

JULY 2016

CURRICULUM VITAE

BIOGRAPHICAL

Name Bruce R. Pitt

Birthplace New York, NY

Citizenship U.S.A.

Business Address Department of Environmental and Occupational Health
University of Pittsburgh Graduate School of Public Health
Pittsburgh, PA 15219

Telephone:
(412) 624-8400

EDUCATION AND TRAINING

Undergraduate

1966 - 1970 Brown University Providence, RI B.A. Human Biology

Graduate

1971 - 1972 Dept.Env. Health Sci. The Johns Hopkins Univ. Baltimore, MD M.H.S. Environ.Hlth.Sci.

1973 - 1977 Dept.Env. Health Sci. The Johns Hopkins Univ. Baltimore, MD Ph.D. Environ. Physiology

APPOINTMENTS AND POSITIONS

2000 – Present Professor and Chairman
Department of Environmental and Occupational Health
The Graduate School Public Health

	University of Pittsburgh Pittsburgh, PA
2002 – Present	Professor Department of Bioengineering School of Engineering University of Pittsburgh Pittsburgh, PA
1991 - Present	Professor Department of Pharmacology and Chemical Biology University of Pittsburgh School of Medicine Pittsburgh, PA
1987 - 1991	Associate Professor Departments of Pharmacology and Anesthesiology University of Pittsburgh School of Medicine Pittsburgh, PA
1985 - 1987	Associate Professor Departments of Anesthesiology and Pediatrics Yale University School of Medicine, New Haven, CT
1981 - 1985	Assistant Professor Department of Anesthesiology Yale University School of Medicine, New Haven, CT
1979 - 1981	Research Associate Department of Surgery Yale University School of Medicine, New Haven, CT
1977 - 1978	Postdoctoral Fellow Institute of Environmental Medicine New York University Medical Center, New York, NY

MEMBERSHIPS IN PROFESSIONAL AND SCIENTIFIC SOCIETIES

American Heart Association
 American Physiological Society
 American Society for Pharmacology and Experimental Therapeutics
 American Thoracic Society
 Perinatal Research Society
 Society of Pediatric Research
 Society Critical Care Medicine
 Oxygen Society
 International Society Zinc Biology

HONORS AND AWARDS

1982 - 1985	New Investigators Research Award, National Institute of Health, Heart, Lung and Blood Institute
1982 - 1985	Parker B. Francis Fellow in Pulmonary Research
1986 - 1991	Established Investigator, American Heart Association
1989 - 1992	Glaxo Cardiovascular Discovery Program
1994 - 1999	Editorial Board, <i>American Journal of Physiology: Lung Cell Molecular Physiology</i>
1998 - 2010	Editorial Board, <i>General Pharmacology</i>
2001 –2009	Editorial Board, <i>Laboratory Investigation</i>
1999- 2011	Associate Editor, <i>American Journal Physiology: Lung Cell Mol Physiol</i>
2000- 2004	Chairman, Respiration Section, American Physiological Society
2000- 2002	Chairman, NIH Lung Biology Pathology Study Section
2000- 2005,2008	California Tobacco Related Disease Program Pulmonary Study Section, Chairman (2002-2005; 2008)
2005 - 2009	Member, NIH HLBI Program Project Review
2004 – Present	Editorial Board, <i>American Journal Respiratory Cell Mol Biology</i>
2001- 2011	MERIT Award, NIH HLBI

PROFESSIONAL ACTIVITIES

Teaching Trainees	Current Position
2015 – present	Jing Chang, MD Anesthesiologist, Shanghai China
2015 – present	Yueeng Xia, MD Anesthesiologist, Xiang Ya, China
2012 – present	Justin Buland, D.O. Assistant Professor Pediatrics University Pittsburgh Sch Med
2008 – present	Murat Kaynar, MD Associate Professor Critical Care Medicine University Pittsburgh Sch Med
2002 – Present	Li-Ming Zhang, M.D. Associate Professor Dept. Anesthesiology University of Pittsburgh Sch Med
2007 – 2014	Hui-Hua Li, MD, PhD Research Associate, Division Pulmonary Allergy Critical Care Med, Univ Pittsburgh School Med

2006 – 2012	Kalidasan Thambiayya, PhD	Postdoctoral Fellow Medicine University of Chicago
2004 – 2008	Rong Cao, PhD	Associate Professor Chemistry Community College Allegheny County, Pittsburgh PA
2002 – 2004	Karanee Leelavanichkul	Masters student Bioengineering Dept. Environmental Occup.Hlth University of Pittsburgh Graduate School Public Health
2002 – 2005	MaiHua Bo	Research assistant Dept. Surgery University Pittsburgh Sch Medicine
2003 – 2008	Molly Stitt, PhD	Environmental Health Sci Specialist Environmental Health Sciences University Pittsburgh Pittsburgh, PA
2001- 2004	Annette Wilson, Ph.D.	Research Associate Division Gastroenterology University Pittsburgh School Med
1998- 2002	Ziu-Le Tang, M.D.	Kaiser Permenant, Napa, CA
1999- 2002	Claudette St. Croix, Ph.D.	Associate Professor Dept. Environmental Occ Hlth University of Pittsburgh GSPH
1997 – 2002	Linda Pearce, Ph.D.	Research Assistant Professor Dept. Environmental Occup. Hlth Univ. Pittsburgh Grad.Sch.Pub.Hlth
2001- 2002	Wan Huang, Ph.D.	Postdoctoral fellow Dept. Medicine, University of Pittsburgh Sch Med
1997 - 1999	Raphael Villavicencio,M.D.	Resident Dept. Medicine Indiana University Sch. Med.

1996 - 1998	Jamal Razzack, M.D.	Postdoctoral Fellow Division of Pulmonary Medicine University of Pittsburgh
1996 – 1998	Jeffrey Erukhimov, M.D.	Clin. Asst. Professor, Division of Pulmonary Med University of Pittsburgh
1995 - 1996	Gail Deutsch, M.D.	Associate Professor Department of Pathology Childrens Hospital University of Washington Seattle, WA
1994 - 1996	Gary Geneviva, M.D.	Assistant Professor Division Pediatric Critical Care Hershey Medical Center
1994 - 1996	Emily Yee, M.D.	Clin. Asst. Prof. Division Pulmonary Medicine University of Pittsburgh
1993 - 1996	Robert Mannix, Ph.D.	Research associate Harvard University Medical School Boston, MA
1993 – 1995	Hector Wong, M.D.	Professor of Pediatrics, Director of Pediatric Intensive Care Children's Hospital of Cincinnati Cincinnati, OH
1992 - 1994	Margaret Schwarz, M.D. American Heart Assoc.	Professor Department of Pediatrics Critical Care Medicine University Indiana School Medicine South Bend, IN
1990 - 1991	Monalisa Mitra, Ph.D. Glaxo Cardiovascular Discovery Program	Research Associate Southwestern Medical Center Dallas, TX
1990 - 1991	MaryAnn DeMichele, Ph.D NIH HLBI Post-doctoral	Assistant Professor Department of Biology Carlow College Pittsburgh, PA
1990 - 1991	Arthur Atlas, M.D. American Lung Assoc.	Clinical Asst. Professor Columbia University

New York, NY

1988 - 1991	Weili, Weng, M.D. Southwest Pennsylvania American Heart Assoc. Fellow	Associate Professor Department of Anesthesiol. The Johns Hopkins University Baltimore, MD
1986 - 1987	Christina Meyers, Ph.D. NIH-HLBI Postdoctoral Fellowship	Department of Pharmacology Boehring Ingleheim Ridgefield, CT
1986 - 1987	Joaquim Pinheiro, M.D. NIH-HLBI Postdoctoral Fellowship	Professor Department of Pediatrics Albany Medical College Albany, NY
1981 - 1982	James Flink, M.D. NIH-HLBI Postdoctoral Fellowship	Clinical Asst Professor Dept. of Medicine University of Minnesota St. Paul, MN

UNIVERSITY COMMITTEES

1. Vice-chairman, Department of Pharmacology 1987-2000
2. Director of Education, Medical Pharmacology 1987-1993; 1997-1998
3. Chairman, University of Pittsburgh School of Medicine, Standing Committee for Tenure and Promotion 1997-1999
4. University of Pittsburgh, Internal Review, Department of Biological Sciences, 1997
5. Research Advisory Committee, Childrens Hospital Pittsburgh, 1992- 2002
5. Search committee, Division of Pulmonary Allergy Critical Care Medicine
6. Search committee, Dept. Bioengineering
7. Director, Summer Medical Student Research Fellowship Program 1996-1999
8. Ad hoc committee, Medical School admissions interview 1998-2001
9. Member, Magee-Womens Research Institute Advisory Committee, 2001-present
10. Member, McGowan Institute for Regenerative Medicine, Feb 2002 – present
11. Member, Medical Scientist Training Program (MD/Ph.D) University of Pittsburgh School of Medicine (Sept 2002 – present)
12. Search committee (Chairman), Chairman Department Pharmacology, University of Pittsburgh School of Medicine (July 2004 – present)
13. Member, University of Pittsburgh Technology Transfer Committee
14. Member, Health Sciences Research Advisory Committee
15. Search committee (Chairman), Chair Department Human Genetics, University of Pittsburgh Grad School Public Health
16. Search committee, Chief Pulmonary Medicine, University of Pittsburgh School Medicine
17. Search committee, Director, Magee Womens Research Institute

NATIONAL COMMITTEES

1. Chairman, Pulmonary Circulation Section, American Thoracic Society, 1991.
2. Member, Publication Policy Committee, American Thoracic Society, 1991 - 1993.
3. Long Range Planning Committee, American Thoracic Society, 1994 - 1996; 1998-1999.
4. Chairman, Program Committee, Respiratory Molecular Cell Biology, American Thoracic Society, 1998.
4. Member, Research Review Committee, American Lung Association, 1986 - 1990.
5. Member, VA Merit Review, Respiration, 1991 - 1994.
6. Lung Biology Pathology Study Section, Ad-hoc, NIH, 1993 - 1995.
7. Respiratory and Applied Physiology Study Section, Ad-hoc, NIH, 1993 - 1997.
8. Program Project Review Committee, Heart-Lung Interactions, NIH, 1992.
9. NIH Advisory Committee, Southwest Foundation, Biomedical Research. 1995-1999
10. NIH Special Emphasis Board, Pulmonary Vascular Biology, 1995.
11. NIH Special Emphasis, Bone Marrow Transplant and Lung Injury, 1995.
12. NIH Special Emphasis, Bronchopulmonary Dysplasia, 1994.
13. American Lung Association Fellowship Review, 1995-1998, member, co-chairman, 1998.
14. NIH SCOR Lung Development and Pathobiology, 1996
15. NIH Special Emphasis, Cystic Fibrosis, 1996
16. NIH Fellowship Review, Physiological Sciences 1996
17. NIH Special Emphasis, Metabolism 1997
18. NIH SCOR Acute Lung Injury, 1997
19. American Heart Association, Lung and Development Review member, 1996-1998
20. NIH Lung Biology and Pathology, Member, 1998-2002
21. March of Dimes Ad hoc reviewer, 1999-2000
22. BSF, United States-Israeli International Science Foundation, Ad hoc reviewer 2000
23. American Physiological Society, Reviewer Giles Filley Award Respiration, 2000-present
24. External Advisory Board, University of Pennsylvania SCOR Acute Lung Injury
25. California Tobacco-Related Disease Research Program, Pulmonary Disease Study Section, 2000-present, Chairman 2002
26. NIH RFA Intermittent Hypoxia, 2000
27. Chairman-elect, Respiration Section, American Physiological Society
28. Chairman, NIH Lung Biology Pathology Study Section, Oct 2000 -
29. Scientific Advisory Board, iNOTherapeutics, Clinton, NJ
30. Adhoc member, promotions committee, Pulmonary Pathology Branch, NIEHS, RTP, NC
31. Ad hoc reviewer, Alice Hamilton Award for Excellence Occupational Safety Health
32. Member, Special study section, NIH Alcohol Toxicology, Oct 2002
33. NIH HLBI SPARKS II, Jan 2003
34. Member, Special study section, NIH Respiratory Applied Physiology, Feb 2003
35. Member, Board Review, Pulmonary Pathobiology NIEHS, Aug 2003
36. Ad hoc reviewer, Kentucky Science and Engineering Foundation, Aug 2003
37. Member, Parker B. Francis Foundation Pulmonary Research Advisory Group
38. External Advisory Board, Case Western Cystic Fibrosis Center, April 2004
39. Ad hoc member, NIH Fellowship Review Pulmonary, Cardiovascular and Exercise March 2004
40. Ad hoc member, NIH PO1 HL60678 (Signaling Endothelial Permeability Lung Vascular Injury) Jun 2004
41. Member, NIH HLBI Program Project Review Committee, 2005 – 2009
42. External Advisory Committee, Chemical Counteract, National Jewish Hospital, Denver CO 2007-

43. External Advisory Committee, T32 Training Program in Pulmonary Research, Harvard School Public Health
44. External Advisory Committee, Institute Vascular Biology, Medical College Georgia
45. External Advisory Committee, Department Environmental Health Sciences, UAB School Public Health
46. External Advisory Committee, University of California at Davis, T32
47. External Advisory Committee, University of Rochester, T32
48. Ad hoc reviewer, NIH KO8 HLBI 2009-present
49. Scientific Advisory Committee, Gilead (Pharmaceuticals) Sciences Research Scholars Program in Pulmonary Arterial Hypertension, 2011-present
50. Ad hoc reviewer, NIH HLBI PO1 University Arizona Oct 2014
51. Scientific Advisory Committee, Southwest Pennsylvania Environmental Health Project

RESEARCH - CURRENT GRANTS

ACTIVE:

Ongoing Research Support

RO1 NIH GM108639 09/30/2014 – 09/30/2018

(PI: Li-Ming Zhang; co-PI: BR Pitt)

WISP1 and TLR4 in ventilator induced lung injury.

This proposal will determine the role of innate immunity and interactions of the matrikine, Wnt inducible signaling protein-1 (WISP1) with toll receptors and ventilation induced acute lung injury.

RO1 NIH HL126711 04/01/15 – 03/31/20

(PI: Murat Kaynar; co-PI: BR Pitt)

Combined viral and bacterial infection and zinc homeostasis in distal lung

This proposal will determine the mechanism by which hypozincemia, by diet or during aging, sensitizes mice to the combined effect of H1N1 influenza and s. aureus infection, including impaired human alveolar macrophage function and enhanced injury to alveolar type II cells.

PO1 HL114453 (Mallampalli) 01/01/2014 – 12/31/2018

NIH Cardiolipin as a novel mediator of acute lung injury. The goal of this program project is to address biosynthesis, translocation and mechanisms of signaling of cardiolipin (CL) in bacterial pneumonia models and as it enters the extracellular environment and causes severe adverse consequences in innate immune responses linked to acute lung injury. BR Pitt, Co investigator on Project 1 Regulation of cardiolipin biosynthesis in epithelial injury (PI: Mallampalli) and Project 2 (Intra- and extra-cellular signaling by cardiolipin in lung injury (PI: Kagan)

Recently Completed

Heinz Endowments

04/01/10 – 12/31/14

(PI: BR Pitt)

Center Healthy Environment Community

This grant supports research efforts in assessing public health impact of unconventional natural gas drilling in Southwest Pennsylvania. In particular, links between hydrofracturing in Marcellus Shale basin and perinatal outcomes are being pursued by epidemiological and environmental exposure approaches

R21 ES021068 (Pitt;Kagan)

04/01/12 – 03/31/14

NIH Imaging mass spectrometry for oxidized lipidomics in acute lung injury. The goal of this proposal is to developing imaging mass spectrometry techniques for in situ identification, quantitation and anatomic location of phospholipids and oxidized phospholipids in the lung during experimental models of acute lung injury in mouse.

UPMC Initiative Personalized Medicine

07/01/12 – 06/30/2014

(PI: BR Pitt)

Zinc as a complement to vaccination for influenza in aging mouse. The goal of this study is to determine if zinc repletion in aging affects the course and pathogenesis of experimental influenza infection in mice and improves response to vaccination to influenza in aging mice.

RO1 HL070755 (Kagan)

07/01/08 - 06/30/13

NIH Oxidative lipidomics of pulmonary endothelial apoptosis in hyperoxia. The goal of this proposal is to determine the molecular role of cardiolipin-induced peroxidase activity of cytochrome c in pulmonary endothelial apoptosis in hyperoxi mouse lung and the molecular role of oxidized anionic phospholipids in signal transduction pathway of pulmonary endothelial apoptosis including scavenging of apoptotic pulmonary endothelium by macrophages.

U01 NS063732-01 (Peterson)

07/01/08 – 06/30/11

NIH Acute Cyanide Toxicity, Complex IV, NO, & Nitrite. The proposed research will establish the biochemical mechanism through which NO counteracts the inhibition of isolated cytochrome *c* oxidase by HCN; elucidate the mechanisms that account for the interactions between cytochrome *c* oxidase, HCN, molecular oxygen (O₂) and NO, or sodium nitrite in mitochondria and demonstrate in animals the efficacy of NO and NO-releasing compounds, including sodium nitrite, in the treatment of acute cyanide intoxication.

RO1 HL094488 (Kagan)

07/01/09 – 06/30/11

NIH

Irradiation Damage and Protection of Pulmonary Endothelium: Oxidative Lipidomics

The goal of this proposal is to determine the molecular role of cardiolipin-induced peroxidase activity of cytochrome *c* in pulmonary endothelial cell apoptosis in mouse after lung irradiation; 2) the molecular role of oxidized anionic phospholipids in the signal transduction pathway of pulmonary endothelial cell apoptosis including scavenging of apoptotic pulmonary endothelium by macrophages; 3) the therapeutic potential of hemigramicidin-4-amino-2,2,6,6-tetramethylpiperidine-N-oxyl, XJB-5-131, and peroxidase-activatable nitric oxide donor, 2-hydroxyamino-vinyl-triphenyl-phosphonium, HVTP, - two types of

mitochondria targeted antioxidants/ inhibitors of cytochrome c/cardiolipin peroxidase - in preventing pulmonary endothelial cell cardiolipin oxidation, apoptosis and favorably affecting the course of lung injury and delayed fibrosis after lung irradiation.

R37 HL065697-05 (Pitt)

07/01/05 – 06/30/11

NIH/NHLBI Zinc Homeostasis and Pulmonary Endothelial Cell Injury. The overall goal of this grant is to determine the mechanism by which nitric oxide mediated changes in zinc homeostasis affect pulmonary endothelial cell function including sensitivity and resistance to apoptotic and necrotic stimuli.

R01 HL085134-03A1 (Bauer)

09/26/07 – 07/31/12

0.6 Cal.

Months

NIH Role of Caveolin-1 and eNOS in Mediating the Therapeutic Effects of CO in PAH. This application focuses on the mechanism by which carbon monoxide (CO) exerts its therapeutic actions in a murine model of experimental pulmonary hypertension. The research will test the hypothesis that CO inhalation therapy exerts its beneficial effects on preclinical models of PAH by modulating the expression and interaction of caveolin-1 and endothelial nitric oxide synthase.

R01 ES014701-01A2 (Sheng)

12/14/07 – 11/30/12

0.6 Cal. Months

NIH Epithelial Sodium Channels and Pulmonary Toxicity of Zinc. The goal of this project is to determine the effects of zinc on ENaC activity and its impact on periciliary liquid (PCL) height, mucociliary transport (MCT) and ciliary beat frequency (CBF) in primary cultures of human bronchial epithelium (HBE); to determine the effects of zinc on ENaC activity in a heterologous expression system; and to identify the molecular mechanism by which zinc activates ENaC.

R25 ES016148-01 (Pitt)

01/01/08 – 11/30/12

0.3 Cal.

Months

NIH University of Pittsburgh: Short-Term Educational Experiences for Research (PITT-STEER). The overall goal of the University of Pittsburgh Short-Term Educational Experience for Research (PITT-STEER) in the Environmental Health Sciences for High School and Undergraduate Students is to encourage entry of students into careers in biomedical research and environmental health sciences.

INVITED SPEAKER

1. Dept. Environmental Health, University of Cincinnati School of Medicine, Cincinnati, OH Aug 1976
2. Institute of Environmental Medicine, New York University School of Medicine, New York, NY August 1976
3. Dept. Physiology, Howard University School of Medicine, Washington, DC Mar 1978
4. NIH Workshop, "Arachidonic acid metabolism and the pulmonary circulation". Bethesda, MD. September, 1982.
5. American Society Pharmacology and Experimental Therapeutics Symposium, "Consequences of

- pulmonary accumulation of drugs". Annual Meeting FASEB, Chicago, IL. April, 1983.
6. Warner-Lambert Parke-Davis Company, Ann Arbor, MI. October, 1983.
 7. Department of Pulmonary Medicine, The Medical College of Georgia, Augusta, GA. October, 1983.
 8. Department of Anesthesia and Critical Care Medicine, The Johns Hopkins University School of Medicine, Baltimore, MD. February, 1984.
 9. Department of Physiology, Brown University School of Medicine, Providence, RI. October, 1984.
 10. Department of Pharmacology, Albany Medical College, Albany, NY. November, 1985.
 11. Department of Medicine, University of Alberta, Edmonton, Canada. December, 1985.
 12. Department of Medicine, State University of New York at Stonybrook, Stonybrook, NY. December, 1985.
 13. Biomedical Engineering Society, St. Louis, MO. April, 1986.
 14. FASEB Conference, Pulmonary Pharmacology and Pathology, Saxons River, VT. July, 1986.
 15. Stuart Pharmaceuticals, Wilmington, DE. July, 1986.
 16. Department of Physiology, New York Medical College, Valhalla, NY. February, 1987.
 17. Department of Medicine, Columbia University College of Physicians and Surgeons, New York, NY. February, 1988.
 18. Department of Physiology, Brown University, School of Medicine, Providence, RI. March, 1989.
 19. American Heart Association Annual Meeting, Established Investigators Conference, New Orleans, LA. November, 1989.
 20. Glaxo Inc., Research Triangle Park, NC. August, 1989.
 21. Department of Anesthesiology, Medical College of Wisconsin, Milwaukee, WI. February, 1990.
 22. NATO ASI, Vascular Endothelium, Corfu, Greece. June, 1990.
 23. Pulmonary endothelium and mucus secreting cells, Torino, Italy. February, 1991.
 24. Department of Medicine, University of Medical Dentistry of New Jersey, New Brunswick, NJ. April, 1991.

25. Department of Pediatrics, University of Utah School of Medicine, Salt Lake City, UT. October, 1991.
26. Glaxo Inc., Research Triangle Park, NC. March, 1992.
27. Grover Conference, Pulmonary Circulation, Dekker, CO. October, 1992.
28. NIH HLBI Workshop, Rockville, MD. September, 1993.
29. Department of Pediatrics, Winthrop University Hospital, Mineola, NY. January, 1994.
30. Western Society Clinical Research, Carmel CA. February, 1994.
31. Department of Medicine, Vanderbilt University School of Medicine, Nashville TN. March, 1994.
32. Department of Pathology, University of Utah School of Medicine, Salt Lake City, UT. April, 1994.
33. Western Society Pediatrics, Cedar City, UT. July, 1994.
34. Institute Environmental Medicine, University of Pennsylvania School of Medicine, Philadelphia, PA. September, 1994.
35. Department of Pediatrics, Washington University School of Medicine, St. Louis, MO. September, 1994.
36. John B. Pierce Foundation, Yale University School of Medicine, New Haven, CT. January, 1995.
37. Special Emphasis Panel, NIH HLBI, Pulmonary Vascular Disease, Bethesda, MD. February, 1995.
38. Department of Anesthesiology, University of Alabama School of Medicine, Birmingham, AL. May, 1995.
39. American Thoracic Society, Seattle, WA. May, 1995.
40. New Jersey Thoracic Society, New Brunswick, NJ, June 1995.
41. Department of Pediatrics, University of Kansas Medical Center, August 1995.
42. Department of Physiology, Medical College of Wisconsin, Milwaukee, WI October 1995
43. Oxygen Society, Pasadena, CA, November, 1995.
44. Keystone Conference on Oxidants, Sante Fe, New Mexico Jan 1996
45. Childrens Hospital of St. Louis, Washington University School of Medicine, St. Louis, MO,

- March 1996
46. Department of Pharmacology, Medical College of Georgia, Augusta, GA March 1996.
 47. Experimental Biology, Washington, DC April 1996
 48. American Thoracic Society, New Orleans, LA May 1996.
 49. Division of Pulmonary Medicine, Brown University School of Medicine, Providence RI September 1996
 50. Department of Pharmacology, West Virginia University School of Medicine, Morgantown, WV October 1996
 51. Children's Hospital of Michigan, Wayne State University School of Medicine, Detroit, MI October 1996
 52. Oxygen Society, Miami Beach, FL Nov 1996
 53. Dept. Chemistry, The Ohio State University, Columbus, OH April 1997.
 54. International Meeting Reactive Oxygen/Nitrogen Radicals and Cellular Injury, Durham NC Sept. 1997
 55. Dept. Molecular Physiology, Hershey Medical Center, Penn St. University, Hershey, PA Nov 1997
 56. Association American Medical Pharmacology Chairmans Meeting, Sea Island, GA Feb 1998
 57. Departments of Anesthesiology and Pharmacology, University of Illinois, Chicago, IL Apr 98
 58. Perinatal Research Center, University of Alberta, Edmonton, CA, May 1998
 59. Dept. Anesthesiology, The Johns Hopkins University Sch.Med., Balt, MD Jun 1998
 60. Dept. Environmental Medicine, University of Rochester School of Medicine and Dentistry., Rochester, NY Jun 1998
 61. FASEB Summer Conference, Renal Hemodynamics, Saxtons River, VT Jun 1998
 62. Division Pulmonary Medicine, The Johns Hopkins University School of Medicine, Balt, MD Aug 1998
 63. III Intl Symposium, In utero stem cell transplantation and gene therapy. Portland, OR Sept 1998
 64. FASEB Endothelial cell conference, Augusta GA Sept 1998
 65. John B. Pierce Foundation, New Haven, CT Oct 1998

66. Metal protein interactions in biology, Banff, Alberta, Canada Oct 1998
67. Division Pulmonary Medicine, Indiana University School Medicine, Indianapolis, IN Oct 1998
68. NIH Conference: Zinc and Health, Bethesda, MD Nov 1998
69. Department of Medicine, Tufts University New England Medical Center, Boston, MA Nov 1998
70. University of California at Davis, Davis, CA Nov 1998
71. Stanford Research Institute, Palo Alto, CA Nov 1998
72. Department of Pediatrics, Yale University School of Medicine, December, 1998
73. Biogen Corp, Cambridge, MA January 1999
74. Department of Medicine, University of Southern California, Los Angeles, CA March 1999
75. Department of Chemistry, Ohio State University, Columbus, OH May 1999
76. Kennametal Incorporated, Latrobe, PA Jul 1999
77. Department of Pathology, University of Vermont Medical College, Burlington, VT Sept 1999
78. Environmental Protection Agency, Chapel Hill, NC Oct 1999
79. Oxygen Club of California, Santa Barbara CA Mar 2000
80. Institute Environmental Medicine, University of Pennsylvania, Philadelphia, PA Mar 2000
81. Experimental Biology, San Diego, CA Mar 2000
82. American Thoracic Society, Toronto, Canada May 2000
83. National Institutes of Environmental Health Science, Research Triangle Park, NC July 2000
84. Duke University, CIIT and EPA, Durham, NC Oct 2000
85. Heart-Lung Institute, The Ohio State University School Medicine, Columbus, OH Nov 2000
86. NIEHS Extramural Branch, Pinehurst, NC Dec 2000
87. Dept. Biophysics, Medical College Wisconsin, Milwaukee, WI Jan 2001
88. Center Environmental Health Sciences, UMDNJ, Piscataway, NJ Feb 2001
89. Division Pulmonary Medicine, University of Iowa Medical College, Iowa City, IO Mar 2001
90. Seventh International Meeting, Toxic Combustion Byproducts, RTP, NC Jun 2001

91. Department Environmental Health Sciences, Harvard University School Public Health, Boston, MA Oct 2001
92. Dept. Pharmacology, University of Illinois School Medicine, Chicago, IL Nov 2001
93. National Institutes Occupational Safety Health, Morgantown, WV Dec 2001
94. Dept. Medicine, Vanderbilt University School Medicine, Nashville, TN March 2002
95. 11th Annual Harold and Marilyn Menkes Memorial Lecture, The Johns Hopkins University, Baltimore, MD March 2002
96. Federation American Society Experimental Biology, Experimental Biology Annual Meeting, Workshop on imaging; Symposium Oxidative Stress and Vascular Wall, New Orleans, LA April 2002
97. Dept. Molecular Biology and Biochemistry, West Virginia University, Morgantown, WV, April 2002
98. Dept. Pharmacology, University of Southern Alabama, Mobile, Alabama April 2002
99. 3rd International Conference Oxidative and Nitrosative Stress, Morgantown WV, Jun 2002
100. International Conference, Reactive Oxygen and Nitrogen Species, St. Petersburg, Russia, Jul 2002
101. Department Anesthesiology, University of Alabama at Birmingham School Medicine, Birmingham, AL, Jul 2002
102. Whitaker Foundation Biomedical Engineering Annual Research Grant Conference, LaJolla, CA Aug 2000
103. Grovers Conference Pulmonary Circulation, Dekkers, Colorado Sept 2002
104. Stanford University Childrens Hospital, Dec 2002
105. Advisory committee, Tobacco Related Disease Program, San Jose, CA Dec 2002
106. Advisory committee, NIH HLBI Sparks II, Bethesda, MD Jan 2003
107. Center for Vascular Biology, Medical College Georgia, Augusta, GA Feb 2003
108. Division Cardiology, Albert Einstein Medical College, New York, NY Feb 2003
109. Grover Conference Pulmonary Circulation, Dekkers Colorado Sept 2004
110. Center Environmental Health, University of Arizona, Tucson, AZ Oct 2004

111. Department Pharmaceutical Sciences, School Pharmacy, University of Colorado, Nov 2004
112. UCLA Biolaboratories, Division Neonatology, Torrance, CA Feb 2005
113. Center Environmental Health Sciences, University of Montana, Missoula, MO April 2005
114. Postgraduate Course, Grant Writing, American Thoracic Society, San Diego, CA May 2005
115. Fifth International Meeting Metallothionein, Beijing, China, Oct 2005
116. Xiangsha Medical College, University South Central China, Changsha, China, Oct 2005
117. Institute Clinical Pharmacology, Xiangsha Medical College, Changsha, China Oct 2005
118. Department Bioengineering, University of Pennsylvania School Medicine, November 2005
119. Department Chemistry, Duquense University, December 2005
120. Symposium, Endothelium and Inflammation, American Thoracic Society, San Diego CA May 2006
121. Nitric Oxide Society, Monterey CA Jun 2006
122. Lovelace Respiratory Research Foundation, Albuquerque, NM Jan 2007
123. Division Pulmonary Allergy Critical Care Medicine, Tufts University – New England Medical Center, March 2007
124. Division Pulmonary Medicine, University of California at Davis, October 2007
125. Center Free Radical Biochemistry, University of Alabama at Birmingham, Oct 2007
126. National Jewish Hospital, Denver CO Nov 2007
127. Visiting Pulmonary Scholar, Duke University, University North Carolina, North Carolina State University and NIEHS Research Triangle Park, NC Nov 2007
128. Giessen, Germany, July 2008
129. Chemical Countermeasures, Albuquerque, NM Nov 2008
130. Respiration Section, American Physiological Society, New Orleans, LA April 2009
131. Davis Heart Lung Institute, The Ohio State University, Columbus, OH Jun 2009
132. International Society Zinc Biology, Plenary Lecture, Jerusalem, Israel Dec 2009
133. Division Environmental Medicine, University Rochester School Medicine and Dentistry, Dec 2009

134. Department Environmental Health Sciences, The Johns Hopkins School Public Health, Baltimore, MD Jan 2010
135. Division Pulmonary Medicine, Brown University Providence RI Apr 2010
136. Department Environmental Health Sciences, The Johns Hopkins Bloomberg School Public Health, Baltimore, MD Sept 2010
137. Department Pediatrics, West Virginia University, Morgantown WV Apr 2010
138. International Society Zinc Biology, Melbourne, Australia Jan 2012
139. Allegheny County Council, Pittsburgh, PA May 2014
140. University Pittsburgh Science Day, Pittsburgh, PA Oct 2014
141. Division Pulmonary Medicine, University Arizona School Medicine, Jan 2015
142. American Bar Association, Section Municipal and Government Law, Philadelphia PA Apr 2015
143. Health Effects of Hydrofracking. League of Women Voters. Pittsburgh, PA Nov 2015
143. Division Nephrology, Department Medicine, University of Edmonton School Medicine, Edmonton, Alberta CA Jun 2016
144. Health and Shale Gas Development: State of the Science. Southwest Pennsylvania Environmental Health Project Conference. Jun 2016.

RESEARCH INTERESTS

1. Molecular pharmacology of pulmonary circulation.
2. Zinc homeostasis in vascular endothelium
3. Phospholipids and pulmonary endothelium.
4. Nitric oxide in lung biology
5. Health Effects Unconventional Natural Gas Drilling

PUBLICATIONS

Refereed Articles

1. Pitt, B.R., Radford, E.P., Gurtner, G.G. and Traystman, R.J. Interaction of carbon monoxide and cyanide on cerebral circulation and metabolism. *Arch. Environ. Hlth.* 34:354-359, 1979.
2. Pitt, B.R., Gillis, C.N. and Hammond, G.L. Influence of the lung on arterial levels of endogenous prostaglandins E and F. *J. Appl. Physiol.* 50:1161-1167, 1981.
3. Yeates, D.B., Pitt, B.R., Karron, G. and Albert, R.E. Coordination of mucociliary transport in the human trachea and lung. *J. Appl. Physiol.* 51:1057-1064, 1981.
4. Yeates, D.B., Spekter, D.M., Leikauf, G.M. and Pitt, B.R. Effect of drugs on mucociliary transport in the trachea and bronchial airways. *Chest* 80:870-873, 1981.
5. Altieri, R.J., Pitt, B.R. and Gillis, C.N. Separation of prostaglandin E1 from its major metabolites: application of the technique to measure first-pass clearance of PGE1 in the pulmonary and cerebral circulations of the anesthetized dog. *Biochem. Pharmacol.* 30:2953-2961, 1981.
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