EXHIBIT 38

Declaration of Rachel Clattenburg
Public Citizen v. FDA et al., 16-cv-781

CURRICULUM VITAE

Kendall B. Wallace, Ph.D.
Diplomate, American Board of Toxicology
Fellow, Academy of Toxicological Sciences
Editor, Toxicology

Professor of Pharmacology & Toxicology
Associate Dean, Faculty Affairs
University of Minnesota Medical School
Duluth, MN 55812-2487
Telephone: 218-726-8899
FAX: 218-726-8014
e-mail: kwallace@d.umn.edu

Education

Alpena High School, Alpena, MI	1971
Alpena Comm. College, Alpena, MI	1973; Associate (Natural Science)
Michigan State Univ., East Lansing, MI	1975; B.S. (Biochemistry)
Michigan State Univ., East Lansing, MI	1977; M.S. (Physiology)
Michigan State Univ., East Lansing, MI	1979; Ph.D. (Physiology)
University of Iowa, Iowa City, IA	1981; Postdoc (Toxicology)

Appointments

Research Assistant	Depts. Pharmacology & Toxicology and Physiology & Human Development Michigan State University, East Lansing, MI	1975-1977
Teaching Assistant	Department of Physiology Michigan State University, East Lansing, MI	1977-1979
Postdoctoral Fellow	Toxicology Center, Dept. Pharmacology University of Iowa, Iowa City, IA	1979-1981
Assistant Professor	Department of Pharmacology University of Minnesota	1981-1987
Director of Graduate Studies	Toxicology M.S./Ph.D. Program University of Minnesota	1990-1994
	-Associate Director	1998-2001
	-Director	2002-2013
Director	Chemical Toxicology Research Center University of Minnesota Duluth	1985-1992
	-Associate Director	1992-2008
Associate Professor	Department of Pharmacology University of Minnesota	1987-1996
Associate Professor	Department of Biochemistry & Molecular Biology University of Minnesota	1996-1998
Professor	Department of Biochemistry & Molecular Biology University of Minnesota	1998-present
Interim Chair	Department of Biomedical Sciences University of Minnesota Medical School Duluth	2011-2012
Associate Dean	Faculty Affairs University of Minnesota Medical School Duluth	2012- present

Teaching

UMD Medical School

Cardiovascular Pharmacology	1981-present
Fetal, Neonatal, and Geriatric Pharmacology	1981-1990
Clinical Toxicology and Therapeutics	1981-1995
Advanced Pharmacology – Drug Metabolism	1985-1995
Clinical Pathology Case presentations (Environmental Medicine)	1996-present

Graduate Student Education

University of Minnesota Graduate School Appointments:

Associate Member, Pharmacology	1984-1993
Full Member, Pharmacology	1993-2010
Full Member, Toxicology	1990-present
Director of Graduate Studies, Toxicology Graduate Program	1990-94, 2001-
Full Member, Biochemistry, Molecular Biology and Biophysics	1998-present

Major Advisor:

(b) (6)	M.S., Pharmacology	1986
(b) (6)	M.S., Pharmacology	1989
(b) (6)	M.S., Pharmacology	1991
(b) (6)	M.S., Pharmacology	1992
(b) (6)	M.S., Pharmacology	1994
(b) (6)	Ph.D., Pharmacology	1994
(b) (6)	Ph.D., Toxicology	1995
(b) (6)	Ph.D., Toxicology	2001
(b) (6)	M.S., Biochem. & Mol. Biol.	2001
(b) (6)	M.S., Biochem. & Mol. Biol.	2002
(b) (6)	M.S., Biochem. & Mol. Biol.	2004
(b) (6)	Ph.D., Toxicology	2006
(b) (6)	Ph.D., Toxicology	2006
(b) (6)	Ph.D., Toxicology	2007
(b) (6)	Masters, Public Health	2008
(b) (6)	M.S. Biochem. & Mol. Biol.	2010
(b) (6)	M.S. Biochem. & Mol. Biol.	2010
(b) (6)	Ph.D., Toxicology	Present

Member, Thesis Examining Committee:

(b) (6)	Ph.D., Pharmacology	1988
(b) (6)	M.S., Pharmacology	1990
(b) (6)	Ph.D., Pharmacology	1991
(b) (6)	M.S., Biology	1992
(b) (6)	Ph.D., Toxicology	1995
(b) (6)	M.S., Biochem & Mol. Biol.	1996
(b) (6)	M.S., Toxicology	1998
(b) (6)	M.S., Chemistry	1998
(b) (6)	M.S., Chemistry	1998
(b) (6)	Ph.D., Biochem. & Mol. Biol.	1999
(b) (6)	Ph.D., Toxicology	2001
(b) (6)	Ph.D. Biochem., Mol. Biol. & Biophys.	2003
(b) (6)	M.S., Chemistry	2003

(b) (6)	M.S., Chemistry	2003
(b) (6)	Ph.D., Coimbra, PORTUGAL	2003
(b) (6)	Ph.D., Coimbra, PORTUGAL	2003
(b) (6)	Ph.D., Coimbra, PORTUGAL	2008
(b) (6)	Ph.D. Toxicology, Sao Paulo, BRAZIL	2006
(b) (6)	Ph.D. Biochem., Mol. Biol. & Biophys.	2008
(b) (6)	Ph.D., Coimbra, PORTUGAL	2008
(b) (6)	Ph.D., Coimbra, PORTUGAL	2012

Post-Doctoral Mentorships:

(b) (6)	1995-1997
(b) (6)	1997-1999
(b) (6)	1999-2004
(b) (6)	2003-2006
(b) (6)	2004-2008
(b) (6)	2008-2011
(b) (6)	2011-2013

Visiting Scientists:

(b) (6)	Medical College of Wisconsin	1996
(b) (6)	University of Coimbra, Portugal	1997
(b) (6)	University of Coimbra, Portugal	1997
(b) (6)	University of California, Davis	1997
(b) (6)	University of Coimbra, Portugal	1999
(b) (6))	University of Coimbra, Portugal	2001
(b) (6)	University of Coimbra, Portugal	2001
(b) (6)	Louisiana State University	2002-2003
(b) (6)	University of Coimbra, Portugal	2003-2004
(b) (6)	University of Sao Paulo, Brazil	2004-2005
(b) (6)	Stockholm University, Sweden	2011

Honors and Recognitions

University of Minnesota School of Medicine	Basic Science Teacher of the Year	1987-1988
	Basic Science Teacher of the Year	1989-1990
	Basic Science Teacher of the Year	1990-1991
	Basic Science Teacher of the Year	1997-1998
	Honorable Mention	2004-2005

Scholar, Great Lakes Occupational and Environmental Medicine Association of Occupational and Environmental Clinics	1995-1997
Toxicology Scholar University of Connecticut Center for Biochemical Toxicology	2000
Society of Toxicology Speakers Bureau	1998-2006
	2010-present

Society of Toxicology, Mechanisms Specialty Section,
Meritorious Graduate Student Research

(b) (6)	3rd Place	1992
(b) (6)	Honorable Mention	1993
(b) (6)	Honorable Mention	1993
(b) (6)	Honorable Mention	1993
(b) (6)	3rd Place	1994
(b) (6)	Honorable Mention	2000

Northland Regional Chapter of SOT Graduate Student Award

(b) (6)	First Place	1999
(b) (6)	Third Place	2002
(b) (6)	First Place	2004

Northland Regional Chapter, Society of Environmental Toxicology and Chemistry

(b) (6)	First Place	2002

American Chinese Toxicology Society Graduate Student Award

(b) (6),	First Place	2000

Sigma Xi, Graduate Student Award

(b) (6)	First Place	2002

3M Science & Technology Graduate Fellowship

(b) (6)		2002-2006

Awards

	total direct costs	
NIEHS Individual Research Service Award (P.I.) "Free Radical Damage to Lung from Environmental Toxins"	$22,768	1980-1981
Minnesota Medical Foundation (P.I.) "Nuclear Metabolism of Adriamycin to Intermediates which Interfere with DNA Replication"	$(b) (6)	1982-1983
American Cancer Society, University of Minnesota (P.I.) "Age-Related Differences in Adriamycin-Induced Poly (ADP)-Ribosylation of Nuclear Proteins and Susceptibility to Chemical-Induced DNA Damage"	$(b) (6)	1982-1983
University of Minnesota Graduate School (P.I.) "The Teratology and Reproductive Toxicity of Organophosphorus Pesticides"	$(b) (6)	1982-1983
Pharmaceutical Manufacturers' Association Fnd. Research Starter Grant (P.I.) "Subcellular Compartmentalization of the Metabolic Activation and Free Radical-Induced Toxicity of Doxorubicin (Adriamycin)"	$ (b) (6)	1982-1984
U.S. Environmental Protection Agency (P.I.) "Fish Surrogates for Higher Vertebrates in Risk Assessment"	$332,320	1983-1987
Biomedical Research Support Grant (P.I.) "Epigenetic Free Radical Mechanisms of Microsomal-Mediated Genotoxicity: Aldehyde Generation During Doxorubicin-Mediated Lipid Peroxidation"	$(b) (6)	1987-1990
University of Minnesota Graduate School (P.I.) "Enzymological Basis for Anticholinesterase Species-	$(b) (6)	1987-1989

Selectivity”		
Minnesota Medical Foundation (P.I.) “Toxicity of Adriamycin to Cultured Heart Cells”	$ (b) (6)	1989-1991
U.S. Environmental Protection Agency (P.I.) “Cytotoxic Mechanisms of Oxidative Chemical Reactivity”	$75,000	1990-1993
American Heart Association – Minnesota Affiliate (P.I.) “Adriamycin-Induced Deregulation of Thiol-Dependent Cardiac Mitochondrial Calcium Homeostasis”	$ (b) (6)	1992-1994
Minnesota Medical Foundation (P.I.) “Adriamycin-Induced Mitochondrial Cardiomyopathy”	$(b) (6)	1994-1995
University of Minnesota Graduate School (P.I.) “Mitochondrial-Mediated Quinone Cytotoxicity”	$(b) (6)	1994-1995
Association of Occupational and Environmental Clinics (P.I.) “Great Lakes Environmental Medicine Scholarship”	$(b) (6)	1995-1996
The 3M Company (P.I.) “Mechanistic Toxicology”	$ (b) (6)	1992-1996
KALSEC (P.I.) “Molecular Mechanisms of Mitochondrial Mutagenesis”	$ (b) (6)	1995-1997
Rohm and Haas Co. (P.I.) “Mechanisms of Acrylic Acid-mediated Mitochondrial Toxicity”	$ (b) (6)	1995-1998
American Heart Association – Minnesota Affiliate (P.I.) “Adriamycin-Induced Mitochondrial Cardiomyopathy”	$ (b) (6)	1996-1997
The 3M Company (P.I.) “Biochemical and Molecular Mechanistic Studies of N-Alkyl-Perfluorosulfonamides”	$ (b) (6)	1997-1998
The 3M Company (P.I.) “Mitochondrial Interactions of Peroxisome Proliferators”	$ (b) (6)	1997-1998
National Heart Lung and Blood Institute – NIH, R01-HL58016 (P.I.) “Adriamycin-Induced Mitochondrial Cardiomyopathy”	$874,808	1997-2001
Whiteside Institute for Clinical Research (P.I.) “The Efficacy of the Triterpenoid Betulin in Treating Pathogenic Herpes Viruses”	$(b) (6)	1998-1999
The 3M Company (P.I.) “Biochemical and Molecular Mechanistic Studies of N-Alkyl-Perfluorosulfonamides”	$ (b) (6)	1998-2001
The 3M Company (P.I.) “Mitochondrial Interactions of Peroxisome Proliferators”	$ (b) (6)	1998-2001
University of Minnesota Academic Health Center (P.I.) Faculty Research Development Program “Mechanisms of Antiviral Activity of Betulin and its Derivatives”	$ (b) (6)	1999-2002
Pharmacia & Upjohn (P.I.) Effects of xenobiotics on mitochondrial metabolism	$ (b) (6)	2000-2001
Chemical Manufacturers’ Association (consultant) “Cumulative Risk Assessment Methods for Mixtures with a Common Mode of Action”	$ (b) (6)	2000-2002
Minnesota Medical Foundation (P.I.) “Prevention of Doxorubicin-induced Heart Damage by Carvedilol”	$(b) (6)	2000-2001
University of Minnesota Graduate School (co-P.I.) Adriamycin-induced mitochondrial cardiomyopathy:	$ (b) (6)	2000-2001

Ischemia/reperfusion studies.

ACTG (co-P.I., 10% effort) "A Pilot Study of the Status of Lymphocyte Mitochondria Biomarkers Among HIV-1 Infected Persons at Risk for Nucleoside Reverse Transcriptase-Related Mitochondrial Toxicity Compared to Controls"	$ (b) (6)	2000-2001
National Institutes of Health (co-I; 5% effort) Nutritional Copper Status and the Nervous System	$375,000	2001-2004
Burroughs Welcome Visiting Professorship (P.I.)	$(b) (6)	2001-2002
The 3M Company (P.I.) "Mitochondrial Interactions of Peroxisome Proliferators"	$ (b) (6)	2001-2003
Great Lakes Regional Center for AIDS Research (P.I.) "Nucleoside reverse transcriptase inhibitor- induced mitochondrial toxicity – Inhibition of the adenine nucleotide translocator"	$ (b) (6)	2002-2003
Duluth Clinic (co-P.I.) "Prevention by carvedilol of doxorubicin-induced damage to heart, kidney, and liver"	$ (b) (6)	2002-2003
SMDC Foundation (co-P.I.) "In vivo anti-herpes virus activity of beta-cyclodextrin"	$ (b) (6)	2003-2004
Minnesota Medical Foundation (co-P.I.) "Prevention of doxorubicin-induced damage to heart, kidney and liver by vitamin E"	$ (b) (6)	2003-2004
NIH-NHLBI – competing renewal (P.I.) "Adriamycin-Induced Mitochondrial Cardiomyopathy"	$1,333,018	2001-2007
NIH-NHLBI (P.I.) "NRTI-induced Mitochondrial Cardiomyopathy"	$1,804,534	2002-2008
Minnesota Medical Foundation "Shared Preparative Ultracentrifuge"	$ (b) (6)	2004-2005
University of Minnesota Graduate School "Shared Preparative Ultracentrifuge"	$ (b) (6)	2004-2005
NIH-NIDK (R21, co-P.I.; 5% effort) "Proteomics in Type I Diabetes and its Complications"	$500,000	2005-2007
NIH-NIDK (R21, co-P.I.; 20% effort) "Mitochondrial and Oxidative Stress in Type I Diabetes"	$180,000	2006-2008
The 3M Company (P.I.) "Mechanistic Toxicology"	$ (b) (6)	2007-2015
NIH-NIEHS, RFQ DLI60131 (P.I.) "Mitochondrial Toxicities of Perfluoroalkanes: a QSAR study"	$98,290	2006-2009
SMDC Health System "Metabolic Approaches to Radiosensitization"	$ (b) (6)	2009-2010
Whiteside Institute for Clinical Research (P.I.) "Troglitazone Amplifies Mitochondrial Infidelity and Sensitizes Breast Cancer Cells to Chemotherapy"	$ (b) (6)	2009-2010
Whiteside Institute for Clinical Research (co-P.I. with K. Nordgren) "Cardiac Risk Modulated by Mitochondrial Epigenetics"	$ (b) (6)	2013-2014

Pending Applications:

Professional Activities

Certifications:

Diplomate, American Board of Toxicology	1992, 1997, 2002
Board of Directors	1998-2002
Vice-President	2000-2001
President	2001-2002
Fellow, Academy of Toxicological Sciences	2005, 2010
Board of Directors	2012-2015
Vice-President	2013-2014
President	2014-2015

Consultancies:

StrataTox, LLC, President & CEO 2004-present

- Advise pharma, food and chemical industry clients on product development, product stewardship, worker & consumer safety
- Assist clients with product registration (EPA, FDA; OSHA)
- Litigation support (past five years):

Retained/Submitted Expert Report:

- For the defendant: *U.S. EPA v. FMC Corp. et al.* petition. U.S. Supreme Court, Washington, DC. (October, 2009)
- For the defendant: *Weissman v. Nerland et al., No. 27-CV-08-28192*
- *State of Minnesota v. 3M Company*, 27-CV-10-28862, Hennepin County District Court, Minnesota. (Sept. 25, 2008)
- For the defendant: *Moxley v. Sec., HHS (May, 2013)*

Deposed by Opposing Counsel:

- For the defendant: *Paulson, Paulson, Henry & Krank v. 3M, No. C2-04-6309,* Washington County District Court, Minnesota (Sept. 25, 2008)
- For the defendant: *Newkirk & Newkirk v.* ConAgra *et al., No. 08-273-FVS,* Circuit Court Jackson County, Missouri at Independence. (Jan. 13, 2010)
- For the defendant: *Khoury & Khoury v. ConAgra et al., No. 0816-CV-31620,* Circuit Court Jackson County, Missouri at Independence. (Jan. 13, 2010).
- For the defendant: *Daughetee v. Chr. Hansen, Inc., et al., No. C09-4100-MWB, U.S. District Court, Northern District of Iowa.* (Feb. 17, 2012).
- For the defendant: *Stults v. American Pop Corn Company, et al., No. C11-4077-MWB, U.S. District Court, Northern District of Iowa.* (Feb. 17, 2012).
- For the defendant: *Mercado v. ConAgra Foods, Inc., et al., No. 11069/10, New York Supreme Court, Queens County.* (Feb. 17, 2012).
- For the defendant*: Kellogg Co. v. Flexible Packaging Corp., Civil No.: 1:11-cv-272, Federal District Court for the Western District of Michigan* (2013).

Testified:

- For the defendant: *R.J. Krakow v. Sec., HHS No. 1:03-vv-00632-UNJ U.S. Court of Federal Claims, Off. Special Masters, Washington, DC (April, 2013)*

Societies:

Society of Toxicology (SOT)	
Continuing Education Committee, member	1988-1993
(Chair 1991-1993)	
Finance Committee	1994-1997
Nominating Committee	1997-1998; 2009-2011
Council Secretary-Elect	1999-2000
Council Secretary	2000-2002
Media Resource Specialist	1999-2001
Continuing Education Committee Speakers Bureau	1998-2002
Vice President-Elect	*2003-2004*
Vice President	*2004-2005*
President	*2005-2006*
Past President	*2006-2007*
Endowment Fund Board	2011-2014
Mechanisms Specialty Section	
Program Committee	1990-1992
Secretary/Treasurer	1998-2000
Mixtures Specialty Section	
Vice-President elect, VP, President	2010-2013
Northland Regional Chapter	
President	1998-2000
Past President	2000-2001
International Union of Toxicology (IUTOX) – International Congress of Toxicology	
Executive Committee	
(ICT VII, Seattle, USA)	1993-1995
Continuing Education Committee, Chair	
(ICT VII, Seattle, USA)	1993-1995
Continuing Education Committee, member	
(ICT VIII, Paris, France)	1995-1998
Continuing Education Committee, member	
(ICT X, Tampere, Finland)	2002-2004
International Advisory Board (ICT-XIII, Seoul, Korea)	2007-2008
Director, IUTOX	2013-2016
American Society for Pharmacology and Experimental Therapeutics (ASPET)	
Member	1983-present
Division of Toxicology	
Nominating Committee, Chair	1992, 1995
Executive Committee	1992-1994
Executive Committee	1995-1998
5th International Workshop on QSAR in Environmental Toxicology	
Organizational Committee QSAR '92	1991-1992
EUROTOX, European Society of Toxicology	
Member	1997-present
Mitochondrial Research Society	
President	2003-2004
United Mitochondrial Disease Foundation	
Co-chair, Research Review Committee	2004-2006

Scientific and Medical Advisory Board 2004-2010

Scientific Advisory Panels:

Council of Great Lakes Governors
Member, Scientific Advisory Panel, Fish Consumption Advisories 1994-1997

International Joint Commission
Member, Advisory Workshop – Health Professional Task Force "Environmental Contaminants and Public Health: Current Approaches and Future Considerations" 1995

National Institutes of Health
Member, NHLBI Working Group – Mitochondrial Mutagenesis and Cardiomyopathy 1993-1995
Toxicology Study Section, Ad Hoc 1997
Member, NHLBI Working Group – Research Priorities for Cardiovascular Disease in HIV infection/AIDS 2004
Ad hoc member, Neural and Oxidative Metabolic Disease Study Section 2009

Risk Sciences Institute; International Life Sciences Institute
Common Mechanisms of Toxicity of Organophosphorus Insecticides 1996 Food Quality Protection Act 1997

Working Group, Methods for Evaluation of Peripheral Nervous System Anticholinesterase Activity 1997
Common Mechanisms of Toxicity of Carbamate Insecticides 1996 Food Quality Protection Act 1997-1998

Health and Environmental Sciences Institute; International Life Sciences Institute Emerging Issues Committee 1998-2007
Board of Trustees 2004-2017
Chair 2010-2012, 2013-2014
Past Chair 2014-2015, 2014-2015

National Science Foundation, Grant Reviewer, Molecular Biochemistry Program 1997

Chemical Manufacturers' Association, Steering Committee, Molecular Biomarkers of Chemical Toxicity 1999-2000

U.S. Environmental Protection Agency, FQPA Scientific Review Board, FIFRA Scientific Advisory Panel 1999-2001

Acrylonitrile Working Group, Scientific Advisor 1999-2000

U.S. Food & Drug Administration, Center for Drug Evaluation Research, 2001-2004
Pharmaceutical Sciences Advisory Committee, Nonclinical Studies Subcommittee
Chair, Expert Working Group on Biomarkers of Drug-Induced Cardiac Toxicity

Center for Neuroscience and Cell Biology, University of Coimbra, PORTUGAL 2002-2007

Mississippi State University, Center for Environmental Toxicology 2004-2009

Mitochondrial Research Society, President 2003-2005

Ministero Dell'Istuzione, Dell'Universita' e Della Ricerca 2009-2012
Grant reviewer, Italian Ministry for Instruction and University Research

HRSA Vaccine Injury Compensation Program 2010-present
Medical Advisory Panel
U.S. Food and Drug Administration 2011-2015
Food Advisory Committee
PrediSafe: Multi-scale *in vitro* based systems toxicology modelling for predictive human safety assessment. Saarland University, Saarbruecken, Germany 2013-2017
Harlan, CSR 2013-2016
Itingen, Switzerland

Editorships

Journals:

Editor-in-Chief: Toxicology 2001-present
Toxic Substance Mechanisms 1997-2000
Associate Editor: Toxicology and Applied Pharmacology 1997-2004
Mitochondrion 1999-2007
Cardiovascular Toxicology 2002–2007
Editorial Boards: Toxicology and Applied Pharmacology 1992-1997
Journal of Pharmacological and Toxicological Methods 1991-1999
Toxic Substance Mechanisms 1992-2000

Books:

Free Radical Toxicology: Target Organ Toxicology Series (ed., K.B. Wallace), Taylor & Francis 1997
Molecular Biology of the Toxic Response (eds., A. Puga and K.B. Wallace) Taylor & Francis 1998

Invited presentations

University of Minnesota Graduate School Research Symposium; Academia in Review
"Species-Selective Targeting of Anticholinesterase Insecticides"
October 6, 1988, Minneapolis, MN

Society of Toxicology, Midwest Regional Chapter Annual Symposium
"Enzymological Basis of Species-Selective Anticholinesterase Toxicity"
November 4, 1988, Chicago, IL

Iowa State University, Toxicology Program
"Enzymological Basis of Species-Selective Anticholinesterase Toxicity"
April 4, 1989, Ames, IA

American Chemical Society, Agrochemicals Division – 199th National Meeting
"Species-Related Differences in the Catalytic Site of Brain Acetylcholinesterase"
April 22-27, 1990, Boston, MA

International Society for Free Radical Research, Fifth Biennial Meeting
"Oxygen Free Radical-Independent Generation of Microsomal Lipid Aldehydes and Consumption of Glutathione by Adriamycin"
November 14-20, 1990, Pasadena, CA

Society of Toxicology, Michigan Chapter
"Mitochondrial Toxicity of Adriamycin"
October 8, 1993, Ann Arbor, MI

Mississippi State University, Toxicology Graduate Program
"Mitochondrial-Mediated Toxicity"
April 18, 1994, Mississippi State, MS

Medical College of Wisconsin, Department of Pharmacology & Toxicology
"Mechanisms of Adriamycin-Induced Mitochondrial Cardiomyopathy"
February 16, 1995, Milwaukee, WI

National Heart, Lung, and Blood Institute – NIH
"Mitochondrial Mutagens: Drug Accelerants of Cardiomyopathy"
May 15 & 16, 1995, Bethesda, MD

Society of Toxicology Annual Meeting – Co-Chair; Continuing Education Course
"Mitochondrial Injury in Toxicology"
March 10, 1996, Anaheim, CA

Society of Toxicology Annual Meeting – Continuing Education Course speaker
"Mitochondrial Calcium Cycling and Activation of the Permeability Transition Pore"
March 10, 1996, Anaheim, CA

Society of Toxicology Annual Meeting – Co-Chair; Symposium
"Mitochondrial-Mediated Cell Injury"
March 13, 1996, Anaheim, CA

Society of Toxicology Annual Meeting – Symposium presentation
"Quinone-Induced Interference with Mitochondrial Calcium Regulation"
March 13, 1996, Anaheim, CA

University of Coimbra, Departments of Biochemistry and Toxicology
"Mechanisms Mitochondrial Toxicity – An Advanced Investigative Laboratory Course"
April 8-19, 1996, Coimbra, Portugal

University of Coimbra, Departments of Biochemistry and Toxicology
"Molecular Mechanisms of Toxic Tissue Injury"
April 17, 1996, Coimbra, Portugal

9th Annual European Bioenergetics Conference
"Adriamycin-Induced Mitochondrial Cardiomyopathy"
Colloquium: The Mitochondrial Permeability Transition in Accidental and Programmed Cell Death
August 17-22, 1996, Louvain-la-Neuve, Belgium

Frontiers of Mitochondrial Research
"Regulation of the Mitochondrial Permeability Pore by Naphthoquinones: Chemical Reactivity-Dependent Mechanisms"

September 19-22, 1996, Rensselaerville Conference Center, New York

Department of Pharmacology and Toxicology – University of Kansas Medical Center
"Differential Mechanisms of Induction of the Mitochondrial Permeability Transition by Naphthoquinones"
October 8, 1996, Kansas City, KS

Center for Neuroscience of Coimbra
International Series in Biomedical Science – Molecular Mechanisms of Cardiovascular Disease
"Molecular Mechanisms of Mitochondrial Myopathies"
November 22 & 23, 1996, Coimbra, Portugal

University of Minnesota-Duluth, Chemistry Department
"Radical Differences in the Mechanisms of Chemical-Induced Mitochondrial Toxicity"
October 10, 1997

Society of Toxicology Annual Meeting – Symposium presentation
"Mitochondrial Permeability Transition in Oxidant-Induced Cardiomyopathy"
March, 1998, Seattle, WA

University of Minnesota-Twin Cities, Department of Biochemistry & Molecular Biology
"Free Radical-Mediated Mitochondrial Myopathies"
June 15, 1998

International Congress of Toxicology - Continuing Education Course speaker
"Oxidative Stress"
July 4, 1998, Paris, France

West Virginia University
Department of Pharmacology & Toxicology
Lecture: "Multiple Modes of Mitochondrial Myopathies"
Seminar: "Adriamycin-induced Mitochondrial Cardiomyopathy"
November 16, 1998, Morgantown, WV

St. Luke's Hospital
"The Biological Basis of Anti-arrhythmic Drug Therapy"
CE Cardiac Update
February 18, 1999, Duluth, MN

Society of Toxicology Annual Meeting - Continuing Education Course speaker
"Generation of Reactive Oxygen by Mitochondria"
March 14, 1999, New Orleans, LA

Society of Toxicology
"Mitochondrial-Mediated Apoptosis"
Co-chair Poster/Discussion Section
March 17, 1999, New Orleans, LA

Indiana University
Department of Pharmacology & Toxicology
"Adriamycin-induced Mitochondrial Cardiomyopathy"

April 16, 1999, Indianapolis, IN

University of Coimbra
Center of Neuroscience and Cell Biology
"Mitochondrial Permeability Transition: a redox sensor for chemical toxicity"
May 14, 1999, Coimbra, PORTUGAL

University of Coimbra
Center of Neuroscience and Cell Biology
"Adriamycin-induced Mitochondrial Cardiomyopathy: a pore way to signal cell death"
May 15, 1999, Coimbra, PORTUGAL

Pharmacia &Upjohn
Investigative Toxicology Division
"The Mitochondrial Permeability Transition: a pore way to regulate cell function and fate"
June 4, 1999, Kalamazoo, MI

Parke-Davis Pharmaceuticals
Experimental Pathology & Toxicology Division
"The Mitochondrial Permeability Transition: a pore way to signal cell death"
June 10, 1999, Ann Arbor, MI

Keystone Symposia on Molecular and Cellular Biology
"Adriamycin-Induced Mitochondrial Pathogenesis In Vivo"
January 15-20, 2000, Santa Fe, NM

University of Minnesota
Department of Medicinal Chemistry
"Adriamycin-induced Mitochondrial Cardiomyopathy"
February 8, 2000, Minneapolis, MN

Michigan State University
Department of Pharmacology & Toxicology
"Adriamycin-induced mitochondrial cardiomyopathy: A pore way to die"
February 22, 2000, East Lansing, MI

Society of Toxicology – Continuing Education Course speaker
"Cardiotoxicity; critical events and emerging issues"
March 17-24, 2000, Philadelphia, PA

Pfizer Pharmaceuticals, Inc.
"Adriamycin-induced mitochondrial cardiomyopathy"
April 6, 2000, Groton, CT

University of Connecticut – TOXICOLOGY SCHOLARS COLLOQUIUM
Center for Biochemical Toxicology
"Adriamycin-induced mitochondrial cardiomyopathy: A pore way to die"
April 7, 2000, Storrs, CT

Washington State University

Department of Pharmaceutical Sciences
"Adriamycin-induced mitochondrial cardiomyopathy"
April 27, 2001, Pullman, WA

University of Coimbra
Center of Neuroscience and Cell Biology
"Calcium-loading and induction of the mitochondrial permeability transition."
May 21, 2001, Coimbra, PORTUGAL

University of Coimbra
Center of Neuroscience and Cell Biology
"Adriamycin-induced irreversible mitochondrial cardiomyopathy"
May 23, 2001, Coimbra, PORTUGAL

American College of Toxicology
Co-chair, "Cardiac troponins as biomarkers of drug-induced myocardial injury"
November 5, 2001, Rockville, MD

International Life Sciences Institute
Co-chair, "Mitochondrial Pathobiology"
December 1, 2001, Salt Lake City, UT

American College of Veterinary Pathobiology.
ILSI Seminars on Advanced Pathologic Techniques: Mechanisms of Mitochondrial Pathobiology
"Mechanisms of mitochondrial injury"
December 1, 2001, Salt Lake City, UT

International Life Sciences Institute
Co-chair, "Genomic technologies"
January 22, 2002, Cancun, MEXICO

Society of Toxicology
"Molecular mechanisms of perfluorooctane toxicity"
March 18-22, 2002, Nashville, TN

University of Louisville
"Molecular Mechanisms of Chemical-induced Cardiac Injury"
November 8, 2002, Louisville, KY

Merck & Co., Inc.
"Multiple Mechanisms of Drug-induced Mitochondrionopathy"
December 19, 2002, West Point, PA

National Institute of Environmental Health Scienes
"Perfluoroalkane-induced Mitochondrionopathies"
April 10, 2003, Research Triangle Park, NC

Hoffman-Roche Pharmaceuticals
"Biomarkers fo Drug-induced Cardiac Toxicity"
May 6, 2003, Nutley, NJ

Mitochondrial Medicine/Research Society
“Free-radical-mediated mitochondrionopathies”
June 12-14, 2003, San Diego, CA

South Central Regional Chapter, Society of Toxicology
“Multiple Mechanisms of Chemical-induced Mitochondrionopathies”
October 10, 2003, Louisiana State University, Shreveport, LA

AACC/Division of Animal Clinical Chemistry
"Conclusions of the FDA Expert Working Group on Biomarkers of Drug-Induced Cardiac Toxicity"
April 23, 2004, Nutley, NJ

Schering AG
“Case-Studies of Dose-Dependent Transitions in Toxicology”
“Troponin Biomarkers of Cardiac Injury”
September 2, 2004, Berlin GERMANY

NHLBI Working Group on Cardiovascular Complications of HIV Infection and AIDS
“NRTI-induced Mitochondrial Cardiomyopathy”
October 13, 2004, Bethesda, MD

U.S. Food and Drug Administration
“Early Preclinical Signals for Drug-induced Mitochondrial Toxicities”
September 14, 2004, Rockville Pike, MD

South Central Regional Chapter, Society of Toxicology
“Multiple Mechanisms of Chemical-induced Mitochondrionopathies”
October 15, 2004, Mississippi State University, Starkville, MS

Mid-Atlantic Regional Chapter, Society of Toxicology
“Adriamycin-induced Cardiomyopathy – A Radical Mechanism of Toxicity”
October 21, 2004, NIEHS, Research Triangle Park, NC

University of Coimbra Center for Neurosciences & Cell Biology
“Multiplicity of Mitochondrial Toxicities”
December 8, 2004; Coimbra, PORTUGAL

University of Coimbra Center for Neurosciences & Cell Biology
“Adriamycin-induced Mitochondrial Cardiomyopathy”
December 8, 2004; Coimbra, PORTUGAL

University of Coimbra Center for Neurosciences & Cell Biology
“Reverse Transcriptase Inhibitor-induced Mitochondrial Depletion””
December 9, 2004; Coimbra, PORTUGAL

Penn State University, Center for Molecular Toxicology
"Adriamycin-induced Mitochondrial Cardiomyopathy - Molecular Basis for Persistent Metabolic Adaptations"
April 29, 2005; College Station, PA

University of Cincinnati, Department of Environmental Health
"Chemical-induced Mitochondrial Cardiomyopathies"
June 7, 2005; Cincinnati, OH

2nd Knoxville Reactivity Workshop
"QSAR Inhalation Toxicity Database"
April 2, 2006; Knoxville, TN

Keystone Symposium
"Mitochondrial Cardiomyopathy and the Compensated Metabolic State"
May 9, 2006; Victoria, BC

Universidade de Sao Paulo – USP, Faculdade de Ciencias Farmaceuticas de Ribeiro Preto, Brasil
"A Small Dose of Toxicology"
August 29, 2006; Ribeiro Preto, Brasil

Society for Heart and Vascular Metabolism
"Cardiomyopathies Induced by Mitochondrial Damage"
September 6-9, 2006; Semiahmoo, CA

ILSI Health and Environmental Sciences Institute, Genomics in Mechanism Based Risk Assessment, "Transcriptional Control of the Metabolic Compensatory Response to Doxorubicin-induced Cardiac Failure"
September 11, 2006; Washington, DC

EUROTOX 2006/6th Croatian Toxicological Society
"Dose-Dependent Transitions in Mechanisms of Toxicity"
September 22, 2006; Dubrovnik, Croatia

EUROTOX 2006/6th Croatian Toxicological Society
"Evolving Identity of Toxicology"
September 21, 2006; Dubrovnik, Croatia

Anthracycline Cardiotoxicity: Molecular Mechanisms and Clinical Correlates
"Adriamycin Mitochondrionopathy"
October 20-21, 2006; Como, Italy

University of Iowa College of Pharmacy, Division of Medicinal and Natural Products Chemistry
"Adriamycin-induced Mitochondrial Cardiomyopathy and the Compensated Metabolic State"
November 7, 2006; Iowa City, IA

Oklahoma State University, 2006 Sitlington Lecturer in Toxicology
"Adriamycin-induced Mitochondrial Cardiomyopathy and the Compensated Metabolic State"
November 30, 2006; Stillwater, OK

Gordon Research Conference – Adverse Drug Reactions
"Mitochondrial Toxicity Related Cardiac and Muscle Injury"

June 11, 2007; Colby College, Waterville, ME

Gordon Research Conference (Colby-Sawyer College) – Toxicogenomics
"Metabolic Correlates of the Transcriptional Signature of Doxorubicin-induced Cardiomyopathy."
June 26, 2007; New London, NH

International Society of Exposure Analysis
"An Editorial Perspective of Effective Scientific Writing"
Oct. 16, 2007; Durham, NC

American College of Occupational and Environmental Medicine
"Stratifying Risks of Complex Exposures"
Oct. 28, 2007; Vancouver, BC

Society of Toxicology
"Transcriptional Signature of Mitochondrial Toxicities"
March 19, 2008; Seattle, WA

United Mitochondrial Disease Foundation
"Metabolic Profiles of Mitochondrial Toxicities"
June 28, 2008; Indianapolis, IN

EUROTOX, European Society of Toxicology
"Adriamycin-induced Mitochondrial Cardiomyopathy"
October 7, 2008; Rhodes, GREECE

National Toxicology Program, NIEHS
"Mitochondrial Toxicity of Perfluoroalkyl Acids: a Structure- Activity Analysis"
July 13, 2009; Research Triangle Park, NC

Rutgers University
Division of Environmental and Occupational Health
"Metabolic Basis of Pefluoroalkyl Acid Toxicity"
October 1, 2009; Piscataway, NJ

Society of Toxicology
"Molecular Determinants of Mitochondrial Disease"
March 12, 2010; Salt Lake City, UT

University of Coimbra
"Mitochondrial Metabonomics"
September 30, 2010; Coimbra, Portugal

Invited Discussant - Nature, Institute of Food Technology, and PEW Health Group sponsored workshop
"Enhancing FDA's evaluation of science to ensure chemicals added to food are safe"
April 5-6, 2011; Washington, DC

United Mitochondrial Disease Foundation
"The metabolic Phenotype of Environmentally-induced Mitochondrial Disease"
June 17, 2011; Chicago, IL

Safety Pharmaceutical Society
"Translating *in vitro* Mitochondrial Toxicity to Predict Cardiovascular Safety."
Sept. 11, 2011; Insbrook, Austria

Co-Chair, International Toxicology of Mixtures Conference,
October 21-23, 2011; Washington, DC

University of Coimbra
"QSAR approach to Perfluoroalkyl Acid Toxicity"
March 19, 2012; Coimbra PORTUGAL

European Society for Clinical Investigation
"Drug-induced Cardiomyopathies of Mitochondrial Origin"
March 22, 2012; Budapest, HUNGARY

European Partnership for Alternative Approaches to Animal Testing (EPAA)
"Harnessing the Chemistry of Life: Revolutionizing Toxicology"
Workshop to Develop a Research Prospectus
April 3-4, 2012; Brussels, BELGIUM

St. John's University
"Molecular Remodeling with Doxorubicin-induced Cardiomyopathy: Adverse v/ Adaptive Response"
April 23, 2012; Jamaica, NY

U.S. DHHS Health Resources and Services Administration and the U.S. Department of Justice
Webinar: "Differential Diagnosis of Mitochondrial Disease"
May 25, 2012

European Commission Joint Research Centre, invited expert advisor
"Adverse Outcome Pathways for Mitochondrial Toxicity"
October 24th-25th, 2012; Ispra, Italy

U.S. Food & Drug Administration, invited course coordinator
Continuing Education Course for Reviewers
"Pre-clinical Alerts for Mitochondrial Toxicities"
November 29, 2012; Washington, DC

International Life Sciences Institute, Food Safety Technical Committee
Weight of Evidence Workshop, Expert Panel
January, 23-24, 2013; Miami, FL

European Society for Clinical Investigation
"The Many Faces of Mitochondrial Disease" – Plenary Lecture
April 17-20, 2013; Algarve, Portugal

Neurobiology of Disease in Children
"Occupational, Environmental and Therapeutically Acquired Mitochondrial Disorders"
October 30, 2013; Austin, TX

Publications, Full-Length Peer-Reviewed Manuscripts

1. Wallace, K.B., Bailie, M.D. and Hook, J.B. 1978 . Angiotensin-Converting Enzyme in Developing Lung and Kidney. Amer. J. Physiol. **234**, R141-R145.
2. Wallace, K.B., Bailie, M.D. and Hook, J.B. 1979 . Development of Angiotensin-Converting Enzyme in Fetal Rat Lungs. Amer. J. Physiol. **236**, R57-R60.
3. Roth, R.A., Wallace, K.B., Alper, R.H. and Bailie, M.D. 1979 . Effect of Paraquat Treatment of Rats on Disposition of 5-Hydroxytryptamine and Angiotensin I by Perfused Lung. Biochem. Pharmacol. **28**, 2349-2355.
4. Wallace, K.B., Roth, R.A., Hook, J.B. and Bailie, M.D. 1980 . Age-Related Differences in Angiotensin I Metabolism by Isolated Perfused Rat Lungs. Amer. J. Physiol. **238**, R395-R399.
5. Wallace, K.B., Hook, J.B. and Bailie, M.D. 1980 . Postnatal Development of the Renin-Angiotensin System in Rats. Amer. J. Physiol. **238**, R432-R437.
6. Wallace, K.B., Bailie, M.D., Hook, J.B. and Roth, R.A. 1980 . Disposition of 5-Hydroxy-tryptamine in Lungs of Developing Rats. Amer. J. Physiol. **239**, R401-R406.
7. Wallace, K.B., Osborn, J.L. and Bailie, M.D. 1980 . Species Differences in the Kinetics of the Renin-Substrate Reaction in Plasma. J. Pharmacol. Methods **4**, 141-154.
8. Roth, R.A. and Wallace, K.B. 1980 . Disposition of Biogenic Amines by Lungs of Spontaneously Hypertensive Rats. Amer. J. Physiol. **239**, H736-H741.
9. Wallace, K.B., Oparil, S. and Bailie, M.D. 1981 . Angiotensin II Metabolism by Tissues from Developing Rats. Pediatr. Res. **15**, 1088-1092.
10. Wallace, K.B. and Bailie, M.D. 1982 . Age-Related Differences in the Stoichiometry of the Renin-Angiotensinogen Reaction in Rat Plasma. Develop. Pharmacol. Ther. **4**, 190-204.
11. McCormack, K.M., Roth, R.A., Wallace, K.B., Ross, L.M. and Hook, J.B. 1982 . Non-respiratory Metabolic Function and Morphology of Lung Following Exposure to Polybrominated Biphenyls in Rats. J. Toxicol. Environ. Health **9**, 27-39.
12. Wallace, K.B. 1983 . Hepatic Redox Homeostasis Following Acute Adriamycin Intoxication in Rats. Biochem. Pharmacol. **32**, 2577-2582.
13. Wallace, K.B. 1986 . Aglycosylation and Disposition of Doxorubicin in Isolated Rat Liver Nuclei and Microsomes. Drug Metab. Dispos. **14**, 399-404.
14. Wallace, K.B. 1986 . Nonenzymatic Oxygen Activation and Stimulation of Lipid Peroxidation by Doxorubicin-Copper. Toxicol. Appl. Pharmacol. **86**, 69-79.
15. Wallace, K.B. and Johnson, J.A. 1987 . Oxygen-Dependent Effect of Microsomes on the Binding of Doxorubicin to Rat Hepatic Nuclear DNA. Molec. Pharmacol. **31**, 307-311.
16. Johnson, J.A. and Wallace, K.B. 1987 . Species-Related Differences in the Inhibition of Brain Acetylcholinesterase by Paraoxon and Malaoxon. Toxicol. Appl. Pharmacol. **88**, 234-241.
17. Wallace, K.B. and Dargan, J.E. 1987 . Intrinsic Metabolic Clearance of Parathion and Paraoxon by Liver from Fish and Rodents. Toxicol. Appl. Pharmacol. **90**, 235-242.
18. Wallace, K.B. and Herzberg, U. 1988 . Reactivation and Aging of Phosphorylated Brain Acetylcholinesterase from Fish and Rodents. Toxicol. Appl. Pharmacol. **92**, 307-314.
19. Wallace, K.B. and Niemi, G.J. 1988 . Structure-Activity Relationships of Species-Selectivity in Acute Chemical Toxicity Between Fish and Rodents. Environ. Toxicol. Chem. **7**, 201-212.
20. Wallace, K.B. 1989 . Glutathione-Dependent Metabolism in Fish and Rodents. Environ. Toxicol. Chem. **8**, 1049-1055.
21. Kemp, J.R. and Wallace, K.B. 1990 . Molecular Determinants of the Species-Selective Inhibition of Brain Acetylcholinesterase. Toxicol. Appl. Pharmacol. **104**, 246-258.
22. Wallace, K.B. and Kemp, J.R. 1991 . Species-Specificity in the Chemical Mechanisms of Organophosphorus Anticholinesterase Activity. Chem. Res. Toxicol. **4**, 41-49.

23. Solem, L.E. and Wallace, K.B. 1993 Selective Activation of the Sodium-Independent, Cyclosporin A-Sensitive Calcium Pore of Cardiac Mitochondria by Doxorubicin. Toxicol. Appl. Pharmacol. **121**, 50-57.
24. Trost, L.C. and Wallace, K.B. 1994 . Stimulation of Myoglobin-Dependent Lipid Peroxidation by Adriamycin. Biochem. Biophys. Res. Comm. **204**, 23-29.
25. Trost, L.C. and Wallace, K.B. 1994 . Adriamycin-Induced Oxidation of Myoglobin. Biochem. Biophys. Res. Comm. **204**, 30-37.
26. Solem, L.E., Henry, T.R. and Wallace, K.B. 1994 . Disruption of Mitochondrial Calcium Homeostasis Following Chronic Doxorubicin Administration. Toxicol. Appl. Pharmacol. **129**, 214-222.
27. Saxena, K., Henry, T.R., Solem, L.E. and Wallace, K.B. 1995 . Enhanced Induction of the Mitochondrial Permeability Transition Following Acute Menadione Administration. Arch. Biochem. Biophys. **317**, 79-84.
28. Henry, T.R., Solem, L.E. and Wallace, K.B. 1995 . Channel-Specific Induction of the Cyclosporine A-Sensitive Mitochondrial Permeability Transition by Menadione. J. Toxicol. Env. Health **45**, 489-504.
29. Henry, T.R. and Wallace, K.B. 1995 . Differential Mechanisms of Induction of the Mitochondrial Permeability Transition by Quinones of Varying Chemical Reactivities. Toxicol. Appl. Pharmacol. **134,** 195-203.
30. Henry, T.R. and Wallace, K.B. 1995 . The Role of Redox Cycling Versus Arylation in Quinone-Induced Mitochondrial Dysfunction: A Mechanistic Approach in Classifying Reactive Toxicants. SAR QSAR Environ. Res. **4**, 97-108.
31. Palmeira, C.M.M., Moreno, A.J.M., Madeira, V.M.C. and Wallace, K.B. 1996 . Continuous Monitoring of Mitochondrial Membrane Potential in Hepatocyte Cell Suspensions. J. Pharmacol. Toxicol. Methods **35**, 35-43.
32. Solem, L.E., Heller, L.J. and Wallace, K.B. 1996 . Dose-Dependent Increase in Sensitivity to Calcium-Induced Mitochondrial Dysfunction and Cardiomyocyte Cell Injury by Doxorubicin. J. Mol. Cell. Cardiol. **28**, 1023-1032.
33. Henry, T.R. and Wallace, K.B. 1996 . Differential Mechanisms of Cell Killing by Redox Cycling and Arylating Quinones. Arch. Toxicol. **70**, 482-489.
34. Serrano, J., Palmeira, C.M., Wallace, K.B. and Kuehl, D. 1996 . Determination of 8-Hydroxy-deoxyguanosine in Biological Tissue by Liquid Chromatography/Electrospray Ionization-Mass Spectrometry/Mass Spectrometry. Rapid Commun. Mass Spec. **10**, 1789-1791.
35. Palmeira, C.M. and Wallace, K.B. 1997 . Benzoquinone Inhibits the Voltage-Dependent Induction of the Mitochondrial Permeability Transition Caused by Redox Cycling Naphthoquinones. Toxicol. Appl. Pharmacol. **143**, 338-347.
36. Palmeira, C.M., Serrano, J., Kuehl, D.W. and Wallace, K.B. 1997 . Preferential Oxidation of Cardiac Mitochondrial DNA Following Acute Doxorubicin Intoxication. Biochim. Biophys. Acta **1321**, 101-106.
37. Wallace, K.B., Eells, J.T., Madeira, V.M.C., Cortopassi, G., and Jones, D.P. 1997 "Mitochondria-Mediated Cell Injury." Fund. Appl. Toxicol. **38**, 23-37.
38. Mileson, B.E., Chambers, J.E., Chen, W.L., Dettbarn, W., Ehrich, M., Eldefrasi, A.T., Gaylor, D.W., Hamernik, K., Hodgson, E., Karczmar, A.G., Padilla, S., Pope, C.N., Richardson, R.J., Saunders, D.R., Sheets, L.P., Sultatos, L.G., and Wallace, K.B. 1998 . Common Mechanism of Toxicity: A Case Study of Organophosphorus Pesticides. J. Toxicol. Sci. **41**, 8-20.
39. Custodio, J.B.A., Palmeira, C.M., Moreno, A.J. and Wallace, K.B. 1998 . Acrylic Acid Induction of the Mitochondrial Permeability Transition by Calcium and Inorganic Phosphate. Toxicol. Sci. **43**, 19-27.

40. Custodio, J.B.A., Moreno, A.J.M. and Wallace, K.B. 1998 . Tamoxifen Inhibits Induction of the Mitochondrial Permeability Transition by Calcium and Inorganic Phosphate. Toxicol. Appl. Pharmacol. **152**, 10-17.
41. Serrano, J., Palmeira, C.M., Kuehl, D.W. and Wallace, K.B. 1999 . Cardioselective and cumulative oxidation of mitochondrial DNA following subchronic doxorubicin administration. Biochim. Biophys. Acta **1411,** 201-205.
42. Zhou, S. and Wallace, K.B. 1999 . The Effect of Peroxisome Proliferators on Mitochondrial Bioenergetics. Toxicol. Sci. **48**, 82-89.
43. Palmeira, C.M., Rana, I., Frederick, C.B. and Wallace, K.B. 2000 . Induction of the mitochondrial permeability transition in vitro by short chain carboxylic acids. Biochim. Biophys. Res. Commun. **272**, 431-435.
44. Wallace, K.B and Starkov, A. 2000 . "Mitochondrial Targets of Drug Toxicity". In: Annual Reviews of Pharmacology and Toxicology, **vol. 40**, 353-388.
45. Zhou, S., Starkov, A., Froberg, M.K., Leino, R.L., and Wallace, K.B. 2001 . Cumulative and irreversible cardiac mitochondrial dysfunction induced by doxorubicin. Cancer Research **61**, 771-777.
46. Zhou, S., Palmeira, C.M. and Wallace, K.B. 2001 . Doxorubicin-induced persistent oxidative stress to cardiac myocytes. Tox. Letters **121**, 151-157.
47. Zhou, S., Heller, L.J. and Wallace, K.B. 2001 . Interference with calcium-dependent mitochondrial bioenergetics in cardiac myocytes isolated from doxorubicin-treated rats. Toxicol. Appl. Pharmacol. **175**, 60-67.
48. Henry K, Erice A, Balfour HH Jr, Schmeling M, Berthiaume J, Wallace K. 2002 . Lymphocyte mitochondrial biomarkers in asymptomatic HIV-1-infected individuals treated with nucleoside reverse transcriptase inhibitors. AIDS. **16,** 2485-2487.
49. Rolo, A.P., Palmeira, C.M., and Wallace, K.B. 2002 Interactions of combined bile acids on hepatocyte viability: cytoprotection or synergism. Tox. Letters, **126**, 197-203.
50. Starkov, A.A. and Wallace, K.B. 2002 . Structural determinants of fluorochemical-induced mitochondrial dysfunction. Toxicol. Sci. **66,** 244-252.
51. Berthiaume, J. and Wallace, K.B. 2002 . Perfluorooctanoate, Perflourooctanesulfonate, and N-Ethyl Perfluorooctanesulfonamido Ethanol; Peroxisome Proliferation and Mitochondrial Biogenesis. Tox. Letters **129**, 23-32.
52. Santos, D.L., Moreno, A.M., Leino, R.L., Froberg, M.K., and Wallace, K.B. 2002 . Carvedilol protects against doxorubicin-induced mitochondrial cardiomyopathy. Toxicol. Appl. Pharmacol. **185,** 218-27.
53. Rolo, A.P., Palmeira, C.M., and Wallace, K.B. 2003 . Mitochondrially-mediated synergistic cell killing by bile acids. Biochim. Biophys. Acta **1637**, 127-132.
54. Hollingworth, R.M., Bjeldanes, L.F., Bolger, M., Kimber, I., Meade, B.J., Taylor, S.L., and Wallace, K.B. 2003 . The safety of genetically modified foods produced through biotechnology. Toxicol. Sci. **71**, 2-8.
55. Heller, L.J., Mohrman, D.E., Smith, J.A., and Wallace, K.B. 2003 . Multitrack system for superfusing isolated cardiac myocytes. Am. J. Physiol.Heart Circ. Physiol. **284**, H1872-H1878.
56. Wallace, K.B. 2003 . "Doxorubicin-induced Cardiac Mitochondrionopathy." Pharmacology & Toxicology **93,** 105-115.
57. Wallace, K.B, Hausner, E., Herman, E., Holt, G.D., MacGregor, J.T., Metz, A.L., Murphy, E., Rosenblum, I.Y., Frank D. Sistare, F.D., and York, M.J. 2004. Serum Troponins as Biomarkers of Drug-induced Cardiac Toxicity. Toxicol. Pathol. **32**, 106-121.
58. Rolo, A.P., Palmeira, C.M., Holy, J.M., and Wallace, K.B. 2004 . Role of mitochondrial dysfunction in combined bile acid-induced cytotoxicity: The switch between apoptosis and necrosis. Toxicol. Sci. **79**, 196-204.

59. O'Brien, T.M. and Wallace, K.B. 2004 . Mitochondrial permeability transition as the critical target of N-acetyl perfluorooctane sulfonamide toxicity in vitro. Toxicol. Sci. **82**,330-340.
60. Lund, K.C. and Wallace, K.B. 2004. Direct, DNA pol g-independent effects of nucleoside reverse transcriptase inhibitors on mitochondrial bioenergetics. Cardiovascular Toxicology **4**, 217-228.
61. Lund, K.C. and Wallace, K.B. 2004. Direct effects of nucleoside reverse transcriptase inhibitors on rat cardiac mitochondrial bioenergetics. Mitochondrion **4**, 193-202.
62. Slikker, W., Andersen, M.E., Bogdanffy, M.S., Bus, J.S., Cohen, S.D., Conolly, R.B., David, R.M., Doerrer, N.G., Dorman, D.C., Gaylor, D.W., Hattis, D., Rogers, J.M., Setzer, R.W., Swenberg, J.A., and Wallace, K.B. 2004 . Dose-dependent transitions in mechanisms of toxicity. Toxicol. Appl. Pharmacol. **201**, 203-225.
63. Slikker, W., Andersen, M.E., Bogdanffy, M.S., Bus, J.S., Cohen, S.D., Conolly, R.B., David, R.M., Doerrer, N.G., Dorman, D.C., Gaylor, D.W., Hattis, D., Rogers, J.M., Setzer, R.W., Swenberg, J.A., and Wallace, K.B. 2004 . Dose-dependent transitions in mechanisms of toxicity: Case studies. Toxicol. Appl. Pharmacol. **201**, 226-294.
64. Oliveira, P.J., Bjork, J.A., Santos, M.S., Leino, R.L., Froberg, M.K., Moreno, A.J., and Wallace, K.B. 2004 . Carvedilol-mediated antioxidant protection against doxorubicin-induced cardiac mitochondrial toxicity. Toxicol. Appl. Pharmacol. **200**, 159-168.
65. McMartin, K.E. and Wallace, K.B. 2005. Calcium Oxalate Monohydrate, a Metabolite Of Ethylene Glycol, Inhibits Rat Renal Mitochondrial Function. Toxicol. Sci **84**, 195-200.
66. Grasty RC, Bjork JA, Wallace KB, Lau CS, Rogers JM. 2005. Effects of prenatal perfluorooctane sulfonate (PFOS) exposure on lung maturation in the perinatal rat. Birth Defects Res B Dev Reprod Toxicol. **74**, 405-16.
67. Berthiaume, J.M., Oliveira, P.J., Fariss, M.W., and Wallace, K.B. 2005. Dietary Vitamin E Decreases Doxorubicin-Induced Oxidative Stress without Preventing Mitochondrial Dysfunction. Cardiovasc. Toxicol. **05**, 257-267.
68. Oliveira, P.J., Santos, M.S., and Wallace, K.B. 2005. Doxorubicin-induced Thiol-dependent Alteration of Cardiac Mitochondrial Permeability Transition and Respiration. Biochemistry (Moscow) **71**, 194-199.
69. Oliveira, P.J. and Wallace, K.B. 2006 . Depletion of adenine nucleotide transporter protein in heart mitochondria from doxorubicin-treated rats - Relevance for mitochondrial dysfunction. Toxicology **220**, 160-168.
70. O'Brien, T.M., Carlson, R.M., Oliveira, P.J. and Wallace, K.B. 2006 . Esterification prevents induction of the mitochondrial permeability transition by N-acetyl perfluorooctane sulfonamides. Chem Res Toxicol. **19**, 1305-1312.
71. Schultz TW, Carlson RE, Cronin MT, Hermens JL, Johnson R, O'brien PJ, Roberts DW, Siraki A, Wallace KB, Veith GD. 2006 . A conceptual framework for predicting the toxicity of reactive chemicals: modeling soft electrophilicity. SAR QSAR Environ Res. **17**, 413-28.
72. Berthiaume, J.M. and Wallace, K.B. 2007 . Adriamycin-induced oxidative mitochondrial cardiotoxicity. Cell Biol. Toxicol. **23**, 15-25.
73. Chang, S.-C., Thibodeaux, J.R., Eastvold, M.L., Ehresman, D.J., Bjork, J., Froehlich, J.W., Lau, C., Singh, R.J., Wallace, K.B., and Butenhoff, J.L. 2007 . Negative bias from analog methods used in the analysis of free thyroxine in rat serum containing perfluorooctanesulfonate (PFOS). Toxicol. **234**, 21-33.
74. Wallace, K.B. 2007. Adriamycin-induced interference with cardiac mitochondrial calcium Homeostasis. Cardiovasc. Toxicol. **7**, 101-107.
75. Sardao, V.A., Oliveira, P.J., Holy, J., Oliveira, C.R., and Wallace, K.B. 2007. Vital imaging of H9c2 myoblasts exposed to tert-butylhydroperoxide – Characterization of morphological features of cell death. *BMC Cell Biology* **16**, 11.
76. Berthiaume, J.M., Wallace, K.B. 2007 . Persistent alterations to the gene expression profile of the heart subsequent to chronic doxorubicin treatment. *Cardiovasc. Toxicol.* **7**, 178-91.

77. Palmeira, C.M., Rolo, A.P., Berthiaume, J.M., Bjork, J.A., and Wallace, K.B. 2007. Hyperglycemia decreases mitochondrial function: The regulatory role of mitochondrial biogenesis. *Toxicol. Appl. Pharmacol*. **225**, 214-220.
78. Lund, K.C. and Wallace, K.B. 2007 . Adenosine 3',5'-cyclic monophosphate (cAMP)-dependent phosphoregulation of mitochondrial complex I is inhibited by nucleoside reverse transcriptase inhibitors. *Toxicol. Appl. Pharmacol*. **226**, 94-106.
79. Lund, K.C., Peterson, L., and Wallace, K.B. 2007 . Absence of a universal mechanism of mitochondrial toxicity by nucleoside analogs. *Antimicrobial Agents and Chemotherapy* **51**, 2531-2539.
80. Chang, S.-C., Thibodeaux, J.R., Eastvold, M.L., Ehresman, D.J., Bjork, J.A., Froehlich, J.W., Lau, C., Singh, R.J., Wallace, K.B., and Butenhoff, J.B. 2008. Thyroid hormone status and pituitary function in adult rats given oral doses of perfluorooctanesulfonate (PFOS). *Toxicology* **243**, 330-339.
81. O'Brien, T.M., Oliveira, P.J. and Wallace, K.B. 2008 . Inhibition of the Adenine Nucleotide Translocator by N-acetyl Perfluorooctane Sulfonamides In Vitro. *Toxicol. Appl. Pharmacol*. **227**, 184-195.
82. Andersen, M.E., Butenhoff, J.L., Chang, S.-C., Lau, C., Seed, J., and Wallace, K.B. 2008. Workshop overview: Perfluoroalkyl acids and related chemistries – toxicokinetics and modes of action. *Toxicol Sci*. **102**, 3-14.
83. Wallace, K.B. Mitochondrial Off-Targets of Drug Therapy. 2008. *Trends in Pharmacological Sciences*. **29**, 361-366.
84. Bjork, J.A., Lau, C.L., Chang, S.C., Butenhoff, J. and Wallace, K.B. 2008. Perfluorooctane sulfonate-induced changes in fetal rat liver gene expression. *Toxicology* **251**, 8-20.
85. Holsapple, M.P. and Wallace, K.B. 2008. Dose response considerations in risk assessment - An overview of recent ILSI activities. *Toxicol. Lett*. **180**, 85-92.
86. Suzuki, S., Arnold, L.L., Muirhead, D., Lu, X., Le, X.C., Bjork, J.A., Wallace, K.B., Ohnishi, T., Kiyota, S.K., Pennington, K.L., and Cohen, S.M. 2008 . Inorganic arsenic-induced intramitochondrial granules in mouse urothelium. *Toxicol. Pathol.* **36**, 999-1005.
87. Apple, F.S., Murakami, M., Ler, R., Walker, D., York, M., et al. 2008 . Analytical characteristics of commercial cardiac troponin I and T immunoassays in serum from rats, dogs and monkeys with induced acute myocardial injury. *Clin. Chem.* **54**, 1982-1989.
88. Sardão, V.A., , Oliveira, P.J., Holy, J., Oliveira, C.R., and Wallace, K.B. 2008 . Morphological alterations induced by doxorubicin on H9c2 myoblasts: Nuclear, mitochondrial and cytoskeletal targets. *Cell Biol. Toxicol*. **25**, 227-243.
89. Chang, S.-C., Ehresman, D.J., Bjork, J.A., Wallace, K.B., Parker, G.A., Stump, D.G., and Butenhoff, J.L. (2009). Gestational and lactational exposure to potassium perfluorooctanesulfonate (K^+PFOS) in rats: Toxicokinetics, thyroid hormone status, and related gee expression. *Reprod. Toxicol*. **27**, 387-399.
90. Mackay, D., Arnot, J.A., Petkova, E.P., Wallace, K.B., Call, D.J., Brooke, L.T., and Veith, G.D. 2009 . The physicochemical basis of QSARs for baseline toxicity. *SAR QSAR Environ. Res*. **20**, 393-414.
91. Sardão, V.A., , Oliveira, P.J., Holy, J., Oliveira, C.R., and Wallace, K.B. 2009 . Doxorubicin-induced mitochondrial dysfunction is secondary to nuclear p53 activation in H9c2 cardiomyoblasts. *Cancer Chemotherapy and Pharmacology* **64**, 811-827.
92. Bjork, J.A. and Wallace, K.B. 2009 . Structure-activity relationships and human relevance for perfluoroalkyl acid-induced transcriptional activation of peroxisome proliferation in liver cell cultures. *Toxicol. Sci*. **111**, 89-99.
93. Veith, G.D., Petkova, E.P., and Wallace, K.B. 2009 . A baseline inhalation toxicity model for narcosis in mammals. *SAR & QSAR Environmental Research* **20,** 567-578.
94. Walters, M.W., Bjork, J.A., and Wallace, K.B. 2009. Perfluorooctanoic Acid Stimulated Mitochondrial Biogenesis and Gene Transcription in Rats. *Toxicology* **264**, 10-15.

95. Carvalho, R.A, Sousa, R.P.B., Cadete, V.J.J., Lopaschuk, G.D., Palmeira, C.M.M., and Wallace, K.B. 2010 . Adaptive switch in substrate metabolism associated with subchronic doxorubicin cardiomyopathy. *Toxicology* **270**, 92-98.
96. Walters, M.W. and Wallace, K.B. 2010. Urea cycle gene expression is suppressed by PFOA treatment in rats. *Toxicol. Lett.* **197**, 46-50.
97. Clements, P., Brady, S., et al. 2010. Time course characterization of serum cardiac troponins, heart fatty acid-binding protein, and morphologic findings with isoproterenol-induced myocardial injury in the rat. *Toxicol. Pathol.* **38**, 703-14.
98. Skildum, A., Dornfeld, K. and Wallace, K. 2011. Mitochondrial amplification selectively increases doxorubicin sensitivity in breast cancer cells with acquired antiestrogen resistance. *Breast Cancer Res. Treat.* **129**, 785-97
99. Bjork, J.A., Butenhoff, J.L., and Wallace, K.B. 2011. Multiplicity of nuclear receptor activation by PFOA and PFOS in primary human and rodent hepatocytes. *Toxicology* **288**, 8-17.
100. Butenhoff, J.L., Bjork, J.A., Chang, S.-C., Ehresman, D.J., Parker, G.A., Das, K., Lau, C., Lieder, P.H., van Otterdijk, F.M., and Wallace, K.B. 2012. Toxicological evaluation of ammonium perfluorobutyrate in rats: Twenty-eight-day and ninety-day oral gavage studies. *Reproductive Toxicol.* **33**, 513-530.
101. Branco, A.F., Sampaio, S.F., Moreira, A.C., Holy, J., Wallace, K.B., Baldeiras, I., Oliveira, P.J. and Sardão, V.A.. 2012. Differentiation dependent doxorubicin toxicity on H9c2 cardiomyoblasts. *Cardiovasc. Toxicol.* **12**, 326-40.
102. Leach, A.R., Wallace, K., Alepee, N., Daston, G., Humphris, C., Manou, I., Modi. S., Ringeissen, S., Whelan, M., and Kimber, I. 2012. Characterizing hepatic mitochondrial function as a model for systemic toxicity: A commentary. *Toxicology* **302**, 1-4.
103. Butenhoff JL, Bjork JA, Chang SC, Ehresman DJ, Parker GA, Das K, Lau C, Lieder PH, van Otterdijk FM, Wallace KB. (2012) Toxicological evaluation of ammonium perfluorobutyrate in rats: twenty-eight-day and ninety-day oral gavage studies. *Reprod Toxicol.* **33**, 513-30.
104. Wallace, K.B., Kissling, G.E., Melnick, R.L. and Blystone, C.R. (2013). Structure-activity relationships for perfluoroalkane-induced *in vitro* interference with rat liver mitochondrial respiration. *Toxicol. Lett.* **222**, 257-264.
105. Nordgren, K.K.S. and Wallace, K.B. (2014). Keap1 Redox-dependent regulation of doxorubicin-induced oxidative stress response in cardiac myoblasts. *Toxicol. Appl. Pharmacol..* **274**, 107-116.
106. Wallace, K.B. (2014). Drug-induced Mitochondrial Neuropathy in Children: A Conceptual Framework for Critical Windows of Development. *J. Child Neurology* (in press).
107. Wallace, K.B. (2014). Secondary targets for drug-induced mitochondrial disease. (in press).

Manuscripts submitted, pending review:

1. Pereira, G.C., Pereira, S.P., Tavares, L.C., Carvalho, F.S., Barbosa, I.B., Santos, M.S., Bjork, J., Moreno, A.J., Wallace, K.B., and Oliveira, P.J. Selective cardiac supression of mitochondrial complex IV reserve after sub-chronic treatment with doxorubicin. (*submitted*).

Book Chapters

1. Wallace, K.B. "Species-Selective Toxicity of Organophosphorus Insecticides: A Pharmacodynamic Phenomenon." (Chapter 4, pp 79-105. In: Organophosphates: Chemistry, Fate and Effects (eds., J.E. Chambers and P.E. Levi). Academic Press, Inc., San Diego, CA 1992.
2. Wallace, K.B. " Oxygen Free Radical-Independent Generation of Aldehyde Products of Microsomal Lipid Peroxidation by Adriamycin." (pp. 569-576 In: Oxidative Damage & Repair: Chemical, Biological, and Medical Aspects (ed., K.J.A. Davies). Pergamon Press, Inc. 1992.
3. Wallace, K.B. "Free Radical-Mediated Chemical Cardiomyopathies." (Chapter 11 In: Free Radical Toxicology: The Target Organ Toxicology Series (ed., K.B. Wallace). Taylor and Francis 1997.

4. Wallace, K.B. "Doxorubicin-induced Mitochondrial Cardiomyopathy." In: Mitochondria in Pathogenesis (eds., J.J. Lemasters and A.-L. Nieminen). Chapter 25, pp467-488. Kluwer Academic/Plenum Publishers, New York. 2001.
5. Starkov, A. and Wallace, K.B. "Yin and Yang Mitochondrial ROS" In: Oxidative Stress, Disease and Cancer (ed., K. Singh), Chapter. 1, pp 1-60, Imperial College Press, London 2006.

Patents

Cyclodextrin Compositions and Methods of Treating Viral Infections. March 21, 2002
SLWK Dkt No. 600.538PRV; UoM File No. Z0166
KB Wallace, MA Khan, RW Carlson, SA Rice, and MK Froberg.

Technical Reports

1. Fischer, L.J., P.M. Bolger, G.P. Carlson, J.L. Jacobson, B.A. Knuth, M.J. Radike, M.A. Roberts, P.T. Thomas, K.B. Wallace and K.G. Harrison. 1995. *Critical Review of a Proposed Uniform Great Lakes Fish Advisory Protocol*, August, 1995. Michigan Environmental Science Board, Lansing.
2. Mileson, B. Brimijoin, S., Chambers, J., Dass, P., Padilla, S., Sheets, L., Taylor, P., Van Pelt, C., and Wallace, K.B. 2001. Guidance for the design and interpretation of studies intended to characterize acetylcholinesterase activity in peripheral nervous system. International Life Sciences, Risk Sciences Institute.
3. Wallace, K.B, Hausner, E., Herman, E., Holt, G.D., MacGregor, J.T., Metz, A.L., Murphy, E., Rosenblum, I.Y., Frank D. Sistare, F.D., and York, M.J. 2003. Serum Troponins as Biomarkers of Drug-induced Cardiac Toxicity. U.S. Food and drug Administration, Center for Drug Evaluation and Research, National Center for Toxicological Research.

Complete list of scientific abstracts available on request.

CURRICULUM VITAE

Kendall B. Wallace, Ph.D.
Diplomate, American Board of Toxicology
Fellow, Academy of Toxicological Sciences
Editor, Toxicology

Professor of Pharmacology & Toxicology
Associate Dean, Faculty Affairs
University of Minnesota Medical School
Duluth, MN 55812-2487
Telephone: 218-726-8899
FAX: 218-726-8014
e-mail: kwallace@d.umn.edu

Education

Alpena Comm. College, Alpena, MI	1973; Associate (Natural Science)
Michigan State Univ., East Lansing, MI	1975; B.S. (Biochemistry)
Michigan State Univ., East Lansing, MI	1977; M.S. (Physiology)
Michigan State Univ., East Lansing, MI	1979; Ph.D. (Physiology)
University of Iowa, Iowa City, IA	1981; Postdoc (Toxicology)

Appointments

Research Assistant	Depts. Pharmacology & Toxicology and Physiology & Human Development Michigan State University, East Lansing, MI	1975-1977
Teaching Assistant	Department of Physiology Michigan State University, East Lansing, MI	1977-1979
Postdoctoral Fellow	Toxicology Center, Dept. Pharmacology University of Iowa, Iowa City, IA	1979-1981
Assistant Professor	Department of Pharmacology University of Minnesota	1981-1987
Director of Graduate Studies	Toxicology M.S./Ph.D. Program University of Minnesota	1990-1994
	-Associate Director	1998-2001
	-Director	2002-2013
Director	Chemical Toxicology Research Center University of Minnesota Duluth	1985-1992
	-Associate Director	1992-2008
Associate Professor	Department of Pharmacology University of Minnesota	1987-1996
Associate Professor	Department of Biochemistry & Molecular Biology University of Minnesota	1996-1998
Professor	Department of Biochemistry & Molecular Biology University of Minnesota	1998-present
Interim Chair	Department of Biomedical Sciences University of Minnesota Medical School Duluth	2011-2012
Associate Dean	Faculty Affairs University of Minnesota Medical School Duluth	2012- present

Teaching

UMD Medical School

Cardiovascular Pharmacology	1981-present
Fetal, Neonatal, and Geriatric Pharmacology	1981-1990
Clinical Toxicology and Therapeutics	1981-1995
Advanced Pharmacology – Drug Metabolism	1985-1995
Clinical Pathology Case presentations (Environmental Medicine)	1996-present

Graduate Student Education

University of Minnesota Graduate School Appointments:

Associate Member, Pharmacology	1984-1993
Full Member, Pharmacology	1993-2010
Full Member, Toxicology	1990-present
Director of Graduate Studies, Toxicology Graduate Program	1990-94, 2001-
Full Member, Biochemistry, Molecular Biology and Biophysics	1998-present

Honors and Recognitions

University of Minnesota School of Medicine	Basic Science Teacher of the Year	1987-1988
	Basic Science Teacher of the Year	1989-1990
	Basic Science Teacher of the Year	1990-1991
	Basic Science Teacher of the Year	1997-1998
	Honorable Mention	2004-2005
Scholar, Great Lakes Occupational and Environmental Medicine Association of Occupational and Environmental Clinics		1995-1997
Toxicology Scholar University of Connecticut Center for Biochemical Toxicology		2000
Society of Toxicology Speakers Bureau		1998-2006 2010-present

Awards

	total direct costs	
NIEHS Individual Research Service Award (P.I.) "Free Radical Damage to Lung from Environmental Toxins"		1980-1981
Minnesota Medical Foundation (P.I.) "Nuclear Metabolism of Adriamycin to Intermediates which Interfere with DNA Replication"		1982-1983
American Cancer Society, University of Minnesota (P.I.) "Age-Related Differences in Adriamycin-Induced Poly (ADP)-Ribosylation of Nuclear Proteins and Susceptibility to Chemical-Induced DNA Damage"		1982-1983
University of Minnesota Graduate School (P.I.) "The Teratology and Reproductive Toxicity of Organophosphorus Pesticides"		1982-1983
Pharmaceutical Manufacturers' Association Fnd. Research Starter Grant (P.I.) "Subcellular Compartmentalization of the Metabolic Activation and Free Radical-Induced Toxicity of Doxorubicin (Adriamycin)"		1982-1984
U.S. Environmental Protection Agency (P.I.) "Fish Surrogates for Higher Vertebrates in Risk Assessment"	$332,320	1983-1987
Biomedical Research Support Grant (P.I.) "Epigenetic Free Radical Mechanisms of Microsomal-Mediated		1987-1990

Genotoxicity: Aldehyde Generation During Doxorubicin-Mediated Lipid Peroxidation"		
University of Minnesota Graduate School (P.I.) "Enzymological Basis for Anticholinesterase Species-Selectivity"		1987-1989
Minnesota Medical Foundation (P.I.) "Toxicity of Adriamycin to Cultured Heart Cells"		1989-1991
U.S. Environmental Protection Agency (P.I.) "Cytotoxic Mechanisms of Oxidative Chemical Reactivity"	$75,000	1990-1993
American Heart Association – Minnesota Affiliate (P.I.) "Adriamycin-Induced Deregulation of Thiol-Dependent Cardiac Mitochondrial Calcium Homeostasis"		1992-1994
Minnesota Medical Foundation (P.I.) "Adriamycin-Induced Mitochondrial Cardiomyopathy"		1994-1995
University of Minnesota Graduate School (P.I.) "Mitochondrial-Mediated Quinone Cytotoxicity"		1994-1995
Association of Occupational and Environmental Clinics (P.I.) "Great Lakes Environmental Medicine Scholarship"		1995-1996
The 3M Company (P.I.) "Mechanistic Toxicology"		1992-1996
KALSEC (P.I.) "Molecular Mechanisms of Mitochondrial Mutagenesis"		1995-1997
Rohm and Haas Co. (P.I.) "Mechanisms of Acrylic Acid-mediated Mitochondrial Toxicity"		1995-1998
American Heart Association – Minnesota Affiliate (P.I.) "Adriamycin-Induced Mitochondrial Cardiomyopathy"		1996-1997
The 3M Company (P.I.) "Biochemical and Molecular Mechanistic Studies of N-Alkyl-Perfluorosulfonamides"		1997-1998
The 3M Company (P.I.) "Mitochondrial Interactions of Peroxisome Proliferators"		1997-1998
National Heart Lung and Blood Institute – NIH, R01-HL58016 (P.I.) "Adriamycin-Induced Mitochondrial Cardiomyopathy"	$874,808	1997-2001
Whiteside Institute for Clinical Research (P.I.) "The Efficacy of the Triterpenoid Betulin in Treating Pathogenic Herpes Viruses"		1998-1999
The 3M Company (P.I.) "Biochemical and Molecular Mechanistic Studies of N-Alkyl-Perfluorosulfonamides"		1998-2001
The 3M Company (P.I.) "Mitochondrial Interactions of Peroxisome Proliferators"		1998-2001
University of Minnesota Academic Health Center (P.I.) Faculty Research Development Program "Mechanisms of Antiviral Activity of Betulin and its Derivatives"		1999-2002
Pharmacia & Upjohn (P.I.) Effects of xenobiotics on mitochondrial metabolism		2000-2001
Chemical Manufacturers' Association (consultant) "Cumulative Risk Assessment Methods for Mixtures with a Common Mode of Action"		2000-2002
Minnesota Medical Foundation (P.I.) "Prevention of Doxorubicin-induced Heart Damage by Carvedilol"		2000-2001

University of Minnesota Graduate School (co-P.I.) Adriamycin-induced mitochondrial cardiomyopathy: Ischemia/reperfusion studies.		2000-2001
ACTG (co-P.I., 10% effort) "A Pilot Study of the Status of Lymphocyte Mitochondria Biomarkers Among HIV-1 Infected Persons at Risk for Nucleoside Reverse Transcriptase-Related Mitochondrial Toxicity Compared to Controls"		2000-2001
National Institutes of Health (co-I; 5% effort) Nutritional Copper Status and the Nervous System	$375,000	2001-2004
Burroughs Welcome Visiting Professorship (P.I.)		2001-2002
The 3M Company (P.I.) "Mitochondrial Interactions of Peroxisome Proliferators"		2001-2003
Great Lakes Regional Center for AIDS Research (P.I.) "Nucleoside reverse transcriptase inhibitor- induced mitochondrial toxicity – Inhibition of the adenine nucleotide translocator"		2002-2003
Duluth Clinic (co-P.I.) "Prevention by carvedilol of doxorubicin-induced damage to heart, kidney, and liver"		2002-2003
SMDC Foundation (co-P.I.) "In vivo anti-herpes virus activity of beta-cyclodextrin"		2003-2004
Minnesota Medical Foundation (co-P.I.) "Prevention of doxorubicin-induced damage to heart, kidney and liver by vitamin E"		2003-2004
NIH-NHLBI – competing renewal (P.I.) "Adriamycin-Induced Mitochondrial Cardiomyopathy"	$1,333,018	2001-2007
NIH-NHLBI (P.I.) "NRTI-induced Mitochondrial Cardiomyopathy"	$1,804,534	2002-2008
Minnesota Medical Foundation "Shared Preparative Ultracentrifuge"	$25,000	2004-2005
University of Minnesota Graduate School "Shared Preparative Ultracentrifuge"	$25,000	2004-2005
NIH-NIDK (R21, co-P.I.; 5% effort) "Proteomics in Type I Diabetes and its Complications"	$500,000	2005-2007
NIH-NIDK (R21, co-P.I.; 20% effort) "Mitochondrial and Oxidative Stress in Type I Diabetes"	$180,000	2006-2008
The 3M Company (P.I.) "Mechanistic Toxicology"		2007-2015
NIH-NIEHS, RFQ DLI60131 (P.I.) "Mitochondrial Toxicities of Perfluoroalkanes: a QSAR study"	$98,290	2006-2009
SMDC Health System "Metabolic Approaches to Radiosensitization"		2009-2010
Whiteside Institute for Clinical Research (P.I.) "Troglitazone Amplifies Mitochondrial Infidelity and Sensitizes Breast Cancer Cells to Chemotherapy"		2009-2010
Whiteside Institute for Clinical Research (co-P.I. with K. Nordgren) "Cardiac Risk Modulated by Mitochondrial Epigenetics"		2013-2014

Professional Activities

Certifications:

Diplomate, American Board of Toxicology	1992, 1997, 2002

Board of Directors	1998-2002
Vice-President	2000-2001
President	2001-2002
Fellow, Academy of Toxicological Sciences	2005, 2010
Board of Directors	2012-2015
Vice-President	2013-2014
President	2014-2015

Consultancies:

StrataTox, LLC, President & CEO	2004-present

- Advise pharma, food and chemical industry clients on product development, product stewardship, worker & consumer safety
- Assist clients with product registration (EPA, FDA; OSHA)
- Litigation support (past five years):

Societies:

Society of Toxicology (SOT)	
Continuing Education Committee, member	1988-1993
(Chair 1991-1993)	
Finance Committee	1994-1997
Nominating Committee	1997-1998; 2009-2011
Council Secretary-Elect	1999-2000
Council Secretary	2000-2002
Media Resource Specialist	1999-2001
Continuing Education Committee Speakers Bureau	1998-2002
Vice President-Elect	*2003-2004*
Vice President	*2004-2005*
President	*2005-2006*
Past President	*2006-2007*
Endowment Fund Board	2011-2014
Mechanisms Specialty Section	
Program Committee	1990-1992
Secretary/Treasurer	1998-2000
Mixtures Specialty Section	
Vice-President elect, VP, President	2010-2013
Northland Regional Chapter	
President	1998-2000
Past President	2000-2001
International Union of Toxicology (IUTOX) – International Congress of Toxicology	
Executive Committee	
(ICT VII, Seattle, USA)	1993-1995
Continuing Education Committee, Chair	
(ICT VII, Seattle, USA)	1993-1995
Continuing Education Committee, member	
(ICT VIII, Paris, France)	1995-1998
Continuing Education Committee, member	
(ICT X, Tampere, Finland)	2002-2004
International Advisory Board (ICT-XIII, Seoul, Korea)	2007-2008
Director, IUTOX	2013-2016
American Society for Pharmacology and Experimental Therapeutics (ASPET)	
Member	1983-present
Division of Toxicology	

Nominating Committee, Chair	1992, 1995
Executive Committee	1992-1994
Executive Committee	1995-1998
5th International Workshop on QSAR in Environmental Toxicology	
Organizational Committee QSAR '92	1991-1992
EUROTOX, European Society of Toxicology	
Member	1997-
Mitochondrial Research Society	
President	2003-2004
United Mitochondrial Disease Foundation	
Co-chair, Research Review Committee	2004-2006
Scientific and Medical Advisory Board	2004-2010

Scientific Advisory Panels:

Council of Great Lakes Governors	
Member, Scientific Advisory Panel, Fish Consumption Advisories	1994-1997
International Joint Commission	
Member, Advisory Workshop – Health Professional Task Force "Environmental Contaminants and Public Health: Current Approaches and Future Considerations"	1995
National Institutes of Health	
Member, NHLBI Working Group – Mitochondrial Mutagenesis and Cardiomyopathy	1993-1995
Toxicology Study Section, Ad Hoc	1997
Member, NHLBI Working Group – Research Priorities for Cardiovascular Disease in HIV infection/AIDS	2004
Ad hoc member, Neural and Oxidative Metabolic Disease Study Section	2009
Risk Sciences Institute; International Life Sciences Institute	
Common Mechanisms of Toxicity of Organophosphorus Insecticides 1996 Food Quality Protection Act	1997
Working Group, Methods for Evaluation of Peripheral Nervous System Anticholinesterase Activity	1997
Common Mechanisms of Toxicity of Carbamate Insecticides 1996 Food Quality Protection Act	1997-1998
Health and Environmental Sciences Institute; International Life Sciences Institute Emerging Issues Committee	1998-2007
Board of Trustees	2004-2017
Chair	2010-2012, 2013-2014
Past Chair	2014-2015
National Science Foundation, Grant Reviewer, Molecular Biochemistry Program	1997
Chemical Manufacturers' Association, Steering Committee, Molecular Biomarkers of Chemical Toxicity	1999-2000
U.S. Environmental Protection Agency, FQPA Scientific Review Board, FIFRA Scientific Advisory Panel	1999-2001
Acrylonitrile Working Group, Scientific Advisor	1999-2000
U.S. Food & Drug Administration, Center for Drug Evaluation Research, Pharmaceutical Sciences Advisory Committee,	2001-2004

Nonclinical Studies Subcommittee
Chair, Expert Working Group on Biomarkers of
Drug-Induced Cardiac Toxicity

Center for Neuroscience and Cell Biology, University of Coimbra, PORTUGAL	2002-2007
Mississippi State University, Center for Environmental Toxicology	2004-2009
Mitochondrial Research Society, President	2003-2005
Ministero Dell'Istuzione, Dell'Universita' e Della Ricerca	2009-2012
Grant reviewer, Italian Ministry for Instruction and University Research	
HRSA Vaccine Injury Compensation Program	2010-present
Medical Advisory Panel	
U.S. Food and Drug Administration	2011-2015
Food Advisory Committee	

Editorships

Journals:

Editor-in-Chief:	Toxicology	2001-present
	Toxic Substance Mechanisms	1997-2000
Associate Editor:	Toxicology and Applied Pharmacology	1997-2004
	Mitochondrion 1999-2007	
	Cardiovascular Toxicology	2002–2007
Editorial Boards:	Toxicology and Applied Pharmacology	1992-1997
	Journal of Pharmacological and Toxicological Methods	1991-1999
	Toxic Substance Mechanisms	1992-2000

Books:

Free Radical Toxicology: Target Organ Toxicology Series (ed., K.B. Wallace), Taylor & Francis	1997
Molecular Biology of the Toxic Response (eds., A. Puga and K.B. Wallace) Taylor & Francis	1998

Publications, Full-Length Peer-Reviewed Manuscripts

1. Wallace, K.B., Bailie, M.D. and Hook, J.B. 1978 . Angiotensin-Converting Enzyme in Developing Lung and Kidney. Amer. J. Physiol. **234**, R141-R145.
2. Wallace, K.B., Bailie, M.D. and Hook, J.B. 1979 . Development of Angiotensin-Converting Enzyme in Fetal Rat Lungs. Amer. J. Physiol. **236**, R57-R60.
3. Roth, R.A., Wallace, K.B., Alper, R.H. and Bailie, M.D. 1979 . Effect of Paraquat Treatment of Rats on Disposition of 5-Hydroxytryptamine and Angiotensin I by Perfused Lung. Biochem. Pharmacol. **28**, 2349-2355.
4. Wallace, K.B., Roth, R.A., Hook, J.B. and Bailie, M.D. 1980 . Age-Related Differences in Angiotensin I Metabolism by Isolated Perfused Rat Lungs. Amer. J. Physiol. **238**, R395-R399.
5. Wallace, K.B., Hook, J.B. and Bailie, M.D. 1980 . Postnatal Development of the Renin-Angiotensin System in Rats. Amer. J. Physiol. **238**, R432-R437.
6. Wallace, K.B., Bailie, M.D., Hook, J.B. and Roth, R.A. 1980 . Disposition of 5-Hydroxy-tryptamine in Lungs of Developing Rats. Amer. J. Physiol. **239**, R401-R406.
7. Wallace, K.B., Osborn, J.L. and Bailie, M.D. 1980 . Species Differences in the Kinetics of the Renin-Substrate Reaction in Plasma. J. Pharmacol. Methods **4**, 141-154.
8. Roth, R.A. and Wallace, K.B. 1980 . Disposition of Biogenic Amines by Lungs of Spontaneously Hypertensive Rats. Amer. J. Physiol. **239**, H736-H741.

9. Wallace, K.B., Oparil, S. and Bailie, M.D. 1981 . Angiotensin II Metabolism by Tissues from Developing Rats. Pediatr. Res. **15**, 1088-1092.
10. Wallace, K.B. and Bailie, M.D. 1982 . Age-Related Differences in the Stoichiometry of the Renin-Angiotensinogen Reaction in Rat Plasma. Develop. Pharmacol. Ther. **4**, 190-204.
11. McCormack, K.M., Roth, R.A., Wallace, K.B., Ross, L.M. and Hook, J.B. 1982 . Non-respiratory Metabolic Function and Morphology of Lung Following Exposure to Polybrominated Biphenyls in Rats. J. Toxicol. Environ. Health **9**, 27-39.
12. Wallace, K.B. 1983 . Hepatic Redox Homeostasis Following Acute Adriamycin Intoxication in Rats. Biochem. Pharmacol. **32**, 2577-2582.
13. Wallace, K.B. 1986 . Aglycosylation and Disposition of Doxorubicin in Isolated Rat Liver Nuclei and Microsomes. Drug Metab. Dispos. **14**, 399-404.
14. Wallace, K.B. 1986 . Nonenzymatic Oxygen Activation and Stimulation of Lipid Peroxidation by Doxorubicin-Copper. Toxicol. Appl. Pharmacol. **86**, 69-79.
15. Wallace, K.B. and Johnson, J.A. 1987 . Oxygen-Dependent Effect of Microsomes on the Binding of Doxorubicin to Rat Hepatic Nuclear DNA. Molec. Pharmacol. **31**, 307-311.
16. Johnson, J.A. and Wallace, K.B. 1987 . Species-Related Differences in the Inhibition of Brain Acetylcholinesterase by Paraoxon and Malaoxon. Toxicol. Appl. Pharmacol. **88**, 234-241.
17. Wallace, K.B. and Dargan, J.E. 1987 . Intrinsic Metabolic Clearance of Parathion and Paraoxon by Liver from Fish and Rodents. Toxicol. Appl. Pharmacol. **90**, 235-242.
18. Wallace, K.B. and Herzberg, U. 1988 . Reactivation and Aging of Phosphorylated Brain Acetylcholinesterase from Fish and Rodents. Toxicol. Appl. Pharmacol. **92**, 307-314.
19. Wallace, K.B. and Niemi, G.J. 1988 . Structure-Activity Relationships of Species-Selectivity in Acute Chemical Toxicity Between Fish and Rodents. Environ. Toxicol. Chem. **7**, 201-212.
20. Wallace, K.B. 1989 . Glutathione-Dependent Metabolism in Fish and Rodents. Environ. Toxicol. Chem. **8**, 1049-1055.
21. Kemp, J.R. and Wallace, K.B. 1990 . Molecular Determinants of the Species-Selective Inhibition of Brain Acetylcholinesterase. Toxicol. Appl. Pharmacol. **104**, 246-258.
22. Wallace, K.B. and Kemp, J.R. 1991 . Species-Specificity in the Chemical Mechanisms of Organophosphorus Anticholinesterase Activity. Chem. Res. Toxicol. **4**, 41-49.
23. Solem, L.E. and Wallace, K.B. 1993 Selective Activation of the Sodium-Independent, Cyclosporin A-Sensitive Calcium Pore of Cardiac Mitochondria by Doxorubicin. Toxicol. Appl. Pharmacol. **121**, 50-57.
24. Trost, L.C. and Wallace, K.B. 1994 . Stimulation of Myoglobin-Dependent Lipid Peroxidation by Adriamycin. Biochem. Biophys. Res. Comm. **204**, 23-29.
25. Trost, L.C. and Wallace, K.B. 1994 . Adriamycin-Induced Oxidation of Myoglobin. Biochem. Biophys. Res. Comm. **204**, 30-37.
26. Solem, L.E., Henry, T.R. and Wallace, K.B. 1994 . Disruption of Mitochondrial Calcium Homeostasis Following Chronic Doxorubicin Administration. Toxicol. Appl. Pharmacol. **129**, 214-222.
27. Saxena, K., Henry, T.R., Solem, L.E. and Wallace, K.B. 1995 . Enhanced Induction of the Mitochondrial Permeability Transition Following Acute Menadione Administration. Arch. Biochem. Biophys. **317**, 79-84.
28. Henry, T.R., Solem, L.E. and Wallace, K.B. 1995 . Channel-Specific Induction of the Cyclosporine A-Sensitive Mitochondrial Permeability Transition by Menadione. J. Toxicol. Env. Health **45**, 489-504.
29. Henry, T.R. and Wallace, K.B. 1995 . Differential Mechanisms of Induction of the Mitochondrial Permeability Transition by Quinones of Varying Chemical Reactivities. Toxicol. Appl. Pharmacol. **134,** 195-203.
30. Henry, T.R. and Wallace, K.B. 1995 . The Role of Redox Cycling Versus Arylation in Quinone-Induced Mitochondrial Dysfunction: A Mechanistic Approach in Classifying Reactive Toxicants. SAR QSAR Environ. Res. **4**, 97-108.

31. Palmeira, C.M.M., Moreno, A.J.M., Madeira, V.M.C. and Wallace, K.B. 1996 . Continuous Monitoring of Mitochondrial Membrane Potential in Hepatocyte Cell Suspensions. J. Pharmacol. Toxicol. Methods **35**, 35-43.
32. Solem, L.E., Heller, L.J. and Wallace, K.B. 1996 . Dose-Dependent Increase in Sensitivity to Calcium-Induced Mitochondrial Dysfunction and Cardiomyocyte Cell Injury by Doxorubicin. J. Mol. Cell. Cardiol. **28**, 1023-1032.
33. Henry, T.R. and Wallace, K.B. 1996 . Differential Mechanisms of Cell Killing by Redox Cycling and Arylating Quinones. Arch. Toxicol. **70**, 482-489.
34. Serrano, J., Palmeira, C.M., Wallace, K.B. and Kuehl, D. 1996 . Determination of 8-Hydroxy-deoxyguanosine in Biological Tissue by Liquid Chromatography/Electrospray Ionization-Mass Spectrometry/Mass Spectrometry. Rapid Commun. Mass Spec. **10**, 1789-1791.
35. Palmeira, C.M. and Wallace, K.B. 1997 . Benzoquinone Inhibits the Voltage-Dependent Induction of the Mitochondrial Permeability Transition Caused by Redox Cycling Naphthoquinones. Toxicol. Appl. Pharmacol. **143**, 338-347.
36. Palmeira, C.M., Serrano, J., Kuehl, D.W. and Wallace, K.B. 1997 . Preferential Oxidation of Cardiac Mitochondrial DNA Following Acute Doxorubicin Intoxication. Biochim. Biophys. Acta **1321**, 101-106.
37. Wallace, K.B., Eells, J.T., Madeira, V.M.C., Cortopassi, G., and Jones, D.P. 1997 "Mitochondria-Mediated Cell Injury." Fund. Appl. Toxicol. **38**, 23-37.
38. Mileson, B.E., Chambers, J.E., Chen, W.L., Dettbarn, W., Ehrich, M., Eldefrasi, A.T., Gaylor, D.W., Hamernik, K., Hodgson, E., Karczmar, A.G., Padilla, S., Pope, C.N., Richardson, R.J., Saunders, D.R., Sheets, L.P., Sultatos, L.G., and Wallace, K.B. 1998 . Common Mechanism of Toxicity: A Case Study of Organophosphorus Pesticides. J. Toxicol. Sci. **41**, 8-20.
39. Custodio, J.B.A., Palmeira, C.M., Moreno, A.J. and Wallace, K.B. 1998 . Acrylic Acid Induction of the Mitochondrial Permeability Transition by Calcium and Inorganic Phosphate. Toxicol. Sci. **43**, 19-27.
40. Custodio, J.B.A., Moreno, A.J.M. and Wallace, K.B. 1998 . Tamoxifen Inhibits Induction of the Mitochondrial Permeability Transition by Calcium and Inorganic Phosphate. Toxicol. Appl. Pharmacol. **152**, 10-17.
41. Serrano, J., Palmeira, C.M., Kuehl, D.W. and Wallace, K.B. 1999 . Cardioselective and cumulative oxidation of mitochondrial DNA following subchronic doxorubicin administration. Biochim. Biophys. Acta **1411,** 201-205.
42. Zhou, S. and Wallace, K.B. 1999 . The Effect of Peroxisome Proliferators on Mitochondrial Bioenergetics. Toxicol. Sci. **48**, 82-89.
43. Palmeira, C.M., Rana, I., Frederick, C.B. and Wallace, K.B. 2000 . Induction of the mitochondrial permeability transition in vitro by short chain carboxylic acids. Biochim. Biophys. Res. Commun. **272**, 431-435.
44. Wallace, K.B and Starkov, A. 2000 . "Mitochondrial Targets of Drug Toxicity". In: Annual Reviews of Pharmacology and Toxicology, **vol. 40**, 353-388.
45. Zhou, S., Starkov, A., Froberg, M.K., Leino, R.L., and Wallace, K.B. 2001 . Cumulative and irreversible cardiac mitochondrial dysfunction induced by doxorubicin. Cancer Research **61**, 771-777.
46. Zhou, S., Palmeira, C.M. and Wallace, K.B. 2001 . Doxorubicin-induced persistent oxidative stress to cardiac myocytes. Tox. Letters **121**, 151-157.
47. Zhou, S., Heller, L.J. and Wallace, K.B. 2001 . Interference with calcium-dependent mitochondrial bioenergetics in cardiac myocytes isolated from doxorubicin-treated rats. Toxicol. Appl. Pharmacol. **175**, 60-67.
48. Henry K, Erice A, Balfour HH Jr, Schmeling M, Berthiaume J, Wallace K. 2002 . Lymphocyte mitochondrial biomarkers in asymptomatic HIV-1-infected individuals treated with nucleoside reverse transcriptase inhibitors. AIDS. **16,** 2485-2487.
49. Rolo, A.P., Palmeira, C.M., and Wallace, K.B. 2002 Interactions of combined bile acids on hepatocyte viability: cytoprotection or synergism. Tox. Letters, **126**, 197-203.

50. Starkov, A.A. and Wallace, K.B. 2002 . Structural determinants of fluorochemical-induced mitochondrial dysfunction. Toxicol. Sci. **66,** 244-252.
51. Berthiaume, J. and Wallace, K.B. 2002 . Perfluorooctanoate, Perflourooctanesulfonate, and N-Ethyl Perfluorooctanesulfonamido Ethanol; Peroxisome Proliferation and Mitochondrial Biogenesis. Tox. Letters **129**, 23-32.
52. Santos, D.L., Moreno, A.M., Leino, R.L., Froberg, M.K., and Wallace, K.B. 2002 . Carvedilol protects against doxorubicin-induced mitochondrial cardiomyopathy. Toxicol. Appl. Pharmacol. **185,** 218-27.
53. Rolo, A.P., Palmeira, C.M., and Wallace, K.B. 2003 . Mitochondrially-mediated synergistic cell killing by bile acids. Biochim. Biophys. Acta **1637**, 127-132.
54. Hollingworth, R.M., Bjeldanes, L.F., Bolger, M., Kimber, I., Meade, B.J., Taylor, S.L., and Wallace, K.B. 2003 . The safety of genetically modified foods produced through biotechnology. Toxicol. Sci. **71**, 2-8.
55. Heller, L.J., Mohrman, D.E., Smith, J.A., and Wallace, K.B. 2003 . Multitrack system for superfusing isolated cardiac myocytes. Am. J. Physiol.Heart Circ. Physiol. **284**, H1872-H1878.
56. Wallace, K.B. 2003 . "Doxorubicin-induced Cardiac Mitochondrionopathy." Pharmacology & Toxicology **93,** 105-115.
57. Wallace, K.B, Hausner, E., Herman, E., Holt, G.D., MacGregor, J.T., Metz, A.L., Murphy, E., Rosenblum, I.Y., Frank D. Sistare, F.D., and York, M.J. 2004. Serum Troponins as Biomarkers of Drug-induced Cardiac Toxicity. Toxicol. Pathol. **32**, 106-121.
58. Rolo, A.P., Palmeira, C.M., Holy, J.M., and Wallace, K.B. 2004 . Role of mitochondrial dysfunction in combined bile acid-induced cytotoxicity: The switch between apoptosis and necrosis. Toxicol. Sci. **79**, 196-204.
59. O'Brien, T.M. and Wallace, K.B. 2004 . Mitochondrial permeability transition as the critical target of N-acetyl perfluorooctane sulfonamide toxicity in vitro. Toxicol. Sci. **82**,330-340.
60. Lund, K.C. and Wallace, K.B. 2004. Direct, DNA pol g-independent effects of nucleoside reverse transcriptase inhibitors on mitochondrial bioenergetics. Cardiovascular Toxicology **4**, 217-228.
61. Lund, K.C. and Wallace, K.B. 2004. Direct effects of nucleoside reverse transcriptase inhibitors on rat cardiac mitochondrial bioenergetics. Mitochondrion **4**, 193-202.
62. Slikker, W., Andersen, M.E., Bogdanffy, M.S., Bus, J.S., Cohen, S.D., Conolly, R.B., David, R.M., Doerrer, N.G., Dorman, D.C., Gaylor, D.W., Hattis, D., Rogers, J.M., Setzer, R.W., Swenberg, J.A., and Wallace, K.B. 2004 . Dose-dependent transitions in mechanisms of toxicity. Toxicol. Appl. Pharmacol. **201**, 203-225.
63. Slikker, W., Andersen, M.E., Bogdanffy, M.S., Bus, J.S., Cohen, S.D., Conolly, R.B., David, R.M., Doerrer, N.G., Dorman, D.C., Gaylor, D.W., Hattis, D., Rogers, J.M., Setzer, R.W., Swenberg, J.A., and Wallace, K.B. 2004 . Dose-dependent transitions in mechanisms of toxicity: Case studies. Toxicol. Appl. Pharmacol. **201**, 226-294.
64. Oliveira, P.J., Bjork, J.A., Santos, M.S., Leino, R.L., Froberg, M.K., Moreno, A.J., and Wallace, K.B. 2004 . Carvedilol-mediated antioxidant protection against doxorubicin-induced cardiac mitochondrial toxicity. Toxicol. Appl. Pharmacol. **200**, 159-168.
65. McMartin, K.E. and Wallace, K.B. 2005. Calcium Oxalate Monohydrate, a Metabolite Of Ethylene Glycol, Inhibits Rat Renal Mitochondrial Function. Toxicol. Sci **84**, 195-200.
66. Grasty RC, Bjork JA, Wallace KB, Lau CS, Rogers JM. 2005. Effects of prenatal perfluorooctane sulfonate (PFOS) exposure on lung maturation in the perinatal rat. Birth Defects Res B Dev Reprod Toxicol. **74**, 405-16.
67. Berthiaume, J.M., Oliveira, P.J., Fariss, M.W., and Wallace, K.B. 2005. Dietary Vitamin E Decreases Doxorubicin-Induced Oxidative Stress without Preventing Mitochondrial Dysfunction. Cardiovasc. Toxicol. **05**, 257-267.
68. Oliveira, P.J., Santos, M.S., and Wallace, K.B. 2005. Doxorubicin-induced Thiol-dependent Alteration of Cardiac Mitochondrial Permeability Transition and Respiration. Biochemistry (Moscow) **71**, 194-199.

69. Oliveira, P.J. and Wallace, K.B. 2006 . Depletion of adenine nucleotide transporter protein in heart mitochondria from doxorubicin-treated rats - Relevance for mitochondrial dysfunction. Toxicology **220**, 160-168.
70. O'Brien, T.M., Carlson, R.M., Oliveira, P.J. and Wallace, K.B. 2006 . Esterification prevents induction of the mitochondrial permeability transition by N-acetyl perfluorooctane sulfonamides. Chem Res Toxicol. **19**, 1305-1312.
71. Schultz TW, Carlson RE, Cronin MT, Hermens JL, Johnson R, O'brien PJ, Roberts DW, Siraki A, Wallace KB, Veith GD. 2006 . A conceptual framework for predicting the toxicity of reactive chemicals: modeling soft electrophilicity. SAR QSAR Environ Res. **17**, 413-28.
72. Berthiaume, J.M. and Wallace, K.B. 2007 . Adriamycin-induced oxidative mitochondrial cardiotoxicity. Cell Biol. Toxicol. **23**, 15-25.
73. Chang, S.-C., Thibodeaux, J.R., Eastvold, M.L., Ehresman, D.J., Bjork, J., Froehlich, J.W., Lau, C., Singh, R.J., Wallace, K.B., and Butenhoff, J.L. 2007 . Negative bias from analog methods used in the analysis of free thyroxine in rat serum containing perfluorooctanesulfonate (PFOS). Toxicol. **234**, 21-33.
74. Wallace, K.B. 2007. Adriamycin-induced interference with cardiac mitochondrial calcium Homeostasis. Cardiovasc. Toxicol. **7**, 101-107.
75. Sardao, V.A., Oliveira, P.J., Holy, J., Oliveira, C.R., and Wallace, K.B. 2007. Vital imaging of H9c2 myoblasts exposed to tert-butylhydroperoxide – Characterization of morphological features of cell death. *BMC Cell Biology* **16**, 11.
76. Berthiaume, J.M., Wallace, K.B. 2007 . Persistent alterations to the gene expression profile of the heart subsequent to chronic doxorubicin treatment. *Cardiovasc. Toxicol*. **7**, 178-91.
77. Palmeira, C.M., Rolo, A.P., Berthiaume, J.M., Bjork, J.A., and Wallace, K.B. 2007. Hyperglycemia decreases mitochondrial function: The regulatory role of mitochondrial biogenesis. *Toxicol. Appl. Pharmacol*. **225**, 214-220.
78. Lund, K.C. and Wallace, K.B. 2007 . Adenosine 3',5'-cyclic monophosphate (cAMP)-dependent phosphoregulation of mitochondrial complex I is inhibited by nucleoside reverse transcriptase inhibitors. *Toxicol. Appl. Pharmacol*. **226**, 94-106.
79. Lund, K.C., Peterson, L., and Wallace, K.B. 2007 . Absence of a universal mechanism of mitochondrial toxicity by nucleoside analogs. *Antimicrobial Agents and Chemotherapy* **51**, 2531-2539.
80. Chang, S.-C., Thibodeaux, J.R., Eastvold, M.L., Ehresman, D.J., Bjork, J.A., Froehlich, J.W., Lau, C., Singh, R.J., Wallace, K.B., and Butenhoff, J.B. 2008. Thyroid hormone status and pituitary function in adult rats given oral doses of perfluorooctanesulfonate (PFOS). *Toxicology* **243**, 330-339.
81. O'Brien, T.M., Oliveira, P.J. and Wallace, K.B. 2008 . Inhibition of the Adenine Nucleotide Translocator by N-acetyl Perfluorooctane Sulfonamides In Vitro. *Toxicol. Appl. Pharmacol*. **227**, 184-195.
82. Andersen, M.E., Butenhoff, J.L., Chang, S.-C., Lau, C., Seed, J., and Wallace, K.B. 2008. Workshop overview: Perfluoroalkyl acids and related chemistries – toxicokinetics and modes of action. *Toxicol Sci*. **102**, 3-14.
83. Wallace, K.B. Mitochondrial Off-Targets of Drug Therapy. 2008. *Trends in Pharmacological Sciences*. **29**, 361-366.
84. Bjork, J.A., Lau, C.L., Chang, S.C., Butenhoff, J. and Wallace, K.B. 2008. Perfluorooctane sulfonate-induced changes in fetal rat liver gene expression. *Toxicology* **251**, 8-20.
85. Holsapple, M.P. and Wallace, K.B. 2008. Dose response considerations in risk assessment - An overview of recent ILSI activities. *Toxicol. Lett*. **180**, 85-92.
86. Suzuki, S., Arnold, L.L., Muirhead, D., Lu, X., Le, X.C., Bjork, J.A., Wallace, K.B., Ohnishi, T., Kiyota, S.K., Pennington, K.L., and Cohen, S.M. 2008 . Inorganic arsenic-induced intramitochondrial granules in mouse urothelium. *Toxicol. Pathol.* **36**, 999-1005.
87. Apple, F.S., Murakami, M., Ler, R., Walker, D., York, M., et al. 2008 . Analytical characteristics of commercial cardiac troponin I and T immunoassays in serum from rats, dogs and monkeys with induced acute myocardial injury. *Clin. Chem.* **54**, 1982-1989.

88. Sardão, V.A., , Oliveira, P.J., Holy, J., Oliveira, C.R., and Wallace, K.B. 2008 . Morphological alterations induced by doxorubicin on H9c2 myoblasts: Nuclear, mitochondrial and cytoskeletal targets. *Cell Biol. Toxicol*. **25**, 227-243.
89. Chang, S.-C., Ehresman, D.J., Bjork, J.A., Wallace, K.B., Parker, G.A., Stump, D.G., and Butenhoff, J.L. (2009). Gestational and lactational exposure to potassium perfluorooctanesulfonate (K^+PFOS) in rats: Toxicokinetics, thyroid hormone status, and related gee expression. *Reprod. Toxicol*. **27**, 387-399.
90. Mackay, D., Arnot, J.A., Petkova, E.P., Wallace, K.B., Call, D.J., Brooke, L.T., and Veith, G.D. 2009 . The physicochemical basis of QSARs for baseline toxicity. *SAR QSAR Environ. Res*. **20**, 393-414.
91. Sardão, V.A., , Oliveira, P.J., Holy, J., Oliveira, C.R., and Wallace, K.B. 2009 . Doxorubicin-induced mitochondrial dysfunction is secondary to nuclear p53 activation in H9c2 cardiomyoblasts. *Cancer Chemotherapy and Pharmacology* **64**, 811-827.
92. Bjork, J.A. and Wallace, K.B. 2009 . Structure-activity relationships and human relevance for perfluoroalkyl acid-induced transcriptional activation of peroxisome proliferation in liver cell cultures. *Toxicol. Sci*. **111**, 89-99.
93. Veith, G.D., Petkova, E.P., and Wallace, K.B. 2009 . A baseline inhalation toxicity model for narcosis in mammals. *SAR & QSAR Environmental Research* **20,** 567-578.
94. Walters, M.W., Bjork, J.A., and Wallace, K.B. 2009. Perfluorooctanoic Acid Stimulated Mitochondrial Biogenesis and Gene Transcription in Rats. *Toxicology* **264**, 10-15.
95. Carvalho, R.A, Sousa, R.P.B., Cadete, V.J.J., Lopaschuk, G.D., Palmeira, C.M.M., and Wallace, K.B. 2010 . Adaptive switch in substrate metabolism associated with subchronic doxorubicin cardiomyopathy. *Toxicology* **270**, 92-98.
96. Walters, M.W. and Wallace, K.B. 2010. Urea cycle gene expression is suppressed by PFOA treatment in rats. *Toxicol. Lett.* **197**, 46-50.
97. Clements, P., Brady, S., et al. 2010. Time course characterization of serum cardiac troponins, heart fatty acid-binding protein, and morphologic findings with isoproterenol-induced myocardial injury in the rat. *Toxicol. Pathol.* **38**, 703-14.
98. Skildum, A., Dornfeld, K. and Wallace, K. 2011. Mitochondrial amplification selectively increases doxorubicin sensitivity in breast cancer cells with acquired antiestrogen resistance. *Breast Cancer Res. Treat.* **129**, 785-97
99. Bjork, J.A., Butenhoff, J.L., and Wallace, K.B. 2011. Multiplicity of nuclear receptor activation by PFOA and PFOS in primary human and rodent hepatocytes. *Toxicology* **288**, 8-17.
100. Butenhoff, J.L., Bjork, J.A., Chang, S.-C., Ehresman, D.J., Parker, G.A., Das, K., Lau, C., Lieder, P.H., van Otterdijk, F.M., and Wallace, K.B. 2012. Toxicological evaluation of ammonium perfluorobutyrate in rats: Twenty-eight-day and ninety-day oral gavage studies. *Reproductive Toxicol*. **33**, 513-530.
101. Branco, A.F., Sampaio, S.F., Moreira, A.C., Holy, J., Wallace, K.B., Baldeiras, I., Oliveira, P.J. and Sardão, V.A.. 2012. Differentiation dependent doxorubicin toxicity on H9c2 cardiomyoblasts. *Cardiovasc. Toxicol*. **12**, 326-40.
102. Leach, A.R., Wallace, K., Alepee, N., Daston, G., Humphris, C., Manou, I., Modi. S., Ringeissen, S., Whelan, M., and Kimber, I. 2012. Characterizing hepatic mitochondrial function as a model for systemic toxicity: A commentary. *Toxicology* **302**, 1-4.
103. Butenhoff JL, Bjork JA, Chang SC, Ehresman DJ, Parker GA, Das K, Lau C, Lieder PH, van Otterdijk FM, Wallace KB. (2012) Toxicological evaluation of ammonium perfluorobutyrate in rats: twenty-eight-day and ninety-day oral gavage studies. *Reprod Toxicol*. **33**, 513-30.
104. Wallace, K.B., Kissling, G.E., Melnick, R.L. and Blystone, C.R. (2013). Structure-activity relationships for perfluoroalkane-induced *in vitro* interference with rat liver mitochondrial respiration. *Toxicol. Lett*. **222**, 257-264.
105. Nordgren, K.K.S. and Wallace, K.B. (2014). Keap1 Redox-dependent regulation of doxorubicin-induced oxidative stress response in cardiac myoblasts. *Toxicol. Appl. Pharmacol..* **274**, 107-116.
106. Wallace, K.B. (2014). Drug-induced Mitochondrial Neuropathy in Children: A Conceptual Framework for Critical Windows of Development. *J. Child Neurology* (Jul 9. pii: 0883073814538510. [Epub ahead of print])).

107. Wallace, K.B. (2014). Off targets for drug-induced mitochondrial toxicity. (in press)

Book Chapters

1. Wallace, K.B. "Species-Selective Toxicity of Organophosphorus Insecticides: A Pharmacodynamic Phenomenon." (Chapter 4, pp 79-105. In: Organophosphates: Chemistry, Fate and Effects (eds., J.E. Chambers and P.E. Levi). Academic Press, Inc., San Diego, CA 1992.
2. Wallace, K.B. " Oxygen Free Radical-Independent Generation of Aldehyde Products of Microsomal Lipid Peroxidation by Adriamycin." (pp. 569-576 In: Oxidative Damage & Repair: Chemical, Biological, and Medical Aspects (ed., K.J.A. Davies). Pergamon Press, Inc. 1992.
3. Wallace, K.B. "Free Radical-Mediated Chemical Cardiomyopathies." (Chapter 11 In: Free Radical Toxicology: The Target Organ Toxicology Series (ed., K.B. Wallace). Taylor and Francis 1997.
4. Wallace, K.B. "Doxorubicin-induced Mitochondrial Cardiomyopathy." In: Mitochondria in Pathogenesis (eds., J.J. Lemasters and A.-L. Nieminen). Chapter 25, pp467-488. Kluwer Academic/Plenum Publishers, New York. 2001.
5. Starkov, A. and Wallace, K.B. "Yin and Yang Mitochondrial ROS" In: Oxidative Stress, Disease and Cancer (ed., K. Singh), Chapter. 1, pp 1-60, Imperial College Press, London 2006.

Technical Reports

1. Fischer, L.J., P.M. Bolger, G.P. Carlson, J.L. Jacobson, B.A. Knuth, M.J. Radike, M.A. Roberts, P.T. Thomas, K.B. Wallace and K.G. Harrison. 1995. *Critical Review of a Proposed Uniform Great Lakes Fish Advisory Protocol*, August, 1995. Michigan Environmental Science Board, Lansing.
2. Mileson, B. Brimijoin, S., Chambers, J., Dass, P., Padilla, S., Sheets, L., Taylor, P., Van Pelt, C., and Wallace, K.B. 2001. Guidance for the design and interpretation of studies intended to characterize acetylcholinesterase activity in peripheral nervous system. International Life Sciences, Risk Sciences Institute.
3. Wallace, K.B, Hausner, E., Herman, E., Holt, G.D., MacGregor, J.T., Metz, A.L., Murphy, E., Rosenblum, I.Y., Frank D. Sistare, F.D., and York, M.J. 2003. Serum Troponins as Biomarkers of Drug-induced Cardiac Toxicity. U.S. Food and drug Administration, Center for Drug Evaluation and Research, National Center for Toxicological Research.

EXHIBIT 39

Declaration of Rachel Clattenburg
Public Citizen v. FDA et al., 16-cv-781

JAMES HOWARD SWAIN, PhD, RD, LD
Curriculum Vitae
(Updated Feb., 2013)

Associate Professor & Director - Didactic Program in Dietetics

CONTACT INFORMATION

Professional: Department of Nutrition
School of Medicine
Case Western Reserve University
10900 Euclid Avenue – WG48
Cleveland, OH 44106-4954
Office Tel: 1-(216)-368-8554
Fax: 1-(216)-368-6644
Email: james.swain@case.edu

Home: (b) (6)

Home Tel: (b) (6)
Cell Tel: (b) (6)

EDUCATION

Post-Doctoral Fellow 2001-03	United States Department of Agriculture/Agricultural Research Service, Grand Forks Human Nutrition Research Center, Grand Forks, ND Area: Mineral Nutrition Research Group
Ph.D. 2000	Iowa State University, Ames, IA Dept. of Food Science and Human Nutrition Major: Nutrition
Dietetic Internship 2000	Iowa State University, Ames, IA Dept. of Food Science and Human Nutrition
M.S. 1996	California State University, Northridge, CA Dept. of Family and Consumer Sciences Major Area: Nutrition/Dietetics
B.A. 1993	University of California, Santa Barbara, CA Major: Biological Sciences

PROFESSIONAL APPOINTMENTS

Primary Faculty Appointment:

Associate Professor (2011-present), Department of Nutrition, CWRU

Assistant Professor (2003-2010), Department of Nutrition, CWRU

Director - Didactic Program in Dietetics (DPD) (2003-present), Department of Nutrition, CWRU

- Responsible for maintaining national accreditation.
  Prepare annual reports to maintain accreditation via Accreditation Council for Education in Nutrition and Dietetics (ACEND; formerly Commission on Accreditation for Dietetics Education (CADE))
- Advise/guide DPD ~15 DPD students per year for dietetic internship placement; total DPD advisees, usually ~35 students, in addition to ~25+ yearly major program advisees.
- Responsible for written self study, required for accreditation review, based on updated ongoing Eligibility Requirements and Accreditation Standards (ERAS) for DPD programs.
- Design program surveys (alumni, dietetic internship directors, and employers); analyze and compile data for continuous quality assessment of program, required for accreditation.
- Dietetic Advisory Board meetings; twice yearly.
- Coordinated full 10-year reaccreditation site-visit in spring 2009.
  Program earned full reaccreditation for another 10-year cycle, through 2019.

Secondary Faculty Appointments:

Department of Environmental Health Sciences (2009-present)
Case Western Reserve University

Center for Global Health and Diseases (4/2010 - present)
Case Western Reserve University

LICENSURE

National (USA) - Registered Dietitian (RD; CDR: #(b) (6)) - current
State (OH) - Licensed Dietitian (LD; OBD: #(b) (6) - current

MEMBERSHIP - PROFESSIONAL SOCIETIES

American Society for Nutrition
Chair, Vitamins/Minerals Research Interest Section (2009-2010)
American Society for Experimental Biology
American Association for the Advancement of Science
American Association for Cancer Research
Academy of Nutrition and Dietetics (AND; formerly the American Dietetic Association)
Research Dietitians' Practice Group
Chair-Elect (2010-2011); Chair (2011-2012); Past-Chair (2012-present)
Nutrition and Dietetics Educators and Practitioners (formerly Dietetic Educators of Practitioners, Dietitians' Practice Group)
Ohio Dietetic Association
Oncology Dietitians' Practice Group
Ohio State Representative (2008-2010)
Cleveland Dietetic Association
President-Elect (2010-2011); President (2011-2012)
Institute of Food Technologists
American Association of Family and Consumer Scientists

Kappa Omicron Nu National Academic Honor Society

PROFESSIONAL AWARDS

National:

- American Dietetic Association (ADA), Outstanding Educator Award, 2009.

State:

- Ohio Dietetic Association (ODA), Outstanding Dietetic Educator Award for Didactic Program in Dietetics, 2009.
- ODA, Research Dietitian Award, 2009.

PROFESSIONAL AWARD NOMINATIONS

University:

- Nomination for Carl F. Wittke Award for Excellence in Undergraduate Teaching, Case Western Reserve University - 2008, 2010, 2011, 2012.

OTHER HONORS

Awards:

- Outstanding Dietetic Student in California, California Dietetic Association, 1996
- Premium for Academic Excellence, Iowa State University, 1996-97
- Graduate Research Paper Competition, Nutrition Division, Annual Meeting of the Institute of Food Technologists, New Orleans, LA, 1996
- Academic Honors, California State University, Northridge, 1995-96
- Food Product Development - Outstanding Accomplishment Award, California State University, Northridge, CA, 1995

Scholarships:

- P. Mabel Nelson Scholarship, Iowa State University, 1999
- Florence Pen Scholarship, Iowa State University, 1999
- Dept. of Food Science and Human Nutrition Scholarship, Iowa State University, 1998
- Kappa Omicron Nu - Beta Epsilon Chapter Scholarship, California State Univ., Northridge, 1995
- Marjory Joseph Scholarship, California State University, Northridge, 1995

Fellowships:

- Miller Fellowship, Iowa State University, 1996-2000
- Damaris Pease Family and Consumer Sciences Fellowship, Iowa State University, 1999
- Pearl Swanson Graduate Fellowship, Iowa State University, 1998
- Jeanette H. Crum American Assoc. of Family and Consumer Sciences National Fellowship, 1998
- Marilyn Magaram Center Graduate Fellowship, California State University, Northridge, 1995
- Kappa Omicron Nu National Alumni Fellowship, 1995

PROFESSIONAL SERVICE

American Society for Nutrition (ASN)

- Vitamins and Minerals Research Interest Section (VMRIS)
  - Chair (2009-2010)
    - Write, submit quarterly, VMRIS sections/reports in ASN's *Nutrition Notes* publication, four times per year
    - Coordinate business meeting and poster competition at Experimental Biology annual conference
    - Liaison between members and ASN
    - Serve on RIS Chairs Panel – ASN symposia review and selection
  - Chair-Elect (2008-2009)
    - Coordinate sponsorship, assist with annual business meeting
  - Secretary/Treasurer (2007-2008)
    - Manage accounts, data distribution
- Iron Mini-Symposium at Experimental Biology annual conference
  - Chair (2008, 2011 EB meetings)
    - Review of abstracts, selection and scheduling of oral and poster presentations

Academy of Nutrition and Dietetics (AND; formerly the American Dietetic Association (ADA))

- Education Committee
  - Committee member (2012-present)
- Accreditation Council for Education in Nutrition and Dietetics (ACEND; formerly Commission on Accreditation for Dietetics Education)
  - Program/Site Reviewer (2006-present)
    - Review documentation, site visits to approx. 3 programs per year seeking accreditation; write and submit reports, including phase 2 responses
    - Review interim program assessment reports, ~3-4 per year; write and submit reports, including phase 2 responses
- AND Positions Committee
  - Committee member (2009-2012)
    - Approx. 6 association position paper developments per year, for publication to 80,000+ ADA members and to the public
      - Current leader for three of six position topic developments
    - Approx. 8 yearly committee conference calls
    - One yearly meeting at ADA headquarters in Chicago
- Research Dietitians' Practice Group (RDPG)
  - Chair-Elect (2010-2011); Chair (2011-2012); Past-Chair (2012-present)
    - Approx. 900 members
    - Responsibilities include review of DPG finances, symposia applications/ scheduling, membership, sponsorship, and editorial activities for newsletter.

Ohio Dietetic Association (ODA)

- Oncology Dietitians' Practice Group
  - Ohio State Representative (2008-2010)
    - Member liaison, annual reports, data distribution

Cleveland Dietetic Association (CDA)

- President-Elect (2010-2011); President (2011-2012)
- Committee on Professional Issues
  - Chair (2009-2010)
  - Co-Chair (2008-2009)
    - Guide, select, schedule monthly seminar, workshops for members' continuing education events
- National Nutrition Month Committee
  - Chair (2006-2008)
    - Coordinated public nutrition information events in Cuyahoga County; National Nutrition Month – *Nutrition Power Pack!* Information packs, distributed to primary Cleveland and Cuyahoga County Brach libraries, for further distribution to 32 regional libraries, March 2007 and 2008.

International Society for Trace Element Research in Humans (ISTERH)

- Planning Committee/Treasurer - 2011 Annual Meeting, Istanbul, Turkey.
  - Manage sponsorship, finances, and records for planning.

Sharing U.S. Technology to Aid in the Improvement of Nutrition (SUSTAIN), DC

- Advisory Panel Member (2005-2010)
  - Consultant, advisor re development of international iron fortification research projects; ~10-12 conference calls annually

Science, Technology, Engineering, Mathematics (STEM) Program – Washington, DC

- Project advisor, consultant, and student mentor (2010-2011)
  - Cleveland, Cuyahoga County High Schools

EDITORIAL BOARD, JOURNALS, & GRANT REVIEWER

Editorial Board (2008-2010) - *Nutrients:* Molecular Diversity Preservation International (MDPI), Editorial office: Kandererstrasse 25, CH - 4057 Basel, Switzerland.

Manuscripts Reviewer:

- British Journal of Nutrition (2008-present)
- Journal of Agriculture and Food Chemistry (2008 – present)
- Journal of Food Science (2007-present)
- Journal of the American Dietetic Association (2005-present)
- Journal of Nutrition (2005-present)

Grant Reviewer/Panel - U.S. Army Research Institute of Environmental Medicine (USARIEM), Natick, Massachusetts (2008).

City of Cleveland

- Committee Member - Health Cleveland Initiative (01/2013-present)
  - Consultant re development of citywide initiatives aimed at population of Cleveland and surrounding region.

SERVICE ON CASE WESTERN RESERVE UNIVERSITY COMMITTEES

University

- Tissue Procurement and Histology Core (TPHC) Advisory Committee
  - Committee Member (2012-present)
- Faculty Senate Committee on Undergraduate Education (FSCUE) (2009-present)
  - Representative for Departments of Nutrition and Biochemistry
    - Subcommittees on Curriculum Review, International Students, Advising
- Executive Committee, University Undergraduate Faculty (2008-2009)
  - Representative for Departments of Nutrition and Biochemistry
    - Curriculum, review of course development process
- Academic Integrity Board (2008-present)
  - Office of Undergraduate Studies
    - Serve as faculty representative on approx. two board hearings per semester
- Curriculum Committee, University Undergraduate Faculty (2005-2008)
  - Representative for Departments of Nutrition and Biochemistry
    - Course approval process development; new/adjusted course review

Departmental (Nutrition)

- Committee on Appointment, Promotion, and Tenure (2008-2010)
- Department of Nutrition Representative to Office of Undergraduate Studies (2004-present)
  - Representative for undergraduate Major Programs
- Undergraduate Curriculum Committee (2004-present)
- Dietetic Advisory Board/Committee, as Director/Committee Chair (DPD)

TEACHING & ADVISING ACTIVITIES

Nutrition Courses – Full Responsibility:

<u>NTRN 342 – Food Science Lecture (3.0 cr.) – taught every Fall Semester</u>
Course instructor.
Required for all nutrition majors and M.S. students working towards dietetics practice as a career; approximately 45 students per semester.
Prerequisites: CHEM 106 (Inorganic Chemistry)
Lecture topics: Composition, chemistry, physical properties and functionality of water, carbohydrates, fats, and proteins; review of food processing, preparation, food component interactions and applications; nutrient retention during processing, preservation, and storage; food handling and safety issues, including chemical, microbiological, physical safety, and quality control; new and novel foods; impact of biotechnology on food supply and quality.

<u>NTRN 342 – Food Science Laboratory (2.0 cr.) – taught every Fall Semester</u>
Course instructor.
Required for all nutrition majors and M.S. students working towards dietetics practice as a career; approximately 26 students per semester.
Prerequisites: CHEM 106 (Inorganic Chemistry); majors concurrent with NTRN 342 lecture.
Lab topics: Methods of investigation of food composition, chemistry, physical properties and functionality of water, carbohydrates, fats, and proteins; review of food processing, preparation, food component interactions and applications; nutrient retention during processing, preservation,

and storage; food handling and safety issues, including chemical, microbiological, physical safety, and quality control; new and novel foods; impact of biotechnology on food supply and quality.

NTRN 365 – Diet in Disease: Pathophysiology (4.0 cr.) – taught every Spring Semester
Course instructor.
Required for all dietetics students and an elective for all undergraduate majors and M.S. students; approximately 25 students per semester.
Prerequisites: BIOC 307 (Biochemistry) and NTRN 363 (Human Nutrition I: Energy, Protein, Minerals).
Lecture topics: Interplay among etiology, metabolic perturbations, pathophysiology, clinical signs and symptoms, and nutrition principles for the prevention and management of disease. Medical conditions in which nutrition plays an integral role in treatment, management and/or prevention. Discussion of general principles, specific considerations and clinical applications. Integrate knowledge of foods and nutrition, physiological and biochemical processes, and economic and psychosocial influences relative to the provision of nutritional care (medical nutrition therapy).

NTRN 397 - Departmental [Nutrition] Seminar – SAGES (3.0 cr.) – taught every Spring Semester
Course instructor.
Required for all undergraduate nutrition majors; approximately 25 students.
Prerequisites: NTRN 201 (Nutrition) and NTRN 342 (Food Science).
Lecture topics: Required for all undergraduate nutrition majors.
Students conceptualize, develop, and prepare NTRN 398 Senior Capstone Project proposal and confirm capstone advisor and/or mentor.

Individual/Independent Student Courses – Full Responsibility:

NTRN 390 – Independent Research (3.0 cr.) – offered every Fall and Spring Semester
Course instructor
Senior undergraduate students; approximately 1-2 per semester.
Lecture topics: Student completes individual independent research project, under guidance of faculty advisor.

NTN 398 – SAGES Capstone Project (3.0 cr.) – offered every Fall and Spring Semester
Course Instructor
Senior undergraduate students; approximately 3-4 per semester.
Lecture topics: Student completes SAGES Senior Capstone Research Project; research-based. Includes critical evaluation of research topic related to nutrition, then conceptualizing, developing, researching (includes literature review and data analysis).

NTRN 399 – Special Problems (3.0 cr.) – offered every Fall and Spring Semester
Course Instructor
Senior undergraduate students; approximately 1-2 per semester.
Lecture topics: Formal investigation of a topic in nutrition culminating in a paper and oral presentation. Requires definition of a problem, evaluation of the scientific literature and delineation of problem-solving approaches.

NTRN 561 – Investigative Methods in Nutrition (3.0 cr.) – offered every Fall and Spring Semester
Course Instructor
Students in Nutrition Department, primarily M.S. students; approximately 1-2 per semester.
Lecture topics: Student completes individual investigative methods based research project; conceptualizing, developing, researching (includes literature review and data analysis).

Team Taught Courses:

NTRN 434 – Advanced Human Nutrition II (3.0 cr.) - taught every Spring Semester
One of three instructors for the course; primary course coordinator spring 2007.
Required course for all M.S. and Ph.D. students; approximately 35 per semester.
Lecture topics: biochemical form and dietary sources, as well as the metabolic handling, utilization and function of vitamins, fundamental concepts used for the determination of human vitamin needs and nutriture, as well as the development and appropriate uses of regulations regarding vitamin standards; vitamins C & E (2 lectures; 2005-2006); B-vitamins (5 lectures; 2007-present).

Guest Lectures - Case Western Reserve University

EVHS/MPHP 429 - Introduction to Environmental Health (3.0 cr.) – taught Spring Semesters
EVHS/MPHP Graduate students; medical students.
Teach lecture entitled, *"Food Safety and Health"*

Other teaching - Medical Students

GINUT (GI & Nutrition) - 2nd year

- 2004-2008: Small groups (12-15 students)
  - Two small groups per year – 2 hr per session
    Topics varied, but included:
    - "Vitamins, Minerals: Selecting an Appropriate Supplement"
    - "Hyperlipidemia, Diabetes, and Hypertension"
    - "Coronary Heart Disease Prevention"
    - "Nutrition and Coronary Heart Disease"
    - "Nutrition, Hypertension, and Diabetes"
  - Three large group lectures per year – 2 hr per session
    Presentation titles:
    - "Influence of Nutrition on Hyperlipidemia and Coronary Heart Disease"
    - "Nutrition in Hypertension and Diabetes"
    - "Nutrition in Hyperlipidemia and Coronary Heart Disease"

BLOCK-3 - 1st year

- 2008-present: Medium groups (approximately 40 students per session)
  - Two medium groups per year
    Topics vary, but include:
    - "Nutrition Assessment and Case Studies in Nutrition"
    - "Vitamin Toxicity and Nutrition Case Studies"
    - "Coronary Heart Disease and Diabetes Nutrition Case Studies"

Environmental Health and Sciences (EVHS/MPHP) - Medical student group - Swetland Projects – Advisor/Consultant

Five medical student groups (6-10 students per group): Students designed literature to present to Cleveland high school/after care students on selecting healthy foods and the importance of nutrition for future health. I was advisor/consultant for these groups - conducting EVHS student projects. 2009-present. Total contact hours = 30+ per semester.

Continuing Medical Education (CME)

Ireland Cancer Center (ICC) Grand Rounds - CME Regularly Scheduled Conference – CID# 6208, May 19, 2010, presentation entitled, *"Iron supplementation and Intestinal Tumorigenesis in Apc min mice: an animal model of familial adenomatous polyposis coli.*" 1 hr

***NetWellness* (Case School of Medicine)**

Faculty Expert, 2009-present. Web-content advisor and development. Total hours = 25 per semester.

Leader; Heart Healthy recipe development, submissions, monthly Alumni Newsletter. 2010-2011); 20 plus hours per semester.

Advising/Mentoring

University

- Freshman Advisor (2007-present). Approximately 20-25 yearly. 15-20+ hours per year.

Department of Nutrition

- Major Advisor for ~25-30 undergraduate students per semester. Total contact hours = 100-125+ per semester.
- Dietetics Program (DPD) Student Advisor - 25-35 students yearly. Total contact hours = 20-30+ per year.
- Mentor for Nutrition Undergraduate Research Students in Laboratory, 3-4 per year. Total contact hours = 250+ hrs per year.
- Preceptor for M.S. Student Research Projects (2008-present); two students. Total contact hours = 40+ per student.
- Mentor for International Undergraduate Research Scholar, one student (spring semester 2010), from University of Goteborg, Sweden. Total contact hours = 120+ per semester.
- Case *Get Connected* speaker/advisor; recruitment fair for prospective students and families. Total of 3hrs. Yearly, since 2004.
- Case *Choices Fair* advisor, Veale Center, major degree options selection symposium. Total of 2 hrs per session, plus 1 hr preparation. Yearly, since 2004.

Teaching & Participating in the Community of Educators – Regional, National, International

Invited Lectures & Other Presentations

Regional

- Cleveland Contemporary Chinese Cultural Association; Healthy Fusion Diets/Mandarin language recital - Chinese New Year's celebration, Solon, OH, Jan27, 2012.
- Cleveland Dietetic Association, Sept. 28, 2010. Oral lecture entitled, *"Food Safety: How Ingredient Profile Determines Susceptibility to Microbial Spoilage."*
- Case Biochemistry Students Association – Iron Bioavailability and Chemical Modifiers of Nonheme Iron Absorption. Spring 2009.
- Lewis Elementary School – Solon School District – First grade instruction, invited lecture: *Healthy afterschool snacks for kids!* Fall, 2009.
- Cuyahoga County Board of Health, April 25, 2006, Oral Presentation entitled, *"Bioavailability of Elemental Iron Powders Used for Food Fortification."*

National

- Dannon Institute's *2012 Academic Mid-Career Leadership Institute*, Selected Participant, June 10-14, 2012, Chicago, IL
- Session Chair - Oral Session - Iron I. Experimental Biology Annual Conference, Washington, DC April, 2011.
- American Dietetic Association's Area V & II Dietetic Educators of Practitioners (DEP) Annual Meeting. *"Bright Ideas: Dietetics Educators Share."* St. Louis, MO, May 1, 2010.
- Experimental Biology Annual Conference, San Diego, CA, April 5-9, 2008. Oral Presentation entitled, *"Proteomic analysis of tumor and adjacent non-tumor intestinal tissue and tumor burden after iron supplementation in* $Apc^{Min/+}$ *mice."* (Nutriproteomics and Nutrigenomics mini-symposium).
- California State University, Northridge. Seminar entitled, *"Iron supplementation and intestinal tumorigenesis."* Marilyn Magaram Center. CA, May 1, 2009.
- Presenter – Research posters at Experimental Biology Annual Conference; 2003- 2010.
    - 2003-2005: Iron Bioavailability and Absorption
    - 2006-2010: Iron and Cancer (Intestinal Tumorigenesis) (4)

International

- Tsinghua University and Capitol Medical School, Beijing, China, P.R.C., Comprehensive AIDS Research Center & Department of Pharmaceutical Studies, 12/14-18/2010. Oral presentations entitled, *"Iron supplementation and food-medication interactions"*, and *"Hypertension, cardiovascular disease, and sodium."*
- Shalgrenska Institute, Goteborg University, Gothenborg, Sweden. 11/15-19/08. Oral presentation entitled, *"Methods in iron efficacy and absorption studies in animals and humans."*
- Women's and Children's Hospital, Sichuan University, Chengdu, China, P.R.C. 8/10-8/13, 2008. Oral seminars/series entitled, *"Bioavailability of Non-heme Iron Powders"* and *"Nutrition, Diabetes, and Cardiovascular Disease: Interplay with Dietary Iron."*

INVITED BOOK, CHAPTER REVIEWS

Textbooks:

Chapters 5 (Carbohydrates) and 9 (Water and Minerals), Nutrition for Healthy Living, by Wendy Schiff. McGraw-Hill Publ., 2008.

Understanding Food: Principles and Preparation, 2nd Ed., 3rd Ed.: Brown, A. Wadsworth/Thomson Higher Learning, 2004.

Nutrition 2nd Ed., 3rd Ed.: Insel, P., Turner, R.E., and Ross, D. Jones & Bartlett, 2002.

RESEARCH SUPPORT

Present:

James Swain (PI): Influence of reduced elemental iron powder on total body iron stores: efficacy of novel elemental iron powders via hemoglobin slope-ratio modeling. Hoganas, Ltd., Sweden. Total = $(b) (6). 2009-2012.

James Swain (PI) and (b) (6) (Co-PI): Centers for Translational Science, Case Western Reserve University, Pilot Grant Award for study entitled, "From aberrant crypt to adenoma: proteomics of intestinal tumorigenesis." $(b) (6). 2009-2011.

James Swain (PI): Efficacy of Sodium-Iron-EDTA, Electrolytic Iron Powder, and Heme Iron Concentrate to Improve Iron Status. Akzo Nobel Chemicals Pte. Ltd., Netherlands; Dr. Paul Lohmann, GMBH, Germany; Proliant Inc., Ankeny, IA, USA; Industrial Metal Powders India Pvt. Ltd. $(b) (6). 2008-2010.

Past:

James Swain (PI), (b) (6) (Co-PI) and Richard Hanson (Co-PI): Transdisciplinary Research on Energetics and Cancer (TREC). Case Comprehensive Cancer Center, Center for, Developmental Project Grant entitled, "Physical activity and tumor incidence in azoxymethane-treated PEPCK-C^{mus} mice." Direct =$(b) (6), Indirect = $(b) (6), Total = $(b) (6). 2008-2010

James Swain (PI); (b) (6) (Consultant): American Cancer Society, Grant #IRG-91-022 (CASE Comprehensive Cancer Center ACS-IRG) entitled, "Iron supplementation and intestinal tumorigenesis in *Apc*$^{Min/+}$ mice." $(b) (6). 2006-2007.

Janet Hunt (PI) and **James Swain (Co-PI):** USDA/CSREES/NRICGP (National Research Initiative Competitive Grants Program). Title: "Combating iron deficiency: Absorption and efficacy in humans of elemental iron powders and heme iron" (Project Director - Janet R. Hunt, Ph.D., R.D.; Proposal # 2002-01885, Grant # 2002-35200-12222), $248,936. 2002-2005.

Travel award - National Institutes of Health, Office of Dietary Supplements and National Institute of Child Health and Human Development conference entitled, "Dietary Supplement Use in Women." Bethesda, MD, January 28-29, 2002.

(b) (6) (PI) and **James Swain (Co-PI):** Professional Advancement Research Grant. Title: "Does phytic acid reduce risks associated with iron overload caused by hemochromatosis? Use of β2-microglobulin-deficient mice model." $(b) (6). Iowa State University, 1997.

James Swain (PI): University Corporation Student Projects Research Grant. Title: "Changes in folate concentration in cruciferous vegetables during storage and preparation." $(b) (6) California State University, Northridge, 1995.

BIBLIOGRAPHY

Manuscripts in preparation:

(b) (6) *For submission to Proteomics.*

(b) (6)
For submission to British Journal of Nutrition.

Manuscripts under revision/updating:

James Swain, Jinsook Chang, Hong Zao, Adam Kresak. Tumor burden and comparative proteomic analysis of tumor and non-tumor intestinal tissue after iron supplementation in ApcMin/+ mice. *Journal of Nutrition.*

James Swain, Adam Kresak, Chunbiao Li, and Patrick Leahy. Intestinal tumors adapt to excess dietary iron by altering expression of lipocalin-2 and divalent metal ion transporter. *Journal of Nutrition*.

Published:

Sean R Lynch, Thomas Bothwell, and the SUSTAIN Task Force on Iron Powders (Lou Campbell, Kristina Cowan, Ray Glahn, Leif Hallberg, Michael Hoppe, Lena Hulthen, Janet R Hunt, Richard F Hurrell, Dennis Miller, **James H Swain**, Liz Turner, Pattanee Winichagoon, C.K. Yeung, Christophe Zeder, and Michael B Zimmermann). A Comparison of Physical Properties, Screening Procedures and a Human Efficacy Trial for Predicting the Bioavailability of Commercial Elemental Iron Powders Used for Food Fortification. Int. *J. Vitam. Nutr. Res.*2007, 77(2):107-124.

Swain, JH, Johnson, LK, Penland, JG and Hunt, JR. Combating iron deficiency: Electrolytic iron or ferrous sulfate increased body iron in women with moderate to low iron stores. *J. Nutr.* 2007;137 620-627.

Swain, JH, Johnson, LK and Hunt, JR. An irradiated electrolytic iron fortificant, poorly absorbed by human subjects, is also less responsive to the enhancing effect of ascorbic acid. *J. Nutr.* 136:2167-2174, 2006.

Petersen, HL, Peterson, CT, Reddy, MB, Hanson, KB, **Swain, JH**, Sharp, RL and Alekel, DL. Body composition, dietary intake and iron status of female collegiate swimmers. *Intl. J. Sport Nutr. And Exercise Metab.* 2006;16:281-295.

James H. Swain, Samuel M. Newman and Janet R. Hunt. Bioavailability of elemental iron powders to rats is less than bakery-grade ferrous sulfate and predicted by iron solubility and particle surface area. *J. Nutr.* 133:3546-3552, 2003.

James H. Swain, D. Lee Alekel, Sarah B. Dent, Charles T. Peterson, and Manju B. Reddy. Iron indexes and total antioxidant status in response to soy protein intake in perimenopausal women. *Am. J. Clin. Nutr.* 2002;76:165-171.

James H. Swain, Louisa B. Tabatabai, and Manju B. Reddy. Histidine content of low molecular weight beef proteins influences nonheme iron absorption in Caco-2 cells. *J. Nutr.* 132:245-251, 2002.

Sarah B. Dent, Charles T. Peterson, Larry D. Brace, Kathy B. Hanson, **James H. Swain**, Manju B. Reddy, Jennifer G. Robinson, and D. Lee Alekel. Soy protein intake by perimenopausal women does not affect circulating lipids and lipoproteins or coagulation and fibrinolytic factors. *J. Nutr.* 131:2280-2287, 2001.

Abstracts and oral presentations:

N. Berger, J. Nadeau, P. Hakimi, G. Casadesus, **J. Swain,** R. Hanson. Transgenic Mouse Models to Study the Effects of Exercise on Cancer Prevention and Survivorship. To be presented at the International Society of Behavioral Nutrition and Physical Activity annual meeting, in June, 2010.

James Swain, Chunbiao Li, and Patrick Leahy. Intestinal tumors adapt to excess dietary iron by altering expression of a diverse set of oxidoreductases. Department of Nutrition, Gene Expression and Genotyping Facility, Case Western Reserve University, Cleveland, OH. Presented at Experimental Biology annual conference, Anaheim, CA, 2010.

James Swain, Shawn Alter, Jinsook Chang, Hong Zhao, Mark Chance. Proteomic analysis of tumor and adjacent non-tumor intestinal tissue and tumor burden after iron supplementation in $Apc^{Min/+}$ mice. Presented at Experimental Biology annual conference, San Diego, CA, 2008.

James Swain, Chunbiao Li, and Patrick Leahy. Iron supplementation modulates genes involved in oxidoreductase activity, including prostaglandin-endoperoxide synthase 2 in intestinal tumors. Presented at Experimental Biology annual conference, San Diego, CA, 2008.

James Swain, Chunbiao Li, and Patrick Leahy. Intestinal tumors adapt to excess dietary iron by altering expression of lipocalin-2 and divalent metal iron transporter. Presented at Experimental Biology annual conference, San Diego, CA, 2008.

James H. Swain, Adam M. Kresak, and Theresa P. Pretlow. Tumor number and comparative micro-array analysis of tumor and adjacent non-tumor intestinal tissue after iron supplementation in $Apc^{Min/+}$ mice. Presented at Experimental Biology annual conference, Washington, DC, 2007.

James H. Swain, James G. Penland, LuAnn K. Johnson, and Janet R. Hunt. Energy, mood and attention did not consistently improve with iron status in non-anemic women with moderate to low iron stores (Abs. #140.5). Presented at Experimental Biology annual conference, San Francisco, CA; FASEB J, 2006.

Janet R. Hunt and **James H. Swain**. Bioavailability to humans of an electrolytic elemental iron fortificant, assessed after radiolabeling by neutron activation. Presented at Experimental Biology annual conference, San Diego, CA, 2005.

James H. Swain, LuAnn K. Johnson, and Janet R. Hunt. Combating iron deficiency: Bioavailability of iron from two elemental iron powders and a heme iron supplement in humans. Presented at Experimental Biology annual conference, Washington, DC, 2004.

J.H. Swain, S.M. Newman, and J.R. Hunt. The bioavailability of elemental iron powders used for food fortification varies among commercial forms and is influenced by physicochemistry. Presented at Experimental Biology annual conference, San Diego, CA, 2003.

J.H. Swain and J.R. Hunt. Elemental iron powder used for food fortification: Does physicochemistry predict bioavailability? International Nutritional Anemia Consultative Group Symposium, Marrakech, Morocco, February 6, 2003.

J.H. Swain and J.R. Hunt. Bioavailability of elemental iron powders used for food fortification (Abs.# 240B). 11th International Symposium on Trace Elements in Man and Animals, Berkeley, CA, 2002.

J.H. Swain and J.R. Hunt. Carbonyl iron is a more effective hemoglobin repletion agent than electrolytic or reduced iron powder. Proceedings of the North Dakota Academy of Science 94th Annual Meeting, vol. 56, pg. 58, 2002.

M.B. Reddy, **J.H. Swain**, G. Zhang, K.L. Schalinske, S.A. Tanumihardjo. Effect of retinol and carotenoid analogs on nonheme iron bioavailability in Caco-2 cells. FASEB J. 16(4):A271 (Abs.# 218.6), 2002.

M.B. Reddy and **J.H. Swain**. Low molecular weight proteins in beef enhance iron bioavailability in Caco-2 cells. Bioavailability, Interlaken, Switzerland, 2001.

M.B. Reddy, **J.H. Swain**, S.B. Dent, C.T. Peterson, and D.L. Alekel. Iron status in women during the menopausal transition. FASEB J. 15(5):A974 (Abs.# 748.7), 2001.

S.B. Dent, C.T. Peterson, M.B. Reddy, **J.H. Swain**, and D.L. Alekel. Isoflavone-rich soy protein maintains antioxidant status in perimenopausal women. FASEB J. 14(4):A519 (Abs.# 364.3), 2000.

J.H. Swain, L.B. Tabatabai, and M.B. Reddy. Isolation and characterization of beef proteins that enhance nonheme iron bioavailability. FASEB J. 14(4):A753 (Abs.# 522.12), 2000.

J.H. Swain, S. Dent, D.L. Alekel, C.T. Peterson, & M.B. Reddy. Influence of soy intake on iron status of perimenopausal women. FASEB J. 13(4):A251 (Abs.# 220.1), 1999.

J.H. Swain, M.-A. del Barrio, K.T. Tran, & T.-S. Chen. Folate determination in food: Effect of variations in homogenization procedure. Institute of Food Technologists Annual Meeting (Abs. # 68D-11), 1996.

J.H. Swain, M.-A. del Barrio, K.T. Tran, and T.-S. Chen (Spon:C.H. Smith). Microbiological assay for food folate: Effect of inoculum preparation, incubation time, incubation method, and commercial source of folic acid standard. FASEB J. 10(3):A795 (Abs.# 4591), 1996.

Thesis:

James H. Swain. Dietary proteins that influence nonheme iron bioavailability, iron status, and plasma total antioxidant status. Doctoral Thesis, Iowa State University, December, 2000.

Newspaper articles:

James H. Swain. Breakfast cereals can really show their metal. *Local Life* section, Grand Forks Herald, ND, Wednesday, April 24, 2002.

Newsletters:

James H. Swain (Staff Writer). Vitamin in the Spotlight. California State University, Northridge, CA, Student Health Center's Nutrition Digest, Fall 1995/Spring 1996 issue.

JAMES HOWARD SWAIN, PhD, RD, LD
Curriculum Vitae
(Updated July 2014)

Associate Professor & Director - Didactic Program in Dietetics

CONTACT INFORMATION

Professional: Department of Nutrition
School of Medicine
Case Western Reserve University
10900 Euclid Avenue – WG48
Cleveland, OH 44106-4954
Office Tel: 1-(216)-368-8554
Fax: 1-(216)-368-6644
Email: james.swain@case.edu

EDUCATION

Post-Doctoral Fellow 2001-03	United States Department of Agriculture/Agricultural Research Service, Grand Forks Human Nutrition Research Center, Grand Forks, ND Area: Mineral Nutrition Research Group
Ph.D. 2000	Iowa State University, Ames, IA Dept. of Food Science and Human Nutrition Major: Nutrition
Dietetic Internship 2000	Iowa State University, Ames, IA Dept. of Food Science and Human Nutrition
M.S. 1996	California State University, Northridge, CA Dept. of Family and Consumer Sciences Major Area: Nutrition/Dietetics
B.A. 1993	University of California, Santa Barbara, CA Major: Biological Sciences

PROFESSIONAL APPOINTMENTS

Primary Faculty Appointment:

Associate Professor (2011-present), Department of Nutrition, CWRU

Assistant Professor (2003-2010), Department of Nutrition, CWRU

Director - Didactic Program in Dietetics (DPD) (2003-present), Department of Nutrition, CWRU

- Responsible for maintaining national accreditation.

Prepare annual reports to maintain accreditation via Accreditation Council for Education in Nutrition and Dietetics (ACEND; formerly Commission on Accreditation for Dietetics Education (CADE))

- Advise/guide DPD ~15 DPD students per year for dietetic internship placement; total DPD advisees, usually ~35 students, in addition to ~25+ yearly major program advisees.
- Responsible for written self study, required for accreditation review, based on updated ongoing Eligibility Requirements and Accreditation Standards (ERAS) for DPD programs.
- Design program surveys (alumni, dietetic internship directors, and employers); analyze and compile data for continuous quality assessment of program, required for accreditation.
- Dietetic Advisory Board meetings; twice yearly.
- Coordinated full 10-year reaccreditation site-visit in spring 2009.
  Program earned full reaccreditation for another 10-year cycle, through 2019.

Secondary Faculty Appointments:

Department of Environmental Health Sciences (2009-present)
Case Western Reserve University

Center for Global Health and Diseases (4/2010 - present)
Case Western Reserve University

LICENSURE

National (USA) - Registered Dietitian (RD; CDR) - current
State (OH) - Licensed Dietitian (LD; OBD) - current

MEMBERSHIP - PROFESSIONAL SOCIETIES

American Society for Nutrition
Chair, Vitamins/Minerals Research Interest Section (2009-2010)
American Society for Experimental Biology
American Association for the Advancement of Science
American Association for Cancer Research
Academy of Nutrition and Dietetics (AND; formerly the American Dietetic Association)
Research Dietitians' Practice Group
Chair-Elect (2010-2011); Chair (2011-2012); Past-Chair (2012-present)
Nutrition and Dietetics Educators and Practitioners (formerly Dietetic Educators of Practitioners, Dietitians' Practice Group)
Ohio Dietetic Association
Oncology Dietitians' Practice Group
Ohio State Representative (2008-2010)
Cleveland Dietetic Association
President-Elect (2010-2011); President (2011-2012)
Institute of Food Technologists
American Association of Family and Consumer Scientists
Kappa Omicron Nu National Academic Honor Society

PROFESSIONAL AWARDS

National:

- American Dietetic Association (ADA), Outstanding Educator Award, 2009.

State:

- Ohio Dietetic Association (ODA), Outstanding Dietetic Educator Award for Didactic Program in Dietetics, 2009.
- ODA, Research Dietitian Award, 2009.

PROFESSIONAL AWARD NOMINATIONS

University:

- Nomination for Carl F. Wittke Award for Excellence in Undergraduate Teaching, Case Western Reserve University - 2008, 2010, 2011, 2012.

OTHER HONORS

Awards:

- Outstanding Dietetic Student in California, California Dietetic Association, 1996
- Premium for Academic Excellence, Iowa State University, 1996-97
- Graduate Research Paper Competition, Nutrition Division, Annual Meeting of the Institute of Food Technologists, New Orleans, LA, 1996
- Academic Honors, California State University, Northridge, 1995-96
- Food Product Development - Outstanding Accomplishment Award, California State University, Northridge, CA, 1995

Scholarships:

- P. Mabel Nelson Scholarship, Iowa State University, 1999
- Florence Pen Scholarship, Iowa State University, 1999
- Dept. of Food Science and Human Nutrition Scholarship, Iowa State University, 1998
- Kappa Omicron Nu - Beta Epsilon Chapter Scholarship, California State Univ., Northridge, 1995
- Marjory Joseph Scholarship, California State University, Northridge, 1995

Fellowships:

- Miller Fellowship, Iowa State University, 1996-2000
- Damaris Pease Family and Consumer Sciences Fellowship, Iowa State University, 1999
- Pearl Swanson Graduate Fellowship, Iowa State University, 1998
- Jeanette H. Crum American Assoc. of Family and Consumer Sciences National Fellowship, 1998
- Marilyn Magaram Center Graduate Fellowship, California State University, Northridge, 1995
- Kappa Omicron Nu National Alumni Fellowship, 1995

PROFESSIONAL SERVICE

American Society for Nutrition (ASN)

- Vitamins and Minerals Research Interest Section (VMRIS)
  - Chair (2009-2010)
    - Write, submit quarterly, VMRIS sections/reports in ASN's *Nutrition Notes* publication, four times per year
    - Coordinate business meeting and poster competition at Experimental Biology annual conference
    - Liaison between members and ASN
    - Serve on RIS Chairs Panel – ASN symposia review and selection
  - Chair-Elect (2008-2009)
    - Coordinate sponsorship, assist with annual business meeting
  - Secretary/Treasurer (2007-2008)
    - Manage accounts, data distribution
- Iron Mini-Symposium at Experimental Biology annual conference
  - Chair (2008, 2011 EB meetings)
    - Review of abstracts, selection and scheduling of oral and poster presentations

Academy of Nutrition and Dietetics (AND; formerly the American Dietetic Association (ADA))

- Education Committee
  - Committee member (2012-present)
- Accreditation Council for Education in Nutrition and Dietetics (ACEND; formerly Commission on Accreditation for Dietetics Education)
  - Program/Site Reviewer (2006-present)
    - Review documentation, site visits to approx. 3 programs per year seeking accreditation; write and submit reports, including phase 2 responses
    - Review interim program assessment reports, ~3-4 per year; write and submit reports, including phase 2 responses
- AND Positions Committee
  - Committee member (2009-2012)
    - Approx. 6 association position paper developments per year, for publication to 80,000+ ADA members and to the public
      - Current leader for three of six position topic developments
    - Approx. 8 yearly committee conference calls
    - One yearly meeting at ADA headquarters in Chicago
- Research Dietitians' Practice Group (RDPG)
  - Chair-Elect (2010-2011); Chair (2011-2012); Past-Chair (2012-present)
    - Approx. 900 members
    - Responsibilities include review of DPG finances, symposia applications/ scheduling, membership, sponsorship, and editorial activities for newsletter.

Ohio Dietetic Association (ODA)

- Oncology Dietitians' Practice Group
  - Ohio State Representative (2008-2010)
    - Member liaison, annual reports, data distribution

Cleveland Dietetic Association (CDA)

- President-Elect (2010-2011); President (2011-2012)
- Committee on Professional Issues
  - Chair (2009-2010)
  - Co-Chair (2008-2009)
    - Guide, select, schedule monthly seminar, workshops for members' continuing education events
- National Nutrition Month Committee
  - Chair (2006-2008)
    - Coordinated public nutrition information events in Cuyahoga County; National Nutrition Month – *Nutrition Power Pack!* Information packs, distributed to primary Cleveland and Cuyahoga County Brach libraries, for further distribution to 32 regional libraries, March 2007 and 2008.

International Society for Trace Element Research in Humans (ISTERH)

- Planning Committee/Treasurer - 2011 Annual Meeting, Istanbul, Turkey.
  - Manage sponsorship, finances, and records for planning.

Sharing U.S. Technology to Aid in the Improvement of Nutrition (SUSTAIN), DC

- Advisory Panel Member (2005-2010)
  - Consultant, advisor re development of international iron fortification research projects; ~10-12 conference calls annually

Science, Technology, Engineering, Mathematics (STEM) Program – Washington, DC

- Project advisor, consultant, and student mentor (2010-2011)
  - Cleveland, Cuyahoga County High Schools

EDITORIAL BOARD, JOURNALS, & GRANT REVIEWER

Editorial Board (2008-2010) - *Nutrients:* Molecular Diversity Preservation International (MDPI), Editorial office: Kandererstrasse 25, CH - 4057 Basel, Switzerland.

Manuscripts Reviewer:

- British Journal of Nutrition (2008-present)
- Journal of Agriculture and Food Chemistry (2008 – present)
- Journal of Food Science (2007-present)
- Journal of the American Dietetic Association (2005-present)
- Journal of Nutrition (2005-present)

Grant Reviewer/Panel - U.S. Army Research Institute of Environmental Medicine (USARIEM), Natick, Massachusetts (2008).

City of Cleveland

- Committee Member - Health Cleveland Initiative (01/2013-present)
  - Consultant re development of citywide initiatives aimed at population of Cleveland and surrounding region.

SERVICE ON CASE WESTERN RESERVE UNIVERSITY COMMITTEES

University

- Tissue Procurement and Histology Core (TPHC) Advisory Committee
  - Committee Member (2012-present)
- Faculty Senate Committee on Undergraduate Education (FSCUE) (2009-present)
  - Representative for Departments of Nutrition and Biochemistry
    - Subcommittees on Curriculum Review, International Students, Advising
- Executive Committee, University Undergraduate Faculty (2008-2009)
  - Representative for Departments of Nutrition and Biochemistry
    - Curriculum, review of course development process
- Academic Integrity Board (2008-present)
  - Office of Undergraduate Studies
    - Serve as faculty representative on approx. two board hearings per semester
- Curriculum Committee, University Undergraduate Faculty (2005-2008)
  - Representative for Departments of Nutrition and Biochemistry
    - Course approval process development; new/adjusted course review

Departmental (Nutrition)

- Committee on Appointment, Promotion, and Tenure (2008-2010)
- Department of Nutrition Representative to Office of Undergraduate Studies (2004-present)
  - Representative for undergraduate Major Programs
- Undergraduate Curriculum Committee (2004-present)
- Dietetic Advisory Board/Committee, as Director/Committee Chair (DPD)

TEACHING & ADVISING ACTIVITIES

Nutrition Courses – Full Responsibility:

<u>NTRN 342 – Food Science Lecture (3.0 cr.) – taught every Fall Semester</u>
Course instructor.
Required for all nutrition majors and M.S. students working towards dietetics practice as a career; approximately 45 students per semester.
Prerequisites: CHEM 106 (Inorganic Chemistry)
Lecture topics: Composition, chemistry, physical properties and functionality of water, carbohydrates, fats, and proteins; review of food processing, preparation, food component interactions and applications; nutrient retention during processing, preservation, and storage; food handling and safety issues, including chemical, microbiological, physical safety, and quality control; new and novel foods; impact of biotechnology on food supply and quality.

<u>NTRN 342 – Food Science Laboratory (2.0 cr.) – taught every Fall Semester</u>
Course instructor.
Required for all nutrition majors and M.S. students working towards dietetics practice as a career; approximately 26 students per semester.
Prerequisites: CHEM 106 (Inorganic Chemistry); majors concurrent with NTRN 342 lecture.
Lab topics: Methods of investigation of food composition, chemistry, physical properties and functionality of water, carbohydrates, fats, and proteins; review of food processing, preparation, food component interactions and applications; nutrient retention during processing, preservation,

and storage; food handling and safety issues, including chemical, microbiological, physical safety, and quality control; new and novel foods; impact of biotechnology on food supply and quality.

NTRN 365 – Diet in Disease: Pathophysiology (4.0 cr.) – taught every Spring Semester
Course instructor.
Required for all dietetics students and an elective for all undergraduate majors and M.S. students; approximately 25 students per semester.
Prerequisites: BIOC 307 (Biochemistry) and NTRN 363 (Human Nutrition I: Energy, Protein, Minerals).
Lecture topics: Interplay among etiology, metabolic perturbations, pathophysiology, clinical signs and symptoms, and nutrition principles for the prevention and management of disease. Medical conditions in which nutrition plays an integral role in treatment, management and/or prevention. Discussion of general principles, specific considerations and clinical applications. Integrate knowledge of foods and nutrition, physiological and biochemical processes, and economic and psychosocial influences relative to the provision of nutritional care (medical nutrition therapy).

NTRN 397 - Departmental [Nutrition] Seminar – SAGES (3.0 cr.) – taught every Spring Semester
Course instructor.
Required for all undergraduate nutrition majors; approximately 25 students.
Prerequisites: NTRN 201 (Nutrition) and NTRN 342 (Food Science).
Lecture topics: Required for all undergraduate nutrition majors.
Students conceptualize, develop, and prepare NTRN 398 Senior Capstone Project proposal and confirm capstone advisor and/or mentor.

Individual/Independent Student Courses – Full Responsibility:

NTRN 390 – Independent Research (3.0 cr.) – offered every Fall and Spring Semester
Course instructor
Senior undergraduate students; approximately 1-2 per semester.
Lecture topics: Student completes individual independent research project, under guidance of faculty advisor.

NTN 398 – SAGES Capstone Project (3.0 cr.) – offered every Fall and Spring Semester
Course Instructor
Senior undergraduate students; approximately 3-4 per semester.
Lecture topics: Student completes SAGES Senior Capstone Research Project; research-based. Includes critical evaluation of research topic related to nutrition, then conceptualizing, developing, researching (includes literature review and data analysis).

NTRN 399 – Special Problems (3.0 cr.) – offered every Fall and Spring Semester
Course Instructor
Senior undergraduate students; approximately 1-2 per semester.
Lecture topics: Formal investigation of a topic in nutrition culminating in a paper and oral presentation. Requires definition of a problem, evaluation of the scientific literature and delineation of problem-solving approaches.

NTRN 561 – Investigative Methods in Nutrition (3.0 cr.) – offered every Fall and Spring Semester
Course Instructor
Students in Nutrition Department, primarily M.S. students; approximately 1-2 per semester.
Lecture topics: Student completes individual investigative methods based research project; conceptualizing, developing, researching (includes literature review and data analysis).

Team Taught Courses:

NTRN 434 – Advanced Human Nutrition II (3.0 cr.) - taught every Spring Semester
One of three instructors for the course; primary course coordinator spring 2007.
Required course for all M.S. and Ph.D. students; approximately 35 per semester.
Lecture topics: biochemical form and dietary sources, as well as the metabolic handling, utilization and function of vitamins, fundamental concepts used for the determination of human vitamin needs and nutriture, as well as the development and appropriate uses of regulations regarding vitamin standards; vitamins C & E (2 lectures; 2005-2006); B-vitamins (5 lectures; 2007-present).

Guest Lectures - Case Western Reserve University

EVHS/MPHP 429 - Introduction to Environmental Health (3.0 cr.) – taught Spring Semesters
EVHS/MPHP Graduate students; medical students.
Teach lecture entitled, *"Food Safety and Health"*

Other teaching - Medical Students

GINUT (GI & Nutrition) - 2nd year

- 2004-2008: Small groups (12-15 students)
  - Two small groups per year – 2 hr per session
    Topics varied, but included:
    - "Vitamins, Minerals: Selecting an Appropriate Supplement"
    - "Hyperlipidemia, Diabetes, and Hypertension"
    - "Coronary Heart Disease Prevention"
    - "Nutrition and Coronary Heart Disease"
    - "Nutrition, Hypertension, and Diabetes"
  - Three large group lectures per year – 2 hr per session
    Presentation titles:
    - "Influence of Nutrition on Hyperlipidemia and Coronary Heart Disease"
    - "Nutrition in Hypertension and Diabetes"
    - "Nutrition in Hyperlipidemia and Coronary Heart Disease"

BLOCK-3 - 1st year

- 2008-present: Medium groups (approximately 40 students per session)
  - Two medium groups per year
    Topics vary, but include:
    - "Nutrition Assessment and Case Studies in Nutrition"
    - "Vitamin Toxicity and Nutrition Case Studies"
    - "Coronary Heart Disease and Diabetes Nutrition Case Studies"

Environmental Health and Sciences (EVHS/MPHP) - Medical student group - Swetland Projects – Advisor/Consultant

Five medical student groups (6-10 students per group): Students designed literature to present to Cleveland high school/after care students on selecting healthy foods and the importance of nutrition for future health. I was advisor/consultant for these groups - conducting EVHS student projects. 2009-present. Total contact hours = 30+ per semester.

Continuing Medical Education (CME)

Ireland Cancer Center (ICC) Grand Rounds - CME Regularly Scheduled Conference – CID# 6208, May 19, 2010, presentation entitled, *"Iron supplementation and Intestinal Tumorigenesis in Apc min mice: an animal model of familial adenomatous polyposis coli.*" 1 hr

***NetWellness* (Case School of Medicine)**

Faculty Expert, 2009-present. Web-content advisor and development. Total hours = 25 per semester.

Leader; Heart Healthy recipe development, submissions, monthly Alumni Newsletter. 2010-2011); 20 plus hours per semester.

Advising/Mentoring

University

- Freshman Advisor (2007-present). Approximately 20-25 yearly. 15-20+ hours per year.

Department of Nutrition

- Major Advisor for ~25-30 undergraduate students per semester. Total contact hours = 100-125+ per semester.
- Dietetics Program (DPD) Student Advisor - 25-35 students yearly. Total contact hours = 20-30+ per year.
- Mentor for Nutrition Undergraduate Research Students in Laboratory, 3-4 per year. Total contact hours = 250+ hrs per year.
- Preceptor for M.S. Student Research Projects (2008-present); two students. Total contact hours = 40+ per student.
- Mentor for International Undergraduate Research Scholar, one student (spring semester 2010), from University of Goteborg, Sweden. Total contact hours = 120+ per semester.
- Case *Get Connected* speaker/advisor; recruitment fair for prospective students and families. Total of 3hrs. Yearly, since 2004.
- Case *Choices Fair* advisor, Veale Center, major degree options selection symposium. Total of 2 hrs per session, plus 1 hr preparation. Yearly, since 2004.

Teaching & Participating in the Community of Educators – Regional, National, International

Invited Lectures & Other Presentations

Regional

- Cleveland Contemporary Chinese Cultural Association; Healthy Fusion Diets/Mandarin language recital - Chinese New Year's celebration, Solon, OH, Jan27, 2012.
- Cleveland Dietetic Association, Sept. 28, 2010. Oral lecture entitled, *"Food Safety: How Ingredient Profile Determines Susceptibility to Microbial Spoilage."*
- Case Biochemistry Students Association – Iron Bioavailability and Chemical Modifiers of Nonheme Iron Absorption. Spring 2009.
- Lewis Elementary School – Solon School District – First grade instruction, invited lecture: *Healthy afterschool snacks for kids!* Fall, 2009.
- Cuyahoga County Board of Health, April 25, 2006, Oral Presentation entitled, *"Bioavailability of Elemental Iron Powders Used for Food Fortification."*

National

- Dannon Institute's *2012 Academic Mid-Career Leadership Institute*, Selected Participant, June 10-14, 2012, Chicago, IL
- Session Chair - Oral Session - Iron I. Experimental Biology Annual Conference, Washington, DC April, 2011.
- American Dietetic Association's Area V & II Dietetic Educators of Practitioners (DEP) Annual Meeting. *"Bright Ideas: Dietetics Educators Share."* St. Louis, MO, May 1, 2010.
- Experimental Biology Annual Conference, San Diego, CA, April 5-9, 2008. Oral Presentation entitled, *"Proteomic analysis of tumor and adjacent non-tumor intestinal tissue and tumor burden after iron supplementation in* $Apc^{Min/+}$ *mice."* (Nutriproteomics and Nutrigenomics mini-symposium).
- California State University, Northridge. Seminar entitled, *"Iron supplementation and intestinal tumorigenesis."* Marilyn Magaram Center. CA, May 1, 2009.
- Presenter – Research posters at Experimental Biology Annual Conference; 2003- 2010.
    - 2003-2005: Iron Bioavailability and Absorption
    - 2006-2010: Iron and Cancer (Intestinal Tumorigenesis) (4)

International

- Tsinghua University and Capitol Medical School, Beijing, China, P.R.C., Comprehensive AIDS Research Center & Department of Pharmaceutical Studies, 12/14-18/2010. Oral presentations entitled, *"Iron supplementation and food-medication interactions"*, and *"Hypertension, cardiovascular disease, and sodium."*
- Shalgrenska Institute, Goteborg University, Gothenborg, Sweden. 11/15-19/08. Oral presentation entitled, *"Methods in iron efficacy and absorption studies in animals and humans."*
- Women's and Children's Hospital, Sichuan University, Chengdu, China, P.R.C. 8/10-8/13, 2008. Oral seminars/series entitled, *"Bioavailability of Non-heme Iron Powders"* and *"Nutrition, Diabetes, and Cardiovascular Disease: Interplay with Dietary Iron."*

INVITED BOOK, CHAPTER REVIEWS

Textbooks:

Chapters 5 (Carbohydrates) and 9 (Water and Minerals), Nutrition for Healthy Living, by Wendy Schiff. McGraw-Hill Publ., 2008.

Understanding Food: Principles and Preparation, 2nd Ed., 3rd Ed.: Brown, A. Wadsworth/Thomson Higher Learning, 2004.

Nutrition 2nd Ed., 3rd Ed.: Insel, P., Turner, R.E., and Ross, D. Jones & Bartlett, 2002.

RESEARCH SUPPORT

James Swain (PI): Centers for Translational Science, Case Western Reserve University, Pilot Grant Award for study entitled, "From aberrant crypt to adenoma: proteomics of intestinal tumorigenesis." 2009-2011.

James Swain (PI): Transdisciplinary Research on Energetics and Cancer (TREC). Case Comprehensive Cancer Center, Center for, Developmental Project Grant entitled, "Physical activity and tumor incidence in azoxymethane-treated PEPCK-C^{mus} mice." 2008-2010

James Swain (PI): American Cancer Society, Grant #IRG-91-022 (CASE Comprehensive Cancer Center ACS-IRG) entitled, "Iron supplementation and intestinal tumorigenesis in $Apc^{Min/+}$ mice." 2006-2007.

James Swain (Co-PI): USDA/CSREES/NRICGP (National Research Initiative Competitive Grants Program). Title: "Combating iron deficiency: Absorption and efficacy in humans of elemental iron powders and heme iron" (Project Director - Janet R. Hunt, Ph.D., R.D.; Proposal # 2002-01885, Grant # 2002-35200-12222), 2002-2005.

Travel award - National Institutes of Health, Office of Dietary Supplements and National Institute of Child Health and Human Development conference entitled, "Dietary Supplement Use in Women." Bethesda, MD, January 28-29, 2002.

James Swain (Co-PI): Professional Advancement Research Grant. Title: "Does phytic acid reduce risks associated with iron overload caused by hemochromatosis? Use of β2-microglobulin-deficient mice model." Iowa State University, 1997.

James Swain (PI): University Corporation Student Projects Research Grant. Title: "Changes in folate concentration in cruciferous vegetables during storage and preparation." California State University, Northridge, 1995.

BIBLIOGRAPHY

Sean R Lynch, Thomas Bothwell, and the SUSTAIN Task Force on Iron Powders (Lou Campbell, Kristina Cowan, Ray Glahn, Leif Hallberg, Michael Hoppe, Lena Hulthen, Janet R Hunt, Richard F Hurrell, Dennis Miller, **James H Swain**, Liz Turner, Pattanee Winichagoon, C.K. Yeung, Christophe Zeder, and Michael B Zimmermann). A Comparison of Physical Properties, Screening Procedures and a Human Efficacy Trial for Predicting the Bioavailability of

Commercial Elemental Iron Powders Used for Food Fortification. Int. *J. Vitam. Nutr. Res.*2007, 77(2):107-124.

Swain, JH, Johnson, LK, Penland, JG and Hunt, JR. Combating iron deficiency: Electrolytic iron or ferrous sulfate increased body iron in women with moderate to low iron stores. *J. Nutr.* 2007;137 620-627.

Swain, JH, Johnson, LK and Hunt, JR. An irradiated electrolytic iron fortificant, poorly absorbed by human subjects, is also less responsive to the enhancing effect of ascorbic acid. *J. Nutr.* 136:2167-2174, 2006.

Petersen, HL, Peterson, CT, Reddy, MB, Hanson, KB, **Swain, JH**, Sharp, RL and Alekel, DL. Body composition, dietary intake and iron status of female collegiate swimmers. *Intl. J. Sport Nutr. And Exercise Metab.* 2006;16:281-295.

James H. Swain, Samuel M. Newman and Janet R. Hunt. Bioavailability of elemental iron powders to rats is less than bakery-grade ferrous sulfate and predicted by iron solubility and particle surface area. *J. Nutr.* 133:3546-3552, 2003.

James H. Swain, D. Lee Alekel, Sarah B. Dent, Charles T. Peterson, and Manju B. Reddy. Iron indexes and total antioxidant status in response to soy protein intake in perimenopausal women. *Am. J. Clin. Nutr.* 2002;76:165-171.

James H. Swain, Louisa B. Tabatabai, and Manju B. Reddy. Histidine content of low molecular weight beef proteins influences nonheme iron absorption in Caco-2 cells. *J. Nutr.* 132:245-251, 2002.

Sarah B. Dent, Charles T. Peterson, Larry D. Brace, Kathy B. Hanson, **James H. Swain**, Manju B. Reddy, Jennifer G. Robinson, and D. Lee Alekel. Soy protein intake by perimenopausal women does not affect circulating lipids and lipoproteins or coagulation and fibrinolytic factors. *J. Nutr.* 131:2280-2287, 2001.

Abstracts and oral presentations:

N. Berger, J. Nadeau, P. Hakimi, G. Casadesus, **J. Swain,** R. Hanson. Transgenic Mouse Models to Study the Effects of Exercise on Cancer Prevention and Survivorship. To be presented at the International Society of Behavioral Nutrition and Physical Activity annual meeting, in June, 2010.

James Swain, Chunbiao Li, and Patrick Leahy. Intestinal tumors adapt to excess dietary iron by altering expression of a diverse set of oxidoreductases. Department of Nutrition, Gene Expression and Genotyping Facility, Case Western Reserve University, Cleveland, OH. Presented at Experimental Biology annual conference, Anaheim, CA, 2010.

James Swain, Shawn Alter, Jinsook Chang, Hong Zhao, Mark Chance. Proteomic analysis of tumor and adjacent non-tumor intestinal tissue and tumor burden after iron supplementation in $Apc^{Min/+}$ mice. Presented at Experimental Biology annual conference, San Diego, CA, 2008.

James Swain, Chunbiao Li, and Patrick Leahy. Iron supplementation modulates genes involved in oxidoreductase activity, including prostaglandin-endoperoxide synthase 2 in intestinal tumors. Presented at Experimental Biology annual conference, San Diego, CA, 2008.

James Swain, Chunbiao Li, and Patrick Leahy. Intestinal tumors adapt to excess dietary iron by altering expression of lipocalin-2 and divalent metal iron transporter. Presented at Experimental Biology annual conference, San Diego, CA, 2008.

James H. Swain, Adam M. Kresak, and Theresa P. Pretlow. Tumor number and comparative micro-array analysis of tumor and adjacent non-tumor intestinal tissue after iron supplementation in $Apc^{Min/+}$ mice. Presented at Experimental Biology annual conference, Washington, DC, 2007.

James H. Swain, James G. Penland, LuAnn K. Johnson, and Janet R. Hunt. Energy, mood and attention did not consistently improve with iron status in non-anemic women with moderate to low iron stores (Abs. #140.5). Presented at Experimental Biology annual conference, San Francisco, CA; FASEB J, 2006.

Janet R. Hunt and **James H. Swain**. Bioavailability to humans of an electrolytic elemental iron fortificant, assessed after radiolabeling by neutron activation. Presented at Experimental Biology annual conference, San Diego, CA, 2005.

James H. Swain, LuAnn K. Johnson, and Janet R. Hunt. Combating iron deficiency: Bioavailability of iron from two elemental iron powders and a heme iron supplement in humans. Presented at Experimental Biology annual conference, Washington, DC, 2004.

J.H. Swain, S.M. Newman, and J.R. Hunt. The bioavailability of elemental iron powders used for food fortification varies among commercial forms and is influenced by physicochemistry. Presented at Experimental Biology annual conference, San Diego, CA, 2003.

J.H. Swain and J.R. Hunt. Elemental iron powder used for food fortification: Does physicochemistry predict bioavailability? International Nutritional Anemia Consultative Group Symposium, Marrakech, Morocco, February 6, 2003.

J.H. Swain and J.R. Hunt. Bioavailability of elemental iron powders used for food fortification (Abs.# 240B). 11th International Symposium on Trace Elements in Man and Animals, Berkeley, CA, 2002.

J.H. Swain and J.R. Hunt. Carbonyl iron is a more effective hemoglobin repletion agent than electrolytic or reduced iron powder. Proceedings of the North Dakota Academy of Science 94th Annual Meeting, vol. 56, pg. 58, 2002.

M.B. Reddy, **J.H. Swain**, G. Zhang, K.L. Schalinske, S.A. Tanumihardjo. Effect of retinol and carotenoid analogs on nonheme iron bioavailability in Caco-2 cells. FASEB J. 16(4):A271 (Abs.# 218.6), 2002.

M.B. Reddy and **J.H. Swain**. Low molecular weight proteins in beef enhance iron bioavailability in Caco-2 cells. Bioavailability, Interlaken, Switzerland, 2001.

M.B. Reddy, **J.H. Swain**, S.B. Dent, C.T. Peterson, and D.L. Alekel. Iron status in women during the menopausal transition. FASEB J. 15(5):A974 (Abs.# 748.7), 2001.

S.B. Dent, C.T. Peterson, M.B. Reddy, **J.H. Swain**, and D.L. Alekel. Isoflavone-rich soy protein maintains antioxidant status in perimenopausal women. FASEB J. 14(4):A519 (Abs.# 364.3), 2000.

J.H. Swain, L.B. Tabatabai, and M.B. Reddy. Isolation and characterization of beef proteins that enhance nonheme iron bioavailability. FASEB J. 14(4):A753 (Abs.# 522.12), 2000.

J.H. Swain, S. Dent, D.L. Alekel, C.T. Peterson, & M.B. Reddy. Influence of soy intake on iron status of perimenopausal women. FASEB J. 13(4):A251 (Abs.# 220.1), 1999.

J.H. Swain, M.-A. del Barrio, K.T. Tran, & T.-S. Chen. Folate determination in food: Effect of variations in homogenization procedure. Institute of Food Technologists Annual Meeting (Abs. # 68D-11), 1996.

J.H. Swain, M.-A. del Barrio, K.T. Tran, and T.-S. Chen (Spon:C.H. Smith). Microbiological assay for food folate: Effect of inoculum preparation, incubation time, incubation method, and commercial source of folic acid standard. FASEB J. 10(3):A795 (Abs.# 4591), 1996.

Thesis:

James H. Swain. Dietary proteins that influence nonheme iron bioavailability, iron status, and plasma total antioxidant status. Doctoral Thesis, Iowa State University, December, 2000.

Newspaper articles:

James H. Swain. Breakfast cereals can really show their metal. *Local Life* section, Grand Forks Herald, ND, Wednesday, April 24, 2002.

Newsletters:

James H. Swain (Staff Writer). Vitamin in the Spotlight. California State University, Northridge, CA, Student Health Center's Nutrition Digest, Fall 1995/Spring 1996 issue.

EXHIBIT 40

Declaration of Rachel Clattenburg
Public Citizen v. FDA et al., 16-cv-781

Christianne L. Roumie, M.D., M.P.H.

Office Address:		Nashville VA Medical Center 1310 24th Ave South, GRECC Nashville, T.N. 37212
Office Phone:		(615) 873-8013
Date of Birth:	Appears this way on the original	[redacted]
Place of Birth:		New York, New York
Email:		mailto:Christianne.Roumie@mcmail.vanderbilt.edu

EDUCATION AND TRAINING

Douglass College, Rutgers University
New Brunswick, New Jersey
Bachelors of Arts, Biological Sciences, [redacted] Appears this way on the original August, 1990- May, 1994
Minor, Psychology

University of Medicine and Dentistry, New Jersey Medical School
Newark, New Jersey
Doctor of Medicine, *Alpha Omega Alpha* August, 1994- May, 1998

Vanderbilt University
Nashville, Tennessee
Masters Public Health September, 2002- May, 2005
Thesis: *Antibiotic Prescribing Patterns in Outpatient Settings*

Internal Medicine and Pediatrics residency training
Vanderbilt University Medical Center
Nashville, Tennessee June, 1998- June, 2002

VA National Quality Scholars Program
Nashville, Tennessee July, 2002- June, 2004

LICENSURE AND CERTIFICATIONS

Diplomate, National Board Medical Examiners	May, 1999
Tennessee Medical License- #	July, 2000
Diplomate, American Board of Internal Medicine	2002 through 2012
Recertification	2012 through 2022
Diplomate, American Board of Pediatrics	2002 through 2012
Recertification	2012 through 2022
Drug Enforcement Agency-#	April, 2001
ACLS Instructor	June, 2002- November, 2006

Appears this way on the original

Mentoring

Appears this way on the original

[redacted]	[redacted]	[redacted]		[redacted]	[redacted]
[redacted]	[redacted]	[redacted]		[redacted]	[redacted]
[redacted]	[redacted]	[redacted]		[redacted]	[redacted]
[redacted]	[redacted]	[redacted]		[redacted]	[redacted]
[redacted]	[redacted]	[redacted]		[redacted]	[redacted]
[redacted]	[redacted]	[redacted]		[redacted]	[redacted]

RESEARCH PROGRAM

Grants (Current)

1. **Effectiveness of Second Line Hypoglycemic Medications Among Veterans**
   VA- CSRD IIR I01 CX000570-01 (Merit) October, 2012 – September, 2016
   PI: Roumie (20%) **$626,980**
   Which medication regimen should be used after failure of metformin monotherapy? We will perform a retrospective cohort study of new users of 2nd line therapy for treatment of diabetes to determine whether certain regimens confer an advantage on reaching goal HbA1c, along with the time to development of complications such as low blood sugar and weight gain. We will also examine if there are differences in the development of diabetes-related complications, including acute myocardial infarction, stroke, kidney disease, and cardiovascular death among patients.

2. **Systolic Blood Pressure Intervention Trial (SPRINT)**
   NIH (NHLBI) 2010- 2018 SPRINT VA CCN
   PI: William Cushman (Memphis VA) September, 2010 – September, 2018
   Site Primary Investigator: Roumie (20%) **TVHS site $600,000**
   SPRINT plans to compare SBP goals of <120 vs <140 mm Hg in patients 55 years or older, participants will become eligible if they have SBP 130+ and known CVD or other risk factors. The primary composite endpoint will be CVD mortality and non-fatal MI, stroke, and heart failure.

3. **PCORI CDRN** January 2014-June 2015
   Role: Co-investigator Coronary heart disease cohort (10%)
   Co-investigator Health Services Research Methodology core (5%)
   PI: Russell Rothman, MD MPP
   The Southern United States has the highest rates of obesity, diabetes, cardiovascular disease, certain cancers, and other conditions, and significant rates of health disparities. The Mid-South Clinical Data Research Network (CDRN) is centered at Vanderbilt University (VU). This CDRN will encompass three large health systems: (1) the Vanderbilt Health System which currently includes electronic medical records for over 2 million patients, (2) the growing Vanderbilt Healthcare Affiliated Network (VHAN) which currently includes 32 hospitals, hundreds of ambulatory practices, and will cover over 3 million patients in the mid-South, and (3) a partnership with Greenway Medical Technologies and other national organizations to provide access to over 24 million patients across the country.

56. Vella MA; Kummerow Broman K; Tarpley JL; Dittus RS; **Roumie CL** Postoperative Telehealth Visits: Assessment of Quality and Veteran Preferences Research Letter In press *JAMA Surgery*

57. **Roumie CL*;** Min, JY; Greevy RA; Grijalva CG; Hung AM; Liu X; Griffin MR Association of metformin with insulin versus sulfonylureas and risk of hypoglycemia (In Press *CMAJ)*

58. **The SPRINT Study Research Group** A randomized trial of Intensive versus Standard Blood Pressure Control *New England Journal of Medicine* 2015 November 9

59. Pajewski N; Applegate W; Berlowitz D; Bolin L; Chertow G; Krousel-Wood M; Lopez Barrera N; Powell J; **Roumie CL**; Still C; Sink K; Tang R; Wright C; Williamson J; Supiano M; Retrospective construction of a frailty index in the Systolic Blood Pressure Intervention (SPRINT) Trial (In Press- *Journal of American Gerontological Society*)

Other Peer Reviewed Publications

60. Roumie, CL*; Natasha Halasa; Kathryn Edwards; et.al.; Differences in antibiotic prescribing among physicians, residents and non physician providers, In reply: (Letter) *American Journal of Medicine* 2006: May; 119, 23-24

61. Roumie CL*; Schuberth, JL; TA Elasy; J. Butler; R. Greevy; T. Speroff; R.S. Dittus. (Letter)- Response to Kessler regarding Quality of Care and Short call admissions. *Circulation* 2009 119: p. e7-e7

62. Roumie, CL*; Rothman RL: Commentary for BMJ's *Evidenced Based Medicine* (Commentary) March 2010

63. Roumie, CL* The doughnut hole: it's about medication adherence (Editorial) *Annals of Internal Medicine* 5 June 2012; 156(11):834-835

(b) (4)

65. Roumie CL; Greevy RA; Griffin MR Re- Comparative Effectiveness Research of Diabetes treatment (Letter) JAMA October 22/29, 2014, Vol 312, No. 16

66. Roumie CL; Greevy RA; Griffin MR In Reply Association between intensification of metformin treatment with insulin vs sulfonylureas and cardiovascular events and all-cause mortality among patients with diabetes (Letter) JAMA October 22/29, 2014, Vol 312, No. 16

Under Review

Appears this way on the original

Appears this way on the original