

**Name:** Terrence James Monks

**Title/Affiliation:** Associate Dean, Research & Graduate Studies  
Professor and Chair  
Department of Pharmacology and Toxicology  
College of Pharmacy  
University of Arizona Health Sciences Center

**Citizenship:** US Naturalized Citizen (October 13<sup>th</sup> 2000)

**Home Address:**



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**Education:** B.Sc 1<sup>st</sup> Class Honors (Valedictorian)  
The Hatfield Polytechnic (University of Hertfordshire)  
Hatfield, Hertfordshire, England

Ph.D.  
St. Mary's Hospital Medical School  
University of London  
Thesis title: *Metabolism and Pharmacokinetics of Theophylline and Aminophylline.*

**Academic Appointments:**

1979-1982 Visiting Fellow, Lab of Chemical Pharmacol., NHLBI,NIH, Bethesda MD.  
1982-1984 Visiting Assoc., Lab of Chemical Pharmacol., NHLBI, NIH, Bethesda MD  
1984-1987 Research Assistant Professor, Vincent T. Lombardi Cancer Center,  
Georgetown University, Washington, D.C.  
1987-1989 Assistant Biochemist, University of TX M.D. Anderson Cancer Center, Science  
Park-Research Division, Smithville, Texas.  
1988-1989 Assistant Professor of Carcinogenesis, University of TX M.D. Anderson Cancer  
Center, Science Park-Research Division, Smithville, TX.  
1988-1989 Adjunct Assistant Professor, Division of Pharmacology and Toxicology College  
of Pharmacy, University of Texas at Austin, Austin, TX.  
1989-1992 Research Scientist and Lecturer, Division of Pharmacol and Toxicology,  
College of Pharmacy, University of TX at Austin, Austin, TX.

- 1992-1995 Assistant Professor, Division of Pharmacology and Toxicology, College of Pharmacy, University of Texas at Austin, Austin, TX.
- 1995-1997 Associate Professor, Division of Pharmacology and Toxicology, College of Pharmacy, University of Texas at Austin, Austin, TX.
- 1997-1998 Adjunct Associate Professor, Dept of Carcinogenesis, UTMDACC.
- 1997-2003 Professor, Division of Pharmacology and Toxicology, College of Pharmacy, University of Texas at Austin, Austin, TX.
- 1997-2003 Director, *Mechanisms of Chemical-Induced Cell Death* Research Core, Center for Research on Environmental Disease.
- 1998-2003 Adjunct Professor, Department of Carcinogenesis, UTMDACC.
- 2000-2003 Director, Center for Molecular and Cellular Toxicology.
- 2003-present Professor and Chair, Department of Pharmacology and Toxicology, College of Pharmacy, University of Arizona Health Sciences Center, Tucson, AZ.
- 2004-present Director, *ROS and Disease Prevention* Research Core, Southwest Environmental Health Sciences Center.
- 2013-present Associate Dean for Research & Graduate Studies, College of Pharmacy, University of Arizona Health Sciences Center, Tucson, AZ.

#### Editorial Boards:

- 1986-1997 *Drug Metabolism and Disposition* (ASPET).
- 1996-1998 *Chemical Research in Toxicology* (ACS).
- 1993-2001 *Life Sciences*.
- 1998-2001 *Toxicology & Applied Pharmacology* (SOT).
- 1998-present *Chemical-Biological Interactions*.
- 1999-2001 *Biochemical Journal*.
- 2001-2003 *Chemical Research in Toxicology* (ACS).
- 2002-2011 *Drug Metabolism Reviews*.
- 2006-present *The Pharmacologist* (ASPET)
- (Ad-hoc) *Molec. Pharmacol., Biochemistry, J.Biol. Chem., Oncogene, Biochem Pharmacol., Free Rad, Biol. Med., P.N.A.S., Cancer Res.*
- 2011-present Associate Editor - *Toxicology & Applied Pharmacology*.

#### Honors and Awards:

- 1975 Departmental Award for the top graduate (*Valedictorian*) Biology Department, Hatfield Polytechnic, Hatfield, Hertfordshire England (currently the University of Hertfordshire).
- 1975-1978 Medical Research Council (U.K.) Scholarship
- 1985-1986 Biomedical Research Support Grant, Georgetown University, Washington, D.C.
- 1986 Best Paper Award, Drug Metabolism and Disposition. Awarded by the Drug Metabolism Division of the American Society of Pharmacology and Experimental Therapeutics. Paper entitled “*Glutathione Conjugates of 2-Bromohydroquinone are Nephrotoxic*”.

- 1988 Nomination for Best Paper Award, Drug Metabolism and Disposition. Awarded by the Drug Metabolism Division of the American Society of Pharmacology and Experimental Therapeutics. Paper entitled “*Cooxidation of 2-bromohydroquinone by renal prostaglandin synthase. Modulation of prostaglandin synthesis by 2-bromohydroquinone and glutathione.*”
- 1993 Zeneca Traveling Lectureship, administered by the U.S. Society of Toxicology.
- 1994 Paper titled “*Developmental toxicity of 2-bromohydroquinone (BHQ) and BHQ-glutathione conjugates in vivo and in whole embryo culture*” (Toxicol. Appl. Pharm. **120**,1-7, 1993) nominated for the Scientific and Technical Achievement Award, United States Environmental Protection Agency.
- 1995/96 Vice-Chairman/Chairman Gordon Research Conference on Drug Metabolism
- 2001 *Morton J. Rodman Distinguished Professorship in Pharmacology*, Dept. of Pharmacology and Toxicology, Rutgers College of Pharmacy and the Joint Graduate Program in Toxicology of Rutgers, The State University of New Jersey, The University of Medicine and Dentistry of New Jersey/Robert Wood Johnson Medical School.
- 2008 Fellow of the Academy of Toxicological Sciences.

**Grant Support (Currently funded grants in bold type):**

- 1987-1990 “Modulation and Mechanisms of Sulfur Conjugate Mediated Toxicities”  
RO1 ES 04662: 01-03, June 1987-May 1990, \$234,239.  
Principal Investigator:- T.J. Monks.
- 1987-1993 “Glutathione-Conjugate Mediated Nephrotoxicity: Structure Activity Relationships”.  
August 1987-Jan., 1993, BF 345,300. (~\$10,000). NATO Grant #542/87 for International Collaboration in Research.  
Project Coordinator:- T.J.Monks (Co-Investigator, Peter J. van Bladeren [The Netherlands])
- 1988-1993 “Glutathione Conjugation as a Mediator of Target Organ Toxicity”.  
R29 GM-39338:01-05, February 1988-January 1993, \$316,463.  
Co-Investigator (P.I., Serrine S. Lau, Div. of Pharmacol. and Toxicology, UT Austin)
- 1988-1990 “Mechanism of Mouse Skin Tumor Promotion by Chrysarobin.”  
CA-37111, August 1988-July, 1993. Participation terminated July 1990.  
Co-Investigator (P.I., J. DiGiovanni [Science Park, UTMDACC])
- 1990-2007 “Graduate Training in Molecular Toxicology & Environmental Disease”.  
T32 ES 07247, July 1, 1990-June 30, 2007. Total Costs Years 12-17 \$1,330,460.  
Training Faculty (P.I., Serrine S. Lau, Div. of Pharmacology and Toxicology, UT Austin).
- 1990-1994 “Toxicology of Quinone-Thioethers”  
R01 ES 04662:04-07, July 1, 1990-June 30, 1995, \$509,481.  
Principal Investigator:-T.J. Monks.
- 1991 3M Pharmaceuticals. Basic Research Grant. \$3,000.
- 1992-1997 “Metabolism of Catechol Estrogens”  
R01 CA 58036. August 1992-July 31, 1997, \$296,842.  
Principal Investigator:- T. J. Monks.

- 1992-1997 “Ethanol and Glutathione on NMDA Receptor Function”  
R01 AA 09337, August 1, 1992-July 31, 1997, \$484,682.  
Co-Investigator (P.I., S.W. Leslie, Div. of Pharmacology & Toxicology, UT Austin)
- 1993-1994 “Small Instrumentation Grant”  
S15 ES 06686, September 1, 1993-August 31, 1994, \$38,108  
Principal Investigator:- T. J. Monks.
- 1994-1995 “Small Instrumentation Grant”  
S15 CA 66098, September 1, 1994-August 31, 1995, \$33,937.  
Principal Investigator:- T. J. Monks.
- 1995-2001 “Integrating Glutathione Conjugation and Cell Death”  
R01 ES-07359, March 1995-February 2000, \$715,700  
Principal Investigator:- T. J. Monks.
- 1996-2003 “Mechanisms and Prevention of Environmental Disease”  
1P30 ES07784 April 1996-March 2006, Years 06-10, \$2,997,452.  
Director, Research Core 1 *“Mechanisms of Chemical Induced Cell Death”*  
Principal Investigator:- T. J. Monks.
- 1996-2000 “Metabolism as a Factor in Drug-Induced Neurotoxicity”  
R01 DA 10832, Sept. 1996-August 2001, \$731,081  
Principal Investigator:- T. J. Monks.
- 2000-2005 “Benzene Metabolites and Hematotoxicity”  
R01 ES 09224, 04/00-03/05, \$1,545,363 (totals costs).  
Principal Investigator:- T. J. Monks.
- 2001-2007 “Short-term Research Training for Minority Students”  
T35 ES07307, 04/02 - 03/07, \$331,959  
NIEHS Undergraduate Summer Training Program  
Training Faculty (P.I., Serrine S. Lau, UT Austin).
- 2001-2002 “ACS Symposium”  
R13 ES11290, 09/01 - 08/02, \$5,000  
Principal Investigator:- T. J. Monks.
- 2002-2008 “Pathways to ROS Induced Cell Death”  
RO1 DK 59491, 07/02-06/08 (\$1,687,500 total costs)  
Principal Investigator:- T. J. Monks
- 2002-2005 “Potential Role of Hydroquinone in Smoking-Related Renal Cancer”  
Philip Morris External Research Program, 09/02 – 08/06, \$967,045  
Principal Investigator:- T. J. Monks.
- 2003-present “Southwest Environmental Health Sciences Center” (P.I. Serrine S. Lau)**  
**Agency: National Institute of Environmental Health Sciences.**  
**Type: P30 ES 06694, Years 17 to 22**  
**This is a NIEHS supported Center grant.**  
**Role = Director, Research Core 3. *“ROS and Disease Prevention”***
- 2008-2013 “Human Disease and the Interplay Between Genes and the Environment”**  
**T32 ES16652, 07/01/08 - 06/30/13 (\$1,367,520 Total Costs).**  
**NIEHS Training Grant**  
**Principal Investigator:- T.J. Monks.**
- 2008-2013 “Hepatic Metabolism and Susceptibility to Ecstasy Toxicity”**

**RO1 DA023525 09/30/08 - 05/31/13 (\$1,672,983 Total Costs)**

**Principal Investigator:- T.J. Monks.**

Approved “College of Pharmacy Remodel and Extension of Research Space” RFA-09-008  
1CO6RR0030377-01 04/01/1 – 03/31/15 (\$14,993,090 Total Costs)  
PI Bootman: Principal Author T.J. Monks – NOT FUNDED

In Preparation: “Calcium and PARP cross-talk in response to ROS-induced DNA damage” for  
submission to NIH/NIEHS, 2014

### **Invited Lectures/Seminars (1988-present)**

April 1988; Dept. of Cancer Research, Research Inst. for Nuclear Medicine & Biology, Hiroshima University, JAPAN. “Nephrotoxicity of Glutathione Conjugates of 2-Bromohydroquinone.”

September 1988; Department of Toxicology, Agricultural University of Wageningen, THE NETHERLANDS. “Nephrotoxicity of Glutathione Conjugates of 2-Bromohydroquinone.”

November 1988. College of Veterinary Medicine, Texas A&M University, USA. “Physiological, biochemical and electrochemical determinants of 2-bromo-(diglutathion-S-yl)-hydroquinone mediated nephrotoxicity.”

April 1989; Dept. of Molecular and Environ. Toxicol., School of Pharmacy, Univ. of Colorado, Boulder, CO, USA. “Electrochemical determinants of quinone-linked GSH conjugate toxicity.”

May 1989; The Vth Annual Graduate Student Colloquium on “*Reactions of Glutathione: Mechanisms and Biological Consequences.*” The Joint Graduate Program in Toxicology, Rutgers University and the Robert Wood Johnson Medical Center, Piscataway, NJ, USA. “Biochemical, physiological and electrochemical determinants of quinol-linked glutathione conjugate mediated nephrotoxicity.”

February 1990; Laboratory of Chemical Pharmacology, NHLBI, NIH, Bethesda, MD., USA. “Nephrotoxicity of Quinol-Linked Glutathione Conjugates.”

February 1990; Society of Toxicology Annual Meeting, Miami, FL, USA. Speaker in the symposium entitled “*Glutathione-Conjugate Mediated Toxicities.*” “Toxicity of Quinone-Thioethers.”

October 1990; Central Toxicology Laboratory, ICI, Alderley Park, Macclesfield, ENGLAND. “Glutathione Conjugate Mediated Toxicities.”

October 1990; International Symposium on “*Renal Disposition and Nephrotoxicity of Xenobiotics*” jointly sponsored by The University of Wurzburg and the Univ. of Rochester, Wurzburg, GERMANY. “Nephrotoxicity of quinol/quinone-linked S-conjugates.”

October 1990; Dept. of Pharmacology & Toxicology, St. Mary’s Hospital Medical School, University of London, ENGLAND. “Glutathione Conjugation: A Toxicological Trojan Horse.”

December 1990; Department of Toxicology, Agricultural University of Wageningen, THE NETHERLANDS. “Selective Nephrotoxicity of Quinone-Thioethers.”

February 1991; Society of Toxicology Annual Meeting, Dallas, TX., USA. Speaker in the Symposium entitled “*Quinone Chemistry and Toxicity.*” “Toxicity of Quinone-Thioethers.”

May 1991; Ohio Valley Chapter, Society of Toxicology, Cincinnati, OH, USA. Symposium on “*Metabolic and Functional Aspects of Renal Toxicology.*” “Quinone-Thioethers: Renal Renegades.”

October 1991; Annual Fall Meeting of the Gulf Coast Chapter, Society of Toxicology, Univ. Texas M.D. Anderson Cancer Center, Science Park-Research Division, Smithville, TX, USA. Symposium on “*Comparative Toxicology.*” “Species Differences in Quinone Thioether Mediated Nephrotoxicity.”

May 1992; Department of Pharmacology & Toxicology, Michigan State University, East Lansing, MI, USA. Seminar “Toxicology of Quinone-Thioethers.”

May 1992; Department of Pharmacology & Toxicology, Michigan State University, East Lansing, MI, USA. Guest Lecture in the Advanced Principles of Toxicology Graduate Course "Mechanisms of Renal Toxicity".

November 1992: Department of Drug and Metabolism and Pharmacokinetics, Smith Kline Beecham Pharmaceuticals, King of Prussia, PA, USA. "Early Morphological and Biochemical Changes Following 2-Br-(diglutathion-S-yl)hydroquinone Administration."

February 1993: Biomedical Sciences Seminar, Marshall University School of Medicine, Huntington, WV, USA. "Early Cellular Targets of Nephrotoxic Quinone-Thioethers."

May 1993: Dept. of Medicine & Therapeutics, Clinical Pharmacology Unit, Univ. Aberdeen, SCOTLAND. "Toxicological Significance of Quinone-Thioether Mediated Nephrotoxicity."

May 1993: Centre for Mechanisms of Human Toxicity, Hodgkin Building, P.O. Box 138, Lancaster Road, Leicester, ENGLAND. "Toxicology of Quinone-Thioethers."

May 1993: Dept. of Environ. Medicine, National Institutes of Public Health, Oslo, NORWAY. "Morphological and Biochemical Correlates of Quinone-Thioether Mediated Nephrotoxicity."

June 1993: TNO/CIVO, Department of Biological Toxicology, Toxicology and Nutrition Institute, Zeist, The Netherlands. "Toxicological Implications of Quinone-Thioether Mediated Nephrotoxicity".

June 1993: Institut für Toxicologie, Universität Würzburg, GERMANY. "Mechanism and Subcellular Targets of Nephrotoxic Quinone-Thioethers."

June 1993: Biochemical Toxicology, Central Toxicology Laboratory, Zeneca LTD., Alderley Park, Macclesfield, Cheshire, ENGLAND. "Toxicity of Quinone Thioethers."

October 1993: University of Arkansas for Medical Sciences, Little Rock, AR. Arkansas Toxicology Symposium, "*Drug Metabolism as a Cause of Drug Toxicity*". "Activation or Detoxication? It's a Kinetic Problem!"

July 1994: *Tenth International Symposium on Microsomes and Drug Oxidations*, Toronto, CANADA. "Bioactivation via Glutathione Conjugation."

September 1994: *Sixth International Congress on Nephrotoxicity and Nephrocarcinogenicity*, Noordwijkerhout, THE NETHERLANDS. "Cellular and Molecular Effects of Quinone-Thioethers."

January 1995: *Fifth International Symposium on Biological Reactive Intermediates*, GDF and the Technical University, Munich, GERMANY. "The Kidney as a Target for Biological Reactive Intermediates."

May 1995: Merck Sharpe and Dohme Research Laboratories, Dept. of Animal Drug Metabolism, Rahway, NJ. "Metabolism and Target Organ Toxicity of Polyphenolic Glutathione Conjugates."

May 1995: Merck Research Laboratories, Department of Drug Metabolism, West Point, PA. "Cellular and Molecular Targets of Polyphenolic-Glutathione Conjugates."

April 1996: Department of Pharmacology and Toxicology, University of Utah, Salt Lake City, UT. "The Renal and Hematotoxicity of Polyphenolic-Glutathione Conjugates: Cellular Targets and Molecular Response."

May 1996: V.A. Medical Center, University of Minnesota, Minneapolis, MN. "The Renal and Neurotoxicity of Polyphenolic-Glutathione Conjugates: Cellular Targets and Molecular Response."

November 1996: Environmental Health Sciences Center, Oregon State University, Corvallis, OR. "Toxicology of Quinone-Thioethers."

April 1997: Department of Medicinal Chemistry and Pharmacognosy, College of Pharmacy, University of Illinois at Chicago. "The Renal and Neurotoxicity of Quinone-Thioethers."

April 1997: Department of Zoology, University of Texas at Austin. "Metabolism of 17 $\beta$ -Estradiol and its Role in Estrogen Mediated Carcinogenicity".

- March 1998: Annual Meeting of the Society of Toxicology, Seattle, WA. "Glutathione-Dependent Bioactivation of Methylenedioxyamphetamine, a Serotonergic Neurotoxicant."
- May 1998: Meril Ltd., Pharmaceutical Research and Development, Iselin, NJ. "The Renal and Neurotoxicity of Polyphenolic Glutathione Conjugates."
- July 1998: Department of Pharmacology and Toxicology, University of Utah, Salt Lake City, UT. "A Tale of Two (toxi)Cities: Benzene and Methylenedioxyamphetamine."
- July 1998: Given Institute, Aspen, CO. *The Toxicology Forum*, "Polyphenolic Glutathione Conjugates: Implications for Neurotoxicity and Disease."
- March 1999: Department of Pharmacology and Toxicology, University of Kentucky, Lexington, KY. "The Neuro- and Hematotoxicity of Quinone-Thioethers."
- March 1999: Annual Meeting of the Society of Toxicology, New Orleans, LA. "Quinone-Thioether Mediated Toxicities."
- April 1999: Annual Meeting of the American Society for Pharmacology and Experimental Therapeutics, Washington, DC. "Catechol Estrogen Thioethers and the Tissue Selectivity of Estrogen-Mediated Carcinogenesis."
- July 1999: Universite Rene Descartes, UFR des Sciences Pharmaceutiques et Biologiques, Unite de Pharmacochimie Moleculaire et Structurale, Paris, France. *Forum on Ecstasy Use and Abuse* "The Role of Metabolism in Ecstasy Neurotoxicity."
- July 1999: " Forrestral Conference Center, Princeton, NJ. Conference on "*Designing Drugs to Minimize Exposure to the Brain* "Metabolism and Toxicity at the Blood-Brain Barrier."
- October 1999: *International Society for the Study of Xenobiotics*, Nashville, TN. "Thioether Conjugates of  $\alpha$ -Methyldopamine Reproduce Methylenedioxyamphetamine-mediated Serotonergic Neurotoxicity."
- March 2000: Department of Pharmacology and Toxicology, University of Rochester, Rochester, NY. "Searching for the Miscreant in Methylenedioxyamphetamine and Methylenedioxymetamphetamine-mediated Neurotoxicity."
- April 2000: Martha's Vineyard, MA. Symposium on "*Mechanisms of Nephrotoxicity and Nephrocarcinogenicity*" "The Role of MAPK's in Renal Epithelial Cell Death."
- May 2000: Department of Pharmacology and Toxicology, University of Arkansas for Medical Sciences, Little Rock, AR. "The Renal and Neurotoxicity of Quinol-Thioethers: Common Metabolites with Uncommon Targets."
- July 2000: *Sixth International Symposium on Biological Reactive Intermediates*, Universite' Rene' Descartes, Paris, France. "Serotonergic Neurotoxicity of Methylenedioxyamphetamine and Methylenedioxymetamphetamine".
- May 2001: College of Pharmacy, Texas Tech University, Amarillo, TX "Neurotoxicity of Ecstasy".
- August 2001: *333<sup>rd</sup> Meeting of the American Chemical Society*, Chicago, IL. Overview "Chemical Modulation of Gene Expression and the Stress Response".
- November 2001: *Morton J. Rodman Distinguished Lectureship* "Metabolism-Dependent Serotonergic Neurotoxicity of Methylenedioxyamphetamine and Methylenedioxymetamphetamine (Ecstasy)" Dept. of Pharmacology and Toxicology, Rutgers College of Pharmacy and the Joint Graduate Program in Toxicology of Rutgers, The State University of New Jersey, The University of Medicine and Dentistry of New Jersey/Robert Wood Johnson Medical School.
- March 2002: Center for Molecular Toxicology, Vanderbilt University, Nashville, TN. Symposium in honor of Prof. Drag Anders "*Bioactivation of Foreign Compounds- Challenges for the Future*" "Glutathione-dependent Bioactivation."

April 2002: Department of Pharmaceutical Sciences, School of Pharmacy, Hampton University, VA. "Metabolism and Neurotoxicity of Ecstasy"

October 2002: *11th North American ISSX Meeting*, Orlando, FL. "Glutathione Conjugate Dependent Bioactivation"

November 2002: *Southwest Regional Meeting of the American Chemical Society*, Austin, TX. "Proteomics Approach to Identify Protein Targets of Environmental Chemicals"

February, 2003: Department of Pharmacology and Toxicology, College of Pharmacy, University of Arizona Health Sciences Center, Tucson, AZ. "Mechanisms of Chemical-Induced Toxicities: The Agony and the Ecstasy".

April, 2003: *Experimental Biology '03 Meeting*, San Diego, CA. "The Neurotoxicity of Putative Ecstasy Metabolites".

May 2003: Pharmacology Research Unit. Instituto Municipal de Investigación Médica (IMIM), Barcelona, Spain. "The Neurotoxicity of Putative Ecstasy Metabolites".

September 2003: *8th. International Congress of Therapeutic Drug Monitoring and Clinical Toxicology*, Basel, Switzerland. "The Neurotoxicity of Ecstasy Metabolites".

April 2004: Brown University, Pathobiology Seminar Series, Dept. of Pathology and Laboratory Medicine, Providence, Rhode Island. "Histone Modifications During ROS-induced DNA Damage."

September 2004: Arizona Cancer Center Cancer Biology Seminar Series. "Histone Modifications During ROS-induced DNA Damage."

October 2004: Tokyo Institute of Technology, Graduate School of Biosciences and Biotechnology, Tokyo, Japan. "Molecular Dissection of ROS-Induced Renal Carcinogenesis in the Eker Rat"

October 2004: *Toxicogenomics International Forum 2004*, Kyoto, Japan. "Understanding Mechanisms of Toxicity as a Prerequisite for Applying Pharmacogenomics to Human Risk Assessment."

March 2005: British Society of Toxicology, Warwick, England, "The Eker Rat as a Model of Chemical-Induced Nephrocarcinogenesis".

September 2005: Medicinal and Natural Products Chemistry, College of Pharmacy, The University of Iowa. "The Metabolism-Dependent Neurotoxicity of Ecstasy".

January 2006: *Seventh International Symposium on Biological Reactive Intermediates*, Westin La Paloma, Tucson, Arizona "ROS-Induced Histone Modifications and Their Role in Cell Survival and Cell Death".

September 2007: *Annual Meeting of the Mountain West Regional Chapter of SOT*. Breckenridge, CO. "The Metabolism-Dependent Neurotoxicity of Ecstasy".

October 2007: Dept. Pharmaceutical Sciences, University of Maryland - Baltimore, College of Pharmacy. "The Metabolism-Dependent Neurotoxicity of Ecstasy".

January 2008: *41st Winter Conference on Brain Research Panel: "How Does "Ecstasy" Produce Long-term Effects?"*- Snowbird, Utah.

April 2008: *Experimental Biology/ASPET Centennial*, San Diego, CA. "GSH Conjugate-mediated Neurotoxicity".

September 2008; Department of Biological Sciences, University of Texas El Paso. "Ecstasy Neurotoxicity: A Scientific 'Whodunnit'"

October 2008: Department of Pharmacology, Toxicology, and Physiology, Marshall School of Medicine, Huntington, WV. "Ecstasy Neurotoxicity: Identifying the Perpetrator"

May 2009: MRC Toxicology Unit, University of Leicester, ENGLAND. "Ecstasy Neurotoxicity: Identifying the Perpetrator"



September 2009: *Benzene 2009: Health Effects and Mechanisms of Bone Marrow Toxicity. Implications for t-AML and the Mode of Action Framework*. Munich, GERMANY. "The Fate of Benzene-Oxide".

February 2010: *The Toxicology Forum*. Washington D.C. "Benzene Metabolism and Biomonitoring".

April 2011: Dept. of Medical Pharmacology, University of Arizona, "The Metabolic Basis of Ecstasy Neurotoxicity".

July 2011: Keynote Speaker at the *West Virginia -INBRE Summer Research Symposium*, Marshall Univ, WV. "A Career in Drug Metabolism; From Tea to Ecstasy".

February 2012: University of New Mexico, Dept. Pharmaceutical Sci., "Metabolism and Ecstasy Neurotoxicity".

March 2012: *British Toxicology Society*, University of Warwick. "Molecular and MS-based Approaches to Assess the Functional Significance of Chemical:Protein Adducts".

May 2012: *ISOSDD 2nd International Symposium on Organic Synthesis and Drug Development*, Nanjing University, China. Plenary Lecture "Drug Discovery Capabilities & Resources at the University of Arizona, BIO5 Oro Valley".

June 2012: *Annual Meeting of the Society of Toxicologic Pathology*, Boston, MA. "Reactive Intermediates and Their Contribution to Chemical-Induced Toxicities".

July 2012: *Human Genes & The Environment Research Training Programs*, Research Triangle Park, NC. "Human Disease and the Interplay Between Genes & the Environment".

October 2012: *Chinese Society of Toxicology*, Chengdu, China. "Reactive Intermediates and Their Contribution to Chemical-Induced Toxicities".

December 2012: *New Approaches on Benzene Occupational Risk Assessment*, Brasilia, Brazil. "Benzene Leukemogenesis – Mode of Action".

### **Membership of Professional Societies:**

American Society of Pharmacology and Experimental Therapeutics (ASPET)  
Society of Toxicology (SOT)  
British Society of Toxicology  
International Society for the Study of Xenobiotics (ISSX)

### **Professional Service:**

1990 Chairman of Symposium entitled "Glutathione Conjugate Mediated Toxicities"  
Presented at the 29<sup>th</sup> annual meeting of the S.O.T., Miami, FL.  
1990 Co-Chairman of the Continuing Education Course on "Free Radical Toxicology"  
presented at the 29<sup>th</sup> Annual Meeting of the S.O.T., Miami, FL.  
1990 Chairman of the Organizing Committee for the Annual Fall Meeting of the Gulf Coast  
Chapter of S.O.T. (GCSOT) Austin, TX.  
1990 Organizer of the Symposium entitled "Chemical Carcinogenesis" presented at the  
Annual Fall Meeting of GCSOT Austin, TX.  
1991 Chairman of the Symposium entitled "Quinone Chemistry and Toxicity" presented at  
the 30<sup>th</sup> Annual Meeting of the S.O.T., Dallas, TX.  
1992/93 Secretary Gulf Coast Chapter of the Society of Toxicology (elected).  
1993 Chairman, Styrene Technical Advisory Panel, Chemical Industry Institute of  
Toxicology, Research Triangle Park, NC., March and August 1993.  
1993/94 Vice-President Elect Gulf Coast Chapter of the Society of Toxicology (elected).  
1994 Chairman, Styrene Technical Advisory Panel, Chemical Industry Institute of  
Toxicology, Research Triangle Park, NC., June 1994.

- 1994 Scientific Program Committee, *6<sup>th</sup> International Congress on Nephrotoxicity and Nephrocarcinogenicity*, 21<sup>st</sup>-24<sup>th</sup> September 1994, Noordwijkerhout, THE NETHERLANDS.
- 1994 Chairman of Session “Chemical-Induced Nephrotoxicity” *6<sup>th</sup> International Congress on Nephrotoxicity and Nephrocarcinogenicity*, Noordwijkerhout, THE NETHERLANDS, September 1994.
- 1994/95 Vice-President Gulf Coast Chapter of the Society of Toxicology (elected).
- 1994/95 International Program Advisory Committee, *Int. Symposium on Biological Reactive Intermediates V*, GSF and the Technical University, Munich, Germany, January 1995.
- 1994/95 Technical review Committee, National Institute on Alcohol Abuse & Alcoholism, Toxicology Contract review, February 1994, August 1995.
- 1995 Vice-Chairman, **Gordon Research Conference on Drug Metabolism (elected)**. Discussion Leader session on “Recent Advances in Pulmonary biotransformation”.
- 1995 Medical Research Council (Canada) Group Grant Site Visit Committee, University of British Columbia, Vancouver, February 1995.
- 1995/96 President Gulf Coast Chapter of the Society of Toxicology (**elected**).
- 1996 Chairman, **Gordon Research Conference on Drug Metabolism (elected)**. Discussion Leader “*Phase III Metabolism, The Export of Drugs and Metabolites*”.
- 1996-98 Member, Drug Metabolism Division Executive Committee, ASPET (**elected**).
- 1996 Chemical Pathology NIH Study Section, *ad hoc* member.
- 1997-00 Chairman, Program Committee, Sixth International Symposium on Biological Reactive Intermediates, Université René Descartes, Paris, France. June 2000.
- 1998 Co-Chairman of Symposium titled “*The Role of Glutathione in Neuroprotection and Neurotoxicity*” presented at the *37<sup>th</sup> Annual Meeting of the S.O.T.*, Seattle WA.
- 1998 Chairman of Platform Session titled “Kidney” presented at the *37<sup>th</sup> Annual Meeting of the S.O.T.*, Seattle, WA.
- 1998 ALTX-4 NIH Study Section, *ad hoc* member.
- 1998 NIH Center for Scientific Review, Special Emphasis Review Panel.
- 1999 Co-Chairman of Symposium titled “The Roles of Quinones in Toxicology” presented at the *38<sup>th</sup> Annual Meeting of the S.O.T.*, New Orleans, LA.
- 1999 Co-Chairman of Symposium entitled “Estrogen Metabolism and Carcinogenicity” presented at the *ASPET/FASEB Annual Meeting* in Washington, DC.
- 1999 Pharmacology NIH Study Section, *ad hoc* member.
- 2000 Committee member, Program Project review, University of Arkansas for the Medical Sciences.
- 2000 Session Co-Chair, “Cell Cycle Control and Genome Integrity” at the *Mechanisms of Toxicity Gordon Research Conference*.
- 2000-03 Vice President Elect, Vice President and President Society of Toxicology Mechanisms Specialty Section (**elected**)
- 2001 Committee member, NIDDK Program Project Review, University of Arkansas for the Medical Sciences
- 2001 Chairman of Symposium titled “*Chemical Modulation of Gene Expression and the Stress Response*” *333<sup>rd</sup> Meeting of the American Chemical Society*, Chicago, IL. **Highlighted in C&E News, 79, pp 69-76, 2001.**
- 2001-04 ALTX-1 *Pathophysiological Sciences Integrated Review Group*, Center for Scientific Review, NIH.
- 2002 Nominating Committee, Society of Toxicology (**elected**).
- 2002 NIH Center for Scientific Review, Special Emphasis Review Panel, July and Oct. '02.
- 2002-04 Chair-Elect, vice-Chair, Chair, Toxicology Division, ASPET (**elected**).
- 2002 Session Co-Chair, “*Cell Cycle Control and Signaling in Toxicity*” at the *Mechanisms of Toxicity Gordon Research Conference*.
- 2003 Chairman of Symposium titled “*The Dangers of Designer Drugs*” at *Experimental Biology 2003 (ASPET)*, San Diego, CA.
- 2005: Member of Workshop “Developing a Research Strategy for Improving Health Risk: Assessment of Bromate in Drinking Water” Miami University, Oxford Ohio.
- 2005 co-Chairman of Symposium titled “*Genetic Susceptibility to Estrogen Carcinogenesis*” EB/ASPET annual meeting, San Diego, CA, April 2005.

- 2005 NIH Center for Scientific Review, Chairman Special Emphasis Review Panel, April '05.
- 2005 Chairman, Program and Organizing Committee, *Seventh International Symposium on Biological Reactive Intermediates*, Tucson, AZ. January 2006.
- 2005-present University of Iowa Superfund Basic Research Program External Advisory Board.
- 2006-09 American Society for Pharmacology and Experimental Therapeutics (ASPET) Council Member (**elected**).
- 2006-09 ASPET Council Liaison, Committee on Graduate Recruitment and Education.
- 2006-09 ASPET Long Range Planning Committee.
- 2006 NCI Cellular and Tissue Biology Cluster PO1 Special Emphasis Panel, Silver Spring, MD.
- 2006 Chairman, NIEHS Special Emphasis Panel, RFP “*Absorption, Distribution, Metabolism and Excretion (ADME) Chemical Disposition in Mammals*” Research Triangle Park, NC.
- 2007 NCI Cellular and Tissue Biology Cluster PO1 Special Emphasis Panel, Rockville, MD.
- 2007-10 Chairman, Program and Organizing Committee, *Eighth International Symposium on Biological Reactive Intermediates*, Barcelona, Spain. July 2010.
- 2008 co-Chairman of Symposium titled “*Drug Metabolism, Bioactivation, and Chemical-Induced Toxicities: Lessons Learned and Contemporary Issues*” ASPET Centennial Meeting, San Diego, CA, April 2008.
- 2008-09 ASPET Awards Committee (Chair). Member, Review Committee for ASPET-Astellas Awards in Translational Research.
- 2008-12 SOT Scientific Program Committee.
- 2008- FASEB International Issues Subcommittee.
- 2008 Member, Planning and Program Committee: *Benzene Health Effects and Mechanisms of Bone Marrow Toxicity International Symposium*, Munich, Germany, September 2009.
- 2008 SOT Program Committee, Sponsored Sessions Policy Task Force – Chair
- 2009 Chair of Session: “*Redox-Cycling, Reactive Oxygen Species (ROS), and DNA Damage*”, 48<sup>th</sup> Annual Meeting of the S.O.T., Baltimore, MD.
- 2009 Challenge Grant *ad hoc* Review. NIH/CSR - *Systemic Injury by Environmental Exposure* - Special Emphasis Panel.
- 2010 Academic Program Review of the School of Pharmacy at the University of Colorado Denver (UC Denver), April 2010.
- 2010 NIEHS Review Panel (ZES1 SET-V 03) for RFA ES09-011 *Engineered Nanomaterials: Linking Physical and Chemical Properties to Biology* (U19), Durham, NC, June 2010.
- 2011 NCI Cellular and Tissue Biology Cluster PO1 Special Emphasis Panel, Rockville, MD, January 2011.
- 2011 NIH Center for Scientific Review - Special Emphasis Panel (Member Conflicts: Liver Pathobiology & Pharmacology), June 2011.
- 2012 Academic Program Review of the Department of Pharmacology & Toxicology, School of Pharmacy at the University of Utah (Salt Lake City), February 2012.
- 2012 NIH Center for Scientific Review, *ad hoc* member XNDA Study Section, February 2012.
- 2012 NIH Center for Scientific Review, EHS T32 Scientific Review Group, November 2012.
- 2013 NIH Center for Scientific Review, Systemic Injury by Environmental Exposure SEP, February, June, and November 2013.
- 2013 Academic Program Review of the School of Pharmacy at the University of Montana, Missoula, March, 2013.
- 2013 - HESI Subcommittee on Translational Biomarkers of Neurotoxicity.

### University Service Activities:

#### (a) University Service (UT Austin)

- 1996-99 University Research Policies Committee, **Chairman 96/97**.
- 1996-2003 Institutional Animal Care and Use Committee, **Chairman '00-'03**.
- 1998-2003 Intellectual Property Committee.

(b) College Service: (UT Austin, 1996-2003)

1996-98 Committee on Committees.  
1996-98 Chair, All College Seminar Committee.  
1998-00 TA Selection Committee.  
1998-00 Space Committee.  
1998-00 Graduate Studies Committee  
1998-00 Ethics Committee  
2000-03 Executive Committee.  
2000-03 Post-Tenure Review Subcommittee, **Chair**.  
2000-03 (Lack of) Space Committee, **Chairman**.  
2001 Post-Tenure Review Subcommittee, **Chair**.  
2002 Financial Aid Committee (Graduate).  
2002 AACP Accreditation Self Study Committee – Physical Resources, **Chair**.  
Self Study Task Force.

(c) University of Arizona Health Sciences Center (2003-present)

2003-present Chairman, Department of Pharmacology and Toxicology  
2003-present Dean's Senior Management Team  
2003-present College of Pharmacy Executive Committee  
2003-2013 Department of Pharmacology and Toxicology Graduate Program Executive Committee  
2006 Search Committee, AZCC Deputy Director.  
2008 Arizona Cancer Center (AZCC) University Board Member.  
2012-13 Search Committee, Senior Vice President - Arizona Health Sciences Center.  
2013 Responsibility Centered Management Research Subcommittee.

**University Teaching Activities:**

**(a) The University of Texas at Austin College of Pharmacy**

1997-98: Freshman Seminar series (HMN 305). Developed a course titled “*Scientific Sleuthing: Toxicology & Environmental Health*” (100%).

Professional Pharm.D.

1989-1997: *Pharmacology* (PHR 473) (team taught, ~20%; Respiratory & GI Pharmacology).  
1997-2003: *Pharmacotherapeutics IA* (PHR 365E). There were major changes to the professional BS/Pharm.D. program that required significant modification to the curriculum. As part of this effort I served as a member of the team that developed and implemented the new integrated curriculum for the Pharm.D. program. I subsequently served as the **Course Coordinator** for the new *Pharmacotherapeutics IA* module, which was offered for the first time in the Fall of 1997 (team taught, ~22-30%; Anti-histamines, anti-asthmatics, GI Pharmacol).

Graduate Ph.D. Program

1989-2000: PHR 284K “*Advanced Toxicology*”, **Course Coordinator**.  
1989-2003: PHR 284K “*Advanced Toxicology*”, (22%, Molecular Markers of Cytotoxicity, NTP & The Chemical Industry Institute of Toxicology).  
1997 PHR 687a, “*Methods in Toxicology*” (15%, HPLC-EC).  
1997-2003: PHR 490N “*Biochemical Toxicology*”, **Course Coordinator**.  
1997-2003: PHR 490N “*Biochemical Toxicology*”, (15%, Bioactivation & Detoxication).  
1998-2003: PHR 380N “*Biomedical Pharmacology II*” (14% Respiratory & GI Pharmacology).

**(b) University of Arizona College of Pharmacy - Tucson**Professional Pharm.D.

2003 - present: PCOL871A "Pharmacology" - Teach the allergies, asthma and GI pharmacology.

2003 - present: PCOL820 & 821- Case Studies. Faculty facilitator.

2005 - present: **Course Coordinator** PCOL820 & 821 – Case Studies.

2003- present: serve as mentor to ~4 Pharm.D. students/year. Evaluate student portfolios and provide advice, etc when necessary.

2009-10: Served on committee to develop the new "Metabolic Basis of Pharmacotherapy" course, PCOL832, essentially bringing Biochemistry in-house.

Graduate Ph.D. Program

2003 - present: Neurotoxicology lectures in PCOL602 "General & Systems Toxicology".

2003 - 2011: DNA damage response lectures in PCOL630 "Cell Communication & Signal Transduction".

**Ph.D. Graduate Student Training:-**Ph.D. Dissertation Committees:

Name	Supervisory Professor	Graduation	Thesis Title
Barbara Hill	Serrine S. Lau	Dec. '91	Biochemical & Physiological Determinants of Quinol-Linked Thiol Conjugate Mediated Nephrotoxicity
Jairam R. Palamanda	James P. Kehrer	Aug. '92	Inhibition of Lipid Peroxidation by Glutathione & Nucleoside Triphosphates In Rat Liver Microsomes
Maria I. Rivera	Serrine S. Lau	Dec. '93	Cellular Targets & Differential Metabolism of Nephrotoxic Quinone-Thioethers
Tiangrong Jiang	Daniel Acosta	Dec. '93	Digitized Fluorescence Imaging Studies of Intracellular Calcium Homeostasis in Primary Cultures of Rat Renal Cortical Epithelial Cells Exposed to Cyclosporine
Wha Young Lee	Sue Fischer	Dec.'93	The Role of Interleukin-1 $\alpha$ in the Promotion Stage of Skin Carcinogenesis
Michael Battalora	John DiGiovanni	May '95	Mechanistic Studies of Mouse Skin Tumor Promotion by Chrysarobin
Jeongmi K. Jeong	Terrence J. Monks	Jan. '96	Molecular Mechanism(s) of Quinone-Thioether Mediated Nephrotoxicity: An Examination of the Stress Response
R. Timothy Miller	Terrence J. Monks	Feb. '96	Metabolism-Dependent Bioactivation of 3,4-( $\pm$ )-Methylenedioxyamphetamine to Neurotoxic Quinol-Thioethers
Heather Kleiner	Serrine S. Lau	Aug. '96	Macromolecular Alkylation and Chemical-Induced Nephrotoxicity
Ansam Sawalha	Serrine S. Lau	June '98	Cytochrome P450 and the Oxidation of Hydroquinone
Hyeon Joo Yim	Reuben Gonzales	July '98	Ethanol and Dopamine Function
Shawn Bratton	Terrence J. Monks	May '99	Benzene-Derived Quinol-Thioethers Induce Apoptosis in Hematopoietic Tissue <i>via</i> a Unique Ceramide Signaling Pathway
Qihong Huang	Terrence J. Monks	May '00	Chemical-Induced Stress Responses: Cellular Mechanisms of Reactive Oxygen Species Induced Cell Cycle Arrest and Cell Death
Kelly Towndrow	Serrine S. Lau	Aug. '00	Prostaglandins and Chemical-Induced Toxicity
Fengju Bai	Terrence J. Monks	Aug. '00 Aug. '95	Serotonergic Toxicity of $\alpha$ -Methyldopamine Thioethers: Role in 3,4-( $\pm$ )-Methylenedioxyamphetamine Mediated Neurotoxicity

Hae-Song Yoon	Serrine S. Lau	Sept. '00	Hydroquinone-thioether-mediated Nephrocarcinogenicity in the Eker Rat
Erik Wilker	John DiGiovanni	Dec. '01	IGF1 and PI3K in Tumor Promotion
Chongran Tang	Steve Clarke	Dec. '01	Establishing the Genomic Organization and Regulation of the Human $\delta$ -5, $\delta$ -6 and the Rev- $\delta$ -5 Desaturase Genes
Minhee Cho	S. Stavchansky	March '02	Pharmacokinetics, Hepatic First-pass Effect and Renal Disposition of Phosphorothionate Oligonucleotides
Julie Kern	James P. Kehrer	Dec. '02	Molecular Mechanisms of Acrolein-Mediated Cytotoxicity
Douglas Jones	Terrence J. Monks	May '04	The Role of $\alpha$ -Methyldopamine Thioethers in the Neurotoxicity of 3,4-( $\pm$ )-Methylenedioxyamphetamine
Zhe Jia	Serrine S. Lau	Aug. '04	11-Deoxy-16,16-Dimethyl Prostaglandin E2 Mediated Cytoprotection
Jing Dong	Terrence J. Monks	Dec. '04	Molecular Dissection of the ROS-Induced DNA Damage Response
Wan-Hong (Didi)Wu	John Kuhn	Jan. '05	Characterization of the PI3/PTEN/AKT/MTOR Pathway in Glioblastoma Multiforme
Nicholas Roman	Bob Dorr	April '05	Imexon and Gemcitabin: Mechanisms of Synergy Against Human Pancreatic Cancer
Mi Young Yang	Terrence J. Monks	April '05	Modulation of ROS-induced Apoptosis of HL-60 Cells by Thioredoxin and Phosphatase Inhibitors
Yamini Chandrasekaran	John Richburg	Aug. '05	The Role of p53 in Death Receptor-Mediated Apoptosis of Testicular Germ Cells in Response to Mono-(2-ethylhexyl)phthalate Treatment
Hong Gao	Mike Jacobson	Oct '06	Effect of Partial Poly(ADP-Ribose) Glyco-hydrolase Gene Deletion on Cellular Responses to Genotoxic Stress
Jean Lord	Serrine S. Lau	May '08	Contribution of Heat Shock Protein 27 and Retinol Binding Protein to 11-Deoxy-16,16-dimethyl Prostaglandin E <sub>2</sub> Mediated Cytoprotection.
Sarah Wilkinson	Margaret Briehl	May '08	Mitochondria: A Crossroad for Oxidatives Stress and Apoptosis Resitance in Lymphoma
Matt Labenski	Serrine S. Lau	Oct. '08	Identification and Characterization of Quinone-Thioether Protein Adducts In Vivo
Ashley Fisher	Serrine S. Lau	Nov'08	Chemical-Induced Post-Translational Modifications and the Structural and Functional Consequences
Zheng Sun	Donna Zhang	Nov '08	Mechanistic Study of Nucleocytoplasmic Trafficking and Reversible Acetylation in Modulating the Nrf2-dependent Antioxidant Response
Gladys Erives Quezada	Terrence J. Monks	May '09	The Role of Metabolism in Ecstasy-Mediated Serotonergic Neurotoxicity
Ruiyu Xia	Terrence J. Monks	May '09	Reactive Oxygen Species-Induced Necrotic Cell Death
Veronica Gonzalez	Laurence Hurley	May '09	G-Quadruplex Interacting Proteins
Jennifer Cohen	Serrine S. Lau	Nov '09	Engagement of MAP Kinase and MTOR Signaling by the Tsc-2 Tumor Suppressor in Renal Cancer
Mike Kimzey	Serrine S. Lau	May '11	Mass spectrometry-based biomarker discovery in Type-2 diabetic and pre-diatetic subjects
Gabriel Knudsen	Glenn Sipes	Nov '11	Investigating complex phenotypes: haplotype association mapping benzene pharmacokinetics in isogenic mouse strains.
Sarah Lamore	Georg Wondrak	May '12	Identification of cathepsin B and L as novel UVA targets upstream of cutaneous lysosomal-autophagic dysregulation
Joseph Herndon	Terrence J. Monks	May '13	Metabolism & Ecstasy Neurotoxicity

Christopher Kuhlman	Serrine S. Lau	Dec '13	Protein adduct formation by reactive electrophiles: Identifying mechanistic links with benzene-Induced hematotoxicity.
Francis Ramirez	Terrence J. Monks	current Enrolled Aug. '08	Calcium Modulation of PARP-mediated DNA Repair
Lucy Lizarraga Zazueta	Terrence J. Monks	current Enrolled Aug '08	The Role of SERT & VMAT in Ecstasy Neurotoxicity
Nicholas Mastrandrea	Serrine S. Lau	current Enrolled Aug '08	
Owen Kinsky	Serrine S. Lau	current Enrolled Aug '09	
Kevin Xu	Serrine S. Lau	current Enrolled Aug '10	
Ryan Canatsey	Serrine S. Lau	current Enrolled Aug '10	
Jessica Sapiro	Serrine S. Lau	current Enrolled Aug '10	
Aram Cholanians	Terrence J. Monks	current Enrolled Aug '11	

I have also served on a number of Master's Degree thesis committees (~12).

### Student Awards/Honors

- 1993 Maria I. Rivera: **2<sup>nd</sup> Place, 11<sup>th</sup>. Annual Carl C. Smith Graduate Student Award for Meritorious Research in Mechanisms of Toxicology.** Paper titled "*Early morphological and biochemical changes during 2-Br-(bis-glutathion-S-yl)hydroquinone-induced nephrotoxicity*", *Toxicologist*, **13**, 131, 1993. 32<sup>nd</sup> Annual Meeting of SOT, New Orleans, LA.
- 1993/95 R. Timothy Miller: Recipient of a NIH Predoctoral Training Fellowship in Toxicology.  
1995 R. Timothy Miller: **1<sup>st</sup>. Place, 13<sup>th</sup>. Annual Carl C. Smith Graduate Student Award for Meritorious Research in Mechanisms of Toxicology.** Paper titled "*Regional neurochemical alterations and mercapturic acid formation following administration of 5-(glutathion-S-yl)- $\alpha$ -methyldopamine*" *Toxicologist*, **15**, 305, 1995, 34<sup>th</sup> Annual Meeting of SOT, Baltimore, MD.
- 1995 Jeonmi Jeong: **3<sup>rd</sup> Place, Molecular Biology Specialty Section** Graduate Student Award. Paper titled "*Stress response and histone down-regulation in response to quinone-thioethers in renal proximal tubular epithelial cells (LLC-PK1)*" *Toxicologist*, **15**, 50, 1995, 35<sup>th</sup> Annual Meeting of SOT, Baltimore, MD.
- 1995-1996 Shawn Bratton: Recipient of a NIH Predoctoral Training Fellowship in Toxicology.  
Shawn Bratton: **Reynolds Award for Best Platform Presentation** at the Annual Fall Meeting of the Gulf Coast Regional Chapter of SOT. Presentation titled "*Evidence for the Participation of Quinone-Thioethers in Benzene-Mediated Hematotoxicity*".
- 1998 Qihong Huang: **1<sup>st</sup> Place, Graduate Student Best Poster Competition**, Annual Fall Meeting of the Gulf Coast Regional Chapter of SOT. Presentation titled "*Inhibition of the MAPK pathway blocks quinone-thioether mediated cytotoxicity, but not growth arrest in LLC-PK1 cells*".
- 1998 Shawn Bratton: **Reynolds Award for Best Platform Presentation** at the Annual Fall Meeting of the Gulf Coast Regional Chapter of SOT. Presentation titled "*2,3,5-tris-(Glutathion-S-yl)hydroquinone depletes cellular glutathione, stimulates sphingomyelin turnover and induces apoptosis in HL-60 cells: Role of reactive oxygen species and nuclear factor- $\kappa$ B*".
- 1999 Qihong Huang: **1<sup>st</sup> Place, Molecular Biology Specialty Section** Graduate Student Competition, 38<sup>th</sup> Annual Meeting of SOT, New Orleans, LA. Presentation titled "*Inhibition of the MAPK pathway blocks quinone-thioether mediated cytotoxicity, but not growth arrest in LLC-PK1 cells*" *Toxicol. Sci.*, **48**, 284 (Abstr. # 1340), 1999.

- 1999 **Shawn Bratton: 1<sup>st</sup> Place, 17<sup>th</sup>. Annual Carl C. Smith Graduate Student Award for Meritorious Research in Mechanisms of Toxicology. 38<sup>th</sup> Annual Meeting of SOT, New Orleans, LA. Paper titled “2,3,5-tris-(Glutathion-S-yl)hydroquinone depletes cellular glutathione, stimulates sphingomyelin turnover and induces apoptosis in HL-60 cells: Role of reactive oxygen species and nuclear factor- $\kappa$ B” *Toxicol. Sci.*, **48**, 152-153 (Abstr. #715), 1999.**
- 2001 **Mi-Young Yang: Recipient of a William Orr Dingwall Foundation Fellowship.**
- 2002 **April Palmer: Recipient of a NIH Predoctoral Training Fellowship in Toxicology.**
- 2002 **Douglas Jones: Recipient of a David Bruton, Jr. Endowed Fellowship.**
- 2003 **Jing Dong: Recipient of a Johnson & Johnson Endowed Fellowship in Pharmacy.**
- 2003 **Mi-Young Yang: 1<sup>st</sup> Place, Graduate Student Poster Presentations, Division of Toxicology, ASPET, Experimental Biology '03, San Diego.**
- 2004 **Jing Dong, 3<sup>rd</sup> Place, 22<sup>nd</sup>. Annual Carl C. Smith Graduate Student Award for Meritorious Research in Mechanisms of Toxicology. 43<sup>rd</sup> Annual Meeting of SOT, Baltimore, MD. Paper titled “A role for p38MAPK in ROS-induced oncotic cell death in renal cells” *Toxicol. Sci.*, **48**, 152-153 (Abstr. #1177), 2004.**
- 2006 **Jean Lord, Honorable Mention, 24<sup>th</sup>. Annual Carl C. Smith Graduate Student Award for Meritorious Research in Mechanisms of Toxicology. 45<sup>th</sup> Annual Meeting of SOT, San Diego, CA. Paper titled “Chemical dependent phosphorylation of heat shock protein 27” *Toxicologist*, **90**, 483, 2006.**
- 2006 **Ashley Fisher, Honorable Mention, 24<sup>th</sup>. Annual Carl C. Smith Graduate Student Award for Meritorious Research in Mechanisms of Toxicology. 45<sup>th</sup> Annual Meeting of SOT, San Diego, CA. Paper titled “Adduction of cytochrome c by benzoquinone and (glutathion-S-yl)-1,4-benzoquinone causes a loss of protein function.” *Toxicologist*, **90**, 2122, 2006.**
- 2006 **Ashley Fisher, 2<sup>nd</sup> Place, Graduate Student Best Paper Competition sponsored by ASPET, Division of Toxicology. “Arylation of cytochrome c by benzoquinone and benzoquinone-thioether causes a loss of protein function”. Experimental Biology/ASPET, San Francisco, CA. *FASEB Journal*, **20**, Abstract #80.15, 2006**
- 2007 **Ashley Fisher, 3<sup>rd</sup> Place, Graduate Student Best Paper Competition sponsored by ASPET, Division of Toxicology “Cytochrome c arylation by 1,4-benzoquinone and its quinol-thioether metabolites results in a loss of protein function”. Experimental Biology/ASPET, Washington D.C., *FASEB Journal*, **21**, Abstract #573.13, 2007.**
- 2007 **Matt Labenski, 1<sup>st</sup> Place, Graduate Student Best Paper Competition sponsored by ASPET, Division of Toxicology “Detection and identification of in vivo chemical-protein adducts.” Experimental Biology/ASPET, Washington D.C., *FASEB Journal*, **21**, Abstract #573.14, 2007.**
- 2008 **Ashley Fisher, Honorable Mention, 26<sup>th</sup>. Annual Carl C. Smith Graduate Student Award for Meritorious Research in Mechanisms of Toxicology. 47<sup>th</sup> Annual Meeting of SOT, San Diego, CA. Paper titled “Chemical-induced post-translational modifications and the consequent structural and functional alterations” *Toxicologist*, **102**, 468, 2008.**
- 2008 **Jenny Cohen, Third Place, Graduate Student Best Paper Competition, Carcinogenesis Specialty Section. 47<sup>th</sup> Annual Meeting of SOT, San Diego, CA. Paper titled “Constitutively active B-Raf does not regulate cyclin D1 in 2,3,5-Tris-(glutathion-S-yl) hydroquinone transformed, tuberous sclerosis-2 null cells” *Toxicologist*, **102**, 1412, 2008.**
- 2008 **Rae Xie, Honorable Mention, 26<sup>th</sup>. Annual Carl C. Smith Graduate Student Award for Meritorious Research in Mechanisms of Toxicology. 47<sup>th</sup> Annual Meeting of SOT, San Diego, CA. Paper titled “Mitochondrial peroxiredoxin 3 function in protection against oxidative stress.” *Toxicologist*, **102**, 2070, 2008.**
- 2009 **Jenny Cohen, Awarded 2<sup>nd</sup> Place, Drug Discovery Toxicology Specialty Section; 3<sup>rd</sup> Place, Molecular Biology Specialty Section; and Honorable Mention, 27<sup>th</sup> Carl C. Smith Graduate Student Award for Meritorious Research in Mechanisms of Toxicology. 48<sup>th</sup> Annual Meeting of SOT, Baltimore, MD. Paper titled. “The tumor suppressor gene *Tsc-2* modulates translation initiation of cyclin D1 through ERK crosstalk with 4EBP1” *Toxicologist*, 2009.**



- 2011 Chris Kuhlman, **Honorable Mention, 29<sup>th</sup> Annual Carl C. Smith Graduate Student Award for Meritorious Research in Mechanisms of Toxicology**. 50<sup>th</sup> Annual Meeting of SOT, Washington, DC. Paper titled, “*Instability of quinone electrophile adducts on cysteine residues: a basis for the preferential detection of covalent modification of lysines and arginines*” *Toxicologist*, **105**, 2011.
- 2011 Chris Kuhlman, **Third Place in Graduate Student Best Paper Competition sponsored by the Division of Toxicology**. Paper titled, “*Phenol/hydroquinone reduces lymphocyte counts and produces quinol-thioether- and 4-hydroxy-2-nonenal-modified proteins: implications for benzene-mediated hematotoxicity*” *Experimental Biology/ASPET*, Washington D.C. *FASEB Journal*.
- 2012 Jessica Sapiro, **First Place, Renal Toxicology Award** - Mechanisms Specialty Section, 51<sup>st</sup> Annual Meeting of SOT, San Francisco, CA.
- 2012 Owen Kinsky, **Second Place 30<sup>th</sup> Annual Carl C. Smith Graduate Student Award for Meritorious Research in Mechanisms of Toxicology**. 51<sup>st</sup> Annual Meeting of SOT, San Francisco, CA.
- 2012 Chris Kuhlman, **Genentech Student Achievement Award**, Biotechnology Specialty Section, 51<sup>st</sup> Annual Meeting of SOT, San Francisco, CA.
- 2012 Nicholas Mastrandrea, **Third Place Dharm V. Singh Carcinogenesis Endowment Graduate Student Award**, Carcinogenesis Specialty Section, 51<sup>st</sup> Annual Meeting of SOT, San Francisco, CA.

#### Published Research Articles:

1. Monks, T.J., J. Caldwell, and R. L. Smith. Influence of methylxanthine-containing foods on theophylline metabolism and kinetics. *Clin. Pharmacol. Ther.*, **26**:513-524, 1979.
2. Hinson, J.A., L.R. Pohl, T.J. Monks, J.R. Gillette, and F.P. Guengerich. 3-Hydroxyacetaminophen: A microsomal metabolite of acetaminophen. Evidence against an epoxide as the reactive metabolite of acetaminophen. *Drug Metab. Dispos.*, **8**:289-295, 1980.
3. Monks, T.J., C.A. Lawrie, and J. Caldwell. The effect of increased caffeine intake on the metabolism and pharmacokinetics of theophylline in man. *Biopharm. Drug Dispos.*, **2**:31-37, 1981.
4. Monks, T. J., R. L. Smith, and J. Caldwell. Metabolic and pharmacokinetic comparison of theophylline and aminophylline (theophylline ethylenediamine). *J. Pharm. Pharmacol.*, **33**:93-97, 1981.
5. Caldwell, J., I.A. Cotgreave, C.A. Lawrie, and T.J. Monks. Origin of interindividual variations in theophylline metabolism in man. In: *Theophylline and Other Methylxanthines* (Rietbrock, N., Woodcock, B.G. and Staib, A.H., eds), pp. 159-167, 1981.
6. Hinson, J.A., L.R. Pohl, T. J. Monks, and J. R. Gillette. Acetaminophen-induced hepatotoxicity. *Life Sciences*, **29**:107-116, 1981.
7. Pohl, L.R., R.V. Branchflower, R.J. Highet, J.L. Martin, D.S. Nunn, T.J. Monks, J.W. George, and J.A. Hinson. The formation of diglutathionyl dithiocarbonate as a metabolite of chloroform, bromotrichloromethane and carbon tetrachloride. *Drug Metab. Dispos.*, **9**:334-339, 1981.
8. Hinson, J.A., T.J. Monks, R. J. Highet, M. Hong, and L.R. Pohl. 3-(Glutathion-S-yl)acetaminophen. A biliary metabolite of acetaminophen. *Drug Metab. Dispos.*, **10**:47-50, 1982.
9. Monks, T.J., J.A. Hinson, and J.R. Gillette. Bromobenzene and *p*-bromophenol toxicity and covalent binding *in vivo*. *Life Sciences*, **30**:841-848, 1982.
10. Monks, T.J., L.R. Pohl, J.R. Gillette, M., Hong, R.J. Highet, J.A. Ferretti, and J.A. Hinson. Stereoselective formation of bromobenzene glutathione conjugates. *Chem.-Biol. Int.*, **41**:203-216, 1982.
11. Gillette, J.R., T.J. Monks, and S.S. Lau. Covalently bound metabolites as a measure of dose: The pharmacokinetic aspect. *Develop. Toxicol. & Environ. Sci.*, **11**:265-272, 1983.

12. Monks, T.J., S.S. Lau, and J.R. Gillette. Diffusion of reactive metabolites out of hepatocytes: Studies with bromobenzene. *J. Pharmacol. Exp. Ther.*, **228**:393-399, 1984.
13. Gillette, J.R., S.S. Lau, and T.J. Monks. Intra and extracellular formation of metabolites from chemically reactive species. *Biochem. Soc. Trans.*, **12**:4-7, 1984.
14. Lau, S.S., T.J. Monks, K.E. Greene, and J.R. Gillette. The role of *ortho*-bromophenol in the nephrotoxicity of bromobenzene. *Toxicol. Appl. Pharm.*, **72**:539-549, 1984.
15. Monks, T.J., S.S. Lau, L.R. Pohl, and J.R. Gillette. The mechanism of formation of *ortho*-bromophenol from bromobenzene. *Drug Metab. Dispos.*, **12**:193-198, 1984.
16. Lau, S.S., T.J. Monks, and J.R. Gillette. Multiple reactive metabolites derived from bromobenzene. *Drug Metab. Dispos.*, **12**:291-296, 1984.
17. Monks, T.J., and S.S. Lau. Activation and detoxification of bromobenzene in extrahepatic tissues. *Life Sci.*, **35**:561-568, 1984.
18. Lau, S.S., T.J. Monks, K.E. Greene, and J.R. Gillette. Detection and half-life of bromobenzene-3,4-oxide in blood. *Xenobiotica*, **14**:539-543, 1984.
19. Monks, T.J., S.S. Lau, and R.J. Highet. Formation of non-toxic reactive metabolites of *para*-bromophenol: Identification of a new glutathione conjugate. *Drug Metab. Dispos.*, **12**:432-437, 1984.
20. Lau, S.S., T. J. Monks, and J.R. Gillette. Identification of 2-bromohydroquinone as a metabolite of bromobenzene: Implications for bromobenzene induced nephrotoxicity. *J. Pharm. Exp. Ther.*, **230**:360-366, 1984.
21. Zimm, S., J.J. Grygiel, J.M. Strong, T.J. Monks, and D.G. Poplack. Identification of 6-mercaptopurine riboside in patients receiving 6- mercaptopurine as a prolonged intravenous infusion. *Biochem. Pharmacol.*, **33**:4089-4092, 1984.
22. Gillette, J. R., S.S. Lau, T.J. Monks, and L.R. Pohl. Free radical intermediates and liver cell necrosis. *Proc. 9<sup>th</sup> Int. Cng. Pharmacol.*, **2**:251-258, 1984.
23. Monks, T.J., S.S. Lau, R.J. Highet, and J.R. Gillette. Glutathione conjugates of 2-bromohydroquinone are nephrotoxic. *Drug Metab. Dispos.*, **13**:553-559, 1985.
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**ALL manuscripts listed as in press, submitted, or in preparation  
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