

## CURRICULUM VITAE

### **Martyn Thomas Smith, Ph.D.**

Professor of Toxicology  
Division of Environmental Health Sciences  
School of Public Health  
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Birthplace: Lincoln, England  
Citizenship: American

### **EDUCATIONAL BACKGROUND:**

- 1977            B.Sc. (Honors) degree in Biology  
                  Queen Elizabeth College, University of London
- 1980            PhD in Biochemistry entitled "Studies on Oxidative Drug Metabolism Using Quantitative Cytochemical and Biochemical Methods."  
                  Department of Biochemistry and Chemistry,  
                  Medical College of St. Bartholomew's Hospital Charterhouse Square, London EC1M 6BQ

### **EMPLOYMENT HISTORY:**

- 1980-1981     Post-doctoral researcher with Professor Sten Orrenius,  
                  Department of Toxicology.  
                  Karolinska Institute, Stockholm, Sweden
- 1981-1982     Teaching Fellow (Junior Lecturer) Toxicology Unit,  
                  Department of Pharmacology, School of Pharmacy,  
                  University of London
- 1981-1982     Taught the first combined BSc degree course in Toxicology and Pharmacology offered in the UK.
- 1982-present   Assistant Professor of Toxicology (1982-1987)  
                  Associate Professor of Toxicology (1987-1992)  
                  Professor of Toxicology (1992 - present)  
                  Currently Professor, Step IX.  
                  Division of Environmental Health Sciences  
                  School of Public Health,  
                  University of California, Berkeley

### **Appointments:**

- 1986-2004     Associate Director, Health Effects Component of the UC Toxic Substances Program
- 1987-present   Director, NIEHS Superfund Basic Research Program
- 1988-2003     Staff Scientist, Lawrence Berkeley National Laboratory
- 1993-1994     Head, Division of Environmental Health Sciences
- 1994-1997     Deputy Head, Division of Environmental Health Sciences
- 1997-1998     Head, Division of Environmental Health Sciences
- 1998-2002     Deputy Head, Division of Environmental Health Sciences
- 2002-2004     Director, NIEHS Center for Environmental Health Sciences

2002-2005 Vice-Head, Division of Environmental Health Sciences  
2008-2010 Vice-Head, Division of Environmental Health Sciences  
2011-2015 Chair, Graduate Group in Molecular Toxicology.  
2012-2014 Director, Berkeley Institute of the Environment  
2014-2015 Chair, Graduate Group in Environmental Health Sciences.

#### **Awards and Honors:**

Fellow of American Association for the Advancement of Science, 1994.  
Visiting Professor, Chinese Academy of Preventive Medicine, Beijing, China, 1992.  
Boehringer-Mannheim and Burroughs-Wellcome Post-doctoral Fellowships, 1980-81  
Past-President, National Association of Superfund Research Program Directors (President 1995-97)  
Distinguished Lecturer Award, National Cancer Institute, 2006  
Certificate for Outstanding Service to the InterLymph Consortium, 2007  
Distinguished Lecturer Award, Childrens Oncology Group, 2007  
Children's Environmental Health Network Award, 2010  
Elected Fellow, Collegium Ramazzini, 2012  
Alexander Hollaender Award, Environmental Mutagenesis and Genomics Society, 2014  
Keynote Address Award in recognition for scientific contributions, Division of Chemical Toxicology, American Chemical Society, 2014

#### **UNIVERSITY AND PUBLIC SERVICE:**

##### **Directorship of Superfund Research Program**

Dr. Smith has led the Superfund Basic Research Program at Berkeley since its inception. This program has been peer reviewed and renewed 5 times and is funded at approx. \$2.5m per annum, making it the largest NIH grant on the Berkeley campus. It has been audited several times because of its size and no problems have been encountered. It is widely considered one of the flagship programs for NIEHS SRP. The goals of the UC Berkeley Superfund program are to improve understanding of the relationship between exposure and disease, provide better human and ecological risk assessments, and develop a range of prevention and remediation strategies to improve and protect public health, ecosystems and the environment. The program's themes are to: a) apply functional genomics, proteomics, transcriptomics, and nanotechnology to better detect arsenic, mercury, benzene, polycyclic aromatic hydrocarbons, trichloroethylene, and other Superfund priority chemicals in the environment; b) to evaluate their effects on human health, especially the health of susceptible populations such as children; c) remediate their presence; and d) reduce their toxicity. Currently 3 biomedical and 2 engineering projects are funded along with 4 cores.

##### **Teaching Activities**

###### *Courses Taught in 2014*

Advanced Toxicology (Toxicology 1) – PH270B, PH170B -- both Spring and Fall semesters

##### **Graduate Student Trainees**

###### *Theses Chaired*

**David Eastmond**, “Free Radical Mechanisms in Benzene Toxicity,” Ph.D. 1987. Currently Professor of Toxicology at University of California, Riverside.

**Martha S. Sandy**, “Mechanisms of Paraquat, Diquat and MPTP Cytotoxicity,” Ph.D. 1988. Currently Chief of Toxicology Division at Cal EPA.

**Celia G. Evans**, “Mechanisms of Resistance to Alkylating Agents in Brain Tumor Cells,” Ph.D. 1988. Currently Senior Toxicologist at Exponent, Seattle, WA.

**Moire L. Robertson**, “Induction of Micronuclei by Benzene Metabolites: Studies with Isolated Lymphocytes,” Ph.D. 1992. Currently Toxicologist at Variant, Walnut Creek, CA

**Kathleen E. Meyer**, “Application of Antisense Technology in Determining the Role of Myeloperoxidase in Hydroquinone-Induced Genotoxicity,” Ph.D. 1993. Currently Senior Director, Toxicology at Sangamo BioSciences, San Francisco.

**Jean A. Grassman**, “Development of an Immunoassay to Detect Benzene Adducts in Hemoglobin,” Ph.D. 1993, Associate Professor, Brooklyn College, City University of New York.

**Lee E. Moore**, “Use of Fluorescent *in situ* Hybridization (FISH) to Measure Radiation- and Arsenic- Induced Aneuploidy and Micronucleus Formation in Human Exfoliated Cells,” Ph.D. 1994. Currently at the Division of Cancer Epidemiology and Genetics, National Cancer Institute.

**Sharan Campleman**, “Genotyping of Cytochrome P4502E1 as a Biological Marker of Genetic Susceptibility in Chemical Carcinogenesis: Studies on a Benzene Exposed Cohort,” Ph.D. 1995. Currently scientist at California Breast Cancer Program, Oakland CA.

**Joseph Wiemels**, “*Ras* Oncogene Involvement in the Leukemic Phenotype and the Development of Mutational Biomarkers of Chemical Leukemogens,” Ph.D. 1997. Currently Associate Professor at UC San Francisco, Department of Epidemiology and Biostatistics.

**Caroline Tanner**, “The Relative Contributions of Genetic and Environmental Factors to the Cause of Parkinsons Disease,” Ph.D. 1998. Currently head of clinical research at Parkinson’s Institute, San Jose, CA.

**Elinor Fanning**, “New Initiatives in Cancer Risk Assessment: Benzene as a Case Study,” Ph.D. 1998. Associate Director, Research at UCLA-Center for Occupational and Environmental Health

**Margy S. Lambert**, “Development of a Human Recombinational Mutation Assay and a Mechanistic Model for the Chromosomal Rearrangements in Cancer,” Ph.D. 1999. Scientist at OSHA.

**Laura Gunn**, “Biomarkers of Genetic Damage in Children of the Inner city,” M.S. 1999.

**Christine Skibola**, “Polymorphisms in the Methylenetetrahydrofolate Reductase Gene and Susceptibility to Acute Leukemia in Adults,” M.S. 1999; Ph.D. 2001. Currently Chair and Professor at University of Alabama, School of Public Health, Dept. of Epidemiology..

**Laura Gunn**, “The Delivery of the FHIT Tumor Suppressor Protein into Lung Cancer Cells,” Ph.D. 2003.

**Christine Hegedus**, “Applications of proteinchip array-based proteomics in molecular epidemiology and toxicology,” Ph.D. 2007; first student to graduate with doctoral degree in Toxicology from UC Berkeley. Currently a scientist at Amgen.

**Nygerma Dangleben**, “Studies on Effects of Arsenic on Human Beta-Defensin-1.” Ph.D. 2012. Currently a scientist at OEHHA, California EPA.

**Nicholas ‘Kipp’ Akers**, “The Role of HLA Gene Region and Environmental Risk Factors in Follicular Non-Hodgkin Lymphoma”, Ph.D. 2014, Currently Postdoc at Mount Sinai School of Medicine, NY.

#### **Selected Postdoctoral Trainees**

**Ann de Peyster**, 1983-4, former Professor of Toxicology and Dean, School of Public Health, San Diego State University, San Diego, CA.

**David Ross**, 1985-6, now Professor and Chair of Molecular and Environmental Toxicology, University of Colorado, Denver, CO.

**Donato DiMonte**, 1986-7, now Head of Basic Research, Parkinson’s Institute, San Jose, CA.

**Gunnilla Ekstrom**, 1986-7, now Scientist at AstraZeneca, Sodertalje, Sweden.

**Vangala Subrahmanyam**, 1990-93, now VP and Head, Division of Drug Metabolism and Pharmacokinetics, SAI.

**Jenny Quintana**, 1990-1, Associate Professor, San Diego State University, San Diego, CA.

**Immaculata de Vivo**, 1993-5, Associate Professor of Epidemiology, Harvard University.

**Jan Semenza**, 1995-6, now Associate Professor of Molecular Epidemiology, Portland State University.

**Michael Jeng**, 1997-9, now Assistant Professor of Hematology at Stanford University.

**Matthew Forrest**, 2001-3, Senior Scientist, Assay Development, TwistDX Ltd, Cambridge UK.

**Patricia Escobar-Stein**, 2001-3, Senior Principal Scientist, Merck Pharmaceuticals,

**Andrew Olaharski**, 2004-6, Assoc Director of Toxicology, Roche Pharmaceuticals, Palo Alto, CA.

**Noé Galvan**, 2004-6, Scientific director, Amway, Buena Vista, CA.

**Xuefeng Ren**, 2007-2010, Assistant Professor, University of Buffalo, NY.

**Joe Shuga**, 2007-11, Scientist, Fluidigm, San Francisco.

#### **Recent Service on University Committees**

Member, Richmond Bay Campus committee, 2012

Member, Committee on Research, 2010- 2011  
Member, CAPRA, 2007- 2010.  
Vice-Chair, Graduate Council, 2006-7.  
Member, Graduate Council, 2005-6.  
Search committee, Faculty position in Environmental Health Sciences, 2005-6; Chair 2010-11.  
Search committee, Faculty position in Nanotechnology and Environment, 2005-6.  
Search committee, Faculty position in Nutritional Sciences and Toxicology, 2005-6.  
Member, Campuswide Li Ka-Shing Building Committee, 2005-7.  
Co-Chair of Committee to review Functional Genomics Facility at request of Vice-Chancellor, report produced 2005.  
Member, Campus Committee on the Environment, 2002-4.  
Chair, Faculty Council, School of Public Health, 2003-5.  
Chair, Strategic Planning Committee, School of Public Health, 2002-3.  
Member, Senate Committee on Research, 2000.  
Member, Laboratory Operations and Safety Committee for the Campus, 1997-2000, 2001-3.  
Member of Faculty Council, School of Public Health, 1999 –2000, 2002-3.  
Chair, Research Committee, School of Public Health, 1998- 99.  
Member, Hazardous Waste Management Committee for the Campus 1997-99.

## **PROFESSIONAL ACTIVITIES:**

### **Recent Invited Lectures**

#### **2010**

"Using Omics to Characterize Human Exposure", Invited speaker, National Academy of Sciences meeting on the Exposome, February 24, 2010.

"The Exposome: A Powerful Approach for Evaluating Environmental Exposures and Their Influences on Diseases", Invited speaker, Annual Meeting of the Society of Toxicology, Salt Lake City, UT, March 3, 2010.

"Using Omics for Biomarker Discovery," Invited speaker and co-organizer of Educational session at AACR Special meeting on Future of Molecular Cancer Epidemiology, Miami, FL, June 4, 2010.

"Dealing with the complexity of the environment through an exposomics approach", Invited speaker and co-organizer, AACR Special meeting on Future of Molecular Cancer Epidemiology, Miami, FL, June 8, 2010.

"Using Omics to Characterize Human Exposure", Invited speaker, International Council of Chemical Associations-Long Range Initiative meeting, Stresa, Italy, June 17, 2010.

"Next Generation Biomarkers and the Exposome", Plenary lecture at UK Environmental Mutagen Society Annual Meeting, Buxton, England, July 12, 2010.

"Benzene, Exposomics and the Future", Invited speaker at Biological Reactive Intermediates VIII, Barcelona, Spain, July 18, 2010

"Analyzing the Exposome to find the Environmental Causes of Disease", Invited plenary lecture, European Union, Brussels, Belgium, September 27, 2010.

"Using Omics to Assess Human Exposure", Invited seminar at Maastricht University, The Netherlands, September 28, 2010

"Analyzing the Exposome to find the Environmental Causes of Disease", Invited seminar at University of Utrecht, Institute of Risk Assessment Sciences, The Netherlands, September 29, 2010.

"Benzene: A Prototype Environmental Leukemogen", EPA NexGen Risk Assessment Meeting, Research Triangle Park, November 2, 2010.

## 2011

- “Benzene: A Prototype Environmental Leukemogen”, EPA NexGen Risk Assessment Meeting, Washington DC, February 15, 2011.
- “Methodologies for analyzing the exposome – The Exposome Alliance”, Imperial College, University of London, March 9, 2011.
- “Methodologies for analyzing the exposome – The Exposome Alliance”, Lecture at Annual Environomarkers Meeting, Athens, Greece, March 7, 2011.
- “Measuring the Exposome to Discover the Environmental Causes of Cancer”, AACR annual meeting, Orlando, FL, April 2, 2011.
- “Characterizing the Exposome to Complement the Genome”, Special lecture at Human Genetics Foundation (HuGeF) in Turin, Italy, May 26, 2011.
- “Characterizing the Exposome to Complement the Genome”, Plenary lecture at Annual meeting of the MRC-HPA Centre for Environment & Health, Imperial College, University of London, UK, June 9, 2011.
- “Characterizing the Exposome to Complement the Genome”, Special lecture at Symposium, School of Pharmacy, University of Colorado, Denver, Co, September 15, 2011.

## 2012

- “Characterizing the Exposome to Complement the Genome”, Department of Epidemiology Seminar, UCSF, March 2, 2012
- “Finding the causes of hematological cancers” ILSI-HESI Award Lecture, Society of Toxicology, San Francisco, CA, March 12, 2012.
- “Measuring cell death and genotoxicity in single cells and human populations using lab-on-a-chip technologies”, Invited Symposium speaker, Society of Toxicology, San Francisco, CA, March 12, 2012.
- “Using omics in the risk assessment of benzene”, Invited speaker at International Congress on Occupational Health, Cancun, Mexico, March 21, 2012.
- “The Early Life Exposome and Future Disease Risk,” Prenatal Programming and Toxicity International Conference (PPTOX III) meeting, Paris France, May 14-16, 2012.
- “Characterizing the Human Exposome,” Keynote lecture introduced by Dr. L. Birnbaum at Aspen Cancer Conference, Aspen CO, July 2012.
- “The Exposome Paradigm,” Chair and opening lecturer for session on the Exposome, Trans-NIH meeting on Inflammation and Aging in Disease, Bethesda, MD, September 5-7, 2012.
- “Transcriptomics,” Invited speaker at International Agency for Research on Cancer, Lyon, France, October 17, 2012.
- “The Exposome Paradigm,” Keynote speaker at meeting of NIEHS Center at Univ. of Washington, Seattle, WA, October 26, 2012.
- “The Exposome Paradigm,” Keynote Opening Lecture at AACR Special Conference on Post-GWAS Horizons in Molecular Epidemiology: Digging Deeper into the Environment, Hollywood, FL, November 11-14, 2012.

## 2013

- “The Exposome and Early Life Exposures”, Invited speaker at symposium on Childrens Environmental Health at CalEPA in Sacramento, CA, Jan 16, 2013.
- “The Exposome Paradigm”, Invited seminar to Life Sciences Division, Lawrence Berkeley National Laboratory, Berkeley, CA, February 12, 2013.
- “Genome-Exposome Interactions in Leukemia Etiology”, Invited keynote speaker, conference organizer and session co-chair at meeting on "The Bone Marrow Niche, Stem Cells and Leukemia: Impact of Drugs, Chemicals, and the Environment," New York Academy of Sciences, New York, May 29-31, 2013.
- “Characterizing the Exposome to Complement the Genome”, Invited seminar at German Cancer Research Center, Heidelberg, Germany, July 12, 2013.
- “Genome-Exposome Interactions in Leukaemia Aetiology”, Invited keynote speaker at UK Environmental Mutagenesis Society meeting, Bristol, UK, July 14-17, 2013
- “An Exposome approach to finding the causes of leukemia”, Invited keynote speaker at Annual meeting of the UK Environmental Mutagen Society, Bristol, UK, July 15, 2013.
- “Introduction to the Exposome”, Opening lecture at Superfund Research Program meeting, Berkeley, CA, September 20, 2013.
- “The Exposome: Where do we go from here”, Invited speaker and session co-chair, Annual meeting of the Environmental Mutagen and Genomics Society, Monterey CA, September 23, 2013
- “Susceptibility to and Mechanisms of Benzene Toxicity”, Invited keynote lecture at the Brazilian Society of Toxicology meeting in Porto Alegre, Brazil, October 9, 2013
- “Risk assessment for benzene”, Invited plenary lecture at the Brazilian Society of Toxicology meeting in Porto Alegre, Brazil, October 9, 2013.
- “Characterizing the Exposome to Complement the Genome”, Invited seminar at Tsinghua University, Beijing China, November 4, 2013.
- “Characterizing the Exposome to Complement the Genome”, Invited seminar at China Central Normal University, Wuhan, China, November 4, 2013.
- “The Exposome Paradigm,” Invited Plenary speaker at meeting of the Chinese Society of Toxicology, Guangzhou, China, November 13, 2013.
- Expert adviser to IARC at monograph meeting on Quantitative Risk Assessment, Lyon, France, November, 18-19, 2013.

## **2014**

- Discussant at State-of-the-Science Workshop to Discuss Issues Relevant for Assessing the Health Hazards of Formaldehyde Inhalation organized by U.S. Environmental Protection Agency (U.S. EPA) National Center for Environmental Assessment (NCEA), April 30-May 1, 2014.
- “Measuring the transcriptome in human populations”, Invited seminar speaker at Human Genetics Foundation, Turin, Italy, May 12, 2013.
- “Measuring the transcriptome in human populations”, Invited seminar speaker at International Agency for Research on Cancer, Lyon, France, May 13, 2013.
- “The Exposome Paradigm,” Invited Plenary speaker at American Society for Mass Spectrometry, Baltimore, Maryland, June 18, 2014.

“Benzene, the World’s Most Important Chemical”, Faculdade de Farmácia, Universidade Federal de Minas Gerais, Belo Horizonte, Brazil, July 8, 2014

“Benzene”, Usiminas, Belo Horizonte, Brazil, July 9, 2014.

“Benzene and the emerging concept of Exposome”, Opening lecture for Winter course on Benzene, followed by 3 more 3 hour lectures on the toxicology and risk assessment of benzene, Oswaldo Cruz Foundation, Fiocruz, Rio de Janeiro, July 14-17, 2014.

“Methods to Measure the Exposome”, Keynote speaker and Award address for Division of Chemical Toxicology, American Chemical Society, Annual Meeting, San Francisco, August 12, 2014.

“Methods to Measure the Human Exposome”, Invited seminar, Hamner Institute, RTP, NC, Sept 29, 2014.

“Maternal and Early Childhood Exposures to Benzene are Associated with Childhood Cancers”, Invited Speaker and discussion leader at CDC webinar: “Opportunities in Early Childhood to Reduce Near-Term Cancer Risk”, October 3, 2014.

Superfund Research Program, Chair and Organizer of the National Meeting, San Jose, CA, November 12-14.

## **2015**

Invited Chair, Working Group 3 at Workshop organized by NIEHS on the Exposome, Research Triangle Park, NC, January 14-15, 2015.

“Measuring the transcriptome in human populations”, Invited seminar, Imperial College, London, UK, January 20th, 2015.

“The Blood Exposome”, Co-Chair and Invited speaker at Workshop on the Exposome at the Annual meeting of the Society of Toxicology, March 22, 2015.

“The Exposome and Cumulative Risk Assessment”, Organizer, Group Chair and Invited Speaker at EPA/NIEHS Workshop on Strengthening the Scientific Basis for Chemical Safety, held at the U.S. EPA, RTP, NC, July 15-16, 2015.

“The Exposome and Cumulative Risk”, Invited seminar at the California Dept. of Public Health, Richmond, CA, July 30, 2015.

## **Service to Editorial Boards of Scientific Journals**

### *Member of the Editorial Board:*

Cancer Epidemiology, Biomarkers and Prevention (2007-present)  
Reviews in Mutation Research (2008- present)  
Cell Biochemistry and Function (2008-present)

### *Prior member of Editorial Board of:*

Environmental Health Perspectives (2003 – 2008)  
Free Radical Research (1990 –2000)  
Biomarkers (1995-2001)  
Molecular Toxicology  
International Journal of Toxicology  
Advances in Pharmacology

### *Recent reviewer for the following journals:*

Environmental Science and Technology; Environmental Health Perspectives; Cancer Research; Chemical Research in Toxicology; Toxicology; Toxicology and Applied Pharmacology; Biomarkers; Carcinogenesis; Leukemia; Leukemia Research; Hematologica; Mutation Research; Environmental and Molecular Mutagenesis.

## **Membership of Advisory Boards**

Elected Member of the Scientific Advisory Board of the International Agency for Research on Cancer, Lyon, France, 2010-2014.

Member of the Advisory Board to HuGeF, Turin, Italy, 2008-present

Member of the Advisory Board of the EU “Envirogenomarkers” project led by Prof. Soterios, Athens, Greece, 2008-present.

Member of the External Advisory Board of the Center for Environmental Health Sciences at Univ. of North Carolina, 2009-

Member of the Advisory Board for the MRC-HPA Centre for Environment & Health at the University of London, UK, 2009 - present.

Member of the Advisory Board for the MRC-NIHR National Phenome Centre, University of London, UK, 2012 - present.

Member of the Advisory Board for the Paradigm II project funded by the California Breast Cancer Research Program.

## **Professional Societies and Memberships**

### *Local*

Genetic and Environmental Toxicology Association (GETA) of Northern California (President, 1987)  
Society of Toxicology, Northern California Chapter (NorCal SOT)  
(Founding member and chair of the Nominating Committee, 1986)

### *National*

Environmental Mutagen and Genomics Society (EMGS)  
Society of Toxicology (SOT)

## **Recent Service to Professional Societies**

Elected member of the Molecular Epidemiology Group of the American Association for Cancer Research, Former Chair of Communications Committee.

Head of Genomics and New Technologies Special Interest Group for the Environmental Mutagen Society, 2003-7.

Member of Program Committee for 2001, Annual Society of Toxicology Meeting in San Francisco, CA.

Member of Program Committee for 2001, Short Course Organizer and Invited Symposium Speaker at the 2001 Environmental Mutagen Society meeting in San Diego, California, March 16-21, 2001.

Member of the Program Planning Committees for the 2002 and 2003 Environmental Mutagen Society meetings in Anchorage, Alaska and Miami, FL.

Member of the Organizing committee for the AACR-SOT Special Conference on ‘Molecular and Genetic Epidemiology of Cancer’, Hawaii, January, 2003.

Member of the Program committee for the International Union of Toxicology (IUTOX) satellite meeting in Tampere, Finland July 2004.

Co-Chair of the Working Group on Predicting Chemical Carcinogenicity for 2006-8.

Member of the Program Planning Committee for the 2008 Environmental Mutagen Society meeting.

Member of Program Committee for 2010 AACR meeting.

Member of Organizing Committee of AACR special conference on the Future of Molecular Epidemiology, 2010.

## Service to Educational and Government Agencies

Member of National Advisory Environmental Health Sciences Council, January 2000 - December 2003. This committee advises NIEHS, NIH on all actions.

Member of the National Leukemia/Brain Cancer Workshop Steering Committee for the National Cancer Institute.

Member of Committee on National Study of Myelodysplastic Syndromes, Office of Rare Diseases, National Heart, Lung and Blood Institute.

Ad hoc Member, XNDA Study Section, NIH, 2006-7.

Member, Strategic Planning Committee, NIEHS, 2011.

Ad hoc member, SIEE study section, NIH, 2014

Reviewer for National Research Council of the National Academies report on "Rethinking the components, coordination and management of the U.S. EPA laboratories", September, 2014

## RESEARCH AND PUBLICATIONS:

### Published Research Papers in Peer-Reviewed Journals

1. **Smith MT**, Darmon J, Wills ED, Dondi PG (1979) Rapid data analysis in quantitative cytochemistry. *Histochem J.* 11:370-371. PMID 457443.
2. **Smith MT**, Loveridge N, Wills ED, Chayen J (1979) The distribution of glutathione in the rat liver lobule. *Biochem J.* 182:103-108. PMID 496899.
3. **Smith MT**, Wills ED, Drew K, Maxwell C, Daly JR, Reader SCJ, Robertson WR (1980) The use of an inexpensive, general purpose microcomputer in quantitative cytochemistry. *Histochem J.* 68:321-323. PMID 7462006.
4. **Smith MT**, Wills ED (1981) Effects of dietary lipid and phenobarbitone on the distribution and concentration of cytochrome P-450 in the liver studied by quantitative cytochemistry. *FEBS Letters.* 127:33-36. PMID 7250371.
5. **Smith MT**, Wills ED (1981) Effect of dietary lipid and phenobarbitone on the production and utilization of NADPH in the liver. A combined biochemical and quantitative cytochemical study. *Biochem J.* 200:691-699. PMID 7342977.
6. Henderson B, Loveridge N, Robertson WR, **Smith MT** (1981) The influence of the storage of tissue blocks at -70°C on enzyme activity: a quantitative cytochemical study. *Histochemistry.* 72:545-550. PMID 7298388.
7. **Smith MT**, Thor H, Orrenius S (1981) Toxic injury to isolated hepatocytes is not dependent on extracellular calcium. *Science.* 213: 1257-1259. PMID 7268433.
8. **Smith MT**, Thor H, Hartzell P, Orrenius S (1982) The measurement of lipid peroxidation in isolated hepatocytes. *Biochem Pharmacol.* 31:19-26. PMID 7059346.
9. Jewell SA, Bellomo G, Thor H, Orrenius S, **Smith MT** (1982) Bleb formation in hepatocytes during drug metabolism is caused by disturbances in thiol and calcium ion homeostasis. *Science.* 217:1257-1259. PMID 7112127.
10. Thor H, **Smith MT**, Hartzell P, Bellomo G, Jewell SA, Orrenius S (1982) The metabolism of menadione in isolated hepatocytes. A study of the implications of oxidative stress in intact cells. *J Biol Chem.* 257:12419-12425. PMID 6181068.
11. **Smith MT**, Thor H, Orrenius S (1983) Role of lipid peroxidation in the toxicity of foreign compounds to liver cells. *Biochem Pharmacol.* 32:763-764. PMID 6838624.
12. Jones DP, Thor H, **Smith MT**, Jewell SA, Orrenius S (1983) Inhibition of ATP-dependent microsomal Ca<sup>2+</sup> sequestration during oxidative stress and its prevention by glutathione. *J Biol Chem.* 258:6390-6393. PMID 6406479.
13. Cohen GM, Wilson GD, Gibby EM, **Smith MT**, Doherty MD, Connors T (1983) 1-Naphthol: A potential anti-cancer agent. *Biochem Pharmacol.* 32:2363-2365. PMID 6882476.
14. **Smith MT**, Redick JA, Baron J (1983) Quantitative immunocytochemistry: A comparison of microdensitometric measurement of unlabeled antibody peroxidase-antiperoxidase staining and of microfluorometric measurement of indirect fluorescent antibody staining for NADPH-cytochrome (P-450) reductase. *J Histochem Cytochem.* 31:1183-1189. PMID 6411804.
15. de Peyster A, Quintanilha A, Packer L, **Smith MT** (1984) Oxygen radical formation induced by gossypol in rat liver microsomes and human sperm. *Biochem Biophys Res Commun.* 118:573-579. PMID 6322752.

16. Doherty MD, Cohen GM, **Smith MT** (1984) Mechanisms of toxic injury to isolated hepatocytes by 1-naphthol. *Biochem Pharmacol.* 33:543-549. PMID 6200119.
17. Thornalley PJ, Doherty MD, **Smith MT**, Bannister JM, Cohen GM (1984) The formation of active oxygen species following activation of 1-naphthol, 1,2- and 1,4-naphthoquinone by rat liver microsomes. *Chem-Biol Interact.* 48:195-206. PMID 6321045.
18. Chesis PL, Levin DB, **Smith MT**, Ernster L, Ames BN (1984) Mutagenicity of quinones: pathways of metabolic activation and detoxification. *Proc Natl Acad Sci USA.* 81:1696-1700. PMID 6584903.
19. **Smith MT** and Evans CG. (1984) Inhibitory effect of superoxide generating quinones on superoxide dismutase. *Biochem Pharmacol.* 33:3109-3110. PMID 6091670.
20. Fluck DS, Rappaport SM, Eastmond DA, **Smith MT** (1984) Conversion of 1-naphthol to naphthoquinone metabolites by rat liver microsomes: Demonstration by high pressure liquid chromatography with electrochemical detection. *Arch Biochem Biophys.* 235:351-358. PMID 6517596.
21. **Smith MT**, Fluck DS, Eastmond DA, Rappaport SM (1985) Detection of quinone metabolites by HPLC with reductive electrochemical detection. *Life Chemistry Reports.* 3:250-258. PMID 6517596.
22. Talcott RE, **Smith MT**, Giannini DD (1985) Inhibition of microsomal lipid peroxidation by naphthoquinones: Structure-activity relationships and possible mechanisms of action. *Arch Biochem Biophys.* 241:88-94. PMID 4026326.
23. **Smith MT**, Thompson S (1985) Free radical and alcoholics. *Lancet*, 2:774-775. PMID 2864501.
24. **Smith MT**, Sandy MS (1985) Role of extracellular Ca<sup>2+</sup> in toxic liver injury: comparative studies with the perfused liver and isolated hepatocytes. *Toxicol Appl Pharmacol*, 81:213-219. PMID 4060150.
25. Thompson S, **Smith MT** (1985) Measurement of a diene conjugated form of linoleic acid in plasma by hplc: A questionable non-invasive assay of free radical activity. *Chem-Biol Interact*, 55:357-367. PMID 4075442.
26. Ross D, Mehlhorn R, Moldeus PW, **Smith MT** (1985) Metabolism of diethylstilbestrol by horseradish peroxidase and prostaglandin synthase: generation of a free radical intermediate and its interaction with glutathione. *J Biol Chem*, 260:16210 - 16214. PMID 2999150.
27. **Smith MT** (1985) Quinones as mutagens, carcinogens and anticancer agents: introduction and overview. *J Toxicol Environ Health*, 16:665-672. PMID 4093988.
28. Berger MS, Talcott RE, Rosenblum ML, Silva M, Ali-Osman F, **Smith MT** (1985) The use of quinones in brain tumor chemotherapy: preliminary results from preclinical investigations. *J Tox Environ Health*, 16:713-719. PMID 2419579.
29. Di Monte D, Sandy MS, Ekstrom G, and **Smith MT**. (1986) Comparative studies on the mechanisms of paraquat and 1-methyl-4-phenyl-pyridine (MPP+) cytotoxicity. *Biochem Biophys Res Commun*, 137:303-309. PMID 3487318.
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