

July 16, 2024

## **CURRICULUM VITAE**

### **PERSONAL INFORMATION:**

Name	Henry Jay Forman, Ph.D.
Present positions	Distinguished Professor Emeritus of Biochemistry Founding Faculty School of Natural Sciences University of California Merced  Research Professor Emeritus of Gerontology Leonard Davis School of Gerontology University of Southern California
Business Phone	+1 (818) 288-1573
Electronic mail	<a href="mailto:peroxideman@gmail.com">peroxideman@gmail.com</a>

### **EDUCATION:**

High School	Stuyvesant High School, New York City, NY
College	Queens College of the City University of New York, B.A. in Chemistry, 1967
Graduate School	Columbia University, New York Ph.D. in Biochemistry, 1971 Philip Feigelson, advisor
Postdoctoral	Postdoctoral Fellow 1971-73 Department of Biochemistry Duke University Medical Center Irwin Fridovich, sponsor

**PROFESSIONAL BACKGROUND:**

**Academic Appointments:**

2020 (lifetime)	Research Professor Emeritus of Gerontology Davis School of Gerontology University of Southern California
2009-2020	Research Professor of Gerontology Davis School of Gerontology University of Southern California
2015 (lifetime)	Distinguished Professor Emeritus of Biochemistry School of Natural Sciences University of California Merced
2010-15	Distinguished Professor of Chemistry and Biochemistry Founding Faculty School of Natural Sciences University of California Merced
2009-19	Research Professor of Gerontology Davis School of Gerontology University of Southern California
2003-10	Professor of Chemistry and Biochemistry and Founding Faculty School of Natural Sciences University of California Merced
1999-03	Professor and Chairman Department of Environmental Health Sciences University of Alabama at Birmingham
1994-99	Charles Krown Professor of Molecular Pharmacology & Toxicology, University of Southern California
1992-99	Professor of Molecular Pharmacology and Toxicology, Pathology, and Pediatrics University of Southern California
1989-92	Professor of Pediatrics, Pathology, and Toxicology University of Southern California

1986-89 Associate Professor of Pediatrics, Pathology, and Toxicology,  
University of Southern California

1982-86 Associate Professor of Physiology,  
University of Pennsylvania

1978-82 Assistant Professor of Physiology,  
University of Pennsylvania

1977 Adjunct Assistant Professor of Biochemistry,  
University of Kansas Medical School

1973-77 Research Associate in Biochemistry,  
University of Kansas Medical School

**Administrative appointments:**

2005-11 Co-Director UC Toxics Research & Teaching  
Program, Atmospheric Aerosols & Health Component

1999-03 Co-Director  
Center for Free Radical Biology  
University of Alabama at Birmingham

1999-2003 Chairman  
Department of Environmental Health Sciences  
University of Alabama at Birmingham

1988-92 Head, Cell Biology Group,  
Childrens Hospital Los Angeles

1987-94 Associate Division Head for Research,  
Division of Neonatology & Pediatric Pulmonology,  
Children's Hospital Los Angeles

**Elected administrative appointments:**

2012-13 Senate Vice-Chair, School of Natural Sciences

2008-09 Chair, Committee on Committees  
University of California Merced

2005-06 Vice-Chair of Faculty Senate  
University of California Merced

2005-06	Senate Chair, School of Natural Sciences University of California Merced
2004-05	Chair, Committee on Committees University of California Merced
2003-04	Chair, Proto-Divisional Council University of California Merced

## RESEARCH ACTIVITIES:

### Research Grants as Principal Investigator

Radicals and enzymes in pulmonary oxygen toxicity

Direct costs: \$157,974

National Institutes of Health, HL23790

1979-82

Radicals and cellular functions in oxygen toxicity

Direct costs: \$379,112

National Institutes of Health, HL31831 (a renewal of HL23790)

1982-86

Nitrogen dioxide and alveolar macrophage metabolism

Direct costs: \$541,276

National Institutes of Health, HL35342

1986-91 (At the time that I relocated to Los Angeles this grant was administratively combined with a renewal of HL31831 for \$732,638 and became HL37556.)

Radicals and cellular functions in oxygen toxicity

Direct costs: \$1,273,914

National Institutes of Health, HL37556

1986-91 (a renewal of HL31831 combined with HL3542)

Influence of pulmonary secretion on the function of alveolar macrophages

Direct costs: \$50,000

H.N. and Frances C. Berger Foundation

1991-93

Effect of oxidant stress on alveolar macrophage function

Direct costs: \$764,190

National Institutes of Health, HL37556

1991-95

Gamma-glutamylcysteine synthetase and oxidant injury of airway epithelium

Direct costs: \$55,000

Berger-Webb Foundation

1999-2000

Glutathione synthesis and uptake in antioxidant defense

Direct costs: \$759,599

National Institutes of Health, ES05511

1991-96

Gamma-glutamylcysteine synthetase and oxidant injury of airway epithelium

Direct costs: \$225,000

Berger-Webb Foundation

1995-1999

Mechanisms of Kupffer cell alteration by alcohol

Direct costs - \$24,000

NIH Liver Center, USC

1996

Glutathione synthesis and uptake in antioxidant defense

Direct costs: \$661,005

National Institutes of Health, ES05511

1996-2000

Effect of oxidant stress on alveolar macrophage function

Direct costs: \$745,872

National Institutes of Health, HL37556

1996-2001

NO<sub>2</sub>-induced peroxidation products and airway reactivity

Direct costs: \$353,529

National Institutes of Health, HL46943

1997-2001

Glutathione transport and oxidative stress in cystic fibrosis

Direct costs: \$75,000

Cystic Fibrosis Foundation

Research Development Program – Component II

Pilot Project 3

2000-2002

Reactive oxygen species in alveolar macrophage signaling

Direct costs: \$1,028,408

National Institutes of Health, HL37556

2001-2005

Regulation of glutathione biosynthesis in oxidative stress

Direct costs: \$901,995

National Institutes of Health, ES05511

2000-2006

Regulation of glutathione biosynthesis in oxidative stress

Direct costs: \$50,000

National Institutes of Health, ES05511

2006-2007

Regulation of glutathione biosynthesis in oxidative stress – summer student support

Total costs: \$5,192

National Institutes of Health, ES05511

2006-2007

Regulation of phase II genes by oxidation products

Direct costs: \$418,171

Tobacco-Related Disease Research Program, 14RT-0059

2005-2009

Role of the hypoxia inducible factor 1 in short and long-term hypoxia in the white shrimp

*Litopenaeus vannamei*

Direct costs: \$25,000

UC MEXUS-CONACYT Collaborative Grant (with Gloria Yepiz-Plascencia, Co-PI.

Centro de Investigación en Alimentación y Desarrollo, A.C. Hermosillo, Sonora, Mexico.

2008-2010

Development of a Nanotoxicology Screening Tool

Direct costs: \$72,518

National Science Foundation Award Number 0854574

(VJ Leppert, Co-PI, HJ Forman, Co-PI)

2009-2011

Hydroxynonenal induces glutathione synthesis through JNK

Direct costs: \$1,146,487

National Institutes of Health, ES05511

2006-2011

Identification of the mechanism of diesel exhaust particle (DEP)-induced cardio-pulmonary pathology due to the GSTM1 null genotype.

Direct costs: \$30,000

Pilot Project Southern California Environmental Health Sciences Center

2011-12

Identification of a new particle activated pro-inflammatory gene, phosphatidylcholine-specific phospholipase C.

Direct costs: \$30,000

Pilot Project Southern California Environmental Health Sciences Center

2012-13

Oxidative activation of Src in smoke-induced epithelial mesenchymal transition

Direct costs: \$275,000

National Institutes of Health, ES020942

2012-14

Human models of the particulate-induced inflammatory/antioxidant axis in aging

Direct costs: \$325,127

National Institutes of Health, ES023864

2014-20



## **CONSULTANT ACTIVITIES:**

### **Editorial Board Memberships**

Archives of Biochemistry and Biophysics, 1991- present  
Reviews Editor, January 1, 2015 – to July 1, 2015  
Editor in Chief, July 1, 2015 -

Free Radical Biology and Medicine, 1985- present  
Associate Editor, 1996-2006, 2015  
Reviews Editor, 2007-2015  
Receiving Editor, 2015 -

Molecular Aspects of Medicine  
Associate Editor, 2007-2016  
Special issue, guest editor, Glutathione in Health and Disease, 2009

American Journal of Respiratory Cell and Molecular Biology, 1995- 2003

Toxicology, 1992- 2000

Redox Biology, 2024-

### **National Institutes of Health Advisory Committees**

Member, Clinical Investigator Awards Study Section, 1985

Ad hoc Member, Pathology A Study Section, 1986, 1988, 1990, 1991, 1995

Ad hoc Member, Lung Biology & Pathology Study Section, 1991, 1993, 1994, 2002

Ad hoc Member, Respiratory & Applied Physiology Study Section, 1988

Chairman, Ad hoc, Special meeting of Respiratory & Applied Physiology Study Section, 1992

Ad hoc Member, Special Study Section on Production of Toxic Oxygen Species in Acute Lung Injury, 1984

Ad hoc Member, Special Study Section on Molecular Biology of Lung Antioxidant Enzyme Regulation, 1987

Member, Site Visit Teams for Program Projects or Specialized Centers of Research Review, 1979-93:

National Heart Lung and Blood Institute (12)

National Institute of Environmental Health Sciences (6, Chair-1)  
National Institute of Neurological Disorders and Stroke (1)  
National Institute of General Medical Sciences (1)

Correspondent reviewer, National Institute of Diabetes, Digestive, and Kidney Diseases,  
1993

Ad hoc Member, Environmental Health Sciences Review Committee, 1995

Member, Environmental Health Sciences Review Committee, member, 1996-1999 -  
Included numerous site visits including chairing of several

Member, Special study section for NHLBI Program Project RFA, 1998

Member Special ad hoc reviews (2), 1999

Member, Division of Research Grants COBRE review, 2000

Chair, NIEHS Special Emphasis Panel, 2001

Member, Special study section for NCCAM Program Projects, 2003

Ad hoc member, Lung Injury, Repair, and Remodeling Study Section, 2004

Ad hoc member, NHLBI Program Project Review, 2005

Ad hoc member, NHLBI Fellowships Review, 2005

Member, Manufactured Nanomaterials: Physico-chemical Principals, Special  
Emphasis Panels, 2007, 2009

Ad hoc member, Cellular Signaling and Regulatory Systems Study  
Section, 2007

Ad hoc member, Alcohol Abuse and Alcoholism-1 Study Section, 2007

Ad hoc member, NIEHS Advisory Board of Scientific Counselors, 2009

Member, Special Topics in Bioengineering, Special Emphasis Panel, 2009

Member, Toxicology and Hepatobiliary/Pulmonary Pathophysiology, Member  
Conflict Study Section, 2011

Member, NIEHS Special Emphasis Panel on Environmental Stem Cell Research,  
2012

Member, Systemic Injury by Environmental Exposure, Special Emphasis Panel,  
2013

Ad hoc member, Cancer Etiology Study Section, 2014

Ad hoc member, Chemo/Dietary Prevention Study Section, 2016

**Grant Review and Grant Administration (non-NIH)**

Member, American Lung Association Review Committee, 1985-86

Member, California Primate Research Center  
Univ. California, Davis: National Advisory Committee, 1988-90

Member, Research Program Administrative Committee  
American Lung Association of California, 1990-98

Member, United States Food and Drug Administration  
Radioactive Drug Research Committee #36, 1993-99

Member, Amyotrophic Lateral Sclerosis Association Scientific Review Committee, 1995

External reviewer Veterans Administration, continuing

External reviewer, National Science Foundation, continuing

External reviewer, Health Research Council of New Zealand, continuing

External reviewer, National Institute of Occupational Health and Safety, continuing

External Reviewer, Israel Science Foundation, continuing

External Reviewer, Canadian Institutes of Health Research, continuing

External Reviewer, Natural Sciences and Engineering Research Council of Canada,  
continuing

**Member, External Advisory Boards:**

Member, External Advisory Committee, University of Iowa Environmental Health  
Sciences Center Grant, 2003-

Member, External Advisory Committee, University of Pennsylvania Institute for  
Environmental Medicine Program Project Grant, 2005-2009

Member, External Advisory Committee, University of Alabama at Birmingham Program Project Grant, 2007-10

Member, External Advisory Board, Buck Institute for Aging Research Program Project Grant, 2005, Chair, 2008

Member, External Advisory Committee, Southern California Particle Center, 2006-10

**Other**

Reviewer, Air Quality Criteria for Carbon Monoxide document

Reviewer, Environmental Protection Agency: 1991

Reviewer for more than 25 journals in past 5 years

Member, External Advisory Committee, University of Texas Medical Branch, Galveston, 1999

Reviewer for Pilot Projects, Center for Ecogenetics and Environmental Health, University of Washington, 2002

**Member, State Board:**

Member of the Governing Board, San Joaquin Valley Unified Air Pollution Control District, 2008-2013 (appointed by Governor, confirmed by state senate, reappointed by Governor, reconfirmed by state senate)

**Consultant/ Expert Witness**

Baxter  
Aegis Bio/Immunodigm  
Korein Tillery, LLC

## **HONORS AND AWARDS:**

### **Honors:**

Queens College Honor Chemistry Society, 1966-67

Columbia University Fellowship, 1967-71

N.I.H. Postdoctoral Fellowship, 1971-73

John Morgan Society (University of Pennsylvania), 1979

Visiting Professor, University of Alabama, School of Medicine, 1989

Fellow of the Oxygen Society (now Fellow of the Society for Redox Biology & Medicine), 1989

Visiting Professor, St. Louis University, 1993

Charles Krown/Pharmacy Alumni Professorship (University of Southern California), 1995-99

Visiting Professor, University of Buenos Aires, 1995

Visiting Pulmonary Scholar, Research Triangle, NC, 1995  
Vanderbilt University, 2002

Visiting Professor, University of Iowa, 2002

Visiting Professor, University of Southern California, 2004

Visiting Professor, University of Colorado Health Sciences Center, 2006

Distinguished Visiting Professor, Universidad Autónoma Metropolitana  
Iztapalapa, Mexico, 2007

Visiting Professor, University of Padua, 2011

Distinguished Professor, UC Merced, 2010

Visiting Professor, University of Padua, 2014

Recognition of Achievements, University of Ferrara, 2014

Visiting Professor, University of Padua, 2015

**Awards:**

Sigma Xi Distinguished Scientist Award, UC Merced Chapter, 2008

Award for Distinction in Research, UC Merced, 2010

Lifetime Membership, International 4-Hydroxynonenal Club, 2012

Visiting International Fellow, University of Exeter, 2014

Distinguished Service Award, Society for Free Radical Biology & Medicine, 2014

Society for Free Radical Research – Europe 2016 Award

Lifetime Achievement Award, Society for Redox Biology & Medicine, 2016

Lifetime Achievement and Service Award, Society for Free Radical Research – International, 2021

Nicolaus Copernicus Medal, University of Ferrara, 2022

**Invited lectures:**

- November 4, 1984 Pan American Association of Biochemical Societies IV  
Buenos Aires, Argentina  
Alterations in cellular metabolism and function by hyperoxia
- July 28, 1986 FASEB Summer Conference on Pulmonary Pharmacology and  
Pathophysiology, Saxton's River, Vermont  
Free radical mechanisms in drug toxicity.
- May 26, 1987 Symposium on Extension of Oxygen Tolerance, Institute for  
Environmental Medicine, University of Pennsylvania, Philadelphia,  
Pennsylvania  
Role of the selenium-dependent glutathione peroxidase in antioxidant  
defense
- July 1, 1987 International Conference on Oxygen Radicals IV, San Diego, California  
Membrane permeability and oxidant injury
- July 18, 1989 Fifth International Congress of Toxicology, Brighton, England  
Leukocytes, macrophages and active molecular species
- February 12, 1990 Society of Toxicology, 29th Annual Meeting, Miami, Florida  
Free Radical Toxicology continuing education course  
Methodology for detecting free radicals and oxidative injury in  
biological systems
- April 6, 1990 American Association of Pathologists, FASEB, Washington, D.C.  
Detection of oxidant injury by alteration of ionic distribution
- November 27, 1990 Seventh International CAAT Symposium, The Johns Hopkins  
University, Baltimore, Maryland  
Keynote lecture: Arachidonic acid metabolites and phagocytic cells as  
mediators of tissue injury
- December 6, 1990 Society of Toxicology, Southern California Chapter, Los Angeles,  
California, Symposium on air pollution  
Mechanisms of injury by oxidant gases
- February 1, 1991 Keystone Symposia on Molecular & Cellular Biology, Molecular Basis  
of Oxidative Damage by Leukocytes, Big Sky, Montana  
Perturbation of arachidonate metabolism and membrane function by  
oxidants
- July 3, 1991 Biological Free Radical Oxidations and Antioxidants, Udine, Italy  
Role of the  $\gamma$ -glutamyl cycle in antioxidant defense

- November 19, 1991 Active Oxygens, Lipid Peroxides and Antioxidants, Kyoto, Japan  
Membrane potential changes in hydroperoxide-induced cell injury
- April 4, 1992 Bay Area Oxygen Club and USC Institute for Toxicology Joint Meeting,  
Berkeley, CA  
 $\gamma$ -glutamyl transpeptidase as an antioxidant enzyme
- March 16, 1993 Society of Toxicology, 32nd Annual Meeting, New Orleans, LA  
Effect of Oxidants on Plasma Membrane Functions Symposium  
Effect of oxidant stress on signal transduction
- May 14, 1993 First European Workshop on Glutathione, Luxembourg  
Role of  $\gamma$ -glutamyl transpeptidase in antioxidant defense: induction of  
the enzyme by oxidant stress
- November 16, 1993 Oxygen Society, 1st Annual Meeting, Charleston, SC  
Elevation of glutathione and  $\gamma$ -glutamyl cycle enzyme activities and  
mRNA by naphthoquinones
- February 5, 1994 Bay Area Oxygen Club and USC Institute for Toxicology Joint Meeting,  
Pasadena, CA  
Calcium signaling in oxidative stress
- September 30, 1994 Therapeutic Potential of Biological Antioxidants, Tiburon, CA  
Elevation of glutathione is partially mediated by transcriptional  
induction of  $\gamma$ -glutamyl cycle enzymes
- November 1, 1994 Cellular Oxidants: Production and Consequences, Queenstown,  
New Zealand  
Glutathione biosynthesis in response to oxidative stress
- November 10, 1994 International Society for Free Radical Research, 7th Biennial Meeting,  
Sydney, Australia  
Oxidative stress induces transcription of  $\gamma$ -glutamylcysteine synthetase
- March 22, 1995 Oxygen Club of California, Santa Barbara  
Role of calcium and sublethal oxidative stress on signal transduction in  
alveolar macrophages
- June 22, 1995 Oxidant Stress and Liver Disease, Airlie, Virginia  
Oxidants, signal transduction and calcium homeostasis
- February 11, 1996 Gordon Conference: Oxygen Radicals in Biology, Ventura, CA  
NO<sub>2</sub>: Signaling by an environmental hazard



- May 15, 1996 American Thoracic Society, New Orleans  
 $\gamma$ -glutamyl cycling enzymes in regulation of oxidant stress
- October 4, 1996 International Society for Free Radical Research, 8th Biennial Meeting,  
Barcelona, Spain  
Quinone regulation of glutathione biosynthesis
- October 10, 1996 Workshop on Redox Reactions in Cell Function and Proliferation, Turin,  
Italy  
Oxidant-induced release of calcium- not from where we thought
- March 8, 1997 Society of Toxicology, Cincinnati  
Oxidants in signal transduction
- April 8, 1997 Experimental Biology '97, New Orleans  
Glutathione synthesis in oxidative stress
- September 8, 1997 Second International Meeting on Oxygen/Nitrogen Radicals and Cellular  
Injury, Durham, NC  
Protein phosphorylation in modulation of alveolar macrophage  
superoxide production
- March 22, 1998 First Regional Meeting on Medical Sciences: The Roles of Free Radicals  
in Health and Disease, Jerusalem, Israel and Amman, Jordan  
Transcriptional upregulation and stabilization of the catalytic and  
regulatory subunit mRNAs of  $\gamma$ -glutamylcysteine synthetase in rat lung  
epithelial L2 cells by 4-hydroxynonenal
- April 29, 1998 American Thoracic Society, Chicago  
Stress, Inflammation and Protein Kinases in Lung Symposium  
Hydrogen peroxide activation of NF- $\kappa$ B in macrophages
- April 29, 1998 American Thoracic Society, Chicago  
Redox Control of Signal Transduction in the Respiratory System  
Symposium  
Oxidative stress and signal transduction: an overview
- May 12, 1998 Society of Free Radical (Europe), Moscow-Yaroslavl, Russia  
Regulation of Biological Processes by Free Radicals  
Oxidative signaling for NF- $\kappa$ B activation in macrophages
- November 21, 1998 Oxygen Society - Free Radical School  
Oxidative Signaling in Phagocytes

- March 18, 1999 Society of Toxicology, New Orleans  
Reactive Oxygen and Nitrogen Species in the Lung: Cell Activation,  
Injury and Apoptosis  
Oxidant and antioxidant regulation of cellular signaling
- April 20, 1999 Experimental Biology '99, Washington, D.C.  
Redox Regulation of Gene Expression in Hypoxia  
Summary: Redox regulation in signaling and gene expression in hypoxia
- April 27, 1999 American Thoracic Society, San Diego  
The Role of Reactive Oxygen Species In Signal Transduction  
Redox signaling in macrophages
- May 8, 1999 California Association of Toxicologists, Los Angeles  
Signal Transduction and Oxidative Stress
- June 7, 2000 American Society for Biochemistry and Molecular Biology, Boston  
Hydrogen Peroxide as an Intracellular Signaling Molecule  
Signaling role of hydrogen peroxide in macrophages
- June 11, 2000 30<sup>th</sup> Annual Cystic Fibrosis Western Regional Caregivers  
Conference, Los Angeles  
Secretion of the endogenous antioxidant, glutathione: a salty tale
- October 18, 2000 International Society for Free Radical Research, 10<sup>th</sup> Biennial  
Meeting, Kyoto, Japan  
Signaling for the synthesis of glutathione
- November 10, 2000 North American Cystic Fibrosis Conference, Baltimore  
Glutathione transport and antioxidant function in CF
- April 12, 2001 NIEHS Signal Transduction Meeting: Mechanisms of Apoptosis,  
Growth Factors, Signal Transduction and Oxidative Stress: Future  
Directions, Research Triangle Park  
Sources and targets of signaling by reactive oxygen and nitrogen species
- June 7, 2001 Third International Conference on Natural Antioxidants and  
Anticarcinogens in Nutrition, Health and Disease, Helsinki, Finland  
Antioxidants and cellular signaling
- November 19, 2001 Oxygen Society, Research Triangle Park  
Antioxidant enzyme distribution and apoptosis
- January 24, 2002 Transatlantic Airway Conference: Oxidants and Antioxidants, Lucerne,  
Switzerland  
Reactive Oxygen Species and Cell Signaling

- February 1, 2002 Cell Signaling, Transcription and Translation as Therapeutic Targets, Luxembourg  
Cellular glutathione and thiols metabolism
- April 10, 2002 NATO Advanced Research Workshop on Thiol Metabolism and Redox Cell Regulation - New evidence, insight and speculation Pisa, Italy  
Oxidative signaling and glutathione biosynthesis
- June 2, 2002 The Third International Conference on Oxygen/Nitrogen Radicals: Cell Injury and Disease, Morgantown, WV  
Keynote lecture: Oxidative stress and signal transduction
- July 13, 2002 First International Meeting of the HNE-Club, Salzburg, Austria  
4HNE: Signaling Pathways Leading to its Elimination
- July 19, 2002 International Society for Free Radical Research, 11th Biennial Meeting, Paris, France  
Signaling pathways in glutathione biosynthesis
- February 9, 2003 Oxidants and Antioxidants in Biology, Cadiz, Spain  
Transcription factor switching by curcumin
- February 21, 2003 First Conference of the Collaborative Research Center for Experimental Hepatology, Heinrich-Heine-University, Düsseldorf, Germany: Signals in the Liver, Current Topics and Recent Advances  
Keynote lecture: Reactive oxygen species and cell signalling
- June 23, 2003 Research Society on Alcoholism, Ft. Lauderdale  
Satellite Symposium on Ethanol and Oxidative Stress Signaling  
Overview: Reactive oxygen species and cell signalling
- September 29, 2003 European Respiratory Society Annual Congress, Vienna  
Redox signal transduction in the lung - basic and clinical implications  
Redox signal transduction in alveolar macrophages
- March 15, 2004 Beyond the antioxidant properties of antioxidants  
University of California, Davis  
The ins and outs of glutathione
- March 27, 2004 Second International Conference on NADPH Oxidases  
Pine Mountain, GA  
Feed-forward signaling by the respiratory burst of alveolar macrophages
- May 7, 2004 International Society for Free Radical Research, 12th Biennial Meeting, Buenos Aires, Argentina  
Redox signaling, JNK activation and apoptosis

- June 5, 2004            Symposium on ROS as signaling molecules and mediators of inflammation, Providence  
Reactive oxygen species and signal transduction
- July 6, 2004            Second International Meeting of the HNE-Club, Berlin, Germany  
Novel signaling for the transcriptional regulation of  $\gamma$ -glutamyl transpeptidase by 4-hydroxynonenal
- June 3, 2005            Korean Research Centers Joint Conference  
Kyung Hee Medical School, Seoul, Korea  
Keynote lecture: Redox and electrophilic signaling
- July 10, 2005           Society for Free Radical Research-Europe meeting  
North Warwickshire, United Kingdom  
Signaling by lovers of electrons
- October 12, 2005       Tobacco Related Diseases Research Program Meeting  
Los Angeles  
Regulation of phase II genes by lipid peroxidation products
- November 10, 2005     International Redox Network Meeting, Kyoto, Japan  
 $\gamma$ -Glutamyl transpeptidase is induced by 4-hydroxynonenal through EpRE and MAPK pathways
- November 12, 2005     Meeting of the Human Stress Signal Research Center, Awaji Island, Japan  
Endogenously produced hydrogen peroxide acts as a second messenger in the Trx/ASK1/MKK4/JNK1/2 pathway in alveolar macrophages
- June 17, 2006           Third International Meeting of the HNE-Club, Genoa, Italy  
HNE activates the EpRE in glutamate cysteine ligase
- August 17, 2006        International Society for Free Radical Research, 13<sup>th</sup> Biennial Meeting, Davos, Switzerland  
The use and abuse of exogenous electrophiles and hydroperoxides in studies of signal transduction
- November 15, 2006     Pre-Meeting Workshop I, Society for Free Radical Biology & Medicine, Denver  
The thiol group in oxidative stress and redox signaling
- May 20, 2007            American Thoracic Society, San Francisco  
Toll-like Receptors: Synergistic Role in Oxidative Stress and Inflammation Symposium  
NOX2 signaling in lung inflammation

- September 3, 2007 V Meeting of SFRBM - South American Group, Montevideo, Uruguay  
Signal Transduction Colloquium  
Signaling for phase II gene induction by acrolein in human bronchial epithelial cells
- October 18, 2007 Third Workshop on Comparative Aspects of Oxidative Stress in Biological Systems, Cuautla, Mexico  
Molecular biology and biochemistry of signal transduction in response to electrophiles
- October 22, 2007 XII Health Sciences Symposium, Mexico City  
Signal Transduction Colloquium  
Signaling by  $\alpha,\beta$ -unsaturated aldehydes
- November 1, 2007 2007 American Society of Nephrology Meeting, San Francisco  
Conference on the Biology of Reactive Oxygen Species  
ROS: activation of signal transduction
- November 16, 2007 Society for Free Radical Biology & Medicine, Washington, D.C.  
Free Radical School  
Antioxidants
- December 9, 2007 Israel Society for Oxygen and Free Radicals Research  
23<sup>rd</sup> Annual Meeting, Rehovoth, Israel  
Keynote lecture: Chemical mechanisms underlying redox and electrophilic signaling
- March 4, 2008 Cystic Fibrosis Research, Inc. Research Symposium  
Children's Hospital Oakland Research Institute  
GSH and CF, is there anything there?
- June 5, 2008 International Conference on Environmental Stressors in Biology and Medicine, Siena, Italy  
Acrolein: a double-edged sword in cigarette smoke
- October 15, 2008 Lipid Peroxidation 2008, Karuizawa, Japan  
Reversible and irreversible protein modification in signaling by electrophiles
- October 19, 2008 International Society for Free Radical Research, 14<sup>th</sup> Biennial Meeting, Beijing, China  
Protein tyrosine phosphatases: principal targets in redox signaling
- December 12, 2008 Institute for Environmental Medicine 40<sup>th</sup> Anniversary Symposium,

University of Pennsylvania, Philadelphia, PA  
Keynote lecture: Reversible and irreversible protein modification in signaling by electrophiles

- March 9, 2009      Oxidative Stress and Disease Gordon Conference  
Il Ciocco, Italy  
Inactivation of protein tyrosine phosphatases by electrophiles: What doesn't kill you makes you stronger
- August 27, 2009      Society for Free Radical Research- Europe  
Rome, Italy  
Multidrug Resistant Protein-Three (MRP3) Gene Regulation by Nrf2 and p53 in Human Bronchial Epithelial and Non-Small Cell Lung Carcinoma- Clinical Implications
- June 9, 2010      San Joaquin Valley Air pollution Control District Air Quality Conference: Particulate Pollution in the San Joaquin Valley, Fresno, California  
Keynote Presentation: Oxygen --The Good, the Bad, and the Ugly: Toxicology of Secondary Organics, Reactive Oxygen Species, and Transition Metals
- June 18, 2010      Lipid Oxidation, Human Diseases and Aging  
University of Turin, Italy  
Novel aspects of EpRE signaling by HNE in lung epithelial cells
- October 7, 2010      Winehealth 2010  
Friuli, Italy  
What is an antioxidant: reductant, nucleophile, electrophile, scavenger or hormetic? Searching for consensus between chemistry and biology
- March 11, 2011      Gordon Conference: Oxidative Stress & Disease, Ventura, CA  
Why biochemists cringe at the term antioxidant and what “they” have to do with transcription factors
- September 8, 2011      Society for Free Radical Research Europe 2011: Redox Biology and Micronutrients: from signaling to translation and back  
Istanbul, Turkey  
Morning School - Signal transduction by reactive oxygen species and electrophiles
- September 8, 2011      Society for Free Radical Research Europe 2011: Redox Biology and Micronutrients: from signaling to translation and back  
Istanbul, Turkey  
Regulation of glutathione biosynthesis in adaptation and aging
- October 6, 2011      Environmental Stressors in Biology and Medicine

- Siena, Italy  
Particle induced cytokine production by respirable silica
- April 14, 2012 Redox Biology Center of University of Nebraska-Lincoln Annual  
Retreat, Nebraska City, NE  
Keynote talk: Redox signaling in cancer, air pollution, and aging
- April 21, 2012 Experimental Biology, San Diego  
Epithelial Injury and Repair Session  
Cigarette smoke-stimulated epithelial-mesenchymal transition through  
Src activation
- June 2, 2012 41st Annual Meeting of the American Aging Association  
Fort Worth, TX  
Signaling by peroxides and alkylating agents- how specific thiols are  
targeted
- September 5, 2012 International Society for Free Radical Research, 16<sup>th</sup> Biennial Meeting,  
London, United Kingdom  
Keynote talk: Lipid peroxidation products and redox signaling
- March 19, 2013 Fourth International Meeting on Reactive Oxygen Species in Biology  
and Medicine, Queretaro, Mexico  
Keynote talk: Redox signaling in cancer, air pollution, and aging
- June 27, 2013 Risk-Based Strategies for Managing Air Quality  
University of California, Davis  
The Role of Iron in Magnifying Particle Toxicity
- June 27, 2013 Risk-Based Strategies for Managing Air Quality  
University of California, Davis  
The Role of Iron in Magnifying Particle Toxicity
- July 18, 2013 Winehealth 2013  
Sydney, Australia  
A paradigm shift concerning nutraceutical antioxidants: From free  
radical scavenging to para-hormesis
- September 24, 2013 Society for Free Radical Research – Europe 2013 Conference  
Athens, Greece  
The false dichotomy of antioxidant defense and redox signaling
- October 14, 2013 Society for Free Radical Biology and Medicine South American Group  
Buenos Aires, Argentina  
Opening Lecture: The false dichotomy of antioxidant defense and redox  
signaling

- March 18, 2014      Society for Free Radical Research International  
Kyoto, Japan  
Nucleophilic tone: a new paradigm for the action of nutritional antioxidants
- May 30, 2014      Department of Molecular Medicine Scientific Meeting  
University of Padua, Italy  
The antioxidant/inflammation axis in environmental diseases and aging
- June 25, 2014      Cellular Environmental Stressors in Biology and Medicine: Focus on Redox Reaction  
Ferrara, Italy  
Smoke signals: activation of epithelial mesenchymal transition
- September 5, 2014      Society for Free Radical Research – Europe 2014 Conference  
Paris, France  
TGF $\beta$ 1 rapidly activates Src through a non-canonical redox mechanism
- July 4, 2015      International Workshop on "Biochemistry, Physiology and Pharmacology of Oxidative Stress"  
Sapienza University of Rome, Italy  
Adaptation to oxidative stress in aging: mechanisms underlying the attenuation of Nrf2 activation  
Plenary Lecture
- April 15, 2016      SFB 974 Mini-Workshop: Current Aspects of Oxidative Stress and Aging  
Heinrich Heine University, Düsseldorf, Germany  
Adaptation to oxidative stress in aging: mechanisms underlying the attenuation of Nrf2 activation
- June 8, 2016      Society for Free Radical Research – Europe 2016 Conference  
Budapest, Hungary  
Redox signaling: an evolution from free radicals to aging  
Society for Free Radical Research – Europe 2016 Award
- September 16, 2016      European Huntington Disease Network 2016  
The Hague, The Netherlands  
Nrf2 Signaling: An Introduction
- October 14, 2016      ParadOx Workshop 2016  
Los Angeles  
Aging suppresses the Nrf2 response in human lung epithelial cells



- November 16, 2016      Fundamentals in Redox Biology Pre-meeting Workshop  
Society for Redox Biology and Medicine 2016  
San Francisco  
Thiol-Based Redox Signaling
- November 16, 2016      Society for Redox Biology and Medicine 2016  
San Francisco  
Redox biology – questions for the future  
SFRBM Lifetime Achievement Award
- May 4, 2017              Life Style and Nutrition as Oxinflammation Modulators  
North Carolina State University Plants for Human Health Institute  
Kannapolis, North Carolina  
Altered Pro- and Anti-inflammatory Responses to Air Pollution in Aging
- September 6, 2017      68th Italian Physiological Society Meeting  
Oxinflammation: from cell signaling to altered redox homeostasis  
Pavia, Italy  
4HNE mediated cell signaling
- September 14, 2017     International 4-Hydroxynonenal-Club  
Reactive Oxygen Species and Lipid Peroxidation in Human Health and  
in Disease  
Graz, Austria  
HNE mediated cell signaling
- September 27, 2017     2nd Adriatic Symposium on Biophysical Approaches in Biomedical  
Studies  
Split, Croatia  
HNE signaling, physiological or pathological?
- May 25, 2018            NIEHS Symposium: Free Radicals: Past, Present, and Future  
Research Triangle Park, North Carolina  
Silencing Bach1 mRNA alters the age-related changes in Nrf2-  
dependent gene regulation in primary human bronchial epithelial cells
- June 6, 2018            19th Biennial Meeting of Society for Free Radical Research  
International  
Lisbon, Portugal  
Silencing Bach1 mRNA alters the age-related changes in Nrf2-  
dependent gene regulation in primary human bronchial epithelial cells
- April 12, 2019          Biochemistry and Biophysics in the Post-Genomic Era  
Porto, Portugal  
Redox biology and redox signaling

- November 19, 2020 SFRR-Europe - Winter Special Lecture Series  
online  
Glutathione related redox signaling in mammalian cells
- November 10, 2021 Healthy Aging Week 2021  
Alba, Italy  
Aging and susceptibility to oxidative injury
- June 28, 2023 The 9th International Selenium Conference 2023  
KAIST, Daejeon, Korea (online)  
The key role of peroxide, chalcogen chemistry and glutathione in redox signaling
- November 12, 2023 Workshop on Redox Nutrition and Toxicology  
Buenos Aires, Argentina  
Biochemical and physiological limitations of antioxidant therapy

**Other Invited Seminars:**

University of Maryland, School of Medicine, 1972  
Kent State University, 1972  
University of Pennsylvania, School of Medicine, 1972  
University of Kansas, School of Medicine, 1973  
University of South Dakota, 1974  
University of Arkansas, 1976  
Boston University, 1978  
University of Southern California, School of Medicine, 1979  
UMDNJ- R.W. Johnson Medical School, 1980  
Long Island Jewish Hospital, 1982  
Hahnemann Medical College, 1982  
Duke University, School of Medicine, 1982  
Bowman Gray School of Medicine, 1983  
Natl. Inst. Environmental Health Sciences, 1983  
Medical College of Pennsylvania, 1983  
Manhattan College, 1983  
University of Miami, School of Medicine, 1983  
Thomas Jefferson University, 1983  
University of California, Los Angeles, 1984  
St. Johns University, NY, 1984  
Temple University, School of Dental Medicine, 1985  
UMDNJ- R.W. Johnson Medical School, 1985  
University of Texas Health Sciences Center, Tyler, 1985  
University of Tennessee, School of Medicine, 1985  
Children's Hospital Los Angeles, 1985  
Thomas Jefferson University, 1987  
University of California Davis, 1987  
University of California Irvine, 1988  
North Carolina State University, 1989  
Bowman Gray School of Medicine, 1989  
Albany Medical College, 1989  
Office of Naval Research, 1990  
University of Padua, Italy, 1990  
Duke University, 1991  
University of Texas Health Sciences Center, Tyler, 1991  
University of Texas, San Antonio, 1991  
University of California Davis, 1992  
University of California Los Angeles, 1992  
Birkur Cholim Hosp., Jerusalem, Israel, 1993  
University of Modena, Italy, 1993  
University of California San Diego, 1994  
Chemical Defense Institute, Aberdeen, MD, 1994  
University of Pennsylvania, 1994  
Penn State University, 1994

Cedar-Sinai Hospital, Los Angeles, 1995  
University of the Republic, Montevideo, Uruguay, 1995  
Duke University, 1995  
Chemical Industry Institute of Toxicology, 1995  
National Institutes for Environmental Health Sciences, 1996  
University of Bern, Switzerland, 1996  
University of Nevada, Reno, 1997  
University of Washington, 1997  
University of California Davis, 1998  
Medical College of Wisconsin, 1998  
University of Vermont, 1998  
University of Pennsylvania, 1998  
University of Alabama, Birmingham, 1998  
UMDNJ- R.W. Johnson Medical School, 1998  
University of California Davis, 1999  
Winthrop University Hospital, Mineola, NY, 2000  
University of Tokyo, 2000  
National Institute of Occupational Safety and Health, 2000  
New York University, 2001  
West Virginia University, 2001  
Kansas State University, 2001  
University of Kansas, 2001  
University of Bern, Switzerland, 2002  
University of Pittsburgh, 2003  
University of Cincinnati, 2003  
University of California Davis, 2003  
University of Texas Medical Branch, Galveston, 2003  
Linus Pauling Institute, Oregon State University, 2003  
University of California Davis, 2004  
University of Padua, Italy, 2004  
Wake Forrest University, 2004  
Kyung Hee Medical School, Seoul, Korea, 2005  
American Thoracic Society Meeting - Meet the Professor, 2006  
University of Siena, Italy, 2006  
University of Pittsburgh, 2006  
University of California Davis, 2006  
Medical College of Wisconsin, 2008  
Vanderbilt University, 2008  
The Ohio State University, 2008  
University of Padua, Italy, 2008  
University of Liverpool, UK, 2009  
California Air Resources Board, 2010  
University of Valencia, Spain, 2010  
University of Alabama at Birmingham, 2010  
Sonoma State University, 2011  
University of California Davis, 2011 (twice)

University of Torino, Italy, 2011  
University of Genova, Italy, 2011  
University of Padua, Italy, 2011  
Children's Hospital of Los Angeles, 2012  
National Jewish Hospital, Denver, 2012  
Peninsular (Universities of Exeter and Plymouth) Medical School, UK, 2012  
Medical College of South Carolina, Charleston, 2012  
University of Southern California, 2013  
University of Washington, 2013  
University of Louisville, 2014  
University of Foggia, Italy, 2014  
University of Pisa, Italy, 2014  
University of Liverpool, UK, 2014  
Aston University, Birmingham, UK, 2014  
University of Exeter (3 lectures), UK, 2014  
University of Iowa, 2015  
University of Debrecen, Hungary, 2016  
University of Padova, Italy, 2017  
University of California Merced, 2018 (two lectures)

**SOCIETY MEMBERSHIP:**

International:

International Society for Free Radical Research  
Treasurer, 2003-2010

International 4-Hydroxynonenal Club  
Advisory board, 2002-2012

Society for Redox Biology & Medicine (formerly Oxygen  
Society and then Society for Free Radical Biology and Medicine)  
Organizing committee for 1995 and 1996 annual meetings  
Council Member, 1996-2000, 2006-  
Publication Committee, 1996-2009  
Chair, External Communication/Public Relations Committee, 2009-10  
President-Elect, 2010-2012  
President, 2012-2014  
Past President, 2014-2016

Oxygen Club of California  
Board member, 1994-1999, 2003-4

National:

American Society for Biochemistry & Molecular Biology (past member)

American Physiological Society (Emeritus)

American Thoracic Society (past member)  
Program Committee for Respiratory Cell and Molecular Biology  
Assembly, 1990-91, 1995-96, 2004-06  
Nominating Committee for Respiratory Cell and Molecular Biology Assembly,  
1991-92

American Society for Cell Biology (past member)

New York Academy of Sciences (past member)

American Association for the Advancement of Science

American Aging Association

Gerontological Society of America

Local:

American Lung Association of California (past member)

Society of Toxicology Southern California Chapter (past member)  
Secretary-Treasurer, 1988-90

Sigma Xi at UC Merced (past member)  
Secretary, 2009-10

## TEACHING

### UC Davis (scheduled Spring, 2023)

Free radicals in chemistry, biochemistry and medicine  
Lectures on antioxidant defenses and thiols in redox signaling

### USC (2009-2019)

Biology of Aging  
Lectures in graduate level course.

Signal Transduction  
Three lectures in graduate level course.

### UC Merced (2005-2015):

Signal Transduction  
Graduate division course

Biochemistry – second semester

Organic Chemistry I  
First semester of lower division organic chemistry – taught for 7 years.

Biochemistry  
Two upper division courses for biology and chemistry majors. Taught 1/3 of each.

Free Radicals Biology and Chemistry  
One unit course for graduate and undergraduate students

Core 1 The World at Home I  
Core 1 is a jointly taught course for freshman by members of the Schools of Natural Sciences, Engineering and Social Sciences, Humanities and Arts for freshman that concerns a curriculum starting with the origins of the universe and life, through development and needs of societies, conflicts and problems of the future.

Free Radical Biology and Chemistry  
Course for graduate and advanced undergraduate students.

Atmospheric Aerosols & Health Intensive Course  
A graduate course taught by faculty from UC Merced and UC Davis on the sources and health effects of atmospheric aerosols.

Core 100 The World at Home II  
Core 100 is a jointly taught course for juniors by members of the Schools of Natural Sciences, Engineering and Social Sciences, Humanities and Arts for freshman



that concerns learning how to formulate solutions to problems of society by working in groups composed of students from diverse majors. Why Public Health?

This is an introductory course on the history and current roles of the different fields of public health.

University of Padua (2011)

Redox signaling  
Graduate level mini-course.

UAB (1999-2003):

Signal Transduction in Environmental Health and Toxicology (Ph.D.), Course Master and most lectures

Essentials of Environmental and Occupational Toxicology (MSPH), lectures on Pulmonary Toxicology

Integrated Core in Public Health (MPH), lectures on Toxicology

Biology of Disease (Ph.D.), lecture on Environmental Pathology

Integrated Experience (MPH), Environmental Health Sciences participant

Fundamentals of Environmental Health (MPH), lectures on Toxicology, course master for one year

Free Radical School Spetses, Greece, September 2004:

Lectures on signal transduction

USC (1986-1999):

Biological Systems (Pharm.D. combined Anatomy, Histology and Physiology two semester course), lectures on cell and respiratory physiology, signal transduction (developed course and served as course director for three years)

Biochemical and Molecular Basis of Disease (Ph.D.), lecture on oxidative stress

Toxicology of Oxygen (Ph.D.), lectures on antioxidant enzymes and oxidant generation by phagocytes

Molecular Mechanisms for Biological Signals (Ph.D.), lectures on second messengers, calcium, the respiratory burst, NF- $\kappa$ B, course director

Methods in Advanced Pharmaceutical Analysis (Ph.D.), lectures on spectroscopy

Drug Discovery and Design (Ph.D.), lectures on signal transduction

Aging and Pathology (B.S.), lecture on pulmonary diseases

Molecular Pharmacology (Ph.D.) lecture on inflammation

Molecular Toxicology (Ph.D.), lectures on pulmonary toxicology

Pharmacology Level 3 (Pharm.D.), lecture of eicosanoid pharmacology

Physical Biochemistry (Ph.D.), lectures on enzyme kinetics

Biochemistry (M.D.), lectures on enzyme kinetics and bioenergetics, and weekly conferences

Physiology (M.D.), weekly conferences

Principles of Toxicology (Ph.D.), lectures on inhalation toxicology and pulmonary toxicology

Oxidant Injury Lectures (Pediatric Pulmonary Fellows)

Pulmonary Toxicology (Ph.D.), organizer and lectures on inhalation toxicology and oxygen toxicity

Pathology Ph.D. Student Seminar Series on Ischemia, lecture and organizer

Lung Cell and Molecular Physiology (fellows), monthly lectures

Pathology, Mechanisms of Disease (Ph.D.), lectures on cell injury, inflammation, and oxidative stress

Toxicology Seminar Series (Ph.D.), organizer 2 years

Molecular Pharmacology and Toxicology II (Ph.D.), lectures on pulmonary pharmacology, inhalation toxicology and pulmonary toxicology

Principles of Molecular Pharmacology & Toxicology (Ph.D.), lectures on signal transduction, section organizer

Biochemistry (Pharm.D.), lectures on proteins, enzymes, metabolism and bioenergetics, summer course director (2 years)

Physiology (Pharm.D.), course director, lectures on cell and respiratory physiology

Physiology (Pharm.D.), summer course director and instructor

## **GRADUATE STUDENTS SUPERVISION:**

### **Doctoral Thesis Advisor:**

Judith K. Murphy, Pathobiology, USC, Ph.D., 1992  
Undergraduate: University of California at Los Angeles  
First position: Postdoctoral fellow, USC  
Current position: Manager, Clinical Operations, Amgen  
Awards  
Proctor and Gamble Professional Opportunity Award, American  
Physiological Society, Respiratory Physiology Section, 1992  
Graduate Student Travel Award, Society of Toxicology, Southern California Chapter,  
1992

Michael Ming Shi, Toxicology, USC, Ph.D., 1994  
Undergraduate: Peking Union Medical School  
First position: Postdoctoral fellow, Harvard University  
Current position: Director, Biomarker Development, Novartis  
Awards  
Young Investigator Award, Oxygen Society, 1992  
Graduate Student Travel Award, Society of Toxicology, 1993  
Caroline tum Suden Opportunity Award, American Physiological Society, 1994

Evelyne Gozal, Toxicology, USC, Ph.D. 1996  
Undergraduate: Hebrew University of Jerusalem  
First position: Postdoctoral fellow, Tulane University  
Current position: Associate Professor, Department of Pediatrics, University of Louisville

Carolyn Hoyal, Pathobiology, USC, Ph.D. 1996  
Undergraduate: Mount St. Mary's  
First position: Postdoctoral fellow, Scripps Institute  
Current position: Manager, Diagnostic Assay Development, Sequenom  
Award  
President's Award, Oxygen Society, 1995

Li Tian, Pathobiology, USC, Ph.D. 1996  
First position: International application specialist, Packard Instrument  
Current position: Started own financial consulting company

Xiaobo Qiu, Molecular Pharmacology & Toxicology, USC, Ph.D. 1996 (co-  
sponsor with E. Cadenas)  
Undergraduate: Anhui Normal Univ  
First position: Postdoctoral fellow, Harvard University  
Current position: Professor, Beijing Normal University

Chang-Jun Yue, Molecular Pharmacology & Toxicology, USC, Ph.D. 1997 (co-

sponsor with T. Chan)

Undergraduate: Second Military Medical University, Shanghai

First position: Residency program, Harbor UCLA Medical Center

Current position: Pathologist, US Labs

Jinah Choi, Molecular Pharmacology & Toxicology, USC, Ph.D. 1999

Undergraduate: University of California Los Angeles

First position: Postdoctoral fellow, University of Southern California

Current position: Deceased – was Associate Professor, School of Natural Sciences,  
University of California Merced

Awards

Dolores Zohrab Liebmann Fund Fellowship

Young Investigators Award, Oxygen Club of California, 1996

Caroline tum Suden/Frances A. Hellebrandt Opportunity Award, American Physiological  
Society, 1999

Lin Gao, Molecular Pharmacology & Toxicology, USC, Ph.D., 2000

Undergraduate: University of Hawaii, M.S. in Nutritional Science

First position: Postdoctoral fellow, Univ. Alabama at Birmingham

Current position: Research Associate, Hospital Virgen del Rocio, Seville, Spain

Nobuo Watanabe, Environmental Health Sciences, UAB, Ph.D., 2003

Undergraduate: Tokyo University of Science

First position: Postdoctoral fellow, University of Tokyo

Hongqiao Zhang, Environmental Health Sciences, UAB, Ph.D., 2005

Undergraduate: Shandong Medical University

First position: Postdoctoral fellow, University of California Merced

Current position: Senior Research Associate, University of Southern California

David Krzywanski, Environmental Health Sciences, UAB, Ph.D., 2006

Undergraduate: Millersville University of Pennsylvania

First position: Postdoctoral fellow, Univ. Alabama at Birmingham

Current position: Assistant Professor, Cellular Biology and Anatomy, Louisiana State  
Health Sciences Center, Shreveport

Christopher Mahaffey, Quantitative Systems Biology, UCM, Ph.D., 2010

Undergraduate: California State University, Sacramento

Master of Science: California State University, Sacramento

Awards

UC Toxics Research & Teaching Program, Atmospheric Aerosols & Health Component  
Fellowship

First position: Postdoctoral fellow, Univ. California, Davis

Gayatri Premasekharan, BESST, UCM, Ph.D., 2012 (co-sponsor with V. Leppert)  
Awards  
UC Toxics Research & Teaching Program, Atmospheric Aerosols & Health Component  
Fellowship  
NSF Summer Institute Fellowship  
First position: Postdoctoral fellow, University of California, San Francisco

Max Thorwald, Quantitative Systems Biology, UCM, Ph.D. 2018 (co-sponsor with R.  
Ortiz)

### **Master of Science**

Cuiwei Ai, Molecular Pharmacology & Toxicology, USC, M.S. 1998

Kennedy Nguyen, BESST, UCM, M.S. 2016  
(co-sponsor with V. Leppert)

### **Master of Public Health**

Advisor for 7 MPH students at UAB

### **Doctor of Public Health**

Advisor for 2 DrPH students at UAB

### **External Examiner for Ph.D. defense**

George A. Loeb, Pharmacology, Medical College of Pennsylvania  
Jill E. Ryer, Environmental Medicine, Rutgers University  
Yue Luo, University of Pittsburgh

### **Dissertation or Advisory Committees (other than above):**

Eileen Mulligan, Physiology, University of Pennsylvania  
Doris Pew, Physiology, University of Pennsylvania  
Mary Lou Wratten, Pathobiology, USC  
Eunjoo Kim Pacifici, Toxicology, USC  
John Zhang, Toxicology, USC, chair  
Endi Wang, Molecular Pharmacology & Toxicology, USC  
Stefan Ryter, Molecular Pharmacology & Toxicology, USC  
Danxi Li, Molecular Pharmacology & Toxicology, USC  
Guoping Feng, Molecular Pharmacology & Toxicology, USC  
James Rong, Pathobiology, USC

Jay West, Toxicology, UC-Davis  
Douglas Moellering, Pathobiology, UAB  
Matthew Pettengill, Quantitative Systems Biology, UCM  
Scott Seranello, Quantitative Systems Biology, UCM  
Shinichi Sunagawa, Quantitative Systems Biology, UCM  
Yiyan Wang, Quantitative Systems Biology, UCM  
Laura Corrales-Diaz Pomatto, USC

### **Visiting Doctoral Students**

Nikolai Chepelev, Carleton University – Canada, 2011  
Two month SFRBM Mini-Fellowship sponsored by Glenn Foundation  
Liliya Skvortsova, Kazakh National University – Kazakhstan, 2014  
Two month support from her university

### **UNDERGRADUATE LAB ASSISTANTS**

Many undergraduates have worked in my laboratory. Those listed below have been coauthors of publications:

Mark Posner, U Penn  
Eric Rotman (2), U Penn  
Kim Foldenauer, USC  
Natalie Court, UCM  
Albert Shih, UCM  
Sam Chung, UCM  
Jenay Yuen, USC  
Sarah Zhang, USC

## POSTDOCTORAL TRAINEES

- Ilan D. Arad, M.D. (1979-80)  
Head, Department of Neonatology, Hadassah University Hospital, Mount Scopus, Jerusalem, Israel
- Yuen (Lyen) Huang, M.D. (1981)  
Private practice in Singapore
- Thomas K. Aldrich, M.D.(1981-83)  
Professor and Chief, Pulmonary Medicine Division, Montefiore Medical Center and Albert Einstein College of Medicine
- Mark W. Sutherland, Ph.D. (1983-85)  
Head, Centre for Rural & Environmental Biotechnology and Professor in Plant Pathology, University of Southern Queensland, Toowoomba, Queensland, Australia
- Mitchell Glass, M.D. (1982-85)  
Senior Vice President of Science and Technology & Chief Scientific Officer, Science Center, Philadelphia, PA
- Timothy W. Robison, Ph.D. (1986-89)  
American Lung Association Fellowship  
Review Pharmacologist  
Center for Drug Evaluation & Research, U.S. Food & Drug Administration
- George A. Loeb, Ph.D. (1986-89)  
American Lung Association Fellowship  
Retired
- Jill E. Ryer-Powder, Ph.D. (1987-88)  
Independent Toxicology Consultant
- Ewa Rajpert-De Meyts, M.D., Ph.D. (1987-90)  
American Lung Association Fellowship  
Senior Scientist, Department of Growth and Reproduction, Rigshospitalet, Copenhagen
- Minyuen Chang Enger, M.D (1988-91)  
Clinical Assistant Professor, University of Illinois at Chicago
- Floyd R. Livingston, M.D.(1989-92)  
Chief of Pediatrics at Nemours Children's Clinic  
Clinical Assistant Professor at Florida State University



David Shoseyov, M.D. (1990-92)

Professor, Department of Pediatrics, Hadassah University Hospital, Mount Scopus, Jerusalem, Israel

Amir Kugelman, M.D. (1992-94)

Senior Lecturer, Faculty of Medicine, Technion, Haifa, Israel  
Senior Neonatologist, Bnai Zion Medical Center, Rambam Medical Center, Barzilai Medical Center, Haifa, Israel

Rui-Ming Liu, M.D., Ph.D. (1993-96)

Professor, Department of Medicine, University of Alabama at Birmingham

Huanfang Zhou, Ph.D. (1993-97)

Investigator, Novartis, San Diego

Nalini Kaul, Ph.D. (1994-98)

American Heart Association Fellowship  
Technical Director, Hill Top Research, Inc., Winnipeg, Canada

Julio Girón-Calle, Ph.D. (1997-02)

Associate Professor, Instituto de la Grasa, Consejo Superior de Investigaciones Científicas, Seville, Spain

Beth Schomer, Ph.D. (1998-99)

Adjunct Professor, College of the Canyons, Santa Clarita, California

Dale A. Dickinson, Ph.D. (1998-03)

Assistant Professor, Department of Environmental Health Sciences, University of Alabama at Birmingham

Karen Iles, Ph.D. (1999-03)

Research Instructor, Department of Environmental Health Sciences, University of Alabama at Birmingham

Honglei Liu, M.D. (2003-06, 2009-)

Research Scientist, Children's Hospital Lo Angeles

Alessandra Rinna, Ph.D. (2004-2009)

Postdoctoral Fellow, Norwegian Institute for Air Research, Oslo, Norway

Hongqiao Zhang, Ph.D. (2005-2016)

Research Assistant Professor, University of Southern California

Smadar Levy, Ph.D. (2007-09)

IUBMB Life/Wiley Young Investigator Award

Lulu Zhou, Ph.D. (2015-2018)

## **COMMITTEES**

### **University of California, Merced Committee, 2022 (as retired faculty)**

Voting Member, Faculty Welfare and Academic Freedom

### **Symposia Organized (have also chaired numerous symposia):**

Member, numerous international and national meeting organizing committees  
Organizer and Chair, numerous symposia for international and national meetings  
Co-Vice Chair, Oxygen Radicals in Biology Gordon Research Conference, 2004  
Co-Chair, Oxygen Radicals in Biology Gordon Research Conference, 2006  
Society for Free Radical Biology and Medicine, organized national meetings, 2013-14

### **University of Southern California:**

Committee on Research, 2015-16

### **University of California, Merced Committees (2003-2015):**

UCM council, Chair, 2003-04, member 2004-06, 2008-09, Vice chair, 2006-07  
College One oversight committee, 2003-06  
Numerous subcommittees of the council, 2003-06  
Social Sciences and Management Building Advisory Committee, 2003-05  
Committee on Committees, 2004-05, 2007-09, 2008-09, 2011- 13  
Committee on Committees Chair 2004-05, 2008-09  
Search committees, Chaired or member of multiple committees, 2003-  
World Cultures Institute Committee, 2004-06  
Natural Sciences Space Policy Committee, Chair, 2005  
Numerous planning committees for School of Natural Sciences, 2003-  
Committee on Academic Planning and Resource Allocation, 2003-04, 2005-06  
College I Executive Committee, 2005-06  
Natural Sciences Curriculum Committee, Chair, 2006-07  
Laboratory Safety Administrative Advisory Committee, 2007-  
Institutional Animal Care and Use Committee, 2007  
Natural Sciences, Committee on Committees, Chair, 2008-09  
Sierra Nevada Research Institute Advisory Committee, 2008-  
Natural Sciences Executive Committee, Member 2005-07, 08-09  
General Education Committee, 2010-11  
School of Natural Sciences, Faculty Vice chair, 2012-13

### **University of California, System**

UC Faculty Welfare, UCM representative, 2003-05  
UC Committee on Committees, UCM representative, 2008-09  
Academic Advisory Committee for UC Presidential Search, 2013

**Outreach activities for UC Merced:**

Diversity Forum at UOP, 2004  
Asthma coalition – lecture, 2004  
Air Pollution Forum at Merced College – lecture, 2005  
UC Davis Conference for Environmental Health Sciences, Air Toxics in Central California, 2005  
Modesto Junior College – lecture, 2005  
Bullard High School, Fresno - recruiting, 2005  
Frontiers in Science and Engineering lecture at Castle Air Museum, 2006

**Faculty advisor to Student Organizations at UC Merced:**

Pre-Veterinary Club, 2009-15

Numerous other committees while at UAB (1999-2003) and USC (1986-1999)

**PATENTS**

US 9,980,981 B2 May 29, 2019

Gomperts, E.D. and Forman, H.J.

Solution of carbon monoxide for the treatment of disease, including sickle cell disease

## BIBLIOGRAPHY

### PEER REVIEWED RESEARCH (open access noted with\*)

1. Forman, H.J. and Feigelson, P.  
Kinetic evidence indicating the absence during catalysis of an unbound ferroprotoporphyrin form of tryptophan oxygenase.  
[Biochemistry 10: 760-763, 1971.](#) PMID: 5544666
2. Brady, F.O., Forman, H.J. and Feigelson, P.  
The role of superoxide and hydroperoxide in the reductive activation of tryptophan-2,3-dioxygenase.  
[J. Biol. Chem. 246: 7119-7124, 1971.\\*](#) PMID: 5167018
3. Forman, H.J. and Feigelson, P.  
The effects of allosteric interaction on the kinetics, spectra and tertiary structure of Pseudomonad tryptophan oxygenase.  
[J. Biol. Chem. 247: 256-259, 1972.\\*](#) PMID: 5017765
4. Forman, H.J. and Fridovich, I.  
Electrolytic univalent reduction of oxygen in aqueous solution demonstrated with superoxide dismutase.  
[Science 175: 339, 1972.\\*](#) PMID: 17814545
5. Brady, F.O., Monaco, M.E., Forman, H.J., Schutz, G. and Feigelson, P.  
On the role of copper in activation and catalysis by tryptophan-2,3-dioxygenase.  
[J. Biol. Chem. 247: 7915-7922, 1972.\\*](#) PMID: 4640930
6. Forman, H.J., Evans, H.J., Hill, R.L. and Fridovich, I.  
Histidine at the active site of superoxide dismutase.  
[Biochemistry 12: 823-827, 1973.\\*](#) PMID: 4346922
7. Forman, H.J. and Fridovich, I.  
On the stability of bovine superoxide dismutase: the effects of metals.  
[J. Biol. Chem. 248: 2645-2649, 1973.\\*](#) PMID: 4697386
8. Forman, H.J. and Fridovich, I.  
Superoxide dismutase: a comparison of rate constants.  
[Arch. Biochem. Biophys. 158: 396-400, 1973.](#) PMID: 4354035
9. Forman, H.J., Waddell, R., Hamilton, P.B. and Grisolia, S.  
Activation of carbamyl phosphate synthase by N-acetyl-L-aspartate.  
[Biochem J. 143: 63-66, 1974.\\*](#) PMID: 4377221

10. Forman, H.J. and Grisolia, S.  
The effects of cyanate, carbamyl phosphate and growth on the glutamine dependent carbamyl phosphate synthetase from rat spleen and brain.  
Physiol. Chem. & Physics 6: 213-233, 1974. PMID: 4500013
11. Forman, H.J. and Kennedy, J.A.  
Role of superoxide radical in mitochondrial dehydrogenase reactions.  
Biochem. Biophys. Res. Commun. 60: 1044-1050, 1974. PMID: 4372996
12. Forman, H.J. and Kennedy, J.  
Superoxide production and electron transport in mitochondrial oxidation of dihydroorotic acid.  
J. Biol. Chem. 250: 4322-4326, 1975.\* PMID: 165196
13. Forman, H.J. and Kennedy, J.  
Dihydroorotate dependent superoxide production in rat brain and liver; a function of the primary dehydrogenase.  
Arch. Biochem. Biophys. 173: 219-224, 1976. PMID: 176947
14. Forman, H.J. and Kennedy, J.  
Effects of chaotropic agents versus detergents on dihydroorotate dehydrogenase.  
J. Biol. Chem. 252: 3379-3387, 1977.\* PMID: 193834
15. Forman, H.J. and Kennedy, J.  
Purification and characterization of the superoxide producing primary dihydroorotate dehydrogenase from rat liver mitochondria.  
Preparative Biochemistry 7: 345-355, 1977. PMID: 199900
16. Forman, H.J. and Kennedy, J.  
Mammalian dihydroorotate dehydrogenase: Physical and catalytic properties of the primary enzyme.  
Arch. Biochem. Biophys. 191: 23-31, 1978. PMID: 216313
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