

# Curriculum Vitae

## JONATHAN S. STAMLER

Jonathan S. Stamler, MD (President, Harrington Discovery Institute) is an internationally acclaimed physician scientist known for the discovery of protein S-nitrosylation, a global post-translational modification of proteins that is widely involved in both physiology and disease. Stamler is also known for a track record of innovation and entrepreneurship as a founder of institutes, biotechnology companies, medical societies, innovation platforms and impact investment funds. He has co-authored close to 400 manuscripts, books and chapters, and 225 issued patents, and has been recognized with multiple awards. His work has been covered in numerous lay publications, including the front page and science sections of the New York Times, as well as Time Magazine and The Economist, in books on the history of science, and in works on outlier innovators.

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**Birthdate:** June 23, 1959 (Wallingford, England)

**Citizenship:** United States

### Education:

|      |      |  |
|------|------|--|
| 1981 | B.A. | Brandeis University, Boston, MA              |
| 1985 | M.D. | Mount Sinai School of Medicine, New York, NY |

### Postdoctoral Training:

#### Internship and Residency

|           |  |
|-----------|--|
| 1985-1986 | Internship, Medicine, Brigham and Women's Hospital, Harvard Medical School, Boston, MA |
| 1986-1987 | Resident, Medicine, Brigham and Women's Hospital, Harvard Medical School, Boston, MA   |
| 1987-1988 | Resident, Medicine, Brigham and Women's Hospital, Harvard Medical School, Boston, MA   |

#### Fellowships

|           |   |
|-----------|---|
| 1985-1989 | Clinical Fellow in Medicine, Harvard Medical School, Boston, MA   |
| 1988-1989 | Clinical Fellow in Medicine (Pulmonary Medicine), Brigham and Women's Hospital  |
| 1989-1993 | Research Fellow in Medicine, Harvard Medical School   |
| 1989-1993 | Clinical/Research Fellow in Medicine (Cardiovascular Medicine), Brigham and Women's Hospital, Boston, MA and West Roxbury V.A. Medical Center, West Roxbury, MA |

### Licensure and Certification:

|      |                                    |
|------|------------------------------------|
| 1985 | Massachusetts Registration # 57936 |
|------|------------------------------------|

|      |  |
|------|--|
| 1988 | American Board of Internal Medicine            |
| 1991 | American Board of Pulmonary Disease # 118996   |
| 1993 | Cardiovascular Disease (board eligible)        |
| 1993 | North Carolina Registration /License # 9400364 |
| 2010 | Ohio License/Registration # 095246             |

**Current Medical Licensure:**

|           |                |
|-----------|----------------|
| Licensed: | North Carolina |
| Licensed: | Ohio           |

**Academic Appointments:**

|              |  |
|--------------|--|
| 1993         | Instructor in Medicine, Harvard Medical School, Boston, MA   |
| 1993         | Assistant Professor in Medicine, Harvard Medical School  |
| 1993-1994    | Associate Professor in Medicine and Assistant Professor of Cell Biology, Duke University   |
| 1995         | Associate Professor in Medicine, Assistant Professor of Cell Biology and Adjunct Faculty Member of Toxicology, Duke University                               |
| 1996-2009    | Professor of Medicine, Duke University   |
| 1997-2005    | Investigator, Howard Hughes Medical Institute  |
| 1999-2009    | Professor of Biochemistry, Duke University   |
| 2004-2009    | George Barth Geller Professor for Research in Cardiovascular Diseases, Duke University Medical Center  |
| 2009-present | Robert S. and Sylvia K. Reitman Family Foundation Distinguished Chair in Cardiovascular Innovation, Case Western Reserve University and University Hospitals |
| 2009-present | Professor of Medicine, Case Western Reserve University   |
| 2009-present | Professor of Biochemistry, Case Western Reserve University   |
| 2009-present | Founding Director, Institute for Transformative Molecular Medicine, Case Western Reserve University and University Hospitals                                 |
| 2010-present | Adjunct Professor of Medicine and of Biochemistry, Duke University   |
| 2012-2016    | Founding Director, Harrington Discovery Institute, University Hospitals, Cleveland   |
| 2016-present | President, Harrington Discovery Institute, University Hospitals Case Medical Center  |

**Hospital Appointments:**

|              |   |
|--------------|---|
| 1991         | Associate Physician, Brigham and Women's Hospital, Boston, MA     |
| 1993-2009    | Associate Physician, Duke University Medical Center, Durham, NC   |
| 2010-present | Staff Physician, University Hospitals of Cleveland, Cleveland, OH |
| 2015-2016    | Vice President, University Hospitals of Cleveland, Cleveland, OH  |
| 2016         | President, University Hospitals of Cleveland, Cleveland, OH       |

**Other Professional Appointments:**

|      |   |
|------|---|
| 1992 | Visiting Scholar, Duke Marine Biomedical Center |
|------|---|

**Awards and Honors:**

|      |   |
|------|---|
| 1981 | Phi Beta Kappa, Magna Cum Laude                               |
| 1983 | Parkinson's Disease Foundation Grant                          |
| 1989 | American Heart Association Fellowship Grant-in-Aid (declined) |
| 1989 | Individual NRSA (NIH)   |
| 1991 | Clinical Investigator Award (NIH)                             |

- 1992 Pew Scholar Nominee, Harvard Medical School
- 1993 Henry Christian Award for Excellence in Research
- 1993 Pew Scholar in the Biomedical Sciences
- 1995 Election to the American Society of Clinical Investigation
- 1996 Nominated for Giovanni Lorenzini Prize for Biomedical Research
- 1997 Howard Hughes Medical Institute Investigator
- 1997 Literature Award, Society of Cosmetic Chemistry
- 1998 Elected to the Association of American Physicians
- 1999 Eminent Scientist of the Year, International Research Promotion Council
- 2000 Stanley J Korsmeyer Award Finalist (ASCI Award Finalist)
- 2001 Outstanding Investigator Award in Basic Science, American Federation for Medical Research Foundation
- 2002 Saul Horowitz Memorial Award for outstanding scientific contribution, Mount Sinai School of Medicine
- 2002 Alpha Omega Alpha, Lambda Chapter, Mount Sinai School of Medicine
- 2003 Sandler Award (for asthma research)
- 2003 The Ruth and A. Morris Williams, Jr. Faculty Research Prize, Duke University
- 2004 Named the George Barth Geller Professor for Research in Cardiovascular Diseases, Duke University
- 2006 The Ewing Marion Kauffman Foundation, “Top Innovators in America”
- 2008 Robert J Lefkowitz Innovation Award
- 2009 Coulter Translational Partnership Research Award
- 2013 Honorary Fellow of the American Heart Association
- 2013 AHA Distinguished Scientist Award
- 2014 Crain’s Power 150 (NE Ohio)
- 2014 Team NEO Award
- 2017 Jacobi Medallion for contributions to the field of medicine, Mt Sinai Medical Center, NY
- 2017 Crain’s Who’s Who in Northeast Ohio
- 2020 Outlier Innovator (<http://pubsonline.informs.org/journal/orisc> ISSN 1047-7039 (print), ISSN 1526-5455). Kneeland MK, Schilling MA, Aharonson BA. *Organization Science* 2020; 31, 535–557
- 2021 Innovation Model Award, Harrington Project (External Accelerator; J Commercial Biotech)
- 2022 Lifetime Achievement Award, International Society for Nitric Oxide and Cancer/Danish Cancer Society, Copenhagen
- 2023 Lahiri-Cherniak Award Lecture/ Experimental Biology (Am Physiol Society) for contributions to hypoxia research.
- 2023 Maurice Saltzman Award (for medical contribution), Cleveland

#### Professional Societies:

- 1985 American Medical Association
- 1985 Massachusetts Medical Society
- 1989 American Heart Association
- 1990 American College of Cardiology
- 1990 American Federation for Medical Research
- 1992 American Association for the Advancement of Science
- 1993 North Carolina Medical Society
- 1995 American Society for Biochemistry and Molecular Biology
- 1995 American Society for Clinical Investigation

- 1996 American Thoracic Society
- 1996 Nitric Oxide Society (co-founder)
- 1998 Association of American Physicians
- 2006 The Robert F. Furchgott Society

**Major Academic Assignments:**

- 1992 Board of Directors, Nitromed, Inc.
- 1993 NHLBI Workshop - Inhaled NO as a Therapeutic Modality (Maryland)
- 1993 Scientific Advisory Board - Third International Meeting. Biology of Nitric Oxide (Koln, Germany)
- 1994 FASEB/ASPET Chair, Symposium: Novel Aspects of NO Biology (Anaheim, California)
- 1994 Scientific Chairman, Fourth International Meeting, Biology Nitric Oxide (Amelia Island, USA, 1995)
- 1995 NIH Consultant: Hemoglobin Based Blood Substitutes (RFA)
- 1995 Basic Science Task Force, Duke University Medical Center
- 1996 NIH Subcommittee: Review of Cellular and Molecular Mechanisms of Asthma (RFA)
- 1996 Co-founder: Society of NO Biology
- 1996 NIH Consultant: Current Approaches to the Treatment of Sickle Cell Disease
- 1996 Division of Pulmonary and Critical Care Medicine at Duke University, Chief Search Committee
- 1997 Scientific Committee: 2nd International meeting on O<sub>2</sub>/N radicals and cellular injury
- 1997 AHA subcommittee for scientific sessions
- 1997 NIEHS Search Committee, Chief of the Laboratory of Pulmonary Pathobiology
- 1997 Internship Applicant Selection (Interviews)
- 1997 Executive Committee, Toxicology Program, Duke University
- 1998 ASPET Chair, Symposium: Apoptosis and redox systems
- 1998 Advisory Committee, 3rd International Conference, Biochemistry and Molecular Biology of Nitric Oxide
- 1998 Division of Endocrinology at Duke University, Chief Search Committee
- 1998 NIEHS Search Committee, Director of Lung Research
- 1998 NIH Adhoc Committee: Bacteriology and Microbiology
- 1998-1999 American Cancer Society Institute Review Grant Committee
- 1999 NIH Consultant, Cellular Biology and Physiology (Ad hoc)
- 1999 Division of Pulmonary and Critical Care Medicine at Duke University, Chief Search Committee
- 1999 NHLBI Consultant, Cardiovascular Ad Hoc
- 1999-2009 Steering Committee-Academic Initiatives, Duke University Medical Center
- 1999 Committee for Translational Medicine, Duke University Medical Center
- 1999 Co-Chair, Task Force for Basic Research, Duke University Medical Center
- 1999 Planning Group on Science and Engineering, Office of the Provost, Duke University
- 1999 Awards Committee, Office of the Dean, School of Medicine, Duke University
- 2000 Burroughs-Wellcome Awards Nominations Committee, Duke University Medical Center
- 2000 Search Committee for the Vice Chancellor for Academic Affairs and Dean of the School of Medicine, Duke University Medical Center
- 2000 Ad Hoc Reviewer, National Science Foundation/organic chemistry
- 2000 Scientific Advisory Board, Arginox
- 2001 Organizer, Juan March Workshop on Regulation of Protein Function by Nitric Oxide, Madrid 2001
- 2001 HHMI Candidate Nomination and Selection Committee

- 2001 Scientific Review Committee, "Oxygen 2002"
- 2001 Ad Hoc Reviewer, National Science Foundation
- 2002 Deputy Director for Translational Sciences, Center for Chemical Biology, Duke University Medical Center
- 2002 Scientific Advisory Board, International Meeting on NO Biology, Prague
- 2002 Translational Medicine Institute, Duke University
- 2002 Ad Hoc, Cardiovascular Study Section, NIH
- 2002 Committee to establish an Endowed Chair at SUNY Downstate Medical Center
- 2003 Center of Excellence, Kumamoto University, Japan
- 2003 Steering Committee, Duke Translational Medicine Institute
- 2003 Department of Medicine Advisory Board, Duke University Medical Center
- 2004 Scientific Advisory Board, 4<sup>th</sup> International Conference on Peroxynitrite and Reactive Nitrogen Species in Biology and Medicine
- 2004-2009 Judge, Annual NIEHS Science Awards
- 2004 Ad Hoc Reviewer, National Science Foundation
- 2004 Search Committee for Chief of Pulmonary, Allergy and Critical Care Medicine, Duke University Medical Center
- 2005 Committee, Translational Medicine Journal
- 2006 Environmental Airway Disease Project Team, NIEHS
- 2006 NHLBI Strategic Plan meeting on Integrative Approaches to Pathogenetic Research
- 2006 Director, Duke Interdisciplinary Training Program in Lung Disease
- 2006 Roadmap Initiative, NIH
- 2006-2007 Scientific Director Search Committee, NIEHS
- 2007-2009 Lung Injury Repair Work Group, Duke University Medical Center
- 2007-2009 Advisory Committee for the Mouse Behavioral/Neuroendocrine Analysis Core Facility, Duke University
- 2008 Reviewer, American Heart Association Innovative Research Grants
- 2008 Review Committee, Pew Scholars Program in Biomedical Sciences
- 2008 Ad Hoc Reviewer, National Science Foundation
- 2009 Co-Chair, Cross Sectional Symposium on "Novel Insights into Nitric Oxide Signaling", Experimental Biology meeting, New Orleans
- 2010 Reviewer, AHA IRG Program Study Group
- 2010 Reviewer, United States - Israel Binational Science Foundation Proposals
- 2010 Reviewer, Investigator Award of Academia Sinica, Taiwan
- 2010 DARPA programmatic initiative
- 2011 Co-Chair, Search Committee for Director, Respiratory Health Institute and Chief, Division of Pulmonary, Critical Care and Sleep Medicine, Case Western Reserve University
- 2012 School of Medicine Research Committee, Case Western Reserve University
- 2012 DARPA programmatic initiative
- 2013 Advisory Committee, Institute for Therapeutic Design
- 2013 Chair, Innovations Committee, University Hospitals
- 2013 DARPA-Celegene programmatic initiative
- 2013 Member, Case Research Institute (CRI) Oversight Committee, University Hospitals and Case Western Reserve University
- 2014 Mentor, Heart, Lung, and Blood Summer Research Program
- 2015 Member, Innovation Leadership Council, University Hospitals
- 2015 Member, Institutional Advisory Board, Case Comprehensive Cancer Center
- 2016 Member, Transfusion HRM Committee, University Hospitals

- 2018 FASEB Chair, Functional disulfides  
2018 Innovation Council, Brandeis University, Waltham Mass

**Exemplary Notable/Honorary Lectures:**

- 1993 In Honor of Hilary Koprowski  
1996 In Honor of Robert Furchgott  
1997 Charles Fumito Taketa Memorial Lecture, Department of Biochemistry, University of Wisconsin at Milwaukee  
1998 Märta Philipson Inaugural (special) Lecture, Karolinska Institute, Stockholm, Sweden  
1999 Keynote Speaker, Gordon Conference on Nitric Oxide in Biochemistry and Biology, Ventura, CA  
1999 Featured Speaker, Association of American Physicians, Chicago  
1999 German-American Frontiers in Science, Pottsdam  
1999 Distinguished Lecture, University of Virginia Health Sciences Center, Charlottesville  
1999 Dean's Lecture, Mount Sinai School of Medicine  
1999 Johns Hopkins Scholar in Lung Biology  
2000 Physiology Course Lecture, Woods Hole, MA  
2000 The Konrad Witzig Lecture, Cardiovascular System Dynamics Society  
2000 Memorial Lecture in honor of Drs. Reinhold and Ruth Benesch, Rockefeller University  
2001 Introduction of Nobel Laureates, "A Century of Nobel Achievements," American Heart Association meeting, Anaheim, CA  
2002 Distinguished Lecturer, Cellular Homeostasis Research Lecture Series, University of Southern California  
2002 Lubomir S. Hnilica Memorial Lecture, Vanderbilt University  
2002 Evans Family Lecture in Vascular Biology, Stanford University  
2003 David Cugell Honorary Lectureship, Department of Medicine, Northwestern  
2003 Berne Lecture, Department of Physiology, University of Virginia, Charlottesville  
2005 Keynote Address, Internal Medicine Research Symposium, University of Michigan,  
2005 Redox Signaling Symposium, Karolinska Institute (Nobel Forum)  
2006 J. Gerald Reves Heart Center Lecture, Duke University Medical Center  
2006 The National Academies Institute of Medicine "Roundtable on Environmental Health Sciences, Research, and Medicine"  
2006 Karolinska Research Lecture at the Nobel Forum, Karolinska Institute, Stockholm  
2007 Keynote Lecturer, Israel Chemical Society  
2007 Distinguished lectureship, Case Cardiovascular Research Institute  
2008 Plenary Lecturer, Japanese Pharmacological Society  
2008 Grand Rounds, Internal Medicine Research Symposium, University of Iowa  
2009 Keynote address, Mexican National Academy of Sciences (declined, personal reasons)  
2009 Nitric oxide symposium, Karolinska Institute (Nobel Forum)  
2010 Inaugural Keynote address: Molecular Medicine PhD Program, Cleveland Clinic.  
2011 Plenary Lecturer, Gordon Conference, Molecular Pharmacology of GPCRs, Ventura, CA  
2011 Plenary Lecturer, Gordon Conference, Nitric Oxide Biology, Ventura, CA  
2011 Plenary Lecturer, ESF-EMBO, Glutathione and Related Thiols, Barcelona, Spain  
2012 Bio-X Seminar "Frontiers in Interdisciplinary Biosciences", Stanford University  
2013 Science and Medicine: A Priceless Journey. Key Biomedical Discoveries of the 20<sup>th</sup> Century, Series. George Washington University  
2014 Borun Visiting Professor lecture, University of California, Los Angeles  
2014 Plenary Lecturer, GPCR meeting, Cleveland  
2014 Cardiovascular Grand Rounds speaker, University of Pennsylvania

- 2015 Plenary Lecturer, BCVS, American Heart Association, New Orleans  
 2016 Keynote Lecture, Cancer Rx, MIT, Boston  
 2017 Dean's Lecture, Research Day, Mount Sinai, New York  
 2017 Inaugural Ziegler Innovation Lecture, Blood Research Institute, Wisconsin  
 2018 Plenary Lecture, FASEB Functional Disulfides  
 2019 The Morton Arnsdorf Lecture, University Chicago  
 2019 Plenary Lecture, American Society of Nephrology  
 2019 Microbiology seminar, University of Pennsylvania (UPenn).  
 2019 Keynote address, Rare Disease Symposium, University of Oxford  
 2020 Plenary Lecture, Thiol-based redox regulation and signaling, Barcelona (postponed)  
 2020 Keynote, International Symposium on Redox Biology, Frankfurt (postponed)  
 2021 Keynote, Plant NO8 Conference, Szegred, Hungary  
 2021 NSF-sponsored workshop "Cross disciplinary study of PTMs and PRMs"  
 2022 AHA/Allen Foundation lecture  
 2022 International symposium Cancer/NO, Danish Cancer Society, Copenhagen  
 2023 Plenary Lecture, American Physiological Society, Summit, Long beach, CA

**Editorial Boards:**

- 1996-2001 Free Radicals in Medicine and Biology  
 1996- Nitric Oxide: Biology and Chemistry  
 1996-1998 Neurobiological Technologies, Inc.  
 1997-2002 Cell Death and Differentiation  
 1997-2001 American Journal of Medicine  
 1997- Trends in Cardiovascular Medicine  
 1998- American Journal of Respiratory Cell and Molecular Biology  
 1998-2002 Journal of Clinical Investigation  
 2000-2005 Circulation Research  
 2007- Clinical and Translational Science  
 2008-2019 Trends in Molecular Medicine  
 2008-2012 Free Radical Biology and Medicine  
 2009-2019 Circulation Research  
 2012-2019 Journal of Clinical Investigation  
 2022- eLife  
 2022- Antioxidants

**Scientific Boards and Board of Directors:**

- 1992-1995 Nitromed, Inc. (Co-founder)  
 1996-2001 Apex Bioscience  
 1996- Nitric Oxide (Co-founder)  
 1996-1998 Neurobiological Technologies, Inc.  
 2000-2007 Arginox  
 2002-2007 Neuromolecular Pharmaceuticals, Inc (Co-founder)  
 2003-2007 Nitrox (Co-founder)  
 2007-2007 N30 Pharmaceuticals (formerly Nitrox) (Co-founder)  
 2007-2009 Aegerion Pharmaceuticals  
 2007- Adamas Pharmaceuticals (Co-founder, formerly NPI)  
 2008-2010 Duska Pharmaceuticals  
 2008-2012 Vindica Therapeutics (Co-founder)

|           |   |
|-----------|---|
| 2009-2015 | SabrePharm Limited (Co-founder)                                     |
| 2010-2018 | LifeHealth (Co-founder)   |
| 2012-     | BioMotiv (Co-founder, Board of Managers)                            |
| 2012-     | Harrington Project (Co-founder)                                     |
| 2012-     | Harrington Discovery Institute (Co-founder)                         |
| 2015-2018 | Nivalis Therapeutics, Inc (Co-founder, formerly N30)                |
| 2015-2018 | Anteros Pharmaceuticals, LLC (Co-founder)                           |
| 2019-     | Morgan Stanley GIFT Cures (Board of Managers)                       |
| 2020-     | Advent-Harrington Impact Fund, Morgan Stanley platform (Co-founder) |
| 2020-     | SNO bio (Co-Founder)  |
| 2021-2022 | EFC (Co-inventor)   |
| 2022-     | NNOXX (Co-founder)  |

**Societies Co-founded**

Nitric Oxide (Co-founder)  
Robert Furchgott (founding advisory board)

**Patents and Technology Licenses:**

223 issued patents.  
‘Top Patent Applicants in America’ Ewing Marion Kauffman Foundation.  
Pharma Licenses: Boston Scientific, Novartis, Aegerion  
Outlier Innovator (Organization Science; <https://doi.org/10.1287/orsc.2019.1328>)

**Major Research Interests:**

Protein S-nitrosylation  
Biology of nitric oxide in health and disease  
Biochemistry and function of sulfhydryls

**Principal Clinical and Hospital Service Responsibilities:**

|              |  |
|--------------|--|
| 1992-1993    | Pulmonary consultant/intensivist, Brigham and Women's Hospital                     |
| 1992-1993    | Staff cardiologist, West Roxbury VA Medical Center                                 |
| 1994-2009    | Staff physician, Pulmonary Medicine, Duke University Medical Center                |
| 1994-2009    | Staff physician, Cardiology, Duke University Medical Center                        |
| 2010-present | Staff physician, Cardiology, University Hospitals Case Medical Center              |
| 2012-2015    | Director, Harrington Discovery Institute, University Hospitals Case Medical Center |
| 2015-2016    | Vice President, University Hospitals Case Medical Center                           |
| 2016-present | President, University Hospitals Cleveland Medical Center                           |
| 2016-        | President, Harrington Discovery Institute, University Hospitals                    |

**Teaching:**

|           |  |
|-----------|--|
| 1982-1983 | Tutorials in Organic Chemistry   |
| 1988-1989 | Preceptor, Longitudinal Clinical Medicine Tutorial for M.D./Ph.D. Students, Harvard Medical School, Boston, MA |
| 1991      | Supervised post-graduate research of an HST/MD-PhD student and 3 fellows in training                           |
| 1992-1993 | Preceptor HST/MD-PhD Students, Harvard Medical School, Boston, MA  |
| 1993      | Supervisor to high school and (Duke) college students and medical fellows in basic training                    |
| 1997      | Supervisor of undergraduate research work of a student in the Undergraduate Research Support Program at Duke   |



- 1999 Physician Scientist Panel, University of Miami  
 1999 Ph.D. Thesis Committee, UNC  
 2001 Cardiology Training Grant, Duke University Medical Center  
 2001 Co-mentor, Sickle Cell Scholar of the Duke-UNC Comprehensive Sickle Cell Center  
 2002 Pulmonary Training Grant: Section of Molecular Biology and Signal Transduction Components  
 2002 T32 Clinical Research Training Grant, Duke University Medical Center  
 2002 Graduate student training in Cell Biology, Duke University Medical Center  
 2002 Molecular Cancer Biology Graduate Lecture Program, Duke University  
 2002 Mentored Sickle Cell Scholar Award (faculty development position), Duke University Medical Center  
 2006 Director, Duke Interdisciplinary Training Program in Lung Disease  
 2007 Translational Research Panel for 4<sup>th</sup> year Capstone students, Duke University  
 2011 Scientific Enrichment and Opportunity Program (SEO)  
 2012 School of Medicine, Research Committee  
 2010-2013 PhD Thesis Committee for Chao Fang, Case Western Reserve University  
 2010-2013 PhD Thesis Committee for Bradley Plummer, Case Western Reserve University  
 2013-2018 PhD Thesis Committee for Colin Stomberski, Case Western Reserve University  
 2015-2021 PhD Thesis Committee for Bea Tan, Case Western Reserve University  
 2018- PhD Thesis Committee for Nicholas Venetos, Case Western Reserve University  
 2019- PhD Thesis Committee for Zachary Grimmett, Case Western Reserve University  
 2020- PhD Thesis Committee for, Kenny Golovan Case Western Reserve University  
 2021- PhD Thesis Committee for Joseph Schindler Case Western Reserve University

### **Institutes and Innovation Platforms**

- Duke Translational Medicine Institute (Naming Advisor)  
 Institute Transformative Molecular Medicine, Case Western (Founding Director)  
 Harrington Discovery Institute, University Hospitals (Founding Director)  
 Harrington Project (Founder and Co-head)  
 Morgan Stanley GIFT CURES (Co-founder)

### **Biotechnology Companies/Venture Funds Founded or Co-founded**

- Nitromed, Inc.  
 Adamas Pharmaceuticals (formerly Neuromolecular Pharmaceuticals)  
 Vindica Therapeutics  
 SabrePharm Limited  
 LifeHealth  
 BioMotiv  
 Nivalis Pharmaceuticals (formerly N30, formerly Nitrox)  
 Anteros Pharmaceuticals  
 SNO bio  
 Advent-Harrington Impact Fund (Morgan Stanley)  
 NNOXX

### **Bibliography:**

#### Original Reports

1. Stamler JS, Bauer JJ, Janowitz HD. Rectourethroperineal fistula in Crohn's disease. Am J Gastroenterology 1985; 80: 111-112.

2. Stamler JS, Creager MA, Loscalzo J, Cooke JP. Vascular response in diabetes with neuropathic foot lesions. N Engl J Med 1988; (let) 319: 1155.
3. Stamler JS, Cunningham M, Loscalzo J. Reduced thiols and the effect of intravenous nitroglycerin on platelet aggregation. Am J Cardiol 1988; 62: 377-380.
4. Stamler JS, Vaughan DE, Rudd MA, Mudge GH, Young P, Kirshenbaum J, Young P, Alexander RW, Loscalzo J. Frequency of hypercholesterolemia after cardiac transplantation. Am J Cardiol 1988; 62: 1268-1272.
5. Stamler JS, Horowitz SF, Goldman ME, Matza D, Mahac J. Peripartum cardiomyopathy: a role for cardiac stress determinants other than pregnancy. Mount Sinai J Med 1989; 56: 285-289.
6. Stamler JS, Mendelsohn ME, Amarante P, Smick D, Andon N, Davies PF, Cooke JP, Loscalzo J. N-acetylcysteine potentiates platelet inhibition by endothelium-derived relaxing factor. Circ Res 1989; 65: 789-795.
7. Stamler JS, Vaughan DE, Loscalzo J. Synergistic disaggregation of platelets by tissue-type plasminogen activator, prostaglandin E<sub>1</sub> and nitroglycerin. Circ Res 1989; 65: 796-804.
8. Stamler JS, Whittmore A, Loscalzo J. Celiac axis compression syndrome caused by sarcoidosis. An acquired form of the syndrome. Am J Med 1989; 86: 225-227.
9. Cooke JP, Stamler J, Andon N, Davies PF, McKinley G, Loscalzo J. Flow stimulates endothelial cells to release a nitrovasodilator that is potentiated by reduced thiol. Am J Physiol 1990; 28: H804-H812.
10. Cooke JP, Stamler JS, Andon NA, Davies PF, Mendelsohn ME, Loscalzo J. Flow-mediated endothelium-dependent effects on platelet and vascular reactivity. In: Rubanyi GM, Vanhoutte PM, eds. Endothelium-derived Vasoactive Factors. Karger Press, 1990, pp 244-253.
11. Folts JD, Stamler JS, Loscalzo J. Intravenous nitroglycerin infusion inhibits cyclic blood flow responses caused by periodic platelet thrombus formation in stenosed dog coronary arteries. Circulation 1991; 83: 2122-2127.
12. Stamler JS, Loscalzo J. The antiplatelet effects of organic nitrates and related nitroso-compounds in vitro and in vivo and their relevance to cardiovascular disorders. J Am Coll Cardiol 1991; 18(6): 1529-1536.
13. Stamler JS, Loscalzo J. The antithrombotic effects of organic nitrates. Trends Cardiovasc Med 1991; 1(8): 346-353.
14. Stamler JS, Vaughan DE, Loscalzo J. Immunosuppressive therapy and lipoprotein abnormalities after cardiac transplantation. Am J Cardiol 1991; 68: 389-391.
15. Jansen A, Drazen JM, Osborne JA, Brown R, Loscalzo J, Stamler JS. The relaxant properties in guinea pig airways of S-nitrosothiols. J Pharmacol Exp Ther 1992; 261: 154-160.
16. Mullins ME, Stamler JS, Osborne JA, Loscalzo J, Singel D. EPR spectroscopic characterization of biological thiyl radicals as PBN spin-trap adducts. Appl Mag Res 1992; 3: 1021-1032.
17. Stamler JS, Goldman ME, Gomes J, Matza D, Horowitz SF. The effect of stress and fatigue on cardiac rhythm in medical interns. J Electrocardiol 1992; 25:3 33-338.
18. Stamler JS, Loscalzo J. Endothelium-derived relaxing factor modulates the atherothrombogenic effects of homocysteine. J Cardiovasc Pharmacol 1992; 20(suppl 12): S202-S204.
19. Stamler JS, Rogers C, Hirano I, Brezinski D, Sharma GVRK. Treatment of complete heart block with inhaled  $\beta$  agonists. Am Heart J 1992; 124: 1093-1095.

20. Stamler JS, Simon DI, Osborne JA, Mullins ME, Jaraki O, Michel T, Singel DJ, Loscalzo J. S-nitrosylation of proteins with nitric oxide: Synthesis and characterization of biologically active compounds. Proc Natl Acad Sci USA 1992; 89: 444-448.
21. Stamler JS, Jaraki O, Osborne J, Simon DI, Keaney J, Vita J, Singel D, Valeri CR, Loscalzo J. Nitric oxide circulates in mammalian plasma primarily as an S-nitroso adduct of serum albumin. Proc Natl Acad Sci USA 1992; 89: 7674-7677.
22. Stamler JS, Simon DI, Jaraki O, Osborne JA, Francis S, Mullins M, Singel D, Loscalzo J. S-nitrosylation of tissue-type plasminogen activator confers vasodilatory and antiplatelet properties on the enzyme. Proc Natl Acad Sci USA 1992; 89: 8087-8091.
23. Stamler JS, Simon DI, Osborne JA, Mullins M, Jaraki O, Michel T, Singel D, Loscalzo J. Exposure of sulfhydryl containing proteins to nitric oxide and endothelium-derived relaxing factor confers novel bioactivity and modulates their intrinsic functional properties. In: Moncada S, Marletta MA, Hibbs JB ed. Biology of Nitric Oxide. I Portland Press Proceed 1992, pp 20-23. (Presentation London 1991)
24. Stamler JS, Singel DJ, Loscalzo J. Biochemistry of nitric oxide and its redox-activated forms. Science 1992; 258: 1898-1902.
25. Stamler JS, Loscalzo J. Capillary zone electrophoretic detection of biological thiols and their S-nitrosated derivatives. Anal Chem 1992; 64: 779-785.
26. Gaston B, Reilly J, Drazen JM, Fackler J, Ramdev P, Arnette D, Mullins ME, Sugarbaker DJ, Chee C, Singel DJ, Loscalzo J, Stamler JS. Endogenous nitrogen oxides and bronchodilator S-nitrosothiols in human airways. Proc Natl Acad Sci USA 1993; 90: 10957-10961.
27. Keaney JF Jr, Simon DI, Stamler JS, Jaraki O, Scharfstein J, Vita JA, Loscalzo J. NO forms an adduct with serum albumin that has endothelium-derived relaxing factor-like properties. J Clin Invest 1993; 91: 1582-1589.
28. Kobzik L, Bredt DS, Lowenstein CJ, Drazen J, Gaston B, Sugarbaker D, Stamler JS. Nitric oxide synthase in human and rat lung: Immunocytochemical and histochemical localization. Am J Respir Cell Mol Biol 1993; 9: 371-377.
29. Lilly CM, Stamler JS, Gaston B, Meckel C, Loscalzo J, Drazen JM. Modulation of vasoactive intestinal peptide pulmonary relaxation by NO in tracheally superfused guinea pig lungs. Am J Physiol: Lung, Cell Mol Physiol 1993; 265: L410-415.
30. Lipton SA, Choi YB, Pan Z-H, Lei SZ, Chen H-SV, Sucher NJ, Loscalzo J, Singel DJ, Stamler JS. A redox-based mechanism for the neuroprotective and neurodestructive effects of nitric oxide and related nitroso-compounds. Nature 1993; 364: 626-632.
31. Rachmilewitz D, Stamler JS, Karmeli F, Mullins ME, Singel DJ, Loscalzo J, Xavier RJ, Podolsky DK. Peroxynitrite-induced rat colitis - A new model of colonic inflammation. Gastroenterology 1993; 105(6): 1681-1688.
32. Rovin JD, Stamler JS, Loscalzo J, Folts JD. Sodium nitroprusside, an endothelium-derived relaxing factor congener, increases platelet cyclic GMP levels and inhibits epinephrine-exacerbated in vivo platelet thrombus formation in stenosed canine coronary arteries. J Cardiovasc Pharmacol 1993; 22(4): 626-631.
33. Simon DI, Stamler JS, Jaraki O, Keaney JF, Osborne JA, Francis SA, Singel DJ, Loscalzo J. Antiplatelet properties of protein S-nitrosothiols derived from nitric oxide and endothelium-derived relaxing factor. Arterioscler Thromb 1993; 13: 791-799.

34. Stamler JS, Osborne JA, Jaraki O, Rabbani LE, Mullins M, Singel D, Loscalzo J. Adverse vascular effects of homocysteine are modulated by endothelium-derived relaxing factor and related oxides of nitrogen. J Clin Invest 1993; 91: 308-318.
35. Asano K, Chee CBE, Gaston B, Lilly CM, Gerard C, Drazen JM, Stamler JS. Constitutive and inducible nitric oxide synthase gene expression, regulation, and activity in human lung epithelial cells. Proc Natl Acad Sci USA 1994; 91: 10089-10093.
36. Crapo J, Stamler JS. Signaling by nonreceptor surface-mediated redox-active biomolecules. J Clin Invest 1994; 93: 2304.
37. Gaston B, Drazen J, Jansen A, Sugarbaker DA, Loscalzo J, Richards W, Stamler JS. Relaxation of human bronchial smooth muscle by S-nitrosothiols *in vitro*. J Pharmacol Exp Ther 1994; 268: 978-984.
38. Gaston B, Drazen JM, Lilly C, Sugarbaker DJ, Loscalzo J, Stamler JS. Bioactive oxides of nitrogen in the lung: Immunity and the neural axis. In: Moncada S, Nistico G, Higgs EA. Nitric Oxide in Brain and the Immune System, Portland Press, 1994, chap. 28: 265-275.
39. Gaston B, Drazen JM, Loscalzo J, Stamler JS. The biology of nitrogen oxides in the airways. State-of-the-Art. Am J Respir Crit Care Med 1994; 149: 538-551.
40. Gaston B, Massaro A, Drazen J, Chee CBE, Wohl MEB, Stamler JS. Expired nitric oxide concentrations are elevated in patients with asthma. In: Biology of Nitric Oxide, Vol 3, Portland Press, Moncada S, Feelisch M, Busse R, Higgs A (eds) 1994, 497-500. (Proceedings)
41. Gaston B, Reilly J, Fackler J, Ramdev P, Jaraki O, Sugarbaker D, Mullins ME, Singel D, Loscalzo J, Stamler JS. Endogenous bronchodilator S-nitrosothiols in human airways. In: Biology of Nitric Oxide, Vol 3, Portland Press, Moncada S, Feelisch M, Busse R, Higgs A (eds), 1994, 444-446. (Proceedings)
42. Jaraki O, Strauss WE, Francis S, Loscalzo J, Stamler JS. Antiplatelet effects of novel antianginal agent, nicorandil. J Cardiovasc Pharm 1994; 23: 24-30.
43. Keaney JF Jr, Puyana J-C, Francis S, Loscalzo JF, Stamler JS, Loscalzo J. Methylene blue reverses endotoxin-induced hypotension. Circ Res 1994; 74: 1121-1125.
44. Kobzik L, Reid MB, Bredt DS, Stamler JS. Nitric oxide in skeletal muscle. Nature 1994; 372: 546-548.
45. Lipton SA, Choi YB, Singel DJ, Stamler JS. Janus faces of nitric oxide in the central nervous system: a redox-based mechanism of neuroprotection and neurotoxicity. Biology of Nitric Oxide, Vol 3, Portland Press, Moncada S, Feelisch M, Busse R, Higgs A (eds) 1994, 309-313. (Proceedings)
46. Lipton SA, Singel DJ, Stamler JS. Neuroprotective and neurodestructive effects of nitric oxide and redox congeners. In: The Neurobiology of NO $\Sigma$  and OH $\cdot$ . Ann NY Acad Sci 1994; 738: 382-387.
47. Lipton SA, Singel DJ, Stamler JS. Nitric oxide in the central nervous system. Prog Brain Res 1994; 103: 359-364.
48. Lipton SA, Stamler JS. Actions of redox related congeners of nitric oxide at the NMDA receptor. Neuropharmacology 1994; 33: 1229-1233.
49. Loh E, Stamler JS, Hare JM, Loscalzo J, Colucci WS. Cardiovascular effects of inhaled nitric oxide in patients with left ventricular dysfunction. Circulation 1994; 90(6): 2780-2785.
50. Mannick JB, Asano K, Izumi K, Kieff E, Stamler JS. Nitric oxide produced by human B lymphocytes inhibits apoptosis and Epstein-Barr virus reactivation. Cell 1994, 79:1137-1146.

51. Mohr S, Stamler JS, Brüne B. Mechanism of covalent modification of glyceraldehyde-3-phosphate dehydrogenase at its active site thiol by nitric oxide, peroxynitrite and related nitrosating agents. FEBS Lett 1994; 348: 223-227.
52. Rachmilewitz D, Karmeli F, Ackerman Z, Stalnikowicz R, Eliakim R, Amir G, Stamler JS. Enhanced gastric nitric oxide synthase activity in duodenal ulcer patients. Gut 1994; 35: 1394-1397.
53. Rachmilewitz D, Stamler JS, Karmeli F, Loscalzo J, Xavler RJ and Podolsky DK. Peroxynitrite-induced rat colitis and enhanced colonic nitric oxide generation and nitric oxide synthase activity in experimental and human colitis indicate possible contribution of the nitric oxide radical to the pathogenesis of colonic inflammation. Biology of Nitric Oxide, Vol 3, Portland Press, Moncada S, Feelisch M, Busse R, Higgs A (eds), 1994, 441-447. (Proceedings)
54. Scharfstein JS, Keaney JF Jr, Slivka A, Welch GN, Vita J, Stamler JS, Loscalzo J. In vivo transfer of nitric oxide between a plasma protein-bound reservoir and low molecular weight thiols. J Clin Invest 1994; 94(4): 1432-1439.
55. Slivka A, Chuttani R, Carr-Locke L, Kobzik L, Bredt D, Loscalzo J, Stamler JS. Inhibition of sphincter of Oddi function by the nitric oxide carrier S-nitroso-N-acetylcysteine in rabbits and humans. J Clin Invest 1994; 94: 1792-1798.
56. Stamler JS. Inhaled nitric oxide as a therapeutic modality: Is it good or bad? AHA and Critical Care Council Newsletter, Spring 1994; 9-11.
57. Stamler JS. Redox signaling: Nitrosylation and related target interactions of nitric oxide. Cell 1994; 78: 931-936.
58. Stamler JS, Lipton SA, Singel DS. NO comments. Nature 1994; 367: 28.
59. Stamler JS, Loh E, Ruddy MA, Currie K, Creager M. Nitric oxide regulates systemic arterial blood pressure and pulmonary vascular tone in normal subjects. Biology of Nitric Oxide, Vol 3, Portland Press, Moncada S, Feelisch M, Busse R, Higgs A (eds), 1994, 447-448. (Proceedings)
60. Stamler JS, Loh E, Roddy MA, Currie KE, Creager M. Nitric oxide regulates basal systemic and pulmonary vascular resistance in healthy humans. Circulation 1994; 89: 2035-2040.
61. Arnelle DR, Stamler JS. NO<sup>+</sup>, NO<sup>•</sup>, and NO<sup>-</sup> donation by S-nitrosothiols: Implications for regulation of physiological functions by S-nitrosylation and acceleration of disulfide formation. Arch Biochem Biophys 1995; 318: 279-285.
62. Kobzik L, Stringer B, Balligand JL, Reid MB, Stamler JS. Endothelial type nitric oxide synthase in skeletal muscle fibers: mitochondrial relationships. Biochem Biophys Res Commun 1995; 211(2): 375-381.
63. Massaro AF, Gaston B, Kita D, Fanta C, Stamler JS, Drazen JM. Expired nitric oxide levels during treatment of acute asthma. Am J Respir Crit Care Med 1995; 152: 800-803.
64. Nanji AA, Greenberg SS, Tahan SR, Fogt F, Loscalzo J, Sadrzadeh MH, Jianming X, Stamler JS. Nitric oxide production in experimental alcoholic liver disease in the rat: Role in protection from injury. Gastroenterology 1995; 109: 899-907.
65. Rachmilewitz D, Stamler JS, Bachwich D, Marmeli F, Ackerman Z, Loscalzo J, Podolsky DK. Enhanced colonic NO generation and NO synthase activity in ulcerative colitis and Crohn's disease. Gut 1995; 36: 718-723.
66. Richards W, Stamler JS, Kobzik L, Sugarbaker D. Role of nitric oxide in human esophageal circular smooth muscle in vitro. J Thorac Cardiovasc Surg 1995; 110: 157-164.

67. Simon D, Stamler JS, Loh E, Loscalzo J, Francis SA, Creager MA. Effect of nitric oxide synthase inhibition on bleeding time in humans. J Cardiovasc Pharm 1995; 26: 339-342.
68. Stamler JS. S-nitrosothiols and bioregulatory actions of nitrogen oxides through reactions with thiol groups. Current Topics in Microbiology and Immunology. Springer-Verlag (eds), 1995; 196: 19-36.
69. Stamler JS. S-nitrosothiols: Correlation of biological chemistry with physiological actions. Biochem Pharmacol Clin Aspects of Nitric Oxide. B. A. Weissman et al (eds), Plenum Press, NY; 1995; 67-78.
70. Stamler JS, Rachmilewitz D. Nitric oxide synthase in gastric mucosa. Gut 1995; 942.
71. Blitzer ML, Loh E, Roddy MA, Stamler JS, Creager MA. Endothelium-derived nitric oxide regulates systemic and pulmonary vascular resistance during acute hypoxia in humans. J Am Coll Cardiol 1996; 28(3): 591-596.
72. Campbell DL, Stamler JS, Strauss HC. Redox modulation of L-type calcium channels in ferret ventricular myocytes: Dual mechanism regulation by nitric oxide and S-nitrosothiols. J Gen Physiol 1996; 108: 277-293.
73. Fulkerson JD, MacIntyre N, Stamler JS, Crapo J. Pathogenesis and treatment of the adult respiratory distress syndrome. Arch Intern Med 1996; 156(1): 29-38.
74. Han J, Stamler JS, Li H, Griffith OW. Inhibition of  $\gamma$ -glutamylcysteine synthetase by S-nitrosylation. Biology of Nitric Oxide, Part 5 1996, 114.
75. Hausladen A, Privalle CT, Keng T, DeAngelo J, Stamler JS. Nitrosative stress: Activation of the transcription factor OxyR. Cell 1996; 86: 719-729.
76. Jia L, Bonaventura C, Bonaventura J, Stamler JS. S-nitrosohemoglobin: a dynamic activity of blood involved in vascular control. Nature 1996; 380: 221-226.
77. Lipton SA, Choi YB, Sucher NJ, Pan ZH, Stamler JS. Redox state, NMDA receptors and NO-related species. Trends Pharmacol Sci 1996; 17: 186-187.
78. Mohr S, Stamler JS, Brune B. Posttranslational modification of glyceraldehyde-3-phosphate dehydrogenase by S-nitrosylation and subsequent NADH attachment. J Biol Chem 1996; 271: 4209-4214.
79. Simon DI, Mullins ME, Jia L, Gaston B, Singel DJ, Stamler JS. Polynitrosylation of proteins: characterization, bioactivity, and functional consequences. Proc Natl Acad Sci USA 1996; 93: 4736-4741.
80. Stamler JS. Alzheimer's disease: A radical vascular connection. Nature 1996; 380: 108-111.
81. Stamler JS, Piantadosi CA. O=O NO: It's CO. J Clin Invest 1996; 97(10): 2165-2166.
82. Stamler JS, Slivka A. Biological chemistry of thiols in the vasculature and in vascular-related disease. Nutr Rev 1996; 54: 1-30.
83. Arnelle DR, Day BJ, Stamler JS. Diethyl dithiocarbamate-induced decomposition of S-nitrosothiols. Nitric Oxide: Biol Chem 1997; 1: 56-64.
84. Creager MA, Roddy MA, Boles K, Stamler JS. N-acetylcysteine does not influence the activity of endothelium-derived relaxing factor in vivo. Hypertension 1997; 29(2): 668-672.
85. Lipton SA, Kim W-K, Choi Y-B, Arnelle DR, Kumar S, D'Emilia DM, Rayudu PV, Arnele R, Stamler JS. Neurotoxicity associated with dual actions of homocysteine at the N-methyl-D-aspartate receptor. Proc Natl Acad Sci USA 1997; 94: 5923-5928.

86. Mannick JB, Miao XQ, Stamler JS. Nitric oxide inhibits Fas-induced apoptosis. J Biol Chem 1997; 272(39): 24125-24128.
87. Stamler JS, Jia L, Eu JP, McMahon TJ, Demchenko IT, Bonaventura J, Gernert K, Piantadosi CA. Blood flow regulation by S-nitrosohemoglobin in the physiological oxygen gradient. Science 1997; 276: 2034-2037.
88. Stamler JS, Toone EJ, Lipton SA, Sucher NJ. (S)NO signals: Translocation, regulation, and a consensus motif. Neuron 1997; 18: 691-696.
89. Abraham RZ, Kobzik L, Moody MR, Reid MB, Stamler JS. Cyclic GMP is a second messenger by which nitric oxide inhibits diaphragm contraction. Comp Biochem Physiol 1998; 119A(1): 177-183.
90. Channon KM, Qian H, Valentina N, Blazing MA, Olmez E, Shetty GA, Youngblood SA, Pawloski J, McMahon T, Stamler JS, George SE. In vivo gene transfer of nitric oxide synthase enhances vasomotor function in carotid arteries from normal and cholesterol-fed rabbits. Circulation 1998; 98: 1905-1911.
91. Chen LE, Seaber AV, Nasser RM, Stamler JS, Urbaniak JR. Effects of the S-nitroso-N-acetylcysteine on contractile function of reperfused skeletal muscle. J App Physiol 1998; 274(43): 822-829.
92. Gaston B, Fry E, Sears S, Heroman WM, Ignarro L, Stamler JS. Umbilical arterial S-nitrosothiols in stressed newborns: role in perinatal circulatory transition. Biochem Biophys Res Commun 1998; 253: 899-901.
93. Gaston B, Sears S, Woods J, Hunt J, Ponaman M, McMahon T, Stamler JS. Bronchodilator S-nitrosothiol deficiency in asthmatic respiratory failure. Lancet 1998; 351: 1317-1319.
94. Gow A, Stamler JS. Reactions between nitric oxide and haemoglobin under physiological conditions. Nature 1998; 391(8): 169-173.
95. Hausladen A, Gow AJ, Stamler JS. Nitrosative stress: metabolic pathway involving the flavohemoglobin. Proc Natl Acad Sci USA 1998; 95: 14100-14105.
96. Hausladen A, Stamler JS. Nitric oxide in plant immunity. Proc Natl Acad Sci USA 1998; 95: 10345-10347.
97. Pawloski JR, Swaminathan RV, Stamler JS. Cell-free and erythrocytic S-nitrosohemoglobin inhibits human platelet aggregation. Circulation 1998; 97: 263-267.
98. Reid MB, Kobzik L, Bredt DS, Stamler JS. Nitric oxide modulates excitation-contraction coupling in the diaphragm. Comp Biochem Physiol 1998; 119A(1): 211-218.
99. Stamler JS, Hausladen A. Oxidative modification in nitrosative stress. Nature Struct Biol 1998; 5(4): 247-249.
100. Xu L, Eu JP, Meissner G, Stamler JS. Activation of the cardiac calcium release channel (ryanodine receptor) by poly S-nitrosylation. Science 1998; 279: 234-237.
101. Day BJ, Patel M, Calavetta L, Chang L-Y, Stamler JS. A mechanism of paraquat toxicity involving nitric oxide synthase. Proc Natl Acad Sci USA 1999; 96(22): 12760-12765.
102. Durner J, Gow AJ, Stamler JS, Glazebrook J. Ancient origins of nitric oxide signaling in biological systems. Proc Natl Acad Sci USA 1999; 96(25): 14206-14207.
103. Eu JP, Xu L, Stamler JS, Meissner G. Regulation of ryanodine receptors by reactive nitrogen species. Biochem Pharmacol 1999; 57: 1079-1084.
104. Gow AJ, Luchsinger BP, Pawloski JR, Singel D, Stamler JS. The oxyhemoglobin reaction of nitric oxide. Proc Natl Acad Sci USA, 1999; 96(16): 9027-9032.

105. Hare JM, Kass DA, Stamler JS. The physiological response to cardiovascular “orphan” G-protein-coupled receptor agonists. Nature Med 1999; 5(11): 1241-1242.
106. Hare JM, Stamler JS. NOS: Modulator, not mediator of cardiac performance. Nature Med 1999; 5(3): 273-274.
107. Hausladen A, Stamler JS. Nitrosative Stress. In: Methods in Enzymology, ed. L. Packer, Academic Press, 1999; 300(38): 389-395.
108. Jia L, Stamler JS. Dual actions of S-nitrosylated derivative of vasoactive intestinal peptide as a vasoactive intestinal peptide-like mediator and a nitric oxide carrier. Eur J Pharmacol 1999; 366: 79-86.
109. Kim W-K, Choi Y-B, Rayudu PV, Das P, Asaad W, Arnelle DR, Stamler JS, Lipton SA. Attenuation of NMDA receptor activity and neurotoxicity by nitroxyl anion (NO<sup>-</sup>). Neuron 1999; 24: 461-469.
110. Liu L, Stamler JS. NO: an inhibitor of cell death. Cell Death Differen 1999; 6: 937-942.
111. Liu L, Zeng M, Stamler JS. Hemoglobin induction in mouse macrophages. Proc Natl Acad Sci USA 1999; 96: 6643-6647.
112. Mannick JB, Stamler JS, Teng E, Simpson N, John L, Jordan J, Finberg RW. Nitric oxide modulates HIV-1 replication. J AIDS 1999; 22(1): 1-9.
113. Mannick JB, Hausladen A, Liu L, Hess DT, Zeng M, Miao QM, Kane LS, Gow A, Stamler JS. Fas-induced caspase denitrosylation. Science 1999; 284: 651-654.
114. Marshall HE, Stamler JS. Exhaled nitric oxide (NO), NO synthase activity, and regulation of nuclear factor (NF)- $\kappa$ B. Am J Respir Cell Mol Biol 1999; 21: 296-297.
115. McMahon T and Stamler JS. Concerted Nitric Oxide and Oxygen Delivery by Hemoglobin. In: Methods in Enzymology, ed. L. Packer, Academic Press, 1999; 301(11): 99-114.
116. Minning DM, Gow AJ, Bonaventura J, Braun R, Dewhirst M, Goldberg DE, Stamler JS. *Ascaris* hemoglobin is a nitric oxide-activated ‘deoxygenase’. Nature 1999; 401: 497-502.
117. Stamler JS. Nitric oxide in the cardiovascular system. Coronary Art Dis 1999; 5: 273-276.
118. Dewhirst MW, Tozer G, Wilson J, Rosner G, Lanzen J, Kaz A, Snyder S, Stamler JS. Modulation of tumour blood flow by nitric oxide. In: Moriarty M, Mothersill C, Seymour C, Edington M, Ward JF, Fry RJM, eds. Radiation Research, Vol. 2: Proceedings. Eleventh International Congress of Radiation Research, Dublin, Ireland, July 1999. Allen Press Inc: Lawrence, KS, ©2000; pp. 610-613.
119. Eu JP, Liu L, Zeng M, Stamler JS. An apoptotic model for nitrosative stress. Biochemistry 2000; 39(5): 1040-1047.
120. Eu JP, Sun J, Xu L, Stamler JS, Meissner G. The skeletal muscle calcium release channel: coupled O<sub>2</sub> sensor and NO signaling functions. Cell 2000; 102: 499-509.
121. Liu L, Zeng M, Hausladen A, Heitman J, Stamler JS. Protection from nitrosative stress by yeast flavohemoglobin. Proc Natl Acad Sci USA 2000; 97: 4672-4676.
122. Marshall HE, Stamler JS. NO waiting to exhale in asthma. Am J Crit Care Med 2000; 161: 1-3.
123. McMahon TJ, Stone AE, Bonaventura J, Singel DJ, Stamler JS. Functional coupling of oxygen binding and vasoactivity in S-nitrosohemoglobin. J Biol Chem 2000; 275: 16738-16745.



124. Bartberger MD, Houk KN, Powell SC, Mannion JD, Lo KY, Stamler JS, Toone EJ. Theory, spectroscopy, and crystallographic analysis of S-nitrosothiols. Conformational distribution dictates spectroscopic behavior. J Am Chem Soc 2000; 122: 5889-5890.
125. Marshall HE, Merchant K, Stamler JS. Nitrosation and oxidation in the regulation of gene expression. FASEB J 2000; 14: 1889-1900.
126. Bartberger MD, Mannion JD, Powell SC, Stamler JS, Houk KN, Toone EJ. S-N dissociation energies of S-nitrosothiols: on the origins of nitrosothiol decomposition rates. J Am Chem Soc 2001; 123: 8868-8869.
127. Hausladen A, Gow A, Stamler JS. Flavohemoglobin denitrosylase catalyses the reaction of a nitroxyl equivalent with molecular oxygen. Proc Natl Acad Sci USA 2001; 98(18): 10108-10112.
128. Hess DT, Matsumoto A, Nudelman R, Stamler JS. S-nitrosylation: spectrum and specificity. Nature Cell Biol 2001; 3: E46-E49.
129. Lai TS, Hausladen A, Slaughter TF, Eu JP, Stamler JS, Greenberg CS. Calcium regulates S-nitrosylation, denitrosylation, and activity of tissue transglutaminase. Biochemistry 2001; 40: 4904-4910.
130. Liu L, Hausladen A, Zeng M, Que L, Heitman J, Stamler JS. A metabolic enzyme for S-nitrosothiol conserved from bacteria to humans. Nature 2001; 410: 490-494.
131. Marshall H, Stamler JS. Inhibition of NFkB by S-nitrosylation. Biochemistry 2001; 40(6): 1688-1693.
132. Moya MP, Gow AJ, McMahan TJ, Toone EJ, Cheifetz IM, Goldberg RN, Stamler JS. S-nitrosothiol repletion by an inhaled gas regulates pulmonary function. Proc Natl Acad Sci USA 2001; 98: 5792-5797.
133. Pawloski JR, Hess DT, Stamler JS. Export by red blood cells of nitric oxide bioactivity. Nature 2001; 409: 622-626.
134. Qi W-N, Yan Z-Q, Whang PG, Zhou Q, Chen L-E, Seaber AV, Stamler JS, Urbaniak JR. Gene and protein expressions of nitric oxide synthases in ischemia/reperfused peripheral nerve of the rat. Am J Physiol 2001; 281: C849-856.
135. Stamler JS, Meissner G. Physiology of nitric oxide in the skeletal muscle. Physiol Rev 2001; 81: 209-237.
136. Stamler JS, Lamas S, Fang FC. Nitrosylation: the prototypic redox-based signaling mechanism. Cell 2001; 106: 675-683.
137. Sun J, Xu L, Eu JP, Stamler JS, Meissner G. Classes of thiols that influence the activity of the skeletal muscle calcium release channel (RyR1). J Biol Chem 2001; 276: 15625-15630.
138. Sun J, Xin C, Eu JP, Stamler JS, Meissner G. Cysteine 3635 is responsible for skeletal muscle ryanodine receptor modulation by NO. Proc Natl Acad Sci USA 2001; 98: 11158-11162.
139. Chen L-E, Liu K, Qi W-N, Joneschild E, Tan X, Seaber AV, Stamler JS, Urbaniak JR. Role of nitric oxide in vasodilation in upstream muscle during intermittent pneumatic compression. J Appl Physiol 2002; 92: 559-566.
140. Chen Z, Zhang J, Stamler JS. Identification of the enzymatic mechanism of nitroglycerin bioactivation. Proc Natl Acad Sci USA 2002; 99: 8306-8311.
141. Gow AJ, Chen Q, Hess DT, Ischiropoulos H, Stamler JS. Basal and stimulated protein S-nitrosylation in multiple cell types and tissues. J Biol Chem 2002; 277(12):9637-9640.

142. Kim SO, Merchant K, Nudelman R, Beyer WF Jr, Keng T, DeAngelo J, Hausladen A, Stamler JS. OxyR: a molecular code for redox-related signaling. Cell 2002; 109: 383-396.
143. Marshall HE, Stamler JS. Nitrosative stress-induced apoptosis through inhibition of NFκB. J Biol Chem 2002; 277(37): 34223-34228.
144. McMahon TJ, Moon RE, Carraway MS, Stone AE, Stolp BW, Gow AJ, Watke P, Singel DJ, Piantadosi CA, Stamler JS. Nitric oxide in the human respiratory cycle. Nature Med 2002; 8: 711-717.
145. Moya MP, Gow AJ, Califf RM, Goldberg RN, Stamler JS. Inhaled ethyl nitrite in persistent pulmonary hypertension of the newborn. Lancet 2002; 360: 141-143.
146. Nozik-Grayck E, McMahon T, Huang Y-CT, Dieterle CS, Stamler JS, and Piantadosi CA. Pulmonary vasoconstriction by serotonin is inhibited by S-nitrosoglutathione. Am J Physiol 2002; 282: L1057-L1065.
147. Pawloski JR, Stamler JS. Nitric oxide in red blood cells. Transfusion 2002; 42: 1603-1609.
148. Rao SV, Stamler JS. Erythropoietin, anemia, and orthostatic hypotension: the evidence mounts ... Clin Autonomic Res 2002; 12: 141-143.
149. Snyder AH, McPherson ME, Hunt JF, Johnson M, Stamler JS, Gaston B. Acute effects of aerosolized S-nitrosoglutathione in cystic fibrosis. Am J Respir Crit Care Med 2002; 165: 922-926.
150. Stamler JS, Moya MP, Gow AJ, Califf RM, Goldberg RN. Inhaled ethyl nitrite gas for persistent pulmonary hypertension in infants. Lancet 2002; 360: 2077.
151. Stamler JS, Toone EJ. The decomposition of thionitrites. Curr Opin Chem Biol 2002; 6: 779-785.
152. de Jesús-Berriós M, Liu L, Nussbaum JC, Cox GM, Stamler JS, Heitman J. Enzymes that counteract nitrosative stress promote fungal virulence. Curr Biol 2003; 13: 1963-1968.
153. Eu JP, Hare JM, Hess DT, Skaf M, Sun J, Cardenas-Navina I, Sun Q, Dewhirst M, Meissner G, Stamler JS. Concerted regulation of skeletal muscle contractility by oxygen tension and endogenous nitric oxide. Proc Natl Acad Sci USA 2003; 100(25): 15229-15234.
154. Foster MW, McMahon T, Stamler JS. S-nitrosylation in health and disease. Trends Mol Med 2003; 9(4): 160-168.
155. Houk KN, Hietbrink BN, Bartberger MD, McCarren PR, Choi BY, Voyksner RD, Stamler JS, Toone EJ. Nitrosyl disulfides, novel intermediates in transnitrosation reactions. J Am Chem Soc 2003; 125(23): 6972-6976.
156. Luchsinger BP, Rich EN, Gow AJ, Williams EM, Stamler JS, Singel DJ. Routes to S-nitroso-hemoglobin formation with heme redox and preferential reactivity in the β subunits. Proc Natl Acad Sci USA 2003; 100: 461-466.
157. Matalon S, Hardiman KM, Jain L, Eaton DC, Kotlikoff M, Eu JP, Sun J, Meissner G, Stamler JS. Regulation of ion channel structure and function by reactive oxygen-nitrogen species. Am J Physiol Lung Cell Mol Physiol 2003; 285: L1184-1189.
158. Matsumoto A, Comatas KE, Liu L, Stamler JS. Screening for nitric oxide-dependent protein-protein interactions. Science 2003; 301: 657-661.
159. McMahon TJ, Pawloski JR, Hess DT, Piantadosi CA, Luchsinger BP, Singel DJ, Stamler JS. S-nitrosohemoglobin is distinguished from other nitrosovasodilators by unique oxygen-dependent responses that support an allosteric mechanism of action. Blood 2003; 102: 410-411.

160. Parsa CJ, Matsumoto A, Kim J, Riel RU, Pascal LS, Walton GB, Thompson RB, Petrofski JA, Annex BH, Stamler JS, Koch WJ. A novel protective effect of erythropoietin in the infarcted heart. J Clin Invest 2003; 112: 999-1007.
161. Stamler JS. Hemoglobin and nitric oxide. N Engl J Med 2003; 349(4): 402.
162. Stamler JS, Taber RL, Califf RM. Translation of academic discovery into societal benefit: Proposal for a balanced approach – Part I. Am J Med 2003; 115: 596-598.
163. Stamler JS, Taber RL, Califf RM. Translation of academic discovery into societal benefit: Proposal for a balanced approach – Part II. Am J Med 2003; 115: 683-688.
164. Sun J, Xu L, Eu JP, Stamler JS, Meissner G. Nitric oxide, NOC-12 and S-nitrosoglutathione modulate the skeletal muscle release channel /ryanodine receptor by different mechanisms: An allosteric function for O<sub>2</sub> in S-nitrosylation of the channel. J Biol Chem 2003; 278(10): 8184-8189.
165. Zhang L, Looney CG, Qi W-N, Chen L-E, Seaber AV, Stamler JS, Urbaniak JR. Reperfusion injury is reduced in skeletal muscle by inhibition of inducible nitric oxide synthase. J Appl Physiol 2003; 94: 1473-1478.
166. Foster MW, Stamler JS. New insights into protein S-nitrosylation: mitochondria as a model system. J Biol Chem 2004; 279(24): 25891-25897.
167. Liu L, Yan Y, Zeng M, Zhang J, Hanes MA, Ahearn G, McMahon TJ, Dickfeld T, Marshall HE, Que LG, Stamler JS. Essential roles of S-nitrosothiols in vascular homeostasis and endotoxic shock. Cell 2004; 116: 617-628.
168. Marshall H, Hess DT, Stamler JS. S-nitrosylation: physiological regulation of NFκB. Proc Natl Acad Sci USA 2004; 101(24): 8841-8842.
169. Parsa CJ, Kim J, Riel RU, Pascal LS, Thompson RB, Petrofski JA, Matsumoto A, Stamler JS, Koch WJ. Cardioprotective effects of erythropoietin in the reperfused ischemic heart: a potential role for cardiac fibroblasts. J Biol Chem, 2004; 279(20): 20655-20662.
170. Rao SV, Jollis JG, Harrington RA, Granger CB, Newby LK, Armstrong PW, Moliterno DJ, Lindblad L, Pieper K, Topol EJ, Stamler JS, Califf RM. The relationship of blood transfusion and clinical outcomes in patients with acute coronary syndromes. JAMA 2004; 292(13): 1555-1562.
171. Singel DJ, Stamler JS. Blood traffic control. Nature 2004; 430: 297.
172. Stamler JS. S-nitrosothiols in the blood: roles, amounts, and methods of analysis. Circ Res 2004; 94: 414-417.
173. Sydow K, Daiber A, Oelze M, Chen Z, August M, Wendt M, Ullrich V, Mülsch A, Schultz E, Keaney JF Jr, Stamler JS, Münzel T. Central role of mitochondrial aldehyde dehydrogenase and reactive oxygen species: central role of mitochondria in nitrate tolerance. J Clin Invest 2004; 113: 482-489.
174. Uemura K, McClaine RJ, de la Fuente SG, Manson RJ, Campbell KA, McClaine DJ, White WD, Stamler JS, Eubanks WS, Reynolds JD. Maternal insufflation during the second trimester equivalent produces hypercarbia, acidosis, and prolonged hypoxia in fetal sheep. Anesthesiology 2004; 101(6): 1332-1338.
175. Zhang J, Chen Z, Cobb FR, Stamler JS. Role of mitochondrial aldehyde dehydrogenase in nitroglycerin-induced vasodilation of coronary and systemic vessels. Circulation 2004; 110: 750-755.
176. Ali NA, Eubanks WS, Stamler JS, Gow AJ, Lagoo-Deenadayalan SA, Villegas L, El-Moalem HE, Reynolds JD. A method to attenuate pneumoperitoneum-induced reductions in splanchnic blood flow. Ann Surg 2005; 241(2): 256-261.

177. Benhar M, Stamler JS. A central role for S-nitrosylation in apoptosis. Nature Cell Biol 2005; 7(7): 645-646.
178. Brandler MD, Powell SC, Craig DM, Quick G, McMahon TJ, Goldberg RN, Stamler JS. A novel organic nitrate that affects pulmonary vascular tone in a piglet model of hypoxia-induced pulmonary hypertension. Pediatr Res 2005; 58: 531-536.
179. Chen Z, Foster MW, Zhang J, Mao L, Rockman HA, Kawamoto T, Kitagawa K, Nakayama KI, Hess DT, Stamler JS. An essential role for mitochondrial aldehyde dehydrogenase in nitroglycerin bioactivation. Proc Natl Acad Sci USA 2005; 102(34): 12159-12164.
180. Foster MW, Pawloski JR, Singel DJ, Stamler JS. Role of circulating S-nitrosothiols in control of blood pressure. Hypertension 2005; 45: 15-17.
181. Hare JM, Stamler JS. NO/redox disequilibrium in the failing heart and cardiovascular system. J Clin Invest 2005; 115(3): 509-517.
182. Haridas V, Kim SO, Nishimura G, Hausladen A, Stamler JS, Gutterman JU. Avicinylation (thioesterification): A novel protein modification that can regulate the response to oxidative and nitrosative stress. Proc Natl Acad Sci USA 2005; 102(29): 10088-10093.
183. Hess DT, Matsumoto A, Kim SO, Marshall HE, Stamler JS. Protein S-nitrosylation: purview and parameters. Nature Rev Mol Cell Biol 2005; 6: 150-166.
184. Luchsinger BP, Rich EN, Yan Y, Williams EM, Stamler JS, Singel DJ. Assessment of the chemistry and vasodilatory activity of nitrite with hemoglobin under physiologically relevant conditions. J Inorg Biochem 2005; 99: 912-921.
185. McMahon TJ, Ahearn GS, Moya MP, Gow AJ, Huang YCT, Luchsinger BP, Nudelman R, Yan Y, Krichman AD, Bashore TM, Califf RM, Singel DJ, Piantadosi CA, Tapson VF, Stamler JS. A nitric oxide processing defect of red blood cells created by hypoxia: Deficiency of S-nitrosohemoglobin in pulmonary hypertension. Proc Natl Acad Sci USA 2005; 102(41): 14801-14806.
186. Pawloski JR, Hess DT, Stamler JS. Impaired vasodilation by red blood cells in sickle cell disease. Proc Natl Acad Sci USA 2005; 102(7): 2531-2536.
187. Que LG, Liu L, Yan Y, Whitehead GS, Gavett SH, Schwartz DA, Stamler JS. Protection from experimental asthma by an endogenous bronchodilator. Science 2005; 308: 1618-1621. PMID: PMC2128762
188. Rao SV, Harrington RA, Stamler JS, Califf RM. Response to letter to the editor from Rathore SS, Radford MJ, and Krumholz HM regarding the study "Relationship of blood transfusion and clinical outcome among patients with acute coronary syndromes". JAMA 2005.
189. Singel DJ, Stamler JS. Chemical physiology of blood flow regulation by red blood cells: role of nitric oxide and SNO-hemoglobin. Annu Rev Physiol 2005; 67: 19.1-19.46.
190. Sonveaux P, Kaz AM, Snyder SA, Richardson RA, Cárdenas-Navia LI, Braun RD, Pawloski JR, Tozer GM, Bonaventura J, McMahon TJ, Stamler JS, Dewhirst MW. Oxygen regulation of tumor perfusion by S-nitrosohemoglobin reveals a pressor activity of nitric oxide. Circ Res 2005; 96: 1119-1126.
191. Angelo M, Singel DJ, Stamler JS. An S-nitrosothiol (SNO) synthase function of hemoglobin that utilizes nitrite as a substrate. Proc Natl Acad Sci USA 2006; 103(22): 8366-8371.
192. Bang I-S, Liu L, Vazquez-Torres A, Crouch M-L, Stamler JS, Fang FC. Maintenance of nitric oxide and redox homeostasis by the *Salmonella* flavohemoglobin Hmp. J Biol Chem 2006; 281(38): 28039-28047.

193. Chen Z, Stamler JS. Bioactivation of nitroglycerin by the mitochondrial aldehyde dehydrogenase. Trends Cardiovasc Med 2006; 16(8): 259-265.
194. Forrester MT, Benhar M, Stamler JS. Nitrosative stress in the ER: a new role for S-nitrosylation in neurodegenerative diseases. ACS Chemical Biology 2006; 1(6): 355-358.
195. Foster MW, Hess DT, Stamler JS. S-nitrosylation TRIPs a calcium switch. Nature Chem Biol 2006; 2(11): 570-571.
196. Gaston BM, Doctor A, Singel DJ, Stamler JS. S-nitrosothiol signaling in respiratory biology. Am J Respir Crit Care Med 2006; 173: 1186-1193.
197. Nozik-Grayck E, Whalen EJ, Stamler JS, McMahon TJ, Chitano P, Piantadosi CA. S-nitrosoglutathione inhibits  $\alpha_1$ -adrenergic receptor-mediated vasoconstriction and ligand binding in pulmonary artery. Am J Physiol: Lung Cell Molec Physiol 2006; 290: L136-L143.
198. Wang G, Moniri NH, Ozawa K, Stamler JS, Daaka Y. Nitric oxide regulates endocytosis by S-nitrosylation of dynamin. Proc Natl Acad Sci USA 2006; 103(5): 1295-1300.
199. Wang Y, Eu J, Wachburn M, Gong T, Chen HS, Larrick JW, Lipton SA, Stamler JS, Went GT, Porter S. The pharmacology of aminoadamantane nitrates. Curr Alzheimer Res 2006; 3(3): 201-204.
200. Zaman K, Carraro S, Doherty J, Lendermon E, Verghese G, Shah V, Zigler M, Mendes F, Park E, Palmer LA, Doctor A, Stamler JS, Gaston B. S-nitrosylating agents: a novel class of compounds that increase cystic fibrosis transmembrane conductance regulator expression and maturation in epithelial cells. Mol Pharmacol 2006; 70: 1435-1442.
201. Auten RL, Mason SN, Whorton MH, Lampe WR, Foster WM, Goldberg RN, Li B, Stamler JS, Auten KM. Inhaled ethyl nitrite prevents hyperoxia-impaired postnatal alveolar development in newborn rats. Am J Respir Crit Care Med 2007; 176: 291-299. PMID: PMC1994219
202. Baccarani A, Yasui K, Olbrich KC, El-Sabbagh A, Kovach S, Follmar KE, Erdmann D, Levin LS, Stamler JS, Klitzman B, Zenn MR. Efficacy of ethyl nitrite in reversing surgical vasospasm. J Reconstr Microsurg 2007; 23(5): 257-262.
203. Diesen D, Stamler JS. S-Nitrosylation and PEGylation of hemoglobin: Toward a blood substitute that recapitulates blood. J Mol Cell Cardiology 2007; 42(5): 921-923.
204. Forrester MT, Foster MW, Stamler JS. Assessment and application of the biotin switch technique for examining protein S-nitrosylation under conditions of pharmacologically induced oxidative stress. J Biol Chem 2007; 282: 13977-13983.
205. Forrester MT, Stamler JS. A classification scheme for redox-based modification of proteins. Am J Respir Cell Mol Biol 2007; 36: 135-137.
206. Hausladen A, Rafikov R, Angelo M, Singel DJ, Nudler E, Stamler JS. Assessment of nitric oxide signals by triiodide chemiluminescence. Proc Natl Acad Sci USA 2007; 104(7): 2157-2162.
207. Kelleher Z, Matsumoto A, Stamler JS, Marshall HE. NOS2 regulation of NF- $\kappa$ B by S-nitrosylation of P65. J Biol Chem 2007; 282: 30667-30672.
208. Larson HN, Zhou J, Chen Z, Stamler JS, Weiner H, Hurley TD. Structural and functional consequences of coenzyme binding to the inactive Asian variant of mitochondrial aldehyde dehydrogenase: roles of residues 475 and 487. J Biol Chem 2007; 282(17): 12940-12950. PMID: PMC1885376
209. Reynolds JD, Ahearn GS, Angelo M, Zhang J, Cobb F, Stamler JS. S-nitrosohemoglobin deficiency: a mechanism for loss of physiological activity in banked blood. Proc Natl Acad Sci USA 2007; 104(43): 17058-17062. PMID: PMC2040473

210. Shah MK, Shimazutsu K, Uemura K, Takahashi T, Stamler JS, Reynolds JD. Inclusion of a S-nitrosylating agent in the insufflating gas does not alter gastric activity in rats following pneumoperitoneum. Surg Endosc 2007; 21(8): 1354-1358.
211. Whalen EJ, Foster MW, Matsumoto A, Ozawa K, Violin JD, Que LG, Benhar M, Keys JR, Koch WJ, Daaka Y, Lefkowitz RJ, Stamler JS. Regulation of  $\beta$ -adrenergic receptor signaling by S-nitrosylation of G protein-coupled receptor kinase 2. Cell 2007; 129(3): 511-522.
212. Angelo M, Hausladen A, Singel DJ, Stamler JS. Interactions of NO with hemoglobin: from microbes to man. In: Poole RK, ed. Methods in Enzymology: Globins and Other Nitric Oxide-Reactive Proteins 2008; 436: 131-168.
213. Benhar M, Forrester MT, Hess DT, Stamler JS. Regulated protein denitrosylation by cytosolic and mitochondrial thioredoxins. Science 2008; 320: 1050-1054. PMID: PMC2754768
214. Diesen DL, Hess DT, Stamler JS. Hypoxic vasodilation by red blood cells: evidence for an S-nitrosothiol-based signal. Circ Res 2008; 103(5): 545-553. PMID: PMC2763414
215. Hazarika S, Angelo M, Li Y, Aldrich AJ, Odronic SI, Yan Z, Stamler JS, Annex BH. Myocyte specific overexpression of myoglobin impairs angiogenesis following hind-limb ischemia. Arterioscler Thromb Vasc Biol 2008; 28(12): 2144-2150.
216. Janssen-Heininger YMW, Mossman BT, Heintz NH, Forman HJ, Kalyanaraman B, Finkel T, Stamler JS, Rhee SG, van der Vliet A. Redox-based regulation of signal transduction: principles, pitfalls, and promises. Free Radic Biol Med 2008; 45(1): 1-17. PMID: PMC2453533
217. Ozawa K, Whalen EJ, Nelson CD, Mu Y, Hess DT, Lefkowitz RJ, Stamler JS. S-nitrosylation of  $\beta$ -arrestin regulates  $\beta$ -adrenergic receptor trafficking. Molec Cell 2008; 31(3): 395-405. PMID: PMC2630185
218. Selvakumar B, Hess DT, Goldschmidt-Clermont PJ, Stamler JS. Co-regulation of constitutive nitric oxide synthases and NADPH oxidase by the small GTPase Rac. FEBS Lett 2008; 582: 2195-2202. PMID: PMC2519002
219. Stamler JS. Nitroglycerin-mediated S-nitrosylation of proteins: a field comes full cycle. Circ Res 2008; 103: 557-559. PMID: PMC2773022
220. Stamler JS, Singel DJ, Piantadosi CA. SNO-hemoglobin and hypoxic vasodilation. Nature Med 2008; 14: 1008-1009.
221. Stamler JS, Sun QA, Hess DT. A SNO storm in skeletal muscle. Cell 2008; 133: 33-35.
222. Sun J, Yamaguchi N, Eu JP, Stamler JS, Meissner G. Selective and specific modulation of cardiac muscle ryanodine receptor and sarcoplasmic reticulum  $\text{Ca}^{2+}$ -ATPase by  $\text{O}_2$  tension and S-nitrosoglutathione. Biochemistry 2008; 47(52): 13985-13990. PMID: PMC2636679
223. Yu Z, Li P, Zhang M, Hannink M, Stamler JS, Yan Z. Fiber type-specific nitric oxide protects oxidative myofibers against cachectic stimuli. PLoS One 2008; 3(5): e2086. doi:10.1371/journal.pone.0002086 (pgs 1-10). PMID: PMC2361191
224. Allen BW, Stamler JS, Piantadosi CA. Hemoglobin, nitric oxide, and molecular mechanisms of hypoxic vasodilation. Trends Molec Med 2009; 15(10): 452-460. PMID: PMC2785508
225. Benhar M, Forrester MT, Stamler JS. Protein denitrosylation: enzymatic mechanisms and cellular functions. Nat Rev Mol Cell Biol 2009; 10(10): 721-732.
226. Forrester MT, Foster MW, Benhar M, Stamler JS. Detection of protein S-nitrosylation with the biotin switch technique. Free Radical Biol Med 2009; 46(2): 119-126.

227. Forrester MT, Seth D, Hausladen A, Eyler CE, Foster MW, Matsumoto A, Benhar M, Marshall HE, Stamler JS. Thioredoxin interacting protein (Txnip) is a feedback regulator of S-nitrosylation. J Biol Chem 2009; 284: 36160-36166.
228. Forrester MT, Thompson JW, Foster MW, Nogueira L, Moseley MA, Stamler JS. Proteomic analysis of S-nitrosylation and denitrosylation by resin-assisted capture. Nature Biotechnol 2009; 27(6): 557-559. PMID: PMC2891235
229. Foster MW, Forrester MT, Stamler JS. A protein microarray-based analysis of S-nitrosylation. Proc Natl Acad Sci USA 2009; 106(45): 18948-18953. PMC: PMCID2776442
230. Foster MW, Hess DT, Stamler JS. Protein S-nitrosylation in health and disease: a current perspective. Trends Molec Med 2009; 15: 391-404.
231. Foster MW, Liu L, Zeng M, Hess DT, Stamler JS. A genetic analysis of nitrosative stress. Biochemistry 2009; 48: 792-799.
232. Gonzalez DR, Treuer A, Sun QA, Stamler JS, Hare JM. S-nitrosylation of cardiac ion channels. J Cardiovasc Pharmacol 2009; 54: 188-195.
233. Hess DT, Foster MW, Stamler JS. Assays for S-nitrosothiols and S-nitrosylated proteins and mechanistic insights into cardioprotection. Circulation 2009; 120: 190-193. PMID: PMC2879612
234. Lima B, Lam GK, Xie L, Diesen DL, Villamizar N, Nienaber J, Messina E, Bowles D, Kontos CD, Hare JM, Stamler JS, Rockman HA. Endogenous S-nitrosothiols protect against myocardial injury. Proc Natl Acad Sci USA 2009; 106(15): 6297-6302. PMID: PMC2669330
235. Marshall HE, Potts EN, Kelleher ZT, Stamler JS, Foster WM, Auten RL. Protection from lipopolysaccharide-induced lung injury by augmentation of airway S-nitrosothiols. Am J Respir Crit Care Med 2009; 180(1): 11-18. PMID: PMC2724715
236. Que LG, Yang Z, Stamler JS, Lugogo NL, Kraft M. S-nitrosogluthione reductase – an important regulator in human asthma. Am J Respir Crit Care Med 2009; 180(3): 226-231. PMID: PMC2724715
237. Schwab DE, Stamler JS, Singel DJ. Nitrite – methemoglobin inadequate for hypoxic vasodilation. Nature Chem Biol 2009; 5(6): 366.
238. Shimazutsu K, Uemura K, Auten KM, Baldwin MF, Belknap SW, LaBanca F, Jones MC, McClaine DJ, McClaine RJ, Eubanks WS, Stamler JS, Reynolds JD. Inclusion of a nitric oxide congener in the insufflation gas repletes S-nitrosohemoglobin and stabilizes physiologic status during prolonged carbon dioxide pneumoperitoneum. Clin Translational Sci 2009; 2: 405-412. PMID: PMC2895905
239. Xie L, Xiao K, Whalen EJ, Forrester MT, Freeman RS, Fong G, Gygi SP, Lefkowitz RJ, Stamler JS. Oxygen-regulated beta2-adrenergic receptor hydroxylation by EGLN3 and ubiquitylation by pVHL. Science Signaling 2009; 2(78): ra33. PMID: PMC2788937
240. Benhar M, Thompson J, Moseley M, Stamler JS. Identification of S-nitrosylated targets of thioredoxin using a quantitative proteomics approach. Biochemistry 2010; 49(32): 6963-6969.
241. Choudhry S, Que LG, Yang Z, Liu L, Eng C, Kim SO, Kumar G, Thyne S, Chapela R, Rodriguez-Santana JR, Rodriguez-Cintron W, Avila PC, Stamler JS, Burchard EG. GSNO reductase and  $\beta$ 2 adrenergic receptor gene-gene interaction: bronchodilator responsiveness to albuterol. Pharmacogenet Genomics 2010; 20(6): 351-358. PMID: PMC2883564
242. Hess DT, Stamler JS. Response to Meszaros: S-nitrosylation of the RyR in health and disease. Circ Res 2010; 107: e2-e3.

243. Lima B, Forrester MT, Hess DT, Stamler JS. S-nitrosylation in cardiovascular signaling. Circ Res 2010; 106(4): 633-646. Review. PMID: PMC2891248
244. Schwab DE, Stamler JS, Singel DJ. EPR spectroscopy of nitrite complexes of methemoglobin. Inorg Chem 2010; 49(14): 6330-6337.
245. Stamler JS, Hess DT. Nascent nitrosylases. Nat Cell Biol 2010; 12(11): 1024-1026.
246. Doctor A, Stamler JS. Nitric oxide transport in blood: a third gas in the respiratory cycle. Comprehensive Physiology (Handbook of Physiology), 2011: 541-568.
247. Eyler CE, Wu Q, Yan K, MacSwords JM, Chandler-Militello D, Misuraca KL, Lathia JD, Forrester MT, Lee J, Stamler JS, Goldman SA, Bredel M, McLendon RE, Sloan AE, Hjelmeland AB, Rich JN. Glioma stem cell proliferation and tumor growth is promoted by nitric oxide synthase-2. Cell 2011; 146(1): 53-66.
248. Forrester MT, Hess DT, Thompson JW, Hultman RC, Moseley MA, Stamler JS, Casey PJ. Site-specific analysis of protein S-acylation by resin-assisted capture. J Lipid Res 2011 52(2): 393-398.
249. Haldar SM, Stamler JS. S-nitrosylation at the interface of autophagy and disease. Mol Cell 2011; 43(1): 1-3.
250. Reynolds JD, Hess DT, Stamler JS. The transfusion problem: role of aberrant S-nitrosylation. Transfusion 2011; 51(4): 852-858.
251. Savidge TC, Urvil P, Oezguen N, Kausar A, Choudhury A, Acharya V, Pinchuk I, Torres AG, English RD, Wiktorowicz JE, Leoffelholz M, Kumar R, Shi L, Nie W, Feng H, Braun W, Herman B, Stamler JS, Pothoulakis C. Host S-nitrosylation inhibits clostridial small molecule-activated glucosylating toxins. Nature Med 2011; 17(9): 1136-1141.
252. Seth D, Stamler JS. The SNO-proteome: causation and classifications. Curr Opin Chem Biol 2011; 15(1): 129-136.
253. Sheng H, Reynolds JD, Auten RL, Demchenko IT, Piantadosi CA, Stamler JS, Warner DS. Pharmacologically augmented S-nitrosylated hemoglobin improves recovery from murine subarachnoid hemorrhage. Stroke 2011; 42(2): 471-476.
254. Sun QA, Hess DT, Nogueira L, Yong S, Boles DE, Eu J, Laurita KR, Meissner G, Stamler JS. Oxygen-coupled redox regulation of the skeletal muscle ryanodine receptor-Ca<sup>2+</sup> release channel by NADPH oxidase 4. Proc Natl Acad Sci USA 2011; 108: 16098-16103.
255. Anand P, Stamler JS. Enzymatic mechanisms regulating protein S-nitrosylation. J Mol Med 2012; 90: 233-244.
256. Beigi F, Gonzalez DR, Minhas KM, Sun Q-A, Foster MW, Khan SA, Treuer AV, Zheng M, Harrison RW, Saraiva RM, Stamler JS, Hare JM. Dynamic denitrosylation via S-nitrosoglutathione reductase regulates cardiovascular function. Proc Natl Acad Sci USA 2012; 109(11): 4314-4319.
257. Cutler MJ, Plummer BN, Wan X, Sun QA, Hess D, Liu H, Deschenes I, Rosenbaum DS, Stamler JS, Laurita KR. Aberrant S-nitrosylation mediates calcium-triggered ventricular arrhythmia in the intact heart. Proc Natl Acad Sci USA 2012; 109(44): 18186-18191.
258. Hausladen A, Stamler JS. Is the flavohemoglobin a nitric oxide dioxygenase? Free Radical Bio Med 2012; 53(5): 1209-1210.
259. Hess DT, Stamler JS. Regulation by S-nitrosylation of protein post-translational modification. J Biol Chem 2012; 287(7): 4411-4418.



260. Oezguen N, Power TD, Urvil P, Feng H, Pothoulakis C, Stamler JS, Braun W, Savidge TC. Clostridrial toxins: sensing a target in a hostile environment. Gut Microbes 2012; 3(1): 35-41.
261. Seth D, Hausladen A, Wang YJ, Stamler JS. Endogenous protein S-nitrosylation in E. coli: regulation by OxyR. Science 2012; 336(6080): 470-473.
262. Sharma N, Lu Y, Zhou G, Liao X, Kapil P, Anand P, Mahabeleshwar GH, Stamler JS, Jain MK. Myeloid Kruppel-like factor 4 deficiency augments atherogenesis in ApoE<sup>-/-</sup> mice -- Brief report. Arterioscler Thromb Vasc Biol 2012; 32(12): 2836-2838.
263. Stamler JS, Reynolds JD, Hess DT. Endocrine nitric oxide bioactivity and hypoxic vasodilation by inhaled nitric oxide. Circ Res 2012; 110(5): 652-654.
264. Sun QA, Hess DT, Wang B, Miyagi M, Stamler JS. Off-target thiol alkylation by the NADPH oxidase inhibitor 3-benzyl-7-(2-benzoxazolyl)thio-1,2,3-triazolo[4,5-d]pyrimidine (VAS2870). Free Radic Biol Med 2012; 52: 1897-1902.
265. Anand P, Hess DT, Stamler JS. Identifying single SNO sites with cardioprotection. Circ Res 2013; 113(7): 849-851.
266. Haldar S, Stamler JS. S-nitrosylation: integrator of cardiac performance and oxygen delivery. J Clin Invest 2013; 123: 101–110.
267. Hess DT, Stamler JS. Editorial for “Methods for Analysis of Nitric Oxide Signaling by S-nitrosylation”. Methods 2013; 62(2): 121-122.
268. Huang ZM, Gao E, Fonseca F, Hayashi H, Shang X, Hoffman NE, Chuprun JK, Tian X, Tilley DG, Madesh M, Lefer DJ, Stamler JS, Koch WJ. Convergence of G protein-coupled receptor and S-nitrosylation signaling determines the outcome of cardiac ischemic injury. Sci Signal 2013; 6(299): ra95.
269. Kumar V, Martin F, Hahn MG, Schaefer M, Stamler JS, Stasch JP, van den Akker F. Insights into BAY 60-2770 activation and S-nitrosylation-dependent desensitization of soluble guanylyl cyclase via crystal structures of homologous Nostoc H-NOX domain complexes. Biochemistry 2013; 52(20): 3601-3608.
270. Reddy YNV, Sundaram V, Stamler JS. An unusual case of peripartum pulmonary edema. Brit Med J (Case Reports) 2013 Sept 26; 2013.
271. Reynolds JD, Bennett KM, Cina AJ, Diesen DL, Henderson MB, Matto F, Plante A, Williamson RA, Zandinejad K, Demchenko IT, Hess D, Piantadosi CA, Stamler JS. S-nitrosylation therapy to improve oxygen delivery of banked blood. Proc Natl Acad Sci USA 2013; 110(28): 11529-11534.
272. Sips PY, Irie T, Zou L, Shinozaki S, Sakai M, Shimizu N, Nguyen R, Stamler JS, Chao W, Kaneki M, Ichinose F. Reduction of cardiomyocyte S-nitrosylation by S-nitrosoglutathione reductase protects against sepsis-induced myocardial depression. Am J Physiol – Heart Circ Physiol 2013; 304(8): H1134-H1146.
273. Stamler JS. Redox pioneer: Professor Stuart Lipton. Antioxid Redox Signal 2013; 19(8): 757-764.
274. Sun QA, Wang B, Miyagi M, Hess DT, Stamler JS. Oxygen-coupled redox regulation of the skeletal muscle ryanodine receptor/Ca<sup>2+</sup>-release channel (RyR1): sites and nature of oxidative modification. J Biol Chem 2013; 288: 22961-22971.
275. Yurcisin BM, Davison TE, Bibbs SM, Collins BH, Stamler JS, Reynolds JD. Repletion of S-nitrosohemoglobin improves organ function and physiologic status in swine following brain death. Ann Surg 2013; 257: 971-977.

276. Anand P, Hausladen A, Wang YJ, Zhang GF, Stomberski C, Brunengraber H, Hess DT, Stamler JS. Identification of S-nitrosoCoA reductases that regulate protein S-nitrosylation. Proc Natl Acad Sci USA 2014; 111(52): 18572-18577.
277. Chaube R, Hess DT, Wang YJ, Plummer B, Sun QA, Laurita K, Stamler JS. Regulation of the skeletal muscle ryanodine receptor/Ca<sup>2+</sup>-release channel RyR1 by S-palmitoylation. J Biol Chem 2014; 289(12): 8612-8619.
278. Cox AG, Saunders DC, Kelsey PB Jr., Conway AA, Tesmenitsky Y, Marchini JF, Brown KK, Stamler JS, Colagiovanni DB, Rosenthal GJ, Croce KJ, North TE, Goessling W. S-nitrosothiol signaling regulates liver development and improves outcome following toxic liver injury. Cell Reports 2014; 6(1): 56-69.
279. Shinozaki S, Chang K, Sakai M, Shimizu N, Yamada M, Tanaka T, Nakazawa H, Ichinose F, Yamada Y, Ishigami A, Ito H, Ouchi Y, Starr ME, Salto H, Shimokado K, Stamler JS, Kaneki M. Inflammatory stimuli induce inhibitory S-nitrosylation of the deacetylase SIRT1 to increase acetylation and activation of p53 and p65. Sci Signal 2014; 7(351): ra106, 1-12.
280. Wagner SJ, Glynn SA, Welniak LA, and the NHLBI Working Group on Strategies to Optimize Red Blood Cell Products. Research opportunities in optimizing storage of red blood cell products. Transfusion 2014; 54(2): 483-494.
281. Irie T, Sips PY, Kai S, Kida K, Ikeda K, Hirai S, Moazzami K, Jiramongkolchai P, Bloch DB, Doulias P-T, Armoundas AA, Kaneki M, Ischiropoulos H, Kranias E, Bloch KD, Stamler JS, Ichinose F. S-nitrosylation of calcium-handling proteins in cardiac adrenergic signaling and hypertrophy. Circ Res 2015; 117: 793-803.
282. Liao X, Zhang R, Lu Y, Prosdocimo DA, Sangwung P, Zhang L, Zhou G, Anand P, Lai L, Leone TC, Fujioka H, Ye F, Rosca MG, Hoppel CL, Schulze PC, Abel ED, Stamler JS, Kelly DP, Jain MK. Krüppel-like factor 4 is critical for transcriptional control of cardiac mitochondrial homeostasis. J Clin Invest 2015; 125(9): 3461-3476.
283. Seth D, Stamler JS. SNOs differ: Methodological and biological implications. Circ Res 2015; 117(10): 826-829.
284. Zhang R, Hess DT, Qian Z, Hausladen A, Fonseca F, Chaube R, Reynolds JD, Stamler JS. Hemoglobin  $\beta$ Cys93 is essential for cardiovascular function and integrated response to hypoxia. Proc Natl Acad Sci USA 2015; 112(20): 6425-6430.
285. Adachi N, Hess DT, McLaughlin P, Stamler JS. S-palmitoylation of a novel site in the  $\beta_2$ -adrenergic receptor associated with a novel intracellular itinerary. J Biol Chem 2016; 291(38): 20232-20246.
286. Benhar M, Shytaj L, Stamler JS, Savarino A. Dual targeting of the thioredoxin and glutathione systems in cancer and HIV. J Clin Invest 2016; 126(5): 1630-1639.
287. Ni C-L, Seth D, Fonseca FV, Wang L, Xiao TS, Gruber P, Sy M-S, Stamler JS, Tartakoff AM. Polyglutamine tract expansion increases S-nitrosylation of Huntingtin and Ataxin-1. PLoS One 2016; 11(9): e0163359.
288. Rizza S, Montagna C, Cardaci S, Maiani E, Di Gaicomo G, Sanchez-Quiles V, Blagoev B, Rasola A, De Zio D, Stamler JS, Cecconi F, Filomeni G. S-nitrosylation of the mitochondrial chaperone TRAP1 sensitizes hepatocellular carcinoma cells to inhibitors of succinate dehydrogenase. Cancer Res 2016; 76(14): 4170-4182.
289. Zhang R, Hess DT, Reynolds JD, Stamler JS. Hemoglobin S-nitrosylation plays an essential role in cardioprotection. J Clin Invest 2016; 126(12): 4654-4658.

290. Elphinstone RE, Besla R, Shikatani EA, Lu Z, Hausladen A, Davies M, Robbins CS, Husain M, Stamler JS, Kain KC. S-nitrosoglutathione reductase deficiency confers improved survival and neurological outcome in experimental cerebral malaria. Infect Immun 2017; 85(9): pii: e00371-17.
291. Kashyap VS, Lakin RO, Campos P, Allemang M, Kim A, Sarac TP, Hausladen A, Stamler JS. The LARGPAD trial: Phase IIA evaluation of L-arginine infusion in patients with peripheral arterial disease. J Vasc Surg. 2017; 66:187-194.
292. Lai TS, Lindberg RA, Zhou HL, Haroon ZA, Dewhirst MW, Hausladen A, Juang YL, Stamler JS, Greenberg CS. Endothelial cell-surface tissue transglutaminase inhibits neutrophil adhesion by binding and releasing nitric oxide. Sci Rep 2017; 7(1):16163.
293. Stamler JS, Reynolds JD, Hess DT. Conceptual and methodological barriers to assessing the role of red blood cell-derived, nitric oxide-based vasoactivity. (Letter to the Editor regarding article, Nitrite and S-nitrosohemoglobin exchange across the human cerebral and femoral circulation: relationship to basal and exercise blood flow responses to hypoxia). Circulation 2017; 135(24): e1135-e1136.
294. Hayashi H, Hess DT, Zhang R, Sugi K, Gao H, Tan BH, Bowles DE, Milano CA, Jain M, Koch WJ, Stamler JS. S-nitrosylation of  $\beta$ -arrestins biases receptor signaling and confers ligand independence. Mol Cell 2018; 70(3): 473-487.
295. Liao X, Shen Y, Zhang R, Sugi K, Vasudevan NT, Alaiti MA, Sweet DR, Zhou L, Qing Y, Gerson SL, Fu C, Wynshaw-Boris A, Hu R, Schwartz MA, Fujioka H, Hayashi H, Stamler JS, Jain MK. Distinct roles of resident and non-resident macrophages in non-ischemic cardiomyopathy. Proc Natl Acad Sci USA 2018; 115(20): E4661-4669.
296. Matto F, Kouretas P, Smith R, Ostrowsky J, Cina A, Hess D, Stamler JS, Reynolds JD. S-nitrosohemoglobin levels and patient outcome after transfusion during pediatric bypass surgery. Clin Transl Sci 2018; 11(2): 237-243.
297. Qian Q, Zhang Z, Orwig A, Chen S, Ding WX, Xu Y, Kunz RC, Lind NRL, Stamler JS, Yang L. S-nitrosoglutathione reductase dysfunction contributes to obesity-associated hepatic insulin resistance via regulating autophagy. Diabetes 2018; 67(2): 193-207.
298. Reynolds JD, Jenkins T, Matto F, Nazemian R, Farhan O, Morris N, Longphre JM, Hess DT, Moon RE, Piantadosi CA, Stamler JS. Pharmacologic targeting of red blood cells to improve tissue oxygenation. Clin Pharmacol Ther 2018; 104(3): 553-563.
299. Rizza S, Cardaci S, Montagna C, di Giacomo G, De Zio D, Bordi M, Maiani E, Campello S, Borreca A, Puca AA, Stamler JS, Cecconi F, Filomeni G. S-nitrosylation drives cell senescence and aging in mammals by controlling mitochondrial dynamics and mitophagy. Proc Natl Acad Sci USA 2018; 115(15): E3388-E3397.
300. Seth D, Hess DT, Hausladen A, Wang L, Wang YJ, Stamler JS. A multiplex enzymatic machinery for cellular protein S-nitrosylation. Mol Cell 2018; 69(3): 451-464.
301. Stomberski C, Hess DT, Stamler JS. Protein S-nitrosylation: Determinants of specificity and enzymatic regulation of S-nitrosothiol-based signaling. Antioxid Redox Signal 2019 30(10): 1331-1351.
302. Zhou H-L, Stomberski CT, Stamler JS. Cross talk between S-nitrosylation and phosphorylation involving kinases and nitrosylases. Circ Res 2018; 112(11): 1485-1487.
303. Hayashida K, Bagchi A, Miyazaki Y, Hirai S, Seth D, Silverman MG, Rezoagli E, Marutani E, Mori N, Magliocca A, Liu X, Berra L, Hindle AG, Donnino MW, Malhotra R, Bradley MO, Stamler JS, Ichinose F. Improvement in outcomes After cardiac arrest and resuscitation by inhibition of S-nitrosoglutathione reductase. Circulation 2019; 139(6): 815-827.

304. Reynolds JD, Premont RT, Stamler JS. Letter regarding “Hemoglobin  $\beta$ 93 cysteine is not required for export of nitric oxide bioactivity from the red blood cell.” Circulation 2019; 140(19): e758-e759.
305. Seth D, Hausladen A, Stamler JS. Anaerobic transcription by OxyR: A novel paradigm for nitrosative stress. Antiox Redox Signal 2019 Dec 3. doi: 10.1089/ars.2019.7921. [Epub ahead of print]
306. Seth P, Hsieh PN, Jamal S, Wang L, Gygi SP, Jain MK, Collier J, Stamler JS. Regulation of microRNA machinery and development by interspecies S-nitrosylation. Cell 2019; 176(5): 1014-1025.
307. Stomberski CT, Anand P, Venetos NM, Hausladen A, Zhou HL, Premont RT, and Stamler JS. AKR1A1 is a novel mammalian S-nitroso-glutathione reductase. J Biol Chem 2019; 294(48): 18285-18293.
308. Stomberski C, Hess DT, Stamler JS. Protein S-nitrosylation: Determinants of specificity and enzymatic regulation of S-nitrosothiol-based signaling. Antioxid Redox Signal 2019; 30(10): 1331-1351.
309. Stomberski CT, Zhou H-L, Wang L, van den Akker F, Stamler JS. Molecular recognition of S-nitrosothiol substrate by its cognate protein denitrosylase. J Biol Chem 2019; 294(5): 1568-1578.
310. Zhou HL, Zhang R, Anand P, Stomberski CT, Qian Z, Hausladen A, Wang L, Rhee EP, Parikh SM, Karumanchi SA, Stamler JS. Metabolic reprogramming by the S-nitroso-CoA reductase system protects against kidney injury. Nature 2019; 565(7759): 95-100.
311. Premont RT, Reynolds JD, Zhang R, Stamler JS. Role of nitric oxide carried by hemoglobin in cardiovascular physiology. Developments on a three-gas respiratory cycle. Circ Res 2020 126(1): 129-158.
312. Premont R, Stamler JS. Essential role of hemoglobin  $\beta$ Cys93 in cardiovascular physiology. Physiology 2020, 35(4):234-243.
313. Cirotti C, Rizza S, Giglio P, Poerio N, Allega MF, Claps G, Pecorari C, Lee J-H, Benassi B, Barilà D, Robert C, Stamler JS, Cecconi F, Fraziano M, Paull TT, Filomeni G. Redox activation of ATM enhances GSNOR translation to sustain mitophagy and tolerance to oxidative stress. EMBO Rep 2021; 22(1): e50500.
314. Grimmitt ZW, Venetos NM, Premont RT, Stamler JS. GSNOR regulates cardiomyocyte differentiation and maturation through protein S-nitrosylation. J Cardiovasc Aging 2021; 1:16.
315. Pophal M, Grimmitt ZW, Chu C, Margevicius S, Raffay T, Ross K, Jafri A, Giddings O, Stamler JS, Gaston B, Reynolds JD. Airway thiol-NO adducts as determinants of exhaled NO. Antioxidants (Basel) 2021 Sep 26;10(10):1527. doi: 10.3390/antiox10101527.
316. Premont R, Reynolds J, Zhang R, Stamler JS. Red blood cell-mediated S-nitrosohemoglobin-dependent vasodilation: lessons learned from a beta-globin Cys93 knock-in mouse. Antioxid Redox Signal 2021; 34(12): 936-961.
317. Seth P, Premont RT, Stamler JS. An optimized protocol for isolation of S-nitrosylated proteins from *C. elegans*. STAR Protoc 2021; 2(2): 100547.
318. Shin MK, Vázquez-Rosa E, Koh Y, Dhar M, Chaubey K, Cintrón-Perez CJ, Barker S, Miller E, Franke K, Noterman MF, Seth D, Allen RS, Motz CT, Rao SR, Skelton LA, Pardue MT, Fliesler SJ, Wang C, Tracy TE, Gan Li, Liebl DJ, Savarraj JPI, Torres GL, Abnstedt H, McCullough LD, Kitagawa RS, Choi HA, Zhang P, Hou Y, Chiang CW, Li L, Cheng F, Ortiz F, Kilgore JA, Williams NS, Whitehair VC, Gefen T, Flanagan ME, Stamler JS, Jain MK, Kraus A, Cheng F, Reynolds JD, Pieper AA. Reducing acetylated tau is neuroprotective in brain injury. Cell 2021; 184(10): 2715-2732.

319. Zhu L, Qureshi A, Awad M, Hausladen A, Perez-Protto S, Latifi SQ, Lebovitz DJ, Chavin K, Stamler JS, Reynolds JD. A novel method to improve perfusion of *Ex Vivo* pumped human kidneys. Ann Surg 2021; 274(6): e610-615.
320. Fonseca FV, Raffay TM, Xiao K, McLaughlin PJ, Qian Z, Grimmett ZW, Adachi N, Wang B, Hausladen A, Cobb BA, Zhang R, Hess DT, Gaston B, Lambert NA, Reynolds JD, Premont RT, Stamler JS. S-nitrosylation is required for  $\beta_2$ AR desensitization and experimental asthma. Mol Cell 2022; 82(16): 3089-3102.
321. Hancock JT, Russell G, Craig TJ, May J, Morse HR, Stamler JS. Understanding Hydrogen: lessons to be learned from physical interactions between the inert gases and the globin superfamily. Oxygen 2022; 2: 578-590.
322. Hausladen A, Qian Z, Zhang R, Premont RT, Stamler JS. Optimized S-nitrosohemoglobin synthesis in red blood cells to preserve hypoxic vasodilation via  $\beta$ Cys93. J Pharmacol Exp Ther. 2022; 382(1): 1-10.
323. Nazemian R, Matta M, Aldamouk A, Zhu L, Awad M, Pophal M, Palmer NR, Armes T, Hausladen A, Stamler JS, Reynolds JD. S-nitrosylated hemoglobin predicts organ yield in neurologically-diseased human donors. Sci Reports 2022; 12: 6639.
324. Premont RT, Singel DJ, Stamler JS. The enzymatic function of the honorary enzyme: S-nitrosylation of hemoglobin in physiology and medicine. Mol Aspects Med 2022; 84: 101056.
325. Stomberski CT, Venetos NM, Zhou H-L, Qian Z, Collison BR, Field SJ, Premont RT, Stamler JS. A multienzyme S-nitrosylation cascade regulates cholesterol homeostasis. Cell Reports 2022; 44: 111538.
326. Zhang R, Hausladen A, Qian Z, Liao X, Premont RT, Stamler JS. Hypoxic vasodilatory defect and pulmonary hypertension in mice lacking hemoglobin  $\beta$ -cysteine93 S-nitrosylation. JCI Insight 2022; 7(3): e155234.
327. Zhou HL, Premont RT, Stamler JS. The manifold roles of protein S-nitrosylation in the life of insulin. Nature Reviews Endocrinology 2022; 18(2): 111-128.
328. Reynolds JD, Posina K, Zhu L, Jenkins T, Matto F, Hausladen A, Kashyape V, Schilz R, Zhang R, Mannick J, Klickstein L, Premont RT, Stamler JS. Control of tissue oxygenation by S-nitrosohemoglobin in human subjects. Proc Natl Acad Sci USA 2023; 120(9): e2220769120.
329. Zhou H-L, Hausladen A, Anand P, Rajavel M, Stomberski C, Zhang R, Premont R, Greenlee W, van den Akker F, Stamler JS. Identification of a selective SCoR2 inhibitor that protects against acute kidney injury. J Med Chem 2023; 66(8): 5657-5668.
330. Seth D, Stomberski CT, McLaughlin PJ, Premont RT, Lundberg K, Stamler JS. Comparison of the nitric oxide synthase interactomes and S-nitroso-proteomes: Furthering the case for enzymatic S-nitrosylation. Antioxid Redox Signal 2023. doi: 10.1089/ars.2022.0199. Online ahead of print. PMID: 37053107
331. Seth P, Premont RT, Stamler JS. Protocol for preparing Thiopropyl-Sepharose resin used for capturing S-nitrosylated proteins. STAR-Protocols 2023, in press.

### **Book Chapters:**

1. Stamler JS, Dzau VJ, Loscalzo J. The vascular smooth muscle cell. In: Loscalzo J, Creager MA, Dzau VJ, eds. Textbook of Vascular Medicine. Little, Brown and Company, Boston, 1992, pp 79-132.
2. Stamler JS, Dzau VJ, Loscalzo J. The vascular smooth muscle cell: In: Loscalzo J, Creager MA, Dzau VJ, eds. Textbook of Vascular Medicine (2nd Edition), Little, Brown and Company, Boston 1994.

3. Kim W-K, Stamler JS, Lipton SA. Redox congeners of nitric oxide, N-methyl-D-aspartate receptor, and intracellular calcium ion. In: Maines MD, ed. Nitric Oxide Synthase: Characterization and Functional Analysis. Methods in Neurosciences, Volume 31 Academic Press, 1996, 27: 309-318.
4. Arnelle D, Stamler JS. Detection of hydroxylamine. In: Feelish M, Stamler JS, eds. Methods in Nitric Oxide Research. John Wiley and Sons, Ltd, London, 1996.
5. Feelish M, Stamler JS. NO-donor compounds: Classification. In: Feelish M, Stamler JS, eds. Methods in Nitric Oxide Research. John Wiley and Sons, Ltd, London, 1996.
6. Feelish M, Stamler JS. Approaches problems and pitfalls in dealings with NO. In: Feelish M, Stamler JS, eds. Methods in Nitric Oxide Research. John Wiley and Sons, Ltd, London, 1996.
7. Gaston B, Kobzik L, Stamler JS. Distribution of nitric oxide synthase in the lung. In: Zapol WM, Bloch KD, eds. Nitric Oxide in the Lung: (Lung Biology in Health and Disease) Marcel Dekker, 1996.
8. Kim W-K, Stamler JS, Lipton SA. Redox congeners of nitric oxide, the NMDA receptor, and intracellular Ca<sup>2+</sup>. In: Maines MD, ed. Nitric Oxide, Methods in Neurosciences, Vol 31, 1996.
9. Lipton SA, Singel DJ, Stamler JS. Redox-activated states of nitric oxide determine neuronal protection versus neuronal injury. In: Nitric Oxide - Roles in Neuronal Communication and Neurotoxicity. CRC Press, Inc, 1996.
10. Lipton SA, Kim W-K, Stamler JS. Neuroprotective and neuropathologic effects of nitric oxide: Role of the NMDA receptor. In: Packer L, Hiramatsu M, Yoshikawa T, eds. Free Radicals in Brain Physiology and Disorders. Academic Press, Orlando; 1996, pp 71-82.
11. Stamler JS, Feelish M. The biochemistry of nitric oxide and related-redox species. In: Feelish M, Stamler JS, eds. Methods in Nitric Oxide Research. John Wiley and Sons, Ltd, London, 1996.
12. Stamler JS, Feelish M. Detection of S-nitrosothiols. In: Feelish M, Stamler JS, eds. Methods in Nitric Oxide Research. John Wiley and Sons, Ltd, London 1996.
13. Stamler JS, Slivka A. Biochemistry and pathobiology of homocysteine in blood vessels. International Conference on Homocysteine Metabolism: From Basic Science to Clinical Medicine. Kluwer Academic Publishers, 1996.
14. Gaston B, Stamler JS. Nitrogen oxides. In: Crystal RG, West JB, Weibel E, Barnes P, eds. The Lung: Scientific Foundation (Second Edition). Lippincott-Raven Publishers, Philadelphia, PA, 1996.
15. Stamler JS, Weibel E, Barnes P. Nitric oxide-related signaling. In: Mechanisms of Signal Transduction, American Thoracic Society, Postgraduate Course 1, 1996.
16. Gaston B, Kobzik L, Stamler JS. Distribution of nitric oxide synthase in the lung. In: Zapol WM, Bloch KD, eds. Lung Biology in Health and Disease. 1997.
17. Lipton S, Stamler JS. Neuronal injury or protection by nitric oxide-related species. In: Bar PR, Flint Beal M, eds. Neuroprotection in CNS Diseases. Marcel Dekker, Inc, 1997.
18. Stamler JS, Slivka A. Biological chemistry of thiols and role of homocysteine in vascular-related disease. In: Graham I, Refsum I, Rosenberg IH, Ueland PM, eds. International Conference on Homocysteine Metabolism: From Basic Science to Clinical Medicine. Kluwer Academic Publishers, 1997, pp. 211-222.
19. Hausladen A, Stamler JS. Resistance factors for nitrosative and oxidative stress. In: Moncada S, Nistico G, Bagetta G, Higgs EA, eds. Nitric Oxide and the Cell. Portland Press, 1998, pp 41-45.

20. Gaston B, Stamler JS. Biochemistry of nitric oxide. In: Fang FC, ed. Nitric Oxide and Infection. Springer-Verlag New York LLC; 1999, pp. 37-53.
21. Gow AJ, McMahon TJ, Stamler JS. Novel nitric oxide and hemoglobin reactions. In: Moncada S, Toda H, Higgs AH, eds. Biology of Nitric Oxide. Portland Press, Colchester, UK; 1999.
22. McMahon T, Stamler JS. Hemoglobin-bound nitric oxide participates in the mammalian respiratory cycle. In: Panza JA, Cannon RO, eds. Endothelium, Nitric Oxide, and Atherosclerosis. Futura Publishing Co Inc., Armonk, NY; 1999, pp. 57-63.
23. Stamler JS. Overview. Nitric oxide in the cardiovascular system. In: Stamler JS, ed. Coronary Artery Disease – Review In Depth. Kluwer Academic and Lippincott-Raven, 1999; 10(5):273-276.
24. Stamler JS. Nitrosative stress: a novel adaptive response. Proceedings of the Conference on “Advances in Molecular Medicine”, Pamplona, Spain, November, 1999. pp. 59-64.
25. Mannick J, Hausladen A, Liu L, Hess D, Zeng Ming, Miao Q, Kane L, Gow A, Stamler J. Caspase denitrosylation during Fas-induced apoptosis. In: Moncada S, Gustafsson LE, Wiklund NP, Higgs EA, eds. Biology of Nitric Oxide Part 7: Proceedings of the 6<sup>th</sup> International Meeting on the Biology of Nitric Oxide, Stockholm, Sweden, September 1999. Portland Press, Colchester, UK; 2000.
26. McMahon TJ, Gow AJ, Stamler JS. The respiratory cycle: a 3-gas system. In: Ignarro L, ed. Nitric Oxide Biology and Pathobiology. Academic Press, San Diego; 2000, pp. 243-249.
27. Stamler JS, Gow AJ, Hausladen A. Molecular evolution of hemoglobin driven by its NO-related functions. In: Moncada S, Gustafsson LE, Wiklund NP, Higgs EA, eds. Biology of Nitric Oxide Part 7: Proceedings of the 6<sup>th</sup> International Meeting on the Biology of Nitric Oxide, Stockholm, Sweden, September 1999. Portland Press, Colchester, UK; 2000.
28. Gow AJ, Cobb F, Stamler JS. Homocysteine, nitric oxide, and nitrosothiols. In: Carmel R, Jacobsen DW, ed. Homocysteine in Health and Disease. Cambridge University Press; 2001.
29. Marshall HE, Que LG, Stamler JS, Gaston B. S-nitrosothiols in lung inflammation. In: Eissa NT, Huston DP, eds. Therapeutic Targets of Airway Inflammation, Vol. 177. Lung Biology in Health and Disease Series. Marcel Dekker Inc, New York, NY; 2003.
30. Meissner G, Stamler JS. Modulation of ryanodine receptors by redox active molecules. In: Wehrens XHT, Marks AR, eds. Ryanodine Receptors: Structure, Function and Dysfunction in Clinical Disease. Developments in Cardiovascular Medicine Series. Springer-Verlag New York LLC; 2004.
31. Luchsinger BP, Walter ED, Lee LJ, Stamler JS, Singel DJ. EPR studies of the chemical dynamics of NO and hemoglobin interactions. In: Berliner L, ed. Biological Magnetic Resonance; 2007.
32. Stamler JS, Telen MJ. Functions of blood group antigens. In: Provan D, Gribben J, eds; Molecular Hematology, 3<sup>rd</sup> edition; Wiley-Blackwell, 2010, Chapter 22.
33. Stamler JS, Telen M. Functions of blood group antigens. In: Molecular Hematology, 4<sup>th</sup> edition; Wiley-Blackwell, 2019, Chapter 21
34. Stamler JS, Telen M, Carla Dinardo. Functions of blood group antigens. In: Molecular Hematology, 5<sup>th</sup> edition; Wiley-Blackwell, 2023 in press

**Journals:**

1. Stamler JS, editor. Coronary Artery Disease -- Review In Depth. Nitric oxide in the cardiovascular system. Kluwer Academic and Lippincott-Raven, 1999; 10(5).

2. Stamler JS, Hess DT, editors. Methods. Methods for Analysis of Nitric Oxide Signalling by S-Nitrosylation. Elsevier, 2013; 62(2).

**Books:**

1. Feelisch M, Stamler JS, editors. Methods in Nitric Oxide Research. John Wiley & Sons, LTD. 1996.
2. Moncada S, Stamler JS, Gross S, Higgs A, editors. Biology of Nitric Oxide, Part Five. Portland Press, 1996.
3. Stamler JS, Mato JM, Lamas S. Workshop on Regulation of Protein Function by Nitric Oxide. Instituto Juan March de Estudios e Investigaciones. Centro de Reuniones Internacionales Sobre Biología 123, May 2001.