May 7, 2026

**CURRICULUM VITAE**

**PERSONAL INFORMATION:**


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| Name | Henry Jay Forman, Ph.D. |
| Present positions | Distinguished Professor Emeritus of Biochemistry<br>Founding Faculty<br>School of Natural Sciences<br>University of California Merced<br><br>Research Professor Emeritus of Gerontology<br>Leonard Davis School of Gerontology<br>University of Southern California |
| Business Phone | +1 (818) 288-1573 |
| Electronic mail | peroxideman@pm.me |


**EDUCATION:**

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| 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<br>Ph.D. in Biochemistry, 1971<br>Philip Feigelson, advisor |
| Postdoctoral | Postdoctoral Fellow 1971-73<br>Department of Biochemistry<br>Duke University Medical Center<br>Irwin Fridovich, sponsor |

**PROFESSIONAL BACKGROUND:**

**Academic Appointments:**

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

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| 1986-89 | Associate Professor of Pediatrics, Pathology, and Toxicology,<br>University of Southern California |
| 1982-86 | Associate Professor of Physiology,<br>University of Pennsylvania |
| 1978-82 | Assistant Professor of Physiology,<br>University of Pennsylvania |
| 1977 | Adjunct Assistant Professor of Biochemistry,<br>University of Kansas Medical School |
| 1973-77 | Research Associate in Biochemistry,<br>University of Kansas Medical School |

**Administrative appointments:**

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| 2005-11 | Co-Director UC Toxics Research & Teaching Program, Atmospheric Aerosols & Health Component |
| 1999-03 | Co-Director<br>Center for Free Radical Biology<br>University of Alabama at Birmingham |
| 1999-2003<br>` | Chairman<br>Department of Environmental Health Sciences<br>University of Alabama at Birmingham |
| 1988-92 | Head, Cell Biology Group,<br>Childrens Hospital Los Angeles |
| 1987-94 | Associate Division Head for Research,<br>Division of Neonatology & Pediatric Pulmonology,<br>Children's Hospital Los Angeles |

**Elected administrative appointments:**

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| 2012-13 | Senate Vice-Chair, School of Natural Sciences |
| 2008-09 | Chair, Committee on Committees<br>University of California Merced |
| 2005-06 | Vice-Chair of Faculty Senate<br>University of California Merced |

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

$NO_2$-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, Manufacutured 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:**

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| November 4, 1984 | Pan American Association of Biochemical Societies IV<br>Buenos Aires, Argentina<br>Alterations in cellular metabolism and function by hyperoxia |
| July 28, 1986 | FASEB Summer Conference on Pulmonary Pharmacology and Pathophysiology, Saxton's River, Vermont<br>Free radical mechanisms in drug toxicity. |
| May 26, 1987 | Symposium on Extension of Oxygen Tolerance, Institute for Environmental Medicine, University of Pennsylvania, Philadelphia, Pennsylvania<br>Role of the selenium-dependent glutathione peroxidase in antioxidant defense |
| July 1, 1987 | International Conference on Oxygen Radicals IV, San Diego, California<br>Membrane permeability and oxidant injury |
| July 18, 1989 | Fifth International Congress of Toxicology, Brighton, England<br>Leukocytes, macrophages and active molecular species |
| February 12, 1990 | Society of Toxicology, 29th Annual Meeting, Miami, Florida<br>Free Radical Toxicology continuing education course<br>Methodology for detecting free radicals and oxidative injury in biological systems |
| April 6, 1990 | American Association of Pathologists, FASEB, Washington, D.C.<br>Detection of oxidant injury by alteration of ionic distribution |
| November 27, 1990 | Seventh International CAAT Symposium, The Johns Hopkins University, Baltimore, Maryland<br>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<br>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<br>Perturbation of arachidonate metabolism and membrane function by oxidants |
| July 3, 1991 | Biological Free Radical Oxidations and Antioxidants, Udine, Italy<br>Role of the γ-glutamyl cycle in antioxidant defense |

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| November 19, 1991 | Active Oxygens, Lipid Peroxides and Antioxidants, Kyoto, Japan<br>Membrane potential changes in hydroperoxide-induced cell injury |
| April 4, 1992 | Bay Area Oxygen Club and USC Institute for Toxicology Joint Meeting, Berkeley, CA<br>γ-glutamyl transpeptidase as an antioxidant enzyme |
| March 16, 1993 | Society of Toxicology, 32nd Annual Meeting, New Orleans, LA<br>Effect of Oxidants on Plasma Membrane Functions Symposium<br>Effect of oxidant stress on signal transduction |
| May 14, 1993 | First European Workshop on Glutathione, Luxembourg<br>Role of γ-glutamyl transpeptidase in antioxidant defense: induction of the enzyme by oxidant stress |
| November 16, 1993 | Oxygen Society, 1st Annual Meeting, Charleston, SC<br>Elevation of glutathione and γ-glutamyl cycle enzyme activities and mRNA by naphthoquinones |
| February 5, 1994 | Bay Area Oxygen Club and USC Institute for Toxicology Joint Meeting, Pasadena, CA<br>Calcium signaling in oxidative stress |
| September 30, 1994 | Therapeutic Potential of Biological Antioxidants, Tiburon, CA<br>Elevation of glutathione is partially mediated by transcriptional induction of γ-glutamyl cycle enzymes |
| November 1, 1994 | Cellular Oxidants: Production and Consequences, Queenstown, New Zealand<br>Glutathione biosynthesis in response to oxidative stress |
| November 10, 1994 | International Society for Free Radical Research, 7th Biennial Meeting, Sydney, Australia<br>Oxidative stress induces transcription of γ-glutamylcysteine synthetase |
| March 22, 1995 | Oxygen Club of California, Santa Barbara<br>Role of calcium and sublethal oxidative stress on signal transduction in alveolar macrophages |
| June 22, 1995 | Oxidant Stress and Liver Disease, Airlie, Virginia<br>Oxidants, signal transduction and calcium homeostasis |
| February 11, 1996 | Gordon Conference: Oxygen Radicals in Biology, Ventura, CA<br>$NO_2$: Signaling by an environmental hazard |

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

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

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| February 1, 2002 | Cell Signaling, Transcription and Translation as Therapeutic Targets, Luxembourg<br>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<br>Oxidative signaling and glutathione biosynthesis |
| June 2, 2002 | The Third International Conference on Oxygen/Nitrogen Radicals: Cell Injury and Disease, Morgantown, WV<br>Keynote lecture: Oxidative stress and signal transduction |
| July 13, 2002 | First International Meeting of the HNE-Club, Salzburg, Austria<br>4HNE: Signaling Pathways Leading to its Elimination |
| July 19, 2002 | International Society for Free Radical Research, 11th Biennial Meeting, Paris, France<br>Signaling pathways in glutathione biosynthesis |
| February 9, 2003 | Oxidants and Antioxidants in Biology, Cadiz, Spain<br>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<br>Keynote lecture: Reactive oxygen species and cell signalling |
| June 23, 2003 | Research Society on Alcoholism, Ft. Lauderdale<br>Satellite Symposium on Ethanol and Oxidative Stress Signaling<br>Overview: Reactive oxygen species and cell signalling |
| September 29, 2003 | European Respiratory Society Annual Congress, Vienna<br>Redox signal transduction in the lung - basic and clinical implications<br>Redox signal transduction in alveolar macrophages |
| March 15, 2004 | Beyond the antioxidant properties of antioxidants<br>University of California, Davis<br>The ins and outs of glutathione |
| March 27, 2004 | Second International Conference on NADPH Oxidases<br>Pine Mountain, GA<br>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<br>Redox signaling, JNK activation and apoptosis |

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| June 5, 2004 | Symposium on ROS as signaling molecules and mediators of inflammation, Providence<br>Reactive oxygen species and signal transduction |
| July 6, 2004 | Second International Meeting of the HNE-Club, Berlin, Germany<br>Novel signaling for the transcriptional regulation of γ-glutamyl transpeptidase by 4-hydroxynonenal |
| June 3, 2005 | Korean Research Centers Joint Conference<br>Kyung Hee Medical School. Seoul, Korea<br>Keynote lecture: Redox and electrophilic signaling |
| July 10, 2005 | Society for Free Radical Research-Europe meeting<br>North Warickshire, United Kingdom<br>Signaling by lovers of electrons |
| October 12, 2005 | Tobacco Related Diseases Research Program Meeting<br>Los Angeles<br>Regulation of phase II genes by lipid peroxidation products |
| November 10, 2005 | International Redox Network Meeting, Kyoto, Japan<br>γ-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<br>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<br>HNE activates the EpRE in glutamate cysteine ligase |
| August 17, 2006 | International Society for Free Radical Research, 13$^{th}$ Biennial Meeting, Davos, Switzerland<br>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<br>The thiol group in oxidative stress and redox signaling |
| May 20, 2007 | American Thoracic Society, San Francisco<br>Toll-like Receptors: Synergistic Role in Oxidative Stress and Inflammation Symposium<br>NOX2 signaling in lung inflammation |

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

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| | University of Pennsylvania, Philadelphia, PA<br>Keynote lecture: Reversible and irreversible protein modification in signaling by electrophiles |
| March 9, 2009 | Oxidative Stress and Disease Gordon Conference<br>Il Ciocco, Italy<br>Inactivation of protein tyrosine phosphatases by electrophiles: What doesn't kill you makes you stronger |
| August 27, 2009 | Society for Free Radical Research- Europe<br>Rome, Italy<br>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<br>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<br>University of Turin, Italy<br>Novel aspects of EpRE signaling by HNE in lung epithelial cells |
| October 7, 2010 | Winehealth 2010<br>Friuli, Italy<br>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<br>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<br>Istanbul, Turkey<br>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<br>Istanbul, Turkey<br>Regulation of glutathione biosynthesis in adaptation and aging |
| October 6, 2011 | Environmental Stressors in Biology and Medicine |

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

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| March 18, 2014 | Society for Free Radical Research International<br>Kyoto, Japan<br>Nucleophilic tone: a new paradigm for the action of nutritional antioxidants |
| May 30, 2014 | Department of Molecular Medicine Scientific Meeting<br>University of Padua, Italy<br>The antioxidant/inflammation axis in environmental diseases and aging |
| June 25, 2014 | Cellular Environmental Stressors in Biology and Medicine: Focus on Redox Reaction<br>Ferrara, Italy<br>Smoke signals: activation of epithelial mesenchymal transition |
| September 5, 2014 | Society for Free Radical Research – Europe 2014 Conference<br>Paris, France<br>TGFβ1 rapidly activates Src through a non-canonical redox mechanism |
| July 4, 2015 | International Workshop on "Biochemistry, Physiology and Pharmacology of Oxidative Stress"<br>Sapienza University of Rome, Italy<br>Adaptation to oxidative stress in aging: mechanisms underlying the attenuation of Nrf2 activation<br>Plenary Lecture |
| April 15, 2016 | SFB 974 Mini-Workshop: Current Aspects of Oxidative Stress and Aging<br>Heinrich Heine University, Düsseldorf, Germany<br>Adaptation to oxidative stress in aging: mechanisms underlying the attenuation of Nrf2 activation |
| June 8, 2016 | Society for Free Radical Research – Europe 2016 Conference<br>Budapest, Hungary<br>Redox signaling: an evolution from free radicals to aging<br>Society for Free Radical Research – Europe 2016 Award |
| September 16, 2016 | European Huntington Disease Network 2016<br>The Hague, The Netherlands<br>Nrf2 Signaling: An Introduction |
| October 14, 2016 | ParadOx Workshop 2016<br>Los Angeles<br>Aging suppresses the Nrf2 response in human lung epithelial cells |

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| November 16, 2016 | Fundamentals in Redox Biology Pre-meeting Workshop<br>Society for Redox Biology and Medicine 2016<br>San Francisco<br>Thiol-Based Redox Signaling |
| November 16, 2016 | Society for Redox Biology and Medicine 2016<br>San Francisco<br>Redox biology – questions for the future<br>SFRBM Lifetime Achievement Award |
| May 4, 2017 | Life Style and Nutrition as Oxinflammation Modulators<br>North Carolina State University Plants for Human Health Institute<br>Kannapolis, North Carolina<br>Altered Pro- and Anti-inflammatory Responses to Air Pollution in Aging |
| September 6, 2017 | 68th Italian Physiological Society Meeting<br>Oxinflammation: from cell signaling to altered redox homeostasis<br>Pavia, Italy<br>4HNE mediated cell signaling |
| September 14, 2017 | International 4-Hydroxynonenal-Club<br>Reactive Oxygen Species and Lipid Peroxidation in Human Health and in Disease<br>Graz, Austria<br>HNE mediated cell signaling |
| September 27, 2017 | 2nd Adriatic Symposium on Biophysical Approaches in Biomedical Studies<br>Split, Croatia<br>HNE signaling, physiological or pathological? |
| May 25, 2018 | NIEHS Symposium: Free Radicals: Past, Present, and Future<br>Research Triangle Park, North Carolina<br>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<br>Lisbon, Portugal<br>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<br>Porto, Portugal<br>Redox biology and redox signaling |

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| November 19, 2020 | SFRR-Europe - Winter Special Lecture Series<br>online<br>Glutathione related redox signaling in mammalian cells |
| November 10, 2021 | Healthy Aging Week 2021<br>Alba, Italy<br>Aging and susceptibility to oxidative injury |
| June 28, 2023 | The 9th International Selenium Conference 2023<br>KAIST, Daejeon, Korea (online)<br>The key role of peroxide, chalcogen chemistry and glutathione in redox signaling |
| November 12, 2023 | Workshop on Redox Nutrition and Toxicology<br>Buenos Aires, Argentina<br>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)
University of California Riverside, 2025

**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-κB, 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, Barzilay 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 Hopital 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

17. Forman, H.J., York, J.L. and Fisher, A.B.
Mechanism for the potentiation of oxygen toxicity by disulfiram.
J. Pharmacol. Exp. Ther. 212: 452-455, 1980. PMID: 6244385

18. Kravetz, G., Fisher, A.B. and Forman, H.J.
The oxygen-adapted rat model: tolerance to oxygen at 1.5 and 2 ata.
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