interdisciplinary research, Institute for Biomedical Sciences and Biotechnology.
- 2004-2006 Member, External Advisory committee, New Mexico Center for Environmental Health Sciences.
- 2004-2005 Organize and chair session on “Proteome modification, stress response and cell signalling” at the 2005 Gordon Research Conference on Toxicogenomics, June 5-9, Colby-Sawyer College, New London, NH.
- 2004-2005 Organize and co-chair session on “Protein modification during oxidative injury” at the 2005 Annual meeting of the Experimental Biology, March 31-April 5, 2005.
- 2005-2006 Appointed member of the Committee on Human Health Risks of Trichloroethylene, an advisory committee under the National Research Council of the National Academy of Sciences.
- 2005-present Member, External Advisory Board of the UC Berkeley Superfund Basic Research Program.
- 2005-2006 Chair, Local Organizing Committee; co-chair session on “Chemistry of Protein Damage by BRI” for the VII International Symposium on Biological Reactive Intermediates held on January 4-7, 2006, Tucson, AZ
- 2007-2010 Member of Editorial Advisory Board, Molecular Intervention.
- 2007-2008 Member of Scientific Advisory Board, R.J. Reynolds Tobacco Company, Winston-Salem, NC.
- 2007 Member, External Review of the Tulane Center for Bioenvironmental Research (CBR), New Orleans, LA, August 29-30
- 2008 Member, Superfund Basic Research Program External Review committee of the UC Davis.
- 2008-2011 Scientific Advisor, Emerging Issues Steering Committee (EISC) of The Health and Environmental Sciences Institute (HESI).

2008-2010	Member, Emerging Issue Subcommittee on Methodology for Intermittent / Short-term Exposure to Carcinogens (MISTEC), HESI.
2008	Chair, University Review Committee, charged by the Associate Vice Chancellor of Health Sciences for proposal of Department of Environmental Health Sciences, Program of Public Health, University of California Irvine.
2009-2010	Member, Scientific Program committee and chair session on “BRIs-Proteomics Approaches” for the VIII International Symposium on Biological Reactive Intermediates held on July 15 -18th, 2010, Barcelona, Spain.
2010-2015	Member, Board of Scientific Counselors of the NIEHS.
2011-2014	Member, Board of Trustees, The Health and Environmental Sciences Institute (HESI).
2012-2014	Treasurer, HESI.

Committee:

Services at UT Austin:

College Committees, UT Austin:

1987-2003	Graduate Studies
1989-1990, 1996-2003	Equipment Committee
1998-2003	Equipment Committee (Chair)
1988-1998	Graduate Studies Administrative Subcommittee
1990-1992, 1994-1996	Honor Program Committee
1992-1994, 2010-2012	Award Committee
1992-1994	Curriculum Committee
1993-1994	Safety Committee
1993-1996	Faculty-Staff Committee
1994-1996	Department Review Committee on Human Research
1994-1996	Faculty Development Committee
1994-1998	Space Utilization Committee
1996-2000	Budget Council
1997	Chair , Accreditation Self Study Committee on College Organization and Administration
1997	Consultative Committee for the selection of the Dean of College of Pharmacy
1998-2003	Committee on Committees
2000-2002	Financial Aid Committee (Graduate)
2002-2003	Accreditation Self Study Committee on College Physical Resources

University Committees, UT Austin:

1990-1993	University Research Institute Award Committee
1995	Ad Hoc Task Force on Asian American Studies Committee
1997	Faculty representative for Group Interviews of U.T. Austin Presidential candidate
1997-2003	Research Safety Advisory Committee
1999	Faculty representative for Group Interviews of U.T. Austin Vice-President for Research candidate
1998-2003	Minority Liaison Officer for the College of Pharmacy in the University of Texas Graduate Outreach Program

2001	Review Committee for Research Internship. Office of the Vice President and Dean of Graduate Studies
2002	Review Committee for the University Cooperative Society's 2002 Research Excellence Awards

Services at University of Arizona:**College and Departmental Committee, U of Arizona:**

2003-present	College of Pharmacy Executive Committee
2004-2008	Faculty Status Committee, Department of Pharmacology and Toxicology
2004-2006	Chair, Millennium Report Oversight Committee, College of Pharmacy
2005-2006	Curriculum Committee
2005-2008	Chair, Faculty Search Committee, Department of Pharmacology and Toxicology
2006-present	Chair, Research Affairs Committee, College of Pharmacy
2007-present	Faculty Status Committee, College of Pharmacy

University Committees, U of Arizona:

2004-2006	Campus Proteomics Committee
2004	Biostatistics Working Group - Advisory Committee to Dr. Vicki Chandler, Director of BIO5
2007-present	Co-Director of the University of Arizona Mass Spectrometry Consortium
2007-present	Howard Hughes Medical Institute (HHMI, PI-Carol Bender) grant Internal Advisory Committee
2007-present	ADVANCE Faculty Associate Committee
2008	Review Committee of Biomedical Research Abroad: Vistas Open! (BRAVO!) (Program Director-Carol Bender)
2008-present	Faculty Advisory Committee for BIO5
2008-present	Provost's Advisory Council for Strategic Advancement
2012-present	Chair, Arizona Cancer Center Director Search Committee

National Committees:**Appointed/ Invited Committees:**

June 8-10, 1988	Organizing Committee, 12 th annual meeting of Texas Pharmacologists, Austin, Texas
Nov 14-16, 1990	Organizing Committee, Lone Star Regional Chapter Society of Toxicology, Austin, Texas
1987-1988	Task Force on Women in Toxicology Committee, Society of Toxicology
1990	Nominating Committee, Mechanisms Specialty Section of Society of Toxicology
Nov 7-9, 1996	Chair, Organizing Committee, Lone Star Regional Chapter Society of Toxicology, Austin, Texas
April 23-24, 1998	Academic Program Review of the Pharmacology & Toxicology Program at the University of Arizona
1998-present	Alumni Steering Committee, Department of Pharmacology, The University of Michigan, Ann Arbor, Michigan
1999-2002	Board of Publications, Society of Toxicology
2002-2004	Animals in Research Committee
2002-2003	Non-SOT Meeting Sponsorship Committee

2003	External Advisory Committee for the Molecular and Environmental Toxicology Center, University of Wisconsin-Madison, Madison, Wisconsin, April 11, 2003
2003-2004	SOT Task Force on Recruitment and Retention of Students in Toxicology
2004-2007	SOT Task Force on NIH Funding
2005-2007	SOT Member Services Strategy Committee
2008-2009	SOT Research Funding Committee
2009-2013	Board of Publications, Society of Toxicology; Co-Chair 2011-2012; Chair 2012-2013
2012-present	ToxSci Publishing Contract Negotiation Team

Elected Committees:

1994-1996; 2010-2012	Awards Committee, Society of Toxicology Chair 2011-2012
1987-1988	Drug Metabolism and Disposition Best Paper Award Selection Committee
1990-1993	Education Committee, Society of Toxicology
1992-1995	Drug Metabolism Division Executive Committee, ASPET
1994-1996	Councilor of the Regional Lone Star Chapter Society of Toxicology
1997-1998	Secretary/Treasurer, Mechanisms Specialty Section, Society of Toxicology
1998-2001	Councilor of International Society for the Study of Xenobiotics
1997-2000	Secretary/VP-elect/VP of the Regional Lone Star Chapter Society of Toxicology
2000-2002	President of the Regional Lone Star Chapter Society of Toxicology
2002-2004	Councilor, Society of Toxicology
2002-2004	Membership Committee, Council Contact
2002-2006	VP-Elect, VP-, President, Past-President, Mechanisms Specialty Section, Society of Toxicology
2007-present	Scientific Director, Arizona Proteomics Alliance

Research Interests:

Molecular toxicology; enzymology; drug metabolism and target-organ toxicity; mechanisms of quinone-thioether mediated nephrotoxicity, and neurotoxicity; genetic and cellular mechanisms of chemical induced nephrocarcinogenicity; smoking induced renal cancer; prostanoid and retinoid mediated cytoprotection against oxidative stress; mass spectrometry based proteomics approaches in chemical/stress/ induced protein post-translational modifications; biomarker discovery including MALDI-tissue imaging in prostate and kidney cancer, serum proteome signatures of pre- and Type 2 diabetes, and early life asthma-protective exposure.

Invited Lectures:

1985	Gordon Research Conference on Mechanisms of Toxicity. Presentation entitled "Glutathione and bromobenzene conjugation: One electron changes and bioactivation".
1988	Department of Pharmacology, Texas Tech University Health Science Center, Lubbock, TX Seminar title "Nephrotoxicity of quinol-linked glutathione conjugates".
1989	Gordon Research Conference on Drug Metabolism. Presentation title "Determinants of quinol-linked glutathione conjugate mediated toxicity".

- 1989 Symposium on "Reactions of glutathione; mechanisms and biological consequences", The 5th Annual Colloquium sponsored by the Joint Graduate Program of Toxicology, Rutgers University and Robert Wood Johnson Medical Center, Piscataway, N.J. Presentation title "Differential nephrotoxicity of quinol-glutathione conjugates".
- 1989 Department of Animal Drug Metabolism, Merck Sharp and Dohme Research Laboratories, Rahway, N.J. Seminar title "Determinants of quinol-linked glutathione conjugate mediated toxicity".
- 1989 Department of Pharmacology and Toxicology, College of Pharmacy, The University of New Mexico, Albuquerque, N.M. Centennial Speaker of Toxicology Program, Seminar title "Determinants of quinol-linked glutathione conjugate mediated toxicity".
- 1989 Department of Pharmacology and Toxicology, College of Veterinary Medicine, Texas A&M University, College Station, TX. Seminar title "Quinone-linked glutathione conjugate-mediated toxicities"
- 1990 The IVth International Symposium on Biological Reactive Intermediates: Molecular and Cellular Effects and Human Impact, Tucson, Arizona. Title "Glutathione conjugation as a mechanism of targeting latent quinones to the kidney".
- 1990 Symposium on "Glutathione conjugate-mediated toxicities", the 29th Annual Meeting of the Society of Toxicology, Miami Beach, Florida. Title "Quinone-linked glutathione conjugate-mediated toxicities".
- 1990 Pharmaceutical Manufacturers Association Foundation Awardee Meeting. Title "Glutathione conjugation as a mechanism of targeting latent quinones to the kidney".
- 1990 Department of Biochemistry, the University of Texas at Austin, Austin, TX. Seminar title "Nephrotoxicity of quinol-linked glutathione conjugates".
- 1992 Department of Pharmacology, College of Medicine, Texas A&M University, College Station, TX. Seminar title "Cellular target(s) of nephrotoxic quinol-linked thiol conjugates".
- 1992 Health and Environment Labs, Eastman Kodak Company, Rochester, NY, Seminar title "Species differences in nephrotoxicity of hydroquinone-thiol conjugates".
- 1993 Department of Toxicology, Karolinska Institutet, Stockholm, Sweden. Seminar title "Cellular mechanisms of quinone-thioether mediated nephrotoxicity"
- 1993 Institute of Toxicology, ETH and University of Zurich, Schwerzenbach, Switzerland. Seminar title "Cellular mechanisms of quinone-thioether mediated nephrotoxicity"
- 1993 Arkansas Toxicology Symposium - Drug Metabolism as a Cause of Drug Toxicity. Little Rock, Arkansas. Seminar title "Subcellular targets and mechanisms of nephrotoxic quinone-thioethers.
- 1994 Department of Pharmacology and Toxicology, College of Veterinary Medicine, Texas A&M University, College Station, TX. Seminar title "Nephrotoxicity of quinone-thioethers: Mechanism and cellular targets".
- 1994 Toxicology Scholars Colloquium at the University of Connecticut, Storrs, CT. Seminar title "Nephrotoxicity of quinone-thioethers: Mechanism and cellular targets".
- 1995 Department of Toxicology, School of Public Health, The University of Texas, Health Science Center Houston, Houston, TX. Seminar title "Cellular mechanisms of nephrotoxic quinone-thioethers.
- 1995 Department of Pharmacology and Graduate Center for Toxicology, College of Medicine, The University of Kentucky, Lexington, KY. Seminar title "Cellular mechanisms of nephrotoxic quinone-thioethers

- 1995 Women Doing Science. Lectures on Contemporary Issues in Science. The University of Texas at Austin, Austin, TX. Seminar title “The interaction of chemicals with the body. The good, the bad, and the ugly”.
- 1996 IBC Symposium on Molecular Toxicology, Orlando, FL., Lecture title “ A model of metabolism-dependent chemical-induced toxicity linked to carcinogenicity “
- 1996 NIH PRAT Fellows Journal Club, Bethesda, MD, Discussion title “Grant Writing and NIH Grant Peer Review Process”
- 1996 Department of Pharmacology, School of Medicine, Marshall University, Huntington, WV. Seminar title “ Quinone-thioether induced nephrotoxicity and prostaglandin mediated cytoprotection”.
- 1996 Pharmaceutical Department, St. Jude Children’s Research Hospital, Memphis, TN. Seminar title “The cytoprotective effects of prostaglandins in quinone-thioether mediated nephrotoxicity”.
- 1997 Center Mini-Symposium, Center for Research on Environmental Disease, M.D. Anderson Cancer Center, Smithville, TX. Seminar title “Nephrotoxic quinone-thioether regulated stress gene and growth related gene expression”.
- 1997 Center in Molecular Toxicology, Vanderbilt University, Nashville, TN. Seminar title “Quinone-thioether induced nephrotoxicity and prostaglandin mediated cytoprotection”.
- 1998 1st Women in Science Symposium, Rutgers University. Seminar title” Chemical induced injury and cytoprotection”.
- 1998 Department of Pharmacology and Toxicology, The University of Utah, Salt Lake City, Utah. Seminar title “The *Tsc-2* tumor suppressor gene and chemical induced nephrocarcinogenicity in the Eker rat”.
- 1998 Women in Science, University of Texas at Austin, panel discussion on “What can you do with a science degree – graduate school/ medical school/industry/other”.
- 1999 Chemical Industry Institute of Toxicology, Seminar title “Quinone-thioether induced nephrotoxicity and prostaglandin mediated cytoprotection”.
- 2000 Society of Toxicology Continue Education course “Molecular genetics, metabolism and cell signaling in renal carcinogenesis: A lesson in synergistic toxicology”; Lecture title “ Metabolism of renal toxicants and carcinogens” 39th annual meeting, March 19-23, Philadelphia, Pennsylvania.
- 2000 Contemporary concepts on the mechanisms of nephrotoxicity and nephrocarcinogenicity. Seminar title “Quinol-thioether induced nephrocarcinogenicity” Harbor View Hotel, Martha’s Vineyard, Ma, April 15-18, 2000.
- 2000 Division of Drug Metabolism, Merck Research Laboratories, Seminar title “Molecular genetics, metabolism and cell signaling in quinol-thioether induced renal carcinogenesis”, Merck & Co, West Point , PA, June 13, 2000.
- 2000 Division of Drug Metabolism, Merck Research Laboratories, Seminar title “Molecular genetics, metabolism and cell signaling in quinol-thioether induced renal carcinogenesis”, Merck & Co, Rahway, NJ, June 14, 2000.
- 2000 The VIth International Symposium on Biological Reactive Intermediates: Chemical and biological mechanisms in susceptibility to and prevention of environmental diseases, Title: Mutagenicity and carcinogenicity of BRI’s derived from a “non-genotoxic” carcinogen. July 16-20, Paris, France.
- 2000 Keynote address, the 18th Annual meeting of the South Central Chapter of the Society of Toxicology. Presentation title “Integrating studies in metabolism, genetics, cell signaling and cytoprotection to unravel the mechanisms of chemical-induced nephrocarcinogenicity”, October 20, University of Arkansas for Medical Sciences, Little Rock, AR.
- 2001 NIEHS Center Annual Symposium, presentation title “Oxidation and macromolecular arylation in quinol-thioether induced nephrotoxicity”, June 7-8, Madison, WI.

- 2001 Symposium speaker entitled “Protein targets of electrophiles associated with oxidative stress, Annual meeting of the American Chemical Society. Presentation title “Oxidation and macromolecular arylation in quinol-thioether induced nephrotoxicity”. August 26-30, Chicago, IL.
- 2002 Summer Research conference on New Directions in Renal Cell Carcinoma sponsored by the American Urological Association, presentation title “ The potential role of hydroquinone in smoking-related renal cancer” August 2-4, Houston, TX.
- 2002 Southwest Regional American Chemical Society Meeting, presentation title “Proteomics approach to identify protein targets of environmental chemicals” November 3-6, Austin, TX.
- 2003 Department of Pharmacology and Toxicology, College of Pharmacy, University of Arizona, Seminar title “The Tsc-2 Tumor Suppressor Gene and Oxidative DNA Damage: Genetic Susceptibility to Environmental Disease” February 28, 2003, Tucson, AZ.
- 2003 Center Symposium, Center for Research on Environmental Disease, M.D. Anderson Cancer Center, Smithville, TX. Seminar title “Mass spectrometric proteomics approach to identify protein targets of environmental chemicals”, May 5-6, 2003, Austin TX.
- 2004 Genetech, Seminar title “Proteomics approach to study gene-environment interactions”. February 9, 2004, South San Francisco, CA.
- 2004 Department of Molecular Biosciences, School of Veterinary Medicine, University of California at Davis, Seminar title “Proteomics approach to study gene-environment interactions”. February 10, 2004, Davis, CA.
- 2004 Arizona Cancer Center, University of Arizona Health Sciences Center, Tucson, AZ. Seminar title “Renal Cancer:- What can we learn from the Eker rat?”. April 12, 2004, Tucson, AZ.
- 2004 Gordon Research Conference on Mechanisms of Toxicity, Session on “Crossroads of the Cell Cycle, Tumor Suppressors and DNA Damage and Repair. Presentation title “Tuberin Function in DNA Damage and Repair”. July 25-30, 2004, Waterville, ME.
- 2004 Molecular and Environmental Toxicology Center, University of Wisconsin-Madison, Seminar title “The Tsc-2 Tumor Suppressor Gene and Oxidative DNA Damage: Genetic Susceptibility to Environmental Disease”. September 2, 2004, Madison, WI.
- 2004 MWSOT annual meeting, presentation title “The Tsc-2 Tumor Suppressor Gene and Oxidative DNA Damage: Genetic Susceptibility to Environmental Disease”, September 9-10, Park City, UT.
- 2004 Department of Pharmacology and Therapeutics, LSU Health Sciences Center, Seminar title “Proteomics Approach in Studying Prostanoid Mediated Cytoprotection”, November 2, 2004, Shreveport, LA.
- 2004 The Fortieth Anniversary United States-Japan Cooperative Medical Science Program, *Panel on Environmental Genomics and Carcinogenesis*. Presentation title “Genomic and Proteomic Approaches to Identify Gene and Protein Targets of Environmental Chemical-Induced Renal Cancer. December 7-10, 2004, Kyoto, Japan
- 2005 Experimental Biology annual meeting invited speaker on symposium entitled “*Inference of Biological Regulatory Networks*”, presentation title “The tumor suppressor functions of tuberin integrate cell cycle regulation with DNA repair”, April 2-6, 2005, San Diego, CA.
- 2005 Experimental Biology annual meeting invited speaker on symposium entitled “*Protein Modification During Oxidative Injury*”, presentation title “Identification of chemical adduction to target proteins and the impact on biological function”, April 2-6, 2005, San Diego, CA.

- 2005 BCP Seminar speaker, Seminar title "Proteomics Approaches in Studying Protein Targets during Chemical-Induced Renal Cancer" University of Arizona, November 17, 2005, Tucson, AZ
- 2006 The VIIth International Symposium on Biological Reactive Intermediates: BRI and Human Health and Disease. Invited speaker, presentation title "Identification of protein electrophile binding motifs for BRI", January 5-9, 2006, Tucson, AZ.
- 2006 Keystone Symposium on "The Molecular and Integrative Basis for Toxic Responses", invited speaker on session "Receptors and Signaling Pathways". Presentation title "Prostanoid Receptor-Mediated Cytoprotective Signaling Pathways", May 7-11, 2006, Victoria, BC, Canada.
- 2006 Invited speaker at the 2006 annual meeting of the American Chemical Society, on session "Major Advances in Chemical Toxicology-Present and Future" presentation title "Integrating Genomic and Proteomic Approaches to Identify Targets of Environmental Chemical-Induced Nephrocarcinogenicity", September 10-12, 2006, San Francisco, CA.
- 2006 Invited speaker presentation in Symposium "*The Chemical Biology of Cancer*", presentation title "Proteomic Approaches to Identify Targets of Chemical-Induced Renal Cancer". 26th Rocky Mountain Regional American Chemical Society, October 17, Tucson, AZ.
- 2006 Invited speaker presentation title "Integrating metabolism, genetics, and proteomics to unravel the mechanisms of chemical-induced nephrocarcinogenicity". 2006 American College of Veterinary Pathologists/American Society for Veterinary Clinical Pathology Concurrent Annual Meetings December 2-6, Hilton El Conquistador Golf and Tennis Resort, Tucson, AZ.
- 2007 Department of Pharmaceutical Sciences, University of Michigan College of Pharmacy, seminar title "Genomic and Proteomic Approaches to Identify Gene and Protein Targets of Environmental Chemical-Induced Renal Cancer", May 23, 2007, Ann Arbor, MI.
- 2007 MWSOT annual meeting, presentation title "Proteomics approaches in identifying protein targets during chemical-induced cancer", September 6-7, Breckenridge, CO.
- 2007 The Research Frontiers in Nutritional Sciences Conference, Department of Nutritional Sciences, the University of Arizona, presentation title "Proteomic Approaches to Identify Targets of Chemical-Induced Renal Cancer", October 22-23, 2007, Tucson, AZ.
- 2007 University of New Mexico College of Pharmacy Toxicology Seminar Series, presentation title "Proteomics Approaches to Study Gene-Environment Interactions", November 5, 2007, Albuquerque, NM.
- 2007 Integrated Biosystems Research Symposium, sponsored by the Arizona Proteomics Alliance, presentation title "MALDI-Tissue Imaging- Discovery and Validation in Chemical Induced Renal Cancer", November 16, 2007, Tempe, AZ.
- 2007 BioImaging Workshop, sponsored by the Advance Research Institute for Biomedical Imaging, University of Arizona, presentation title "MALDI Mass Spectrometry-based Tissue Imaging". December 8, 2007, Tucson, AZ.
- 2008 Partnership for Personalized Medicine, Proteomics Workshop, presentation title "Proteomics Biomarker Discovery at the University of Arizona". January 3-5, 2008, Phoenix, AZ.
- 2008 Sealy Center for Environmental Health and Medicine, University of Texas Medical Branch, seminar title "Proteomics Approaches in Determining Protein Associated with Renal Cancer", April 21, 2008, Galveston, TX.
- 2008 Frontiers in Medical Research Seminar, College of Medicine Research Office, seminar title "Proteomic and Metabolomic Biomarker Investigation of Type 2 Diabetes" September 9, 2008, Tucson, AZ.

- 2009 Distinguished Chinese Toxicologist Lectureship, sponsored by the American Association of Chinese in Toxicology, SOT special interest group, seminar title "Proteomics in Biomarker Discovery: Diagnostics, Prevention, and Intervention" March 16, 2009, Baltimore, MD.
- 2009 New Enterprise Development in Biotechnology, Office of Technology Transfer and BIO5 Institute, seminar title "Proteomics Personalized Medicine" April 27, 2009, Tucson, AZ.
- 2009 Invited speaker at the *Benzene 2009: Health Effects and Mechanism of Bone Marrow Toxicity*, presentation title "Biological activity of hydroquinone thiol conjugates", September 7-11, 2009, Munich, Germany.
- 2010 Division of Medicinal and Natural Products Chemistry, College of Pharmacy, University of Iowa, seminar title "Proteomics in Biomarker Discovery: Diagnostics, Prevention, and Intervention", April 6, 2010, Iowa City, IA.
- 2010 Invited speaker at the 2010 Southwest Bioexpo, presentation title "Proteomic Approaches in Biomarker Discovery: Diagnostics and Intervention" May 21, 2010, Tucson AZ.
- 2010 Invited speaker at the 2010 biological Reactive Intermediates VIII: Impact and Human Relevance, session on BRIs - Proteomics Approaches, presentation title: "BRI-derived protein adducts as biomarkers of diabetic complications", July 15 - 18, 2010, Barcelona, Spain.
- 2010 Invited speaker at the XIV Congreso Farmaceutico Nacional; sponsored by College of Pharmacists of Costa Rica and Universidad de Ciencias Médicas, presentation title "Diagnosis and Personalized Cancer Treatment: Approach Based on Proteomics", August 12-13, 2010, San Jose, Costa Rica.
- 2010 Drug Discovery and Developmental Therapeutics Seminar Series, Department of Pharmacology and Toxicology, U of Arizona, seminar title "A Proteomics Approach to Cancer Diagnostics and Therapy", September 2, 2010.
- 2010 Invited speaker at the 28th annual meeting of the Mountain West Society of Toxicology, presentation title "Quinones and Retinoids: Voldemort meets Harry Potter", September 9-10, Tucson, AZ.
- 2010 Department of Molecular Pharmacology, City of Hope, seminar title "Mass Spectrometry-based Tissue and Drug Imaging: Utility in Molecular diagnostics and Therapy", September 14, Duarte, CA.
- 2010 Environmental Toxicology Graduate Program, University of California, Seminar titled "Glycooxidative Stress in Type 2 Diabetes: A Proteomics Approach" October 6, Riverside, Riverside, CA.
- 2011 Department of Pharmacology, Physiology and Toxicology, Joan C. Edwards School of Medicine, Marshall University, seminar title "Retinoid and Oxidative Stress: Harry Potter and the Deathly Hallows", July 27, Huntington, WV.
- 2012 The 3rd International Symposium on Organic Synthesis and Drug Development, Session on Biomedical Sciences, lecture titled "Proteomics Approaches and Capabilities in Biomedical Research at the University of Arizona", Changzhou, China May 20-23, 2012. Symposium sponsored by the School of Chemistry and Chemical Engineering Nanjing University, Jiangsu 210093 and School of Petrochemical Engineering, Changzhou University, Jiangsu 213164, P. R. China.
- 2012 The 2nd Chinese Annual Meeting of Drug Toxicology October 24-26, 2012, Plenary lecture speaker sponsored by HESI, titled "Biomarker discovery in Complex Diseases", Chengdu, P. R. China.

Past Grants:

University Research Institute, University of Texas, Role of renal transport in chemically induced nephrotoxicity. 11/7/86-3/31/87. \$7,800, Principal investigator.

- National Institutes of Health, RO1 ES004662, Modulation and mechanism(s) of sulfur conjugate mediated toxicities. 6/1/87-5/31/90, \$234,239 (direct costs), Co-investigator (10% effort; PI-Terrence J. Monks).
- University Research Institute, University of Texas, Enzymatic oxidation of ortho- and para-quinols and the corresponding glutathione conjugates. 7/15/87-3/31/88, \$9,970, Principal investigator.
- Biomedical Research Support Grant, University of Texas, Enzymatic oxidation of ortho- and para-quinols and the corresponding glutathione conjugates. 8/15/87-3/31/88, \$2,200, Principal investigator.
- Pharmaceutical Manufacturers Association Foundation, 1988 Faculty Development Award in Basic Pharmacology, Enzymatic oxidation of ortho- and para-quinols and their corresponding glutathione conjugates. 7/1/88-6/30/90, \$50,000 (direct costs), Principal investigator.
- National Institutes of Health, R29 GM039338, Glutathione conjugation as a mediator of target organ toxicity. 2/1/88-1/31/93, \$316,463 (direct costs), Principal investigator.
- American Association of College of Pharmacy, Renal transport of nephrotoxic thiol conjugates. 6/1/88-8/31/88, \$3,500, Principal investigator.
- N.I.H. MARC Predoctoral Fellowship, 1/1/90-12/31/94, \$80,455, recipient-Maria Rivera, Sponsor-Serrine S. Lau.
- Pharmaceutical Manufacturers Association Foundation, 1990 Predoctoral Fellowship in Pharmacology and Toxicology, Biochemical and physiological determinants of quinol-linked thiol conjugate mediated nephrotoxicity. 6/1/90-5/31/92, \$21,000, Principal investigator- Serrine S. Lau, trainee- Barbara A. Hill.
- National Institutes of Health, RO1 ES004662, Toxicology of quinone-thioethers. 7/1/90-6/30/94, \$742,046 (direct costs), Co-investigator (15% effort, PI-Terrence J. Monks).
- National Institutes of Health, T32 ES 07247, Mechanisms of organ-specific toxicity of xenobiotics-Training Grant. 7/1/90-6/30/95, \$677,746 (direct costs). Training Faculty and Scientific Discussion Coordinator (5% effort, PI-Daniel Acosta).
- National Institutes of Health, R29 GM039338, Administrative supplement to grant Glutathione conjugation as a mediator of target organ toxicity, for support of Minority Pharmacy Student, Ms. Lara Hinojosa, 2/1/91-1/31/92, \$3,994 (direct costs), Principal investigator.
- National Institutes of Health, R29 GM039338, Administrative Supplement to grant Glutathione conjugation as a mediator of target organ toxicity, for support of Minority Pharmacy Student, Ms. Patricia Canales, 6/1/92-1/31/93, \$7,065 (direct costs), Principal investigator.
- National Institutes of Health, RO1 HL048035, Cooxidation and the toxicity of cyclophosphamide. 4/1/92-3/31/95. \$253,034 (direct costs), Co-investigator (5% effort, PI-James P. Kehrer).
- National Institutes of Health, RO1 CA058036, Metabolism of catechol-estrogen. 8/1/92-7/31/96. \$298,205 (direct costs), Co-investigator (10% effort, PI-Terrence J. Monks).
- National Institutes of Health, RO1 AA009337, Ethanol and glutathione on NMDA receptor function. 8/1/92-7/31/97. \$484,682 (direct costs), Co-investigator (5% effort, PI- Steven Leslie).
- National Institutes of Health, GM048789, Small Instrumentation Grant. 9/1/92-8/30/93. \$25,899 (direct costs), Principal investigator.
- CIBA-Geigy Award (Predoctoral Fellowship administered by the Society of Toxicology); Macromolecular damage and cell death. 4/1/95-3/31/96, \$12,000, recipient-Heather Kleiner, Sponsor-Serrine S. Lau.
- National Institute of Health, RO1 GM039338, Metabolism and toxicity of hydroquinone-thioethers. (Yr. 6-9). 7/1/93-6/30/1997 \$505,013 (direct costs), Principal investigator (40% effort).
- National Institutes of Health, T32 ES 07247, Mechanisms of organ-specific toxicity of xenobiotics-Training Grant. 7/1/95-6/30/99, \$513,488 (direct costs). Program Director

- (10% effort). Supplement (\$84,286 to continue supporting trainees for the period of July 1, 1999 to June 30, 2000.
- National Institutes of Health, T35 ES07307, Short-term research training for minority students. 4/1/96-3/31/01, \$148,560 (direct costs). Program Director (10% effort). Supplement (\$37,290) to support 6 students for the period of April 1, 2001 to March 31, 2002.
- National Institutes of Health, RO1 HL048035 Mechanisms of cyclophosphamide toxicity. 12/1/95-11/30/99. \$399,234 (direct costs), Co-investigator (10% effort, PI-James P. Kehrer).
- National Institutes of Health, P30 ES07784, Mechanisms and prevention of environmental disease-P30 Center Grant. 4/1/96-3/31/01, \$2,700,000 (direct costs). Director of Analytical Instrumentation Service Core (10% effort; Program Director- Dr. John DiGiovanni).
- National Institutes of Health P30 ES07784 Pilot project, Mechanism of hydroquinone carcinogenicity. 09/15/96 - 03/31/97. Contract under the P30 Center Grant, Mechanisms and prevention of environmental disease. \$10,925 (direct costs), Principal investigator (10% effort).
- National Institutes of Health, RO1 GM056321, Prostanoid mediated cytoprotection. 4/1/98-3/30/02 \$635,877 (direct costs). Principal investigator (25% effort).
- National Institutes of Health, P30 ES006694 Supplement for Inter-Center Collaborative Pilot Projects, Characterization of quinone thioether-adducted peptides by LC-MS. 4/1/99-3/30/00, \$72,232 (direct costs, UT total subcontract: \$43,313 [D-\$28,875; I-\$14438]) Co-Principal investigator.
- National Institute of Health, RO1 GM 39338, Metabolism and toxicity of hydroquinone-thioethers. (Yr. 10-13). 01/01/00-12/31/03 \$ 692,829 (direct costs), Principal investigator (25% effort).
- National Institutes of Health, T32 ES 07247, Mechanisms of organ-specific toxicity of xenobiotics-Training Grant. 7/1/00-6/30/03, \$535,916 (direct costs). Program Director (10% effort).
- National Institutes of Health, P30 ES07784, Mechanisms and prevention of environmental disease-P30 Center Grant. 4/1/01-3/31/06, \$4,997,646 (direct costs). Director, Analytical Instrumentation Facility Core (10% effort, Program Director- Dr. John DiGiovanni).
- National Institutes of Health, T35 ES07307, Short-term research training for minority students. 4/1/02-3/31/07, \$331,959 (direct costs). Program Director (10% effort).
- Philip Morris External Research Program, The Potential role of hydroquinone in smoking-related renal cancer 7/1/02-6/30/07, \$670,361 (direct costs). Co-PI (10% effort, PI-Dr. Terrence J. Monks).
- National Institutes of Health, T32 ES 07247, Training in molecular toxicology and environmental disease-Training Grant. 7/1/03-6/30/08, \$909,200 (direct costs). Program Director (10% effort).
- National Institutes of Health, P30 ES006694, Southwest Environmental Sciences Center P30 Center Grant. 4/1/99-3/31/04, \$4,211,500 (direct costs). Program Director- (20% effort).
- National Institutes of Health, P30 ES006694, Southwest Environmental Sciences Center P30 Center Grant Administrative Supplement. 4/1/04-3/31/05, \$397,351 (direct costs). Program Director- (20% effort).
- National Institutes of Health, RO1 GM070890, Identification and significance of protein adducts. 3/1/05-2/28/10, \$784,255 (direct costs). Principal investigator (20% effort).
- National Institutes of Health, P30 ES006694, Southwest Environmental Sciences Center P30 Center Grant 4/1/06-3/31/11, \$5,074,297 (direct costs). Program Director (20% effort).
- National Institutes of Health, RO1 GM070890, Minority graduate student supplement (Ingrid Druwe) to RO1, Identification and Significance of Protein Adducts. 3/1/07-2/28/09, \$59,082 DC (direct costs). Principal investigator (20% effort).

- ASPET Summer Undergraduate Research Fellowships (SURF) 03/01/08 - 2/28/11, \$ 27,000 (direct costs). Lau, Co-PI and Training Faculty (1 % effort); (Program Director-Bender).
- National Science Foundation (NSF-PGRP) 0501914, VCA: Self-assembling protein microarrays, a universal resource. 05/15/05 - 4/30/07, \$749,502 (direct costs), [399,479 direct costs to Serrine Lau]; Co-PI (10% effort); (Co-PIs: Galbraith, Lau, Gang).
- NCRR Share Instrument Grant, S10RR022384, ABI 4000 QTRAP Mass Spectrometer. 2/1/06-1/31/07, \$356,960 DC (direct costs). Co-PI (PI, Tsaprailis).
- National Institutes of Health, T32 ES 007091, Graduate Training Program in Toxicology and Toxicogenomics (Year 26-30). 7/1/06-6/30/11, \$1,497,148 (direct costs). Co-PI (10% effort, Program Director, Q. Chen).
- Technology and Research Initiative Funds (TRIF), Proteomic and metabolomic biomarker investigation of type 2 diabetes, Arizona State University and University of Arizona Collaborative Biomedical Research Grant Program, 1/1/07-12/31/08, \$250,000 (direct costs [\$125,000 direct costs to Serrine Lau]. Co-PI (10% effort); Co-PIs: Lau, Tsaprailis, Stump [UA]; Nelson, Mobley, Mandarino [ASU])
- National Institutes of Health, P30 ES006694 Southwest Environmental Health Sciences Center Pilot Project, Biomarkers of glyco-oxidative stress and susceptibility to diabetic complications. 1/1/09-12/31/09. \$40,000 (direct costs). Co-Principal investigator (PI-Stump).
- National Institutes of Health, P30 ES006694 Supplement to Southwest Environmental Sciences Center P30 Center Grant for University of Arizona and New Mexico Inter-Center Collaborative Projects. 4/1/07-3/31/08, \$40,000 (direct costs). Program Director (20% effort).
- National Institutes of Health, R24 DK083948-01 (PAR-08-181), Team approach to translate novel biomarkers for diabetes. 7/1/09-6/30/10, \$300,000 (direct costs); [\$52,008 direct costs to Serrine Lau] (PI-Nelson; Co-I-Lau, 5% effort).
- National Institutes of Health, P30 ES006694, Southwest Environmental Sciences Center P30 Center Grant 4/1/11-3/31/12 (administrative supplement), \$100,000 (direct costs). Program Director (20% effort).
- Ventana Medical Systems, Collaborative Research Agreement, MALDI-tissue imaging in biomarker discovery in lymphoma. 12/1/06-12/31/11 \$561,025 (direct costs; \$561,025 TC (instruments on loan [\$511,356]). Principal investigator (10% effort), co-I: Rimsza.
- The Translational Genomics Research Institute (TGen) Pilot Project, Global mass spectrometry-based protein profiling and drug imaging on tissue. 3/1/09-8/31/11, \$229,316 (direct costs). Principal investigator (10% effort).
- National Institutes of Health, ARRA-RC1 ES018328, Proteomic signatures of an early life asthma-protective exposure. 10/1/09-8/30/11, \$619,445 (direct costs). Principal investigator (20% effort).
- Arizona Biomedical Research Commission, ABRC 10-100, The effect of glyco-oxidative modification on plasma fibrinogen function in diabetes. 7/1/10-6/30/13, \$135,000 (direct costs). Principal investigator (5% effort).

Current Grants:

- Ventana-Roche Gift in support of research program utilizing imaging mass spectrometry for the direct analysis of tissue. 7/1/09-completion, \$110,000 (direct costs). Principal investigator (5% effort).
- National Institutes of Health, RO1 ES016578, Retinoid mediated protection against reactive oxygen species induced cytotoxicity. 9/1/10-4/30/15, \$1,125,000 (direct costs). Principal investigator (20% effort).

- AstraZeneca Studentship “Molecular mechanisms of drug efficacy and drug-induced cytotoxicity in renal cancer” 9/1/10-8/31/14, \$40,000 (direct costs). (PI- Nicholas Mastrandrea; Dissertation Advisor-Lau).
- ASPET Summer Undergraduate Research Fellowships (SURF) 03/01/11 - 2/28/14, \$ 27,000 (direct costs). Lau, Co-PI and Training Faculty (1 % effort). (Program Director-Bender).
- National Institutes of Health, R24 (PAR-08-182) R24DK090958, Team approach to translate novel biomarkers for diabetes. 8/5/11-7/31/15, \$3,753,964 (direct costs); [\$944,353 direct costs to Serrine Lau]. Principal investigator -Nelson; UA Leader-Lau (9% effort).
- National Institutes of Health, RO1 AI083403, Alternaria proteases and protease defenses in asthma. 7/1/11-6/30/16, \$1,830,624 [\$63,555 direct costs to Serrine Lau] (PI- Michael Daines; Co-I-Lau, 5% effort)].
- National Institutes of Health, P30ES006694, Southwest Environmental Sciences Center (Year 15-20). 4/1/12-3/31/17, \$5,250,000 (direct costs). Principal investigator (20% effort).
- Ventana-Roche Research Contract: Multiple Signaling pathway analyses in prostate cancer xenografts to determine drug efficacy. 5/1/12-completion, \$10,000 (direct costs). Principal investigator (5% effort).
- National Institutes of Health, P30 ES006694-16S Administrative Supplement in support of COEC on “Environmental Health Literacy” to Southwest Environmental Sciences Center P30 Center Grant- Project Leader: Marti Lindsey in collaboration with Shaw-Ree Chen at the University of Rochester, 9/1/12-8/31/13, \$90,027 (direct costs); 9/1/13-3/31/14 (no-cost extension). Program Director (20% effort).
- National Institutes of Health K23 HL107389, The effect of saturated fat ingestion on the HDL proteome. 9/1/2012-8/31/2017, \$612,360 (direct costs). Principal investigator-Hussein Yassine; Menor-Serrine Lau (5% effort).
- Skaggs Scholars Program Grant, Mechanisms Underlying Benzene-induced Occupational and Environmental Leukemias. 7/1/13-6/30/15, \$100,000 (direct costs). Co-Principal investigators (Ross, Lau, Monks) (5% effort).
- National Institutes of Health, P30 ES006694-17S Administrative Supplement in support of COEC on “American Indian Environmental Health Stories: An EHS Core Center Multi-site Pilot” to Southwest Environmental Sciences Center P30 Center Grant-Project co-Leader: Marti Lindsey in collaboration with Kelly Edwards (Leader) at the University of Washington, 9/16/13-03/31/14, \$28,283 (direct costs); Program Director (20% effort).
- ASPET Summer Undergraduate Research Fellowships (SURF) 03/01/14 - 2/28/17, \$ 27,000 (direct costs). Lau, Co-PI and Training Faculty (1 % effort). (Program Director-Bender).

Pending Grants:

None

Current Graduate Student and Postdoctoral Fellow Supervised:***I. Doctoral Students***

1. Nicholas Mastrandrea, Doctoral Candidate, Ph.D. student since Fall 2008. His project is “Modulation of 4EBP1 phosphorylation as a target therapy for renal cell carcinoma”

2. Christopher Kuhlman, Doctoral Candidate, Ph.D. student since Fall 2008. His project is “Investigating the Role of Protein Modification by Reactive Xenobiotic Metabolites in the Progression of Bone Marrow Related Disease”
3. Owen Kinsky, Ph.D. student since Fall 2009. His project is “Glyco-oxidation and diabetic complication”.
4. Kevin Xu, Ph.D. student since Fall 2008. His project is “Identification of plasma proteomic signatures that provide asthma protection via early life dog exposure”.
5. Ryan Canatsey, Ph.D. student since Fall 2010. His project is “The role of Nrf2 in all-trans-retinoic acid-mediated renoprotection of ischemia-reperfusion injury”
6. Jessica Sapiro, Ph.D. student since Fall 2010. Her project is “The role of Grp78 and the endoplasmic reticulum stress response in all-trans-retinoic acid-mediated cytoprotection of acute kidney injury”.

II. Master Students

None

III. Postdoctoral Fellows/Research Associates

1. None

Past Graduate Student and Postdoctoral Fellow Supervised:

I. Doctoral Students

1. Barbara A. Hill, Ph.D., December 1991. The title of her dissertation is “Biochemical and Physiological Determinants of Quinol-Linked Thiol Conjugate Mediated Nephrotoxicity”. Postdoctoral position: PRAT Postdoctoral-Fellowship under Dr. Snorri Thorgeirsson at the Laboratory of Experimental Carcinogenesis, NCI, NIH, Bethesda, MD. Latest position: Pharmacology/Toxicology reviewer, FDA, Rockville, MD.
2. Maria I. Rivera, Ph.D., December, 1993. The title of her dissertation is “Cellular Targets and Differential Metabolism of Nephrotoxic Quinone-Thioethers” Postdoctoral position: PRAT Postdoctoral-Fellowship under Dr. Michael Boyd at the Laboratory of Experimental Therapeutics and Metabolism, NCI, NIH, Frederick, MD. Latest position: Pharmacology/Toxicology reviewer, FDA, Rockville, MD.
3. Heather Kleiner, Ph.D., December, 1996. The title of her dissertation is “Macromolecular Arylation and Oxidation in quinone-Thioether induced Nephrotoxicity”. Postdoctoral position under Dr. John DiGiovanni, Department of Carcinogenesis, University of Texas M.D. Anderson Cancer Center, Science Park-Research Division, Smithville, TX. Latest position: Associate Professor, Department of Pharmacology & Therapeutics, School of Medicine, Louisiana State University – Health Sciences Center, Shreveport, LA.
4. Ansam Sawalha, Ph.D., August, 1998. The title of her dissertation is “Species susceptibility to nephrotoxicity by hydroquinone and hydroquinone-glutathione conjugates: Role of oxidation, specific cytochrome P450 isoforms, and tissue arylation”. Postdoctoral position under Dr. Julie Katkin, Baylor College of Medicine, Houston, Tx. Latest position: Director, Poison Control and Drug Information Center, & Head, Medication Quality Control Testing Services, Dean, The Faculty of Pharmacy, An-Najah National University, Nablus-West Bank, Palestine.
5. Kelly Flagella-Towndrow, Ph.D. May, 2000. The title of her dissertation is “Toxicant-induced prostaglandin E₂ synthesis and prostanoid-mediated cytoprotection”. Latest Position: Senior Scientist, Safety Assessment, Genetech Inc., San Francisco, CA.

6. Hae Seong Yoon, December 2000. The title of her dissertation is “A role for the tuberous sclerosis-2 tumor suppressor gene in quinol-thioether-induced nephrocarcinogenicity in the Eker rat”. Postdoctoral position under Dr. Elizabeth Snyderwine, Laboratory of Experimental Carcinogenesis. Latest position: Chief, Human Exposure Assessment Team, National Institute of Toxicology Research, Korea Food & Drug Administration, Korea.
7. Zhe Sophie Jia, December 2004. The title of her dissertation is “Mechanisms of 11-deoxy-16,16-dimethyl prostaglandin E₂ mediated cytoprotection “. Latest Position: Senior Toxicologist, Chevron Phillips Chemical Company LP, The Woodlands, TX.
8. Jean Lord-Garcia, May 2008. The title of her dissertation is “Contribution of heat shock protein 27 and retinol binding protein to 11-deoxy-16, 16-dimethyl prostaglandin E₂ mediated cytoprotection”. Latest Position: Toxicologist, Additive Team, Toxicology and Health Risk Assessment, Chevron Energy Technology Company, Richmond, CA.
9. Matthew Labenski, December 2008. The title of his dissertation is “Identification and characterization of quinone-thioether protein adducts in vivo”. Latest Position: Research Scientist, Analytical Pharmacology Group, Avila Therapeutics, Waltham, MA.
10. Ashley Fisher, December 2008. The title of her dissertation is “Chemical-induced post-translational modifications and the consequent structural and functional alterations”. Latest Position: Principal Investigator, Bioanalytical Chemistry, Covance Indianapolis, IN.
11. Jennifer Cohen, December 2009. The title of her dissertation is “Engagement of MAP kinase and mTOR signaling by the Tsc-2 tumor suppressor in renal cancer”. Latest Position: Scientist II, Drug Safety Evaluation, Takeda Pharmaceuticals, San Diego, CA.
12. Michael Kimzey, May 2011. The title of his dissertation is “Identification, Characterization, and Quantification of Dicarboxyl Adducts in the Plasma Proteome in Type-2 Diabetes” Latest Position: Assay/Product Development Scientist, ProZyme, Hayward, CA.

II. Masters Students

1. Elisabeth Meussen, Masters degree May, 1997. The title of her thesis is “Formation of 8-hydroxydeoxyguanosine in rats and hamsters by glutathione conjugates of hydroquinone” Latest position: Technician, Section for Product Toxicology, Department of Environmental Medicine, National Institute of Public Health, Oslo, Norway.
2. Hae Seong Yoon, Masters degree May, 1998. Her thesis title is “Alterations in protein expression and cell transformation during 2,3,5-*tris*-(glutathion-S-yl)hydroquinone induced nephrocarcinogenicity in the Eker rat”. Received her Ph.D. degree in December 2000 at UT Austin. Latest position: Chief, Human Exposure Assessment Team, National Institute of Toxicology Research, Korea Food & Drug Administration, Korea.
3. Sonal Patel, Masters degree August 2001. The title of her thesis is “Alterations in gene expression during 2,3,5-*tris*-(glutathion-S-yl)hydroquinone induced nephrocarcinogenicity in the Eker rat”. Latest position: Associate Scientist, Amgen Inc. Seattle, WA.
4. Ning Ma, Master degree December, 2003. Her thesis title is “alterations in the expression of annexin I and annexin II proteins during 2,3,5-*tris*-(glutathion-S-yl)hydroquinone-induced nephrotoxicity and nephrocarcinogenicity in Eker rats”

Latest position: Senior Research Associate, Safety Assessment Department, Genetech Inc., San Francisco, CA.

III. Postdoctoral Fellows

1. Dr. Stony Heng-Hsiang Lo, Postdoctoral fellow (Ph.D. from the Department of Pharmacology, Marshall University School of Medicine) June, 1989 to November 1991. His projects involved nephrotoxicity of catechol and its mono-substituted derivatives in mice and rats. Second Postdoctoral position: Research Associate under Dr. Susan Fischer, Department of Carcinogenesis, University of Texas M.D. Anderson Cancer Center, Science Park-Research Division, Smithville, TX (December 1991-December 1997). Latest position: Laboratory manager, Analytical Facility Core, Center of Research on Environmental Disease.
2. Dr. Jos Mertens, Postdoctoral fellow (Ph.D from Agricultural University at Wageningen, The Netherlands, 1990), January 1991-January 1994. His projects were to determine the role of oxygen species, DNA damage and arachidonic acid metabolism in quinone-thioethers mediated nephrotoxicity. Latest position: Associate Director of Toxicology, Wil Research Laboratories Inc., Ashland, OH.
3. Dr. Melanie Peters, Postdoctoral fellow (Ph.D. from St. Mary's Hospital, England, 1993) May 1993-October 1995. Her projects were to determine the role of site specific nephrotoxicity induced by hydroquinone-thioethers in cell proliferation, gene expression and nephrocarcinogenicity. Latest position: Campaign Coordinator Corporate Social Responsibility with the Dutch Consumer Association, Consumentenbond, The Netherlands.
4. Dr. Thomas J. Weber, Postdoctoral fellow (Ph.D. in Physiology and Pharmacology, College of Veterinary Medicine, Texas A&M University, 1994). September 1994-August 1997. His project involved the molecular mechanism of prostaglandins mediated cytoprotection in quinone-thioether induced nephrotoxicity. Latest position: Senior Research Scientist, Battelle, Cell Biology, Richland, WA.
5. Dr. Regina Maldve, Postdoctoral fellow (Ph.D. from the Department of Nutrition, College of Natural Sciences, The University of Texas at Austin, 1997). January 1, 1998- July 30, 1999. Her project involved the molecular mechanism of prostaglandins mediated cytoprotection in quinone-thioether induced nephrotoxicity. Latest position: Sr. Contracts and Grants Specialist Office of the Associate Dean for Research & Graduate Studies College of Pharmacy, The University of Texas at Austin, Austin, TX.
6. Dr. Samy Habib, Research Associate (Ph.D. from Department of Food Science, Faculty of Agriculture, Alexandria University, Alexandria, Egypt, 1992) His project title was "Role of oxidative DNA damage and macromolecular arylation in quinol-thioether mediated nephrocarcinogenicity". May 1, 2000 to June 30, 2003. Latest position: Assistant Professor, Department of Cellular & Structural Biology, School of Medicine, the University of Texas Health Sciences Center at San Antonio, San Antonio, TX.

7. Dr. Maria D. Person, Research Associate (Ph.D. from Department of Chemistry, University of Chicago, 1991). Her project title was “Mass spectrometric approaches in proteomics: Applications in chemical induced cell injury”. October 1, 2000 to August 31, 2003. Latest position: Director, Analytical Instrumentation Facility Core, Center for Research on Environmental Disease, The University of Texas at Austin, Austin, TX.
8. Dr. Mary S. Chacko, Postdoctoral fellow (Ph.D. from Department of Biochemistry, University of Texas Health Science Center at San Antonio, 2002). Her project title was “Cell signaling in quinol-thioether induced nephrocarcinogenicity”, March 1, 2002 to August 31, 2003. Latest position: Scientific Writer/Editor, Ambion, San Antonio, TX.
9. Dr. Wendi David, Postdoctoral fellow (Ph.D. from Division of Medicinal Chemistry, University of Texas at Austin, 2000; first postdoctoral training under Dr. Jennifer Brodbelt, 12/10/00-1/31/03), investigating molecular recognition in the gas-phase, specifically noncovalent DNA-drug interactions and fundamental hydrogen-bonding interactions. Her project title was “Proteomics Approach to Identify Protein Targets of Environmental Chemicals”. February 1, 2003 to August 31, 2003. Latest position: Assistant Professor, Department of Chemistry and Biochemistry, Texas State University, San Marcos, TX.
10. Dr. Rania Milleron, Postdoctoral fellow (Ph.D. from the Department of Biomedical Science, University of Texas Medical Branch at Galveston, December, 2002). Her project title was “Role of benzoquinone adduction to cytochrome c and actin in apoptosis and gene transcription”, April 1 2003 to August 31, 2003. Latest position: Postdoctoral fellow under Dr. Shawn Bratton, Division of Pharmacology and Toxicology, University of Texas at Austin, Austin, TX.
11. Dr. Martina Bowen, Postdoctoral fellow (Ph.D. from the Department of Chemistry, University of Arizona, 2004). Her project titled “Mass spectrometric approaches in proteomics: Applications in chemical induced cell injury”. July 1, 2004 to November 30, 2007. Latest position: Research Chemist, Ansul incorporated Tyco International, Marinette, WI.
12. Dr. Barbara Leinweber, Research Associate (Ph.D. from the Department of Biochemistry, East Carolina University, 1997). Her project titled “Mass spectrometric MALDI-tissue imaging and biomarker discovery”. March 1, 2005 to September 30, 2008. Latest position: Consultant, Tucson. AZ.
13. Dr. Christopher Hattan, Postdoctoral Fellow (Ph.D. from the Division of Medicinal and Natural Products Chemistry, College of Pharmacy at the University of Iowa, 2008). His project titled “Mass spectrometric MALDI-tissue imaging and biomarker discovery”. September 1, 2008- June 15, 2011. Latest Position: Chemist, Cognis, Tucson. AZ.
14. Dr. Hussein Naji Yassine, Clinical Fellow in the Section of Endocrinology, Diabetes and Hypertension, Diabetes Research Center, College of Medicine, U of Arizona (M.D. degree from Beirut Arab University, Beirut, Lebanon, 2003; Resident Department of Medicine, Case Western Reserve University, Cleveland, OH, 2004-2007; Chief Resident, Southern Arizona VA Healthcare System, Tucson, AZ, 2007-2008; Fellow (2008-2010), and Assistant Professor

(2010-2012), Section of Endocrinology, Diabetes and Hypertension University of Arizona, Tucson. His project titled "Proteomic and metabolomic biomarker investigation of Type 2 Diabetes". April 1, 2007-June 30, 2012. Latest position: Assistant Professor, Endocrinology, Keck School of Medicine, University of Southern California, Los Angeles, CA.

15. Dr. Timothy Radabaugh, Research Associate, (Ph.D. in Genetics Graduate Interdisciplinary Program in Genetics, U of Arizona, 2003). His project titled "Proteomic signatures of an early life asthma-protective exposure". October 1, 2009- October 31, 2013.
16. Dr. Richard T. Miller, Research Associate, (Ph.D. in University of Texas at Austin, 1996). His project titled "Tissue and drug imaging by MALDI-mass spectrometry". January 1, 2012- September 19, 2013 (deceased).

Student and Postdoctoral Fellow Awards/Honors

Barbara A. Hill: Continuing Education Fellowship, University of Texas at Austin (September 1989-May 1990); Advanced Predoctoral Fellowship in Pharmacology/Toxicology from the Pharmaceutical Manufacturers Association Foundation (June 1990-December 1991); First Prize awarded in the graduate student symposium competition at the 12th Annual Texas Pharmacologists in June of 1988; Awarded honorable mentions of best student presentation at the 1991 Annual Carl C. Smith Graduate Student Award for Meritorious Research in Mechanisms of Toxicology and PRAT Postdoctoral-Fellowship from NIH (January 1992-December 1994)

Maria I. Rivera: 2nd Place, annual Carl C. Smith Graduate Student Award for Meritorious Research in Mechanisms of Toxicology (1993), NIH-MARC Fellowship (1989-1993); Patricia Harris Fellowship, The University of Texas at Austin (1989); and PRAT Postdoctoral-Fellowship from NIH (January 1994-December 1996).

Ansam Sawalha: 2011 United States of America Department of State **Women in Science Hall of Fame.** *The Environment, Science, Technology and Health Regional Office at the U.S. Embassy in Amman started a program in 2010 to honor outstanding professional women throughout the Middle East and North Africa. Twelve women from a variety of scientific disciplines were selected for their accomplishments and ability to motivate other women. These role models should inspire girls to pursue scientific careers and demonstrate that women can balance demanding careers and fulfilling personal lives.*

Heather E. Kleiner: The Society of Toxicology Travel Award for Best Abstract, offered by the Regulatory and Safety Evaluation Specialty Section (1994); The University Preemptive Fellowship, the University of Texas at Austin (1991), The CIBA-GEIGY Corporation Graduate Student Fellowship administered by the SOT (1995-1996); Honorable Mention, graduate student poster presentation, 1995 annual meeting of the Lone Star Regional Chapter of SOT and a recipient of a NIEHS Predoctoral Training Fellowship in Toxicology (1992-1994), 1st Place Postdoctoral Fellow Platform Presentations, 2000 annual meeting of the Lone Star Regional Chapter of SOT.

Kelly Towndrow: A recipient of a NIEHS Predoctoral Training Fellowship in Toxicology (1996-2000), 2nd Place, Graduate Student Poster Presentations, Lone Star Regional Chapter of SOT, 1996.

Melanie Peters: 3rd Place, 1996 Netherlands Society of Toxicology Annual Meeting.

Hae Seong Yoon: Honorable Mentions, Graduate Student Award of Society of Toxicology Carcinogenesis Specialty Section (1999).

Thomas Weber: 3rd Place, Molecular Biology Specialty Section Graduate Student Competition, 38th. Annual Meeting of SOT, New Orleans, LA. 1999.

- Sonal Patel:** 3rd Place, Graduate Student Poster Presentations, 2000 annual meeting of the Lone Star Regional Chapter of SOT.
- Samy Habib:** Best Postdoctoral Fellow Poster Presentations, 2000 annual meeting of the Lone Star Regional Chapter of SOT.
- Sophie Zhe Jia:** Awarded honorable mentions of best student presentation at the 2002 Annual Carl C. Smith Graduate Student Award for Meritorious Research in Mechanisms of Toxicology, SOT.
- Jean Lord:** Awarded honorable mentions of best student presentation at the 2005 and 2006 Annual Carl C. Smith Graduate Student Award for Meritorious Research in Mechanisms of Toxicology, SOT.
- Ashley Fisher:** Awarded 2nd Place Poster Presentation, 2005 annual meeting of the Mountain West Regional Chapter of SOT; honorable mentions of best student presentation at the 2006 and 2008 Annual Carl C. Smith Graduate Student Award for Meritorious Research in Mechanisms of Toxicology, SOT; 2nd and 3rd Place in the Graduate Student Best Paper Competition sponsored by the Division of Toxicology, American Society of Pharmacology and Experimental Therapeutics, FASEB, 2006 and 2007 respectively.
- Barbara Leinweber:** Recipient of the 2006 Merck Mechanisms Postdoctoral Travel Award sponsored by the Mechanisms Specialty Section of SOT.
- Jennifer Cohen:** Recipient of 2007 SOT Women in Toxicology Specialty Section Student Achievement Award; Awarded 1st Place in the 2007 Graduate Student Best Poster Competition 2007 annual meeting of the Mountain West Regional Chapter of SOT; awarded 3rd Place in the 2008 Student Abstract Competition in the Carcinogenesis Specialty Section; awarded 2nd Place in the 2009 SOT Drug Discovery Toxicology Specialty Section Student Award, 3rd Place in the 2009 Student Abstract Competition in the SOT Molecular Biology Specialty Section; and honorable mentions of best student presentation at the 2009 Annual SOT Carl C. Smith Graduate Student Award for Meritorious Research in Mechanisms of Toxicology; 2nd Place in the 2010 Renal Toxicology Award, SOT Mechanisms Specialty; 1st Place in the 2011 Drug Discovery Specialty Section Best Post-doctoral presentation.
- Matthew Labenski:** Awarded 1st Place in the 2007 Graduate Student Best Paper Competition sponsored by the Division of Toxicology, American Society of Pharmacology and Experimental Therapeutics, FASEB.
- Nicolas Mastrandrea:** Awarded AstraZeneca Studentship 2010-2014. 2nd Place in 2012 Graduate Student Competition in the SOT Carcinogenesis Specialty Section.
- Christopher Kuhlman:** Awarded honorable mentions of best student presentation at the 2011 Annual SOT Carl C. Smith Graduate Student Award for Meritorious Research in Mechanisms of Toxicology. Awarded 3rd Place in the 2011 and 2012 Graduate Student Best Paper Competition sponsored by the Division of Toxicology, American Society of Pharmacology and Experimental Therapeutics, FASEB. Recipient of the 2012 Student Achievement Award for the SOT Biotech Specialty Section.
- Owen Kinsky:** Awarded 2nd Place of best student presentation at the 2012 Annual Carl C. Smith Graduate Student Award for Meritorious Research in Mechanisms of Toxicology, SOT.
- Jessica Sapiro:** 2012 Renal Toxicology Award sponsored by the Mechanisms Specialty Section of SOT. Awarded Best Student Platform Presentation at the 2013 Mountain West Regional Chapter of the SOT.
- Hali (Kevin) Xu:** Abstract selected by the Integrative Systems, Translational and Clinical

Pharmacology Division of 2012 ASPET for poster and oral presentation and awarded 2nd Place on the oral presentation entered the Young Investigator Awards Platform competition.

High school and Undergraduate student supervised:

The University of Texas at Austin

- 1987 Minority high school student, Jeff Hernandez
- 1988 Minority high school student, Melissa Salinas
NSF undergraduate student, Noah Friedman
Minority undergraduate student, Roger Pinon
- 1989 Minority high school student, Gia Pham
- 1991 Minority high school student, Van Chung
NSF undergraduate student, Sam Han
Pharmacy Honor Undergraduate Student, Lara Hinojosa
- 1992 Minority high school student, Van Chung
Pharmacy student, Patricia Canales
- 1993 Minority high school student, Ester Martinez
Pharmacy student, Patricia Canales
- 1994 Minority high school student, Thanh Chung
Pharmacy Honor Undergraduate Student, Elaine Lee and Hilton Holman
- 1995 Minority high school student, Tung Giang
Pharmacy Honors Student, Genie Chow
- 1996 Minority undergraduate student, Minh Phan
Microbiology undergraduate student, Nimisha Maken
- 1997 Minority undergraduate student, Andy Chen
Microbiology undergraduate student, Georgina Osorio
Microbiology undergraduate student, Minh Phan
- 1998 Minority undergraduate student, David Hernandez
Biochemistry undergraduate student, Andy Chan
Biochemistry undergraduate student, Adriana Guerra
Microbiology undergraduate student, Minh Phan
- 1999 Minority student, David Hernandez*
Music/Biochemistry undergraduate student, Molly McGlone[†]
Biochemistry undergraduate student, Adriana Guerra*
Pharmacy Honor student, Ilaria Badagnani
Minority undergraduate student, Khoi-Nguyen Teresa Nguyen

*Recipients of Undergraduate Research Fellowships sponsored by the Office of the Vice President for Research, The University of Texas at Austin

[†]Recipient of American Foundation of Pharmacy Education (AFPE) Fellowship

2000 Minority undergraduate student, Maria Sandoval
Music/Biochemistry undergraduate student, Molly McGlone
Pharmacy Honors student, Ilaria Badagnani[†]

[†]*Recipient of AFPE Fellowship; Pre-emptive Recruitment Fellowship; Harrington Fellowship (One of the most prestigious Predoctoral Fellowship at UT Austin)*

2001 Minority undergraduate student, Maria Sandoval
Music/Biochemistry, Molly McGlone

2002 Minority undergraduate student, Rocky Chavez and Kimberly Walker

2002 High School student from Austin Community College Biotechnology Program, Erin Mikels

2003 Minority undergraduate student, Erick Rodriguez
College of Natural Sciences

The University of Arizona

2004 Minority undergraduate student, Tatiana Halwood
Department of Microbiology

2005 Kajetan Ciborowski
High school senior project BASIS Charter School

2005-2008 John Chapman
College of Pharmacy and UBRP (Undergraduate Biology Research Program)

2005-2006 Darwin Tsinajinnie
Biochemistry and Molecular Biophysics undergraduate student

2006-2007 Katy Mullens[†]
Biochemistry and Molecular Biophysics undergraduate student.

[†]Together with her graduate student mentor, Ashley Fisher, Katy won first place in the Health Sciences category of the Student Showcase hosted by the Graduate and Professional Student Council Homecoming weekend (Nov. 11, 2006). Katy's poster titled "Characterization of Chemically-Induced Protein Adductions by Benzoquinone and Its Quinol-Thioether Metabolites". She was invited to present on Feb. 6, 2007 at the Student Showcase of the University of Arizona Pride Night attended by Arizona legislators including Governor Napolitano and University leaders including President Shelton.

2006 Minority summer undergraduate student, Daisyree Vargas
Pima College, Tucson, Arizona

2006 Daniel Mahoney
High school senior project BASIS Charter School

2006 Minority undergraduate student, Thomasina Blackwater
UBRP/ASPET summer research Program

2006 David Hsieh, Sophomore in Microbiology, U of A

- 2006-2007 Phuong Kieu, Sophomore, Pre-med, U of A
- 2007 Nadav Hart, Ironwood Ridge High School, Oro Valley
- 2007 Arshed Al-Obeidi, Freshman, Molecular and Cellular Biology, U of A
- 2007-2011 Kim Tham, since Freshman, Biomedical Engineering and UBRP, U of A
- 2007-2008 Dan Hafner, Senior, Biochemistry, U of A
- 2007-2008 April Lake, Senoior, Department of Molecular and Cellular Biology, U of A
- 2008 Brian Wang, High school senior project BASIS Charter School, Tucson, AZ
- 2008-2009 Emily Hobart, Senior, Chemistry, U of A
- 2008 Daniela Reyes, Pueblo High School, Tucson, AZ, Keep Engaging Youth in Science (KEYS) Summer Internship, U of A
- 2008 Rosa Jaime-Frias, Ironwood Ridge High School, Tucson, AZ, KEYS Summer Internship, U of A
- 2009-2010 Stephen Karpen, Sophomore, Department of Chemistry and UBRP/ASPET, U of A
- 2009 Kersten Linsangan, Sunnyside High School, Tucson, AZ, KEYS Summer Internship, U of A
- 2009 Connie Chau, PharmD. Student, College of Pharmacy, U of A.
- 2009-2010 Heather Bisbee, Freshman, Department of Molecular and Cellular Biology, U of A
- 2010 Brent Riepel, Senior (senior thesis), Department of Biochemistry, U of A
- 2010 Jaynath Ganesan, Basis Upper School, Tucson, AZ, KEYS Summer Internship, U of A
- 2010-2011 Jamie Houle, Junior, Department of Molecular and Cellular Biology, U of A
- 2010-2011 Itzel Rojas, Senior (senior thesis), Department of Biochemistry, National Hispanic Merits Scholar, U of A
- 2010-2013 Jinglu (Audrey) Shi, Sophomore, Department of Biochemistry, Honors College Student, UBRP/ASPET U of A
- 2011-present Wesley Cai[†], Freshman, Department of Biochemistry, UBRP Program, U of A
[†] 1st Place in Chemistry and Biochemistry Poster Fair (2013, from >90 posters); Excellence Award in the Biological Sciences, Galileo Circle Scholarship, Honorable Mention at 2013 ASBMB Undergraduate Poster Competition and ASBMB Travel awards (2012, 2013).
- 2011 Yurika Isoe, Sophomore, KEYS Program, U of A

- 2012 Ari Romans, Sophomore, Departments of Mathematics and Biology, UBRP Program, U of A
- 2012-present Anne Williams, Sophomor, Department of Physiology, U of A
- 2012 Saheba Bhatnagar, Junior, Desert Vista High School, Phoenix, AZ, KEYS Program, U of A
- 2012 Gloria Le, Junior, Liberty High School, Peoria, AZ, KEYS Program, U of A
- 2013 Danielle Richard, Junior, University High School, Tucson, AZ, KEYS Program, U of A

Ph.D.Dissertation and Masters Thesis Committees, UT Austin, Austin TX:

(A) Pharmacology/Toxicology:

- (1) Youngja H. Park (Ph.D. degree, 1990: supervising professor: Dr. James Kehrer)
- (2) Julio C. Davila (Ph.D. degree, 1990: supervising professor: Dr. James Kehrer)
- (3) Enrique Chicon (Ph.D. degree, 1991: supervising professor: Dr. Daniel Acosta)
- (4) Lucy Fraiser (Ph.D. degree, 1992: supervising professor: Dr. James Kehrer)
- (5) Roberta Grant (Ph.D. degree, 1995: supervising professor: Dr. Daniel Acosta)
- (6) Chun Mak (Ph.D. degree, 1995 : supervising professor: Dr. Richard Wilcox)
- (7) Cai Yuan (Ph.D. degree, 1995: supervising professor: Dr. Daniel Acosta)
- (8) Camarie Perry (MS degree, 1995: supervising professor: Dr. James Kehrer)
- (9) Jeongmi Jeong (Ph.D. degree, 1996: supervising professor: Dr. Terrence Monks)
- (10) Timothy Miller (Ph.D. degree, 1996: supervising professor: Dr. Terrence Monks)
- (11) Rosita Rodriguez (Ph.D. degree, 1996: supervising professor: Dr. Daniel Acosta)
- (12) Sheng Feng (MS degree, 1998, supervising professor: Dr. James Kehrer)
- (13) John Robertson (Ph. D. degree, 1999, supervising professor: Dr. James Kehrer)
- (14) Shawn Bratton (Ph.D. degree. 1999, supervising professor: Dr. Terrence Monks)
- (15) Kate Wurm (MS degree, 1999, supervising professor: Dr. John Richburg)
- (16) Qihong Huang (Ph.D. degree, 2000, supervising professor: Dr. Terrence Monks)
- (17) Fengju Bai (Ph.D. degree, 2000, supervising professor: Dr. Terrence Monks)
- (18) Doug Jones (Ph.D. degree, 2004, supervising professor: Dr. Terrence Monks)
- (19) Jing Dong (Ph.D. degree, 2004, supervising professor: Dr. Terrence Monks)
- (20) MiYoung Yang (Ph.D. degree, 2005, supervising professor: Dr. Terrence Monks)

(B) Biochemistry, College of Natural Sciences

- (1) Guangping Chen (Ph.D. 1993: supervising professor: Dr. Dan Ziegler)

(C) Pharmaceutics, College of Pharmacy

- (1) Shirley Lu (Ph.D. degree, 2004; supervising professor: Dr. Lane Brunner)

Ph.D. Dissertation and Masters Thesis Committees, The University of Texas M. D. Anderson Cancer Center, Science Park-Research Division, Smithville, TX:

(A) Department of Carciongenesis

- (1) Bangyan Li Stiles (Ph.D. degree, 1998; supervising professor: Dr. Susan M. Fischer)

- (2) Jiang-Rong Jiang (Masters degree, 2000; supervising professor: Dr. John DiGiovanni)
- (3) Matt Liu (Ph.D. degree, 2004; supervising professor: Dr. Cheryl Walker)

Ph.D. Dissertation and Masters Thesis Committees, U of Arizona, Tucson AZ:

(A) Cancer Biology Program

- (1) Claudia Benavente (Ph.D. degree, 2007; supervising professor: Dr. Elaine Jacobson)
- (2) Heather Tardif (Ph.D. degree, 2011; supervising professor: Dr. Margaret Briehl)

(B) Nutrition Sciences

- (1) Stephanie Degnar (Ph.D. degree, 2007; supervising professor: Dr. Donato Romagnolo)

(C) Pharmacology & Toxicology

- (1) Christopher Orton (Ph.D. degree, 2006; supervising professor: Dr. Daniel Liebler)
- (2) Kylee Eblin (Ph.D. degree, 2008; supervising professor: Dr. A. Jay Gandolfi)
- (3) Craig D. Fisher (Ph.D. degree, 2008; supervising professor: Dr. Nathan Cherrington)
- (4) Ruiyu Xie (Ph.D. degree, 2009; supervising professor: Dr. Terrence Monks)
- (5) Gladys Erives (Ph.D. degree, 2009; supervising professor: Dr. Terrence Monks)
- (6) Joshua D. Williams (Ph.D. degree, 2010; supervising professor: Dr. Myron Jacobson)
- (7) Joseph Herndon (Ph.D. student; supervising professor: Dr. Terrence Monks)
- (8) Ana Tula-Sanchez (Ph.D. student; supervising professor: Dr. Cathy Smith)
- (9) Lucina Lizarraga Zazueta (Ph.D. student; supervising professor: Dr. Terrence Monks)
- (10) Frances Ramirez (Ph.D. student; supervising professor: Dr. Terrence Monks)
- (11) Angie Davis (Ph.D. student; supervising professor: Dr. Georg Wondrak)
- (12) Christine Kaiser (Ph.D. student; supervising professor: Dr. Laurence Hurley)
- (13) Aram Cholanians (Ph.D. student; supervising professor: Dr. Terrence Monks)

(D) Biostatistics

- (1) Serena Allred (Ph.D. student; supervising professor: Dr. Dean Billheimer)

Publications:

1. Lau, S.S. and Domino, E.F. Gas chromatography mass spectrometry assay for ketamine and its metabolites in plasma. *Biomedical Mass Spectrometry* 4:317-321, 1977. PMID: 410466.
2. Lau, S.S. and Zannoni, V.G. Hepatic microsomal epoxidation of bromobenzene to phenols and its toxicological implication. *Toxicol. Appl. Pharmacol.* 50:309-318, 1979. PMID: 505459.
3. Lau, S.S., Abrams, G.D., and Zannoni, V.G. Metabolic activation and detoxification of bromobenzene leading to cytotoxicity. *J. Pharmacol. Exp. Ther.* 214:703-708, 1980. PMID: 7400972.
4. Lau, S.S., Abrams, G.D., and Zannoni, V.G. Hepatic Microsomal Epoxidation of Bromobenzene to Phenols and its Toxicological Implication. In Coon, M.J., Conney, A.H., Estabrook, R.W., Gelboin, H.V., Gillette, J.R., and O'Brien, P.J. (Eds): *Microsomes, Drug Oxidation and Chemical Carcinogenesis*, Academic Press, 1980, pp. 925-928.
5. Lau, S.S. and Zannoni, V.G. Bromobenzene metabolism in the rabbit: Specific forms of cytochrome P-450 involved in 2,3- and 3,4-epoxidation. *Mol. Pharmacol.* 20:234-235, 1981. PMID: 7290087.
6. Lau, S.S. and Zannoni, V.G. Bromobenzene epoxidation leading to binding on macromolecular protein sites. *J. Pharmacol Exp. Ther.* 219:563-572, 1981. PMID: 7288634.
7. Zannoni, V.G., Marker, E.K. and Lau, S.S. Hepatic bromobenzene epoxidation and binding: prevention by ascorbyl palmitate. *Drug Nutrient Interaction* 1:193-204, 1982. PMID: 6926828.
8. Zannoni, V.G., Holsztyńska, E.J., and Lau, S.S. Biochemical functions of ascorbic acid in drug metabolism. In Seib, P.A. and Tolbert, B.M. (Eds.): *Advances in Chemistry Series 200*, American Chemical Society, 1982, pp. 349-368.
9. Gillette, J.R., Monks, T.J., and Lau, S.S. Covalently bound metabolites as a measure of dose: The pharmacokinetic aspects. In Hayes, A.W., Schnell, R.C., and Miya, T.S. (Eds.): *Developments in the Science and Practice of Toxicology*, Elsevier Science Publisher B.V., 1983, pp. 265-272. PMID: 6677461.
10. Lau, S.S., Monks, T.J., Greene, K.E., and Gillette, J.R. The role of *ortho*-bromophenol in the nephrotoxicity of bromobenzene in rats. *Toxicol. Appl. Pharm.* 72:539-549, 1984. PMID: 6710503.
11. Monks, T.J., Lau, S.S., and Gillette, J.R. Diffusion of reactive metabolites out of hepatocytes: Studies with bromobenzene. *J. Pharmacol. Exp. Ther.* 228:393-399, 1984. PMID: 6694117.
12. Gillette, J.R., Lau, S.S. and Monks, T.J. Intra- and extra-cellular formation of metabolites from chemically reactive species. *Biochem. Soc. Trans.* 12:4-7, 1984. PMID: 6705984
13. Monks, T.J., Lau, S.S., Pohl, L.R., and Gillette, J.R. The mechanism of formation of *o*-bromophenol from bromobenzene. *Drug Metab. Disp.* 12:193-198, 1984. PMID: 6144485.

14. Lau, S.S., Monks, T.J., and Gillette, J.R. Multiple reactive metabolites derived from bromobenzene. *Drug Metab. Disp.* 12:291-296, 1984. PMID: 6145555.
15. Monks, T.J., Lau, S.S., and Hight, R.J. Formation of nontoxic reactive metabolites of *p*-bromophenol: Identification of a new glutathione conjugate. *Drug Metab. Disp.* 12:432-437, 1984. PMID: 6148209.
16. Lau, S.S., Monks, T.J., and Gillette, J.R. Identification of 2-bromohydroquinone as a metabolite of bromobenzene and *o*-bromophenol: Implications for bromobenzene-induced nephrotoxicity. *J. Pharmacol. Exp. Ther.* 230:360-366, 1984. PMID: 6747840.
17. Monks, T.J. and Lau, S.S. Activation and detoxification of bromobenzene in extrahepatic tissues. *Life Sci.* 35:561-568, 1984. PMID: 6748863 (doi: 10.1016/0024-3205(84)90250-9).
18. Lau, S.S., Monks, T.J., Greene, K.E., and Gillette, J.R. Detection and half-life of bromobenzene-3,4-oxide in blood. *Xenobiotica* 14:539-543, 1984. PMID: 6506767 (doi: 10.3109/00498258409151444).
19. Gillette, J.R., Lau, S.S., Monks, T.J. and Pohl, L.R. Free radical intermediates and liver cell necrosis. *Proc. Ninth International Congress of Pharmacology*, Vol. 2, Miller Press, 1984, pp.251-258.
20. Monks, T.J., Lau, S.S., Hight, R.J., and Gillette, J.R. Glutathione conjugates of 2-bromohydroquinone are nephrotoxic. *Drug Metab. Disp.* 13:553-559, 1985. (Best Paper Award). PMID: 2865102.
21. Gillette, J.R., Lau, S.S., Monks, T.J., Satoh, H., and Pohl, L.R. Chemically reactive metabolites: Introductory Remarks. In Boobis, A.R., Caldwell, J., DeMatteis, F., and Elcombe, C.R. (Eds.): *Microsomes and Drug Oxidations*, Taylor and Francis Press, 1985, pp. 231-237.
22. Monks, T.J. and Lau, S.S. Renal transport processes and glutathione conjugate-mediated nephrotoxicity (Commentary). *Drug Metab. Disp.* 15:437-441, 1987. PMID: 2888613.
23. Lau, S.S., McMahon, J.B., McMenamin, M.G., Schuller, H.M., and Boyd, M.R. Metabolism of arachidonic acid in human lung cancer cell lines. *Cancer Research* 47:3757-3762, 1987. PMID: 3036346.
24. Lo, T.N., Saul, W.F., and Lau, S.S. Carrageenan-stimulated releases of arachidonic acid and of lactate dehydrogenase from rat pleural cells. *Biochem. Pharmacol.* 36:2405-2413, 1987. PMID: 3111482 (doi: 10.1016/0006-2952(87)90610-1).
25. Lau, S.S. and Monks, T.J. Co-oxidation of 2-bromohydroquinone by renal prostaglandin synthase: Modulation of prostaglandin synthesis by 2-bromohydroquinone and glutathione. *Drug Metab. Disp.* 15:801-807, 1987. (Nominated for Best Paper Award). PMID: 2893705.
26. Lau, S.S., McMenamin, M.G. and Monks, T.J. Differential uptake of isomeric 2-bromohydroquinone-glutathione conjugates into kidney slices. *Biochem. Biophys. Res. Commun.* 152:223-230 1988. PMID: 2895999.
27. Monks, T.J., Hight, R.J., Chu, P.S. and Lau, S.S. Synthesis and nephrotoxicity of 6-bromo-2,5-dihydroxy-thiophenol. *Mol. Pharmacol.* 34:15-22, 1988. PMID: 3393139.

28. Monks, T.J., Highet, R.J., and S.S. Lau. 2-Bromo-(diglutathion-S-yl)hydroquinone nephrotoxicity: Physiological, biochemical, and electrochemical determinants. *Mol. Pharmacol.* 34:492-500, 1988. PMID: 3173333.
29. Lau, S.S., Hill, B.A., Highet, R.J., and Monks, T.J. Sequential oxidation and glutathione addition to 1,4-benzoquinone: Correlation of toxicity with increased glutathione substitution. *Mol. Pharmacol.* 34:829-836, 1988. PMID: 3200250.
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31. Monks, T.J. and Lau, S.S. Review: Reactive intermediates and their toxicological significance. *Toxicology* 52:1-53, 1988. PMID: 3055427 (doi: 10.1016/0300-483X(88)90195-3).
32. Monks, T.J. and Lau, S.S. Sulfur conjugate mediated-toxicities. *Rev. Biochem. Toxicol.* 10:41-90, 1989.
33. Schnellmann, R.G., Monks, T.J., Mandel, L.J., and Lau, S.S. 2-Bromohydroquinone-induced toxicity to rabbit renal proximal tubules: The role of biotransformation, glutathione and covalent binding. *Toxicol. Appl. Pharmacol.* 99:19-27, 1989. PMID: 2567073.
34. Lau, S.S. and Monks, T.J. The *in vivo* disposition of 2-bromo-[14C]-hydroquinone and the effect of γ -glutamyl transpeptidase inhibition. *Toxicol. Appl. Pharmacol.* 103:121-132, 1990. PMID: 1969181.
35. Monks, T.J. and Lau, S.S. Glutathione, γ -glutamyl transpeptidase, and the mercapturic acid pathway as modulators of 2-bromohydroquinone oxidation. *Toxicol. Appl. Pharmacol.* 103:557-563, 1990. PMID: 1971126.
36. Monks, T.J., Highet, R.J., and Lau, S.S. Oxidative cyclization, 1, 4-benzothiazine formation and dimerization of 2-bromo-3-(glutathion-S-yl)hydroquinone. *Mol. Pharmacol.* 38:121-127, 1990. PMID: 1973524.
37. Lau, S.S., Jones, T.W., Highet, R.J., Hill, B.A. and Monks, T.J. Differences in the localization and extent of the renal proximal tubular necrosis caused by mercapturic acid and glutathione conjugates of 1,4-naphthoquinone and menadione. *Toxicol. Appl. Pharmacol.* 104:334-350, 1990. PMID: 2363184 (doi: 10.1016/0041-008X(90)90307-G).
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- halohydroquinones. *Toxicol. Lett.* 53:147-149, 1990. PMID: 1977216 (doi: 10.1016/0378-4274(90)90111-X).
41. Lau, S.S., Jones, T.W., Sioco, R., Hill, B.A., Pinon, R.K., and Monks, T.J. Species differences in renal γ -glutamyl transpeptidase activity do not correlate with susceptibility to 2-bromo-(diglutathion-S-yl)-hydroquinone nephrotoxicity. *Toxicology* 64:291-311, 1990. PMID: 1980038 (doi: 10.1016/0300-483X(90)90122-W).
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