

January, 2011

CURRICULUM VITAE

MICHAEL PETER HLASTALA

Personal:

Born: Uniontown, PA, June 1, 1944
Married: Margaret Bjornson, 2 children

Education:

State University of New York at Buffalo
Ph.D., Physiology, June 1969

University of Washington
B.S., Physics, June 1966

Postgraduate Training:

Postdoctoral Fellow 3/1970 - 11/1970
University of Washington

Faculty Positions:

Professor of Bioengineering
10/2009 - present

Professor Emeritus of Physiology and Biophysics and of Medicine
6/2009 - present

Professor of Physiology and Biophysics and of Medicine
7/1982 – 6//2009
University of Washington

Adjunct Professor of Bioengineering
5/1986 – 6/2009
University of Washington

Visiting Scientist, 7/1979 - 6/1980
Abteilung Physiologie, Max Planck Institut für experimentelle Medizin,
Göttingen, Federal Republic of Germany

Associate Professor of Physiology and Biophysics and of Medicine
7/1977 - 6/1982
University of Washington

Assistant Professor of Physiology and Biophysics and of Medicine
11/1974 - 6/1977
University of Washington

Research Assistant Professor of Medicine

1/1973 - 10/1974

University of Washington

Acting Instructor of Medicine

11/1970 - 12/1972

University of Washington

Other Professional Experience:

The Boeing Co., Seattle, WA

Senior Human Engineering Analyst, 9/1969-4/1970

Student Engineer, 6/1963 - 8/1966

Secondary Appointments

Consultant, University Hospital, 10/1973 - 9/1994

Associate Director, Pulmonary Function Lab, 10/1973 - 9/1987

Director of Research, Division of Pulmonary and Critical Care Medicine, 7/1986 - 12/1993

Associate Director for Physiological Research, Division of Pulmonary and Critical Care Medicine, 1/1994-2009

Research Affiliate, Regional Primate Research Center, 2/1989 - 2009

Honors:

Phi Beta Kappa

Pi Mu Epsilon

Phi Eta Sigma

Finalist, Mission Specialist Astronaut Selection, NASA, 1977

USPHS Research Career Development Award, 1976 - 1981

John Simon Guggenheim Fellow, 1979 - 1980

National Heart Lung and Blood Institute MERIT Award, 1986

Science in Medicine Lecture, University of Washington, April, 1991

Doctor of Medicine honoris causa (MD h.c. Linköping)

Linköping University, Sweden, May, 1992

Listed in "Book of Honors", Fundamental Library, St. Petersburg State of Medical University I.I. Pavlov, St. Petersburg, Russia

Professional Organizations:

Aerospace Medical Association – past member

American Heart Association – past member

American Physiological Society – Emeritus member

American Thoracic Society – past member

Biomedical Engineering Society - past Senior Member

Comparative Respiratory Society – past member

European Respiratory Society – past member

International Society on Oxygen Transport to Tissue – past member

Scandinavian Physiological Society – past member

Undersea and Hyperbaric Medical Society – past member

Washington Thoracic Society – past member

Editorial Responsibilities:

Associate Editor, Journal of Applied Physiology, 5/1987 - 6/1993

Editorial Board, Journal of Applied Physiology, 4/1976 - 2009

Editorial Board, Undersea Biomedical Research, 7/1980 - 6/1984

Editorial Board, Cardiologia, 2/1995-12/1999

Editorial Board, Italian Heart Journal, 1/2000 – 2002

Editorial Board, DWI Journal: Science and Law, 1/2008 – 4/2010

Co-editor, Handbook of Physiology: Gas Exchange, American Physiological Society

Ad Hoc Reviewer:

Acta Physiol Scand

American Journal of Physiology

American Journal of Veterinary Research

American Review of Respiratory Diseases

Annals of Biomedical Engineering

Blood

Bulletin europeen de Physiopathologie respiratoire:

Clinical Respiratory Physiology

Chest

Circulation

European Respiratory Journal

IEEE Transactions of Biomedical Engineering

Intensive Care Medicine

International Commission of Clinical Chemistry

Journal of Biomedical Engineering

Journal of Breath Research

Journal of Clinical Investigation

Journal of Developmental Physiology

Journal of Pharmacology and Experimental Therapeutics

Journal of Sports Medicine

New England Journal of Medicine

Pfluegers Archiv

Respiration Physiology

Science

Undersea Biomedical Research

University Responsibilities:

Admissions Committee, School of Medicine, 1991-1993

Admissions Committee, PBio Department, 1991-1998

Animal Care Committee, UW, 1988-1990, Chair, 1993-1995

Classified and Proprietary Research Review Committee, UW, 1987-1989

Committee for Evaluation and Improvement of Teaching, PBio Department, 1985-1988,
Chairman, 1987-1988

Committee on a Smoke-Free Environment in the Health Science Center, 1985-1986

Cystic Fibrosis Foundation Research Development Program Advisory Committee,
1986-1991

Faculty Senate, UW, 1989-1991, 1995-1997

Graduate Faculty Nominations Committee, PBio Department, 1992-2001

Graduate Student Admissions Committee, PBio Department, 2000-2001

Graduate Student Qualifying Exam Committee, PBio Department, 1995-1997

HD Patton Physiological Society Committee, Chairman, PBio Dept., 1986

Pulmonary Program Project Grant Advisory Committee, 1977-present, Chair, 1988-
present

Pulmonary Specialized Center of Research Advisory Committee, 1971-1975; 1982-
1987

National Responsibilities:

American Heart Association, Cardiopulmonary Council

Budget Committee, 1987-1988

Executive Committee, 1986-1988

Long Range Planning Committee, 1988 - 1990

American Physiological Society

Long Range Planning Task Force, 1981-1983

Program Advisory Committee, 1993-1995

Program Committee, 1993-1995

Respiration Section

Nominating Committee, 1991-1992

Secretary, 1988-1991

Science Teacher Research Program

Sponsor, 1994

Special Lecture, Experimental Biology 1996

American Thoracic Society

Scientific Assembly on Respiratory Structure, Function and Metabolism

Program Committee, 1981-1982

Canadian Heart Foundation, Ad Hoc Reviewer, 1987

Canadian Medical Research Council, Ad Hoc Reviewer, 1987

Center for Research in Special Environments, SUNY at Buffalo, Center Advisory
Committee, 1993-1997

Lovelace Medical Foundation, External Scientific Advisory Panel, 1987, 1992

National Aeronautics and Space Administration, Subcommittee on Biomedical and
Behavioral Research of the Life and Microgravity Sciences and Applications
Advisory Committee, 1997-2001

National Institutes of Health

Division of Research Grants

Ad Hoc Reviewer, 1976-present

Cardiovascular and Renal Special Study Section, Member, 1990, Chair, 1991
Lung Biology and Pathology Special Review Group, Member, 1991;
Chair, 1992, 1993
Metabolic Pathology Special Study Section, Chair, 1990
Respiration and Applied Physiology Study Section, Member, 1983-1987
National Heart, Lung and Blood Institute
Ad Hoc Reviewer, 1976-present
Artificial Lung Advisory Panel, Chair, 1990
Artificial Lung Research and Development Monitoring Board, Member,
1992-1995
Hyperbaric Oxygen Workshop, Session Chair, 1989
Pulmonary Specialized Center of Research, Parent Committee, 1980-1981
Research Review Committee A, 1988 - 1992
Special Emphasis Panel, 1992
National Reviewers Reserve, 1992-1996
National Science Foundation, Ad Hoc Reviewer, 1983-present
New Zealand Health Research Council Referee, 2007
The Wellcome Trust, Ad Hoc Reviewer, 1995
Undersea Medical Society
Publications Committee, 1977-1980
Workshop Committee, 1978-1982
University of Pennsylvania, Institute for Environmental Medicine
Research Advisory Board, Member 1999 - 2004

Consultant Activities:

Cascadia Corporation, Seattle, WA, 1991 - 2000
Medical-Legal Consulting, 1984 - present
Meridian Medical Corporation, Seattle, WA
Board of Directors, 1984 - present
Consultant, 1984 - present
Pacific Northwest Laboratory, Battelle Memorial Institute, 1982-1984
Tiarco, 1984-1985
Pulmonary Interface, Seattle, WA, 1995-1997

Other Activities:

Commercial Pilot License
Airplane Single Engine Land Rating
Airplane Multiengine Land Rating
Instrument Rating
Academic Advisor, Lambda Chi Alpha Fraternity, University of Washington,
2011-present

BIBLIOGRAPHY

1. Van Liew HD and MP Hlastala. Influence of bubble size and blood perfusion on absorption of gas bubbles in tissues. *Respir Physiol* 7:111-121, 1969.
2. Hlastala MP. Absorption of nitrogen bubbles in flowing blood. Ph.D. Thesis, State University of New York at Buffalo, Buffalo, N.Y. 1969.
3. Ryan PW, WE Springer and MP Hlastala. Cockpit Geometry Evaluation, Phase II - Human Data, D162-10126-2. The Boeing Company, Seattle, Washington, February 1970.
4. Hlastala MP. A model of fluctuating alveolar gas exchange during the respiratory cycle. *Respir Physiol* 15:214-232, 1972.
5. Hlastala MP, B Wranne and CJ Lenfant. The single breath method of measuring cardiac output - a re-evaluation. *J Appl Physiol* 33:846-848, 1972.
6. Hlastala MP. Significance of the Bohr and Haldane effects in the pulmonary capillary. *Respir Physiol* 17:81-92, 1973.
7. Hlastala MP, B Wranne and CJ Lenfant. Cyclical variations in FRC and other respiratory variables in resting man. *J Appl Physiol* 34:670-676, 1973.
8. Hlastala MP and LE Farhi. Absorption of gas bubbles in flowing blood. *J Appl Physiol* 35:311-316, 1973.
9. Hlastala MP. Transient state diffusion in subcutaneous tissue. *Aerospace Medicine* 45:269-273, 1974.
10. Papayannopoulou T, CA Finch, G Stamatoyannopoulos, and MP Hlastala. Extracorporeal treatment of blood with cyanate in primates: physiologic and toxicologic observations. *J Lab Clin Med* 84:81-71, 1974.
11. Hlastala MP and RD Woodson. Saturation dependency of the Bohr effect: interactions among H^+ , CO_2 and DPG. *J Appl Physiol* 38:1126-1131, 1975.
12. Hlastala MP and HD Van Liew. Absorption of in vivo inert gas bubbles. *Respir Physiol* 24:147-158, 1975.
13. Hlastala MP, PS Colley and FW Cheney. Pulmonary shunt: A comparison between oxygen and inert gas infusion methods. *J Appl Physiol* 39:1048-1051, 1975.
14. Hlastala MP, HP McKenna, RL Franada and JC Detter. The influence of carbon monoxide on hemoglobin-oxygen binding. *J Appl Physiol* 41:893-399, 1976.

15. Langer EE, G Stamatoyannopoulos, MP Hlastala, JW Adamson, M Figley, FR Labbe, JC Detter and CA Finch. Extracorporeal treatment with cyanate in sickle cell disease. Preliminary observations in four patients. *J Lab Clin Med* 24:462-472, 1976.
16. Brookens AR and MP Hlastala. 2,3-Diphosphoglycerate and P₅₀ in patients receiving blood transfusion. *Comm Nursing Res WICHE* 9:146-154, 1976
17. Robertson HT and MP Hlastala. Elevated alveolar PCO₂ relative to predicted values during normal gas exchange. *J Appl Physiol: Respirat Environ Exercise Physiol* 43:357-364, 1977.
18. Hlastala MP, RD Woodson and B Wranne. The influence of temperature on hemoglobin-ligand interaction in whole blood. *J Appl Physiol: Respirat Environ Exercise Physiol* 43:545-550, 1977.
19. Hlastala MP and HT Robertson. Inert gas elimination characteristics of the normal and abnormal lung. *J Appl Physiol: Respirat Environ Exercise Physiol* 44:258-266, 1978.
20. Modell HI and MP Hlastala. Gas exchange under environmental stress. Air Force Technical Report USAFSAM-TR-78-24, 1978.
21. Hlastala MP, T Standaert, RL Franada and HP McKenna. Saturation-dependent hemoglobin-ligand interaction in fetal and maternal sheep blood. *Respir Physiol* 34:185-194, 1978.
22. Robertson HT, A Chait, MP Hlastala and JD Brunzell. Red cell oxygen affinity in severe hypertriglyceridemia. *Proc Soc Exp Biol Med* 159:437-440, 1978.
23. Hlastala MP, HT Robertson and BK Ross. Gas exchange abnormalities produced by venous gas emboli. *Resp Physiol* 36:1-17, 1979.
24. Colley PS, FW Cheney, Jr, and MP Hlastala. Ventilation-perfusion and gas exchange effects on nitroprusside in normal and edematous lungs. *Anesthesiology* 50:489-495, 1979.
25. Ross BK, MP Hlastala and R Frank. On the lack of effect of ozone on hemoglobin-oxygen affinity. *Archiv Environ Health* 34:161-163, 1979.
26. Malmberg PO, MP Hlastala and RD Woodson. Effect of increased blood oxygen affinity on oxygen transport in hemorrhagic shock. *J Appl Physiol: Respirat Environ Exercise Physiol* 47:889-895, 1979.

27. Truog WE, MP Hlastala, TA Standaert, HP McKenna and WA Hodson. Oxygen induced alteration of ventilation-perfusion relationships in rats. *J Appl Physiol: Respirat Environ Exercise Physiol* 47:1112-1117, 1979.
28. Finch GA, PD Gollnick, MP Hlastala, LR Miller, E Dillman and B Mackler. Lactic acidosis due to iron deficiency. *J Clin Invest* 64:127-137, 1979.
29. Hlastala MP. Physiological significance of the interaction between oxygen and carbon dioxide in blood. *Crit Care Med* 7:374-379, 1979.
30. Uvelli DA, MY Lee, JM Manning, MP Hlastala and AL Babb. Measurement of the carbamylation kinetics and anti-sickling mechanism in HbS blood. *J Lab Clin Med* 95:748-758, 1980.
31. Warrenburg WA, RR Pagano, M Woods and MP Hlastala. A comparison of somatic relaxation and EEG activity in classical progressive relaxation and transcendental meditation. *J Behavioral Med* 3:73-93, 1980.
32. Hlastala MP, M Meyer, G Riepl and P Scheid. Solubility of helium, argon and sulfur hexafluoride in human blood measured by mass spectrometry. *Undersea Biomed Res* 7:297-304, 1980.
33. Hlastala MP. Multiple inert gas elimination method: concepts and techniques. In: *Progress in respiration research. Gas exchange function of normal and diseased lungs*. Eds. J Piiper and P Scheid. (S. Karger, Basel 1981) pp. 242-244.
34. Colley PS, FW Cheney and MP Hlastala. Pulmonary gas exchange effects of nitroglycerine in the edematous lung. *Anesthesiology* 55:114-119, 1981.
35. Scheid P, MP Hlastala and J Piiper. Inert gas elimination from lungs with stratified inhomogeneity: theory. *Respir Physiol* 44:299-309, 1981.
36. Hlastala MP. Interactions between O₂ and CO₂: the blood. *Seminars in Respiratory Medicine* 3:70-75, 1981.
37. Ross BK and MP Hlastala. Increased hemoglobin oxygen affinity does not decrease skeletal muscle oxygen consumption. *J Appl Physiol: Respirat Environ Exercise Physiol* 51:864-870, 1981.
38. Hlastala MP, P Scheid and J Piiper. Interpretation of inert gas retention and excretion in the presence of stratified inhomogeneity. *Respir Physiol* 46:247-260, 1981.

39. Christopherson SK and MP Hlastala. Pulmonary gas exchange during altered density gas breathing. *J Appl Physiol: Respirat Environ Exercise Physiol* 52:221-225, 1982.
40. Hlastala MP, HP McKenna, M Middaugh and HT Robertson. The role of diffusion-dependent gas inhomogeneity in gas exchange in the dog. *Bull Europ Physiopath Resp* 18:373-380, 1982.
41. Robertson HT, RL Coffey and MP Hlastala. Influence of carrier gas density on gas exchange during high frequency ventilation. *Bull Europ Physiopath Resp* 18:381-387, 1982.
42. Ross BK and MP Hlastala. Reply to Letter to Editor. *J Appl Physiol* 53:1678-1679, 1982.
43. Hlastala MP. Diffusion in lung gas and across alveolar membrane in mammalian lungs. *Fed Proc* 41:2122-2124, 1982.
44. Hlastala MP. Oxygen and carbon dioxide interactions in blood. In: *Oxygen Transport to Human Tissues*. Ed. J.A. Loepky and M.L. Riedesel. Elsevier North Holland, Inc. New York. 1982. p. 92-100.
45. Hlastala MP. Interactions between O₂ and CO₂: the blood. In: *Hypoxia: Man at Altitude*. Eds.: J.R. Sutton, N.L. Jones and C.S. Houston. Thieme-Stratton Inc, New York. 1982. pp. 17-23.
46. Ohlsson J, MP Hlastala, J Tranesjo and B Wranne. Non-invasive determination of effective stroke volume. Evaluation of a CO₂-rebreathing method in normal subjects and patients. *Clin Physiol* 3:9-18, 1983.
47. Bridges CR, MP Hlastala, G Riepl and P Scheid. Root effect induced by CO₂ and by fixed acid in the blood of the eel, *Anguilla anguilla*. *Respir Physiol* 51:275-286, 1983.
48. Hlastala MP and RD Woodson. Bohr effect data for blood gas calculations. *J Appl Physiol: Respirat Environ Exercise Physiol* 55:1002-1007, 1983.
49. Petrini MF, HT Robertson and MP Hlastala. Interaction of series and parallel dead space in the lung. *Respir Physiol* 54:121-136, 1983.
50. Schoene RB, HT Robertson, DR Thorning, SC Springmeyer, MP Hlastala and FW Cheney. Pathophysiological patterns of resolution from acute oleic acid lung injury in the dog. *J Appl Physiol: Respirat Environ Exercise Physiol* 56:472-481, 1984.

51. Hlastala MP. The multiple inert gas elimination technique. *J Appl Physiol: Respirat Environ Exercise Physiol* 56:1-7, 1984.
52. Ralph DD, SM Ott, DJ Sherrard and MP Hlastala. Inert gas analysis of ventilation-perfusion matching during hemodialysis. *J Clin Invest* 73: 1385-1391, 1984.
53. Hlastala MP. Cardiovascular shunts: a gas exchange perspective. In: *Cardiovascular Shunts: Phylogenetic, Ontogenetic and Clinical Aspects*. Eds. K Johansen and WW Burggren. pp 310-318, 1984.
54. Hlastala MP, TA Standaert, DJ Pierson and DL Luchtel. The matching of ventilation and perfusion in the lung of the tegu lizard, *Tupinambis nigropunctatus*. *Respir Physiol* 60:277-294, 1985.
55. Ralph DD, HT Robertson, LJ Weaver, MP Hlastala, CJ Carrico and LD Hudson. Distribution of ventilation and perfusion during PEEP trials in the adult respiratory distress syndrome. *Amer Rev Resp Dis* 131:54-60, 1985.
56. Hlastala MP. Interactions between O_2 and CO_2 in blood. In: *Advances in the Biosciences: Oxygen Transport in Red Blood Cells*. Proceedings of the 12th Aharon Katzir Katchalsky Conference, Tours, France, April 1985, Pergamon Press, Ed. C Nicolau, pp. 54:95-103, 1986.
57. Robertson HT, J Whitehead and MP Hlastala. Diffusion-related differences in the elimination of inert gases from the lung. *J Appl Physiol* 61:1162-1172, 1986.
58. Malvin GM and MP Hlastala. Regulation of cutaneous gas exchange by environmental O_2 and CO_2 in the frog. *Respir Physiol* 65:99-112, 1986.
59. Ralph DD, MP Hlastala and AL Babb. Interaction of ethanol with airway mucosa during exhalation. *Prog Artificial Organs* 1985, pp. 1119-1121.
60. Hlastala MP, DD Ralph, AL Babb, R Gard, and HT Robertson: Dynamics of heat exchange and gas exchange in the airways. *Prog Resp Res* 21:134-137, 1986.
61. Robertson HT and MP Hlastala. Beyond partition coefficients - individual properties of infused inert gases influencing their elimination from the lung. *Prog Resp Res* 21:177-181, 1986.
62. Malvin GM and MP Hlastala. Effects of lung volume and O_2 and CO_2 content on cutaneous gas exchange in frogs. *Am J Physiol: Reg Integ Comp Physiol* 20:R941-R946, 1986.

63. Hlastala MP, J Ohlsson and HT Robertson. Alveolar gas-phase diffusion limitation in the hyperbaric environment. In: Underwater and Hyperbaric Physiology IX. Ed. Bove AA, AJ Bachrach and LJ Greenbaum, Jr. Undersea and Hyperbaric Medical Society, Inc., Bethesda, pp.457-464, 1987.
64. Albert RK, D Leasa, M Sanderson, HT Robertson and MP Hlastala. The prone position improves arterial oxygenation and reduces shunt in oleic acid-induced acute lung injury. *Am Rev Resp Dis* 135:628-633, 1987.
65. Grønlund J, ER Swenson, J Ohlsson and MP Hlastala. Contribution of continuing gas exchange to phase III exhaled PCO₂ and PO₂ profiles. *J Appl Physiol* 62:2467-2476, 1987.
66. Tsu ME, AL Babb, DD Ralph and MP Hlastala. Dynamics of heat, water, and soluble gas exchange in the human airways: I. A model study. *Ann Biomed Eng.* 16:547-571, 1988.
67. Hlastala MP, DD Ralph and AL Babb. Influence of gas physical properties on pulmonary gas exchange. In: *Oxygen Transfer from Atmosphere to Tissues*, Volume 227:33-38. Eds: N.C. Gonzolez and MR Fedde, Plenum Press, 1988.
68. Filipy RE, JR Decker, Y-L Lai, KE Lauhala, RL Buschbom, MP Hlastala, DR McGee, JF Park, EG Kuffel, HA Ragan, WC Cannon, SS Yaniv, BR Scott. Inhaled ²³⁹PuO₂ and/or Total-Body Gamma Radiation: Early Mortality and Morbidity in Rats and Dogs. Pacific Northwest Laboratory No. PNL-6586. U.S. Nuclear Regulatory Commission Document No. NUREG/CR-5198, 1988.
69. Grønlund J, GM Malvin and MP Hlastala. Estimation of blood flow distribution in skeletal muscle from inert gas washout. *J Appl Physiol* 66:1942-1955, 1989.
70. Ohlsson J, M Middaugh and MP Hlastala. Reduction of lung perfusion increases \dot{V}_A/\dot{Q} heterogeneity. *J Appl Physiol* 66:2423-2430, 1989.
71. Malvin GM and MP Hlastala. Effects of environmental O₂ on blood flow and diffusing capacity in amphibian skin. *Respir Physiol* 76:229-242, 1989.
72. Domino KB, MP Hlastala, BL Eisenstein and FW Cheney. Effect of regional alveolar hypoxia on gas exchange in dogs. *J Appl Physiol* 67:730-735, 1989.
73. Ohlsson J, DD Ralph, MA Mandelkorn, AL Babb and MP Hlastala. Accurate measurement of blood alcohol concentration with isothermal rebreathing. *J Stud Alcohol* 51:6-13, 1990.

74. Domino KB, MP Hlastala and FW Cheney. Effect of increased intracranial pressure on regional hypoxic pulmonary vasoconstriction. *Anesthesiology* 72:490-495, 1990.
75. Hlastala MP. Integrating mechanics and transport in assessing respiratory function. In: *Respiratory Biomechanics: Engineering Analysis of Structure and Function*. Ed: MAF Epstein and JR Ligas. Springer-Verlag, New York. 1990, pp 193-194.
76. Tsu ME, AL Babb, EM Sugiyama and MP Hlastala. Dynamics of soluble gas exchange in the airways: II. Effects of breathing conditions. *Respir Physiol*. 83:261-276, 1991.
77. Domino KB, BL Eisenstein, FW Cheney and MP Hlastala. Pulmonary blood flow and ventilation-perfusion heterogeneity. *J Appl Physiol* 71:252-258, 1991.
78. Domino KB, FW Cheney, BL Eisenstein and MP Hlastala. Effect of regional alveolar hypoxia on gas exchange in pulmonary edema. *Am Rev Respir Dis* 145:340-347, 1992.
79. Hlastala MP, GM Malvin, C Quartararo, and J Grønlund. Inert gas washout measurement of muscle blood flow distribution - roles of hypoxia and diffusion limitation. In: *ISOTT XIV*, Ed: W. Erdmann and D.F. Bruley, 1991, pp 745-750.
80. Emery MJ, ME Middaugh, T Tran, and MP Hlastala. Gas exchange uniformity within individual lung lobes. In: *ISOTT XIV*. Ed: W. Erdmann and D.F., Bruley, 1991, pp 357-362.
81. Swenson ER, HT Robertson, NL Polissar, ME Middaugh, and MP Hlastala. Conducting airways gas exchange: diffusion-related differences in inert gases. *J Appl Physiol* 72:1581-1588, 1992.
82. Tsang JY, M Middaugh, M Emery, and MP Hlastala. Gas exchange and regional redistribution of pulmonary blood flow during resuscitation of acute pulmonary bead embolization. *Pulmonary Pharmacol* 5:273-278, 1992.
83. Domino KB, YM Lu, BL Eisenstein, and MP Hlastala. Hypocapnia worsens arterial blood oxygenation and increases \dot{V}_A/\dot{Q} heterogeneity in canine pulmonary edema. *Anesthesiol.*, 78:91-99, 1993.
84. Swenson ER, J Grønlund, J Ohlsson, and MP Hlastala. *In vivo* quantitation of the contributions of carbonic anhydrase and red cell band 3 protein to pulmonary gas exchange. *J Appl Physiol.*, 74:838-848, 1993.
85. Sato S, MP Hlastala, and J Hildebrandt. Intrapulmonary shunt in excised dog lobes: comparison of oxygen and inert gas methods. *J Appl Physiol.*, 74:951-958, 1993.

86. Swenson ER, HT Robertson, and MP Hlastala. Effects of carbonic anhydrase inhibition on ventilation-perfusion matching in the lung. *J. Clin. Invest.* 92:702-709, 1993.
87. Domino KB, ER Swenson, NL Polissar, YM Lu, BL Eisenstein, and MP Hlastala. Effect of inspired CO₂ on ventilation and perfusion heterogeneity in hyperventilated dogs. *J. Appl. Physiol.* 75:1306-1314, 1993.
88. Hlastala MP, SC George, and AL Babb. Airway heat and gas exchange. *Respiration in Health and Disease: Lessons from Comparative Physiology. Funktionsanalyse biologischer Systeme* 23:53-60, 1993.
89. Hlastala MP and KB Domino. Roles of hypoxia and blood flow in modulating \dot{V}_A/\dot{Q} heterogeneity in the lungs. *Adv Exp Med Biol* 345:67-73, 1994.
90. Swenson ER, HT Robertson, and MP Hlastala. Effects of inspired CO₂ on ventilation-perfusion matching in normoxia, hypoxia, and hyperoxia. *Amer J Respir Crit Care Med* 149:1563-1569, 1994.
91. Emery MJ, MP Hlastala, and AM Matsumoto. Depression of hypercapnic ventilatory drive by testosterone in the sleeping infant primate. *J Appl Physiol* 76:1786-1793, 1994.
92. Mates EA, JC Jackson, J Hildebrandt, WE Truog, TA Standaert, and MP Hlastala. Respiratory gas exchange and inert gas retention during partial liquid ventilation. In: *Oxygen Transport to Tissue XVI*, M.C Hogan, O. Mathieu-Costello, D.C. Poole, and P.D. Wagner (Eds); Plenum Press, New York; *Adv Exp Med Biol* 361:427-435, 1994.
93. Domino KB, BL Eisenstein, T Tran, and MP Hlastala. Increased pulmonary perfusion worsens ventilation-perfusion matching. *Anesthesiology* 79:817-826, 1993.
94. George SC, AL Babb, and MP Hlastala. Dynamics of soluble gas exchange in the airways: III. Single exhalation breathing maneuver. *J Appl Physiol* 75:2439-2449, 1993.
95. Domino KB, and MP Hlastala. Hyperventilation, in treatment of metabolic acidosis, does not adversely affect pulmonary gas exchange. *Anesthesiology* 81:1445-1453, 1994.
96. Swenson ER, MM, Graham and MP Hlastala. Carbonic anhydrase inhibition slows ventilation redistribution following changes in blood flow: effects on \dot{V}_A/\dot{Q} matching. *J Appl Physiol* 78:1312-1318, 1995.

97. Hlastala MP, JE Souders, SC George and AL Babb. A model of pulmonary airway exchange of soluble gases. Proc RC IEEE-EMBS & 14th BMESI:2.3-2.4, 1995.
98. George SC, AL Babb and MP Hlastala. Mathematical modeling of airway gas exchange: IV. Impact of pre-test breathing conditions on the single-exhalation breathing maneuver. Ann Biomed Eng 23:48-60, 1995.
99. Domino KB, ER Swenson, and MP Hlastala. Hypocapnia-induced ventilation/perfusion mismatch: A direct CO₂ or pH-mediated effect. Am J Respir Crit Care Med 152:1534-1539, 1995.
100. Souders JE, SC George, NL Polissar, ER Swenson and MP Hlastala. Tracheal gas exchange: Perfusion-related differences in inert gas elimination. J Appl Physiol 79:918-928, 1995.
101. George SC, AL Babb and MP Hlastala. Modeling steady state inert gas exchange in the canine trachea. J Appl Physiol 79:929-940, 1995.
102. Lamm WJE, T Obermiller, MP Hlastala, and RK Albert. Perfusion through vessels open in zone 1 contributes to gas exchange in rabbit lungs *in situ*. J Appl Physiol 79:1895-1899, 1995.
103. Hlastala MP. Letter to the editor. Forens Sci Internat 73:211-212, 1995.
104. George SC, AL Babb, ME Deffebach, and MP Hlastala. Diffusion of non-electrolytes in the canine trachea: Effect of tight junction. J Appl Physiol 80:1687-1695, 1996.
105. Hlastala MP, SL Bernard, HH Erickson, MR Fedde, EM Gaughan, R McMurphy, MJ Emery, N Polissar and RW Glenny. Pulmonary blood flow distribution in standing horses is not dominated by gravity. J Appl Physiol 81:1051-1061, 1996.
106. Bernard SL, RW Glenny, HH Erickson, MR Fedde, N Polissar, RJ Basaraba and MP Hlastala. Minimal redistribution of pulmonary blood flow with exercise in racehorses. J Appl Physiol 81(3):1062-1070, 1996.
107. Hlastala MP. Ventilation/perfusion: From the bench to the patient. Cardiologia 41:405-415, 1996.
108. Mates EA, P Tarczy-Hornoch, J Hildebrandt, JC Jackson and MP Hlastala. Negative slope of exhaled CO₂ profile. In: Oxygen Transport to Tissue XVII. Ince C, J Kesecioglu, L. Telci and K. Akpir (Eds); Plenum Press, New York; Adv. Exp Med Biol 362:585-597, 1996.

109. George SC, MP Hlastala, JE Souders and AL Babb. Gas exchange in the airways. *J Aerosol Med* 9:25-33, 1996.
110. Li MH, J Hildebrandt and MP Hlastala. Quantitative analysis of transpleural flux in the isolated lung. *J Appl Physiol* 82:545-551, 1997.
111. Walther SM, KB Domino, RW Glenny, NL Polissar and MP Hlastala. Pulmonary blood flow distribution has a hilar-to-peripheral gradient in awake, prone sheep. *J Appl Physiol*, 82(2): 678-685, 1997.
112. Mates EA, J Hildebrandt, JC Jackson, P Tarczy-Hornoch and MP Hlastala. Shunt and ventilation-perfusion distribution during partial liquid ventilation in healthy piglets. *J Appl Physiol* 82(3):933-942, 1997.
113. Tsang JYC, MJ Emery and MP Hlastala. Ventilation inhomogeneity in oleic acid induced pulmonary edema. *J Appl Physiol*, 82:1040-1045, 1997.
114. Walther SM, KB Domino, RW Glenny, NL Polissar, and MP Hlastala. Pulmonary blood flow distribution in sheep: Effects of anesthesia, mechanical ventilation and change in posture. *Anesthesiol*, 87(2):335-342, 1997.
115. Domino KB, MJ Emery, ER Swenson and MP Hlastala. Ventilation heterogeneity is increased in hypocapnic dogs but not pigs. *Respir Physiol* 111:89-100, 1998.
116. Hlastala MP. The alcohol breath test - A brief review. *J Appl Physiol* 84:401-408, 1998.
117. Kallas HJ, KB Domino, RW Glenny, EA Anderson and MP Hlastala. Pulmonary blood flow distribution changes with low levels of positive end-expiratory pressure. *Anesthesiol*. 88:1291-1299, 1998.
118. Hlastala MP, MA Chornuk, DA Self, HJ Kallas, JW Burns, S Bernard, NL Polissar and RW Glenny. Pulmonary blood flow redistribution by increased gravitational force. *J Appl Physiol* 84:1278-1288, 1998.
119. Mann CM, KB Domino, SM Walther, RW Glenny, NL Polissar and MP Hlastala. Redistribution of pulmonary blood flow during unilateral hypoxia in prone and supine dogs. *J Appl Physiol* 84: 2010-2019, 1998.
120. Mure M, RW Glenny, KB Domino and MP Hlastala. Pulmonary gas exchange improves in the prone position with abdominal distension. *Am J Respir Crit Care Med* 157:1785-1790, 1998

121. Walther SM, KB Domino and MP Hlastala. Effects of posture on blood flow diversion by hypoxic pulmonary vasoconstriction in dogs. *Brit J Anaesth* 81:425-429, 1998.
122. Albert RK, JO Benditt, J Hildebrandt, DE Wood and MP Hlastala. Lung volume reduction surgery has variable effects on blood gases in patients with emphysema. *Am J Respir Crit Care Med* 158:71-76, 1998.
123. Walther SM, KB Domino, RW Glenny and MP Hlastala. Positive end-expiratory pressure redistributes perfusion to dependent lung regions in supine but not in prone sheep. *Crit Care Med* 27:37-45, 1999
124. Mure M, KB Domino, HT Robertson, MP Hlastala and RW Glenny. Pulmonary blood flow does not redistribute in dogs with reposition from supine to left lateral position. *Anesthesiology* 89:483-492, 1998.
125. vanLöbenSels EM, JC Anderson, J Hildebrandt and MP Hlastala. Modeling diffusion limitation of gas exchange in lungs containing perfluorocarbon. *J Appl Physiol* 86: 273-284, 1999.
126. Hlastala MP and RW Glenny. Vascular structure determines pulmonary blood flow distribution. *News in Physiol Sci* 14:182-186, 1999.
127. Glenny RW, S Bernard, HT Robertson and MP Hlastala. Gravity is an important but secondary determinant of regional pulmonary blood flow in upright primates. *J Appl Physiol* 86: 623-632, 1999.
128. Erickson HH, SL Bernard, RW Glenny, MR Fedde, NL Polissar, RJ Basaraba, SM Walther, EM Gaughan, MP Hlastala. Effect of furosemide on pulmonary blood flow distribution in resting and exercising horses. *J Appl Physiol* 86:2034-2043, 1999.
129. Souders JE, JB Doshier, NL Polissar and MP Hlastala. Spatial distribution of venous gas emboli in the lungs. *J. Appl. Physiol.* 87:1937-1947, 1999.
130. Hübler M, JE Souders, ED Shade, MP Hlastala, NL Polissar and RW Glenny. Validation of fluorescent-labeled microspheres for measurement of relative blood flow in severely injured lungs. *J. Appl. Physiol.* 87:2381-2385, 1999.
131. Tsang JYC, D Frazer and MP Hlastala. Ventilation heterogeneity does not change following pulmonary microembolism. *J Appl Physiol* 88:705-712, 2000.
132. Mure M, KB Domino, SGE Lindahl, MP Hlastala, WA Altemeier and RW Glenny. Regional ventilation-perfusion distribution is more uniform in the prone position. *J Appl Physiol* 88:1076-1083, 2000.

133. Emery MJ, J Hildebrandt and MP Hlastala. Ventilation heterogeneity in excised lobes. Effect of tidal volume. *J Appl Physiol* 88:1659-1671, 2000.
134. Sinclair SE, S McKinney, RW Glenny, SL Bernard and MP Hlastala. Exercise alters fractal dimension and spatial correlation of pulmonary blood flow in the horse. *J Appl Physiol* 88:2269-2278, 2000.
135. Chornuk MA, SL Bernard, JW Burns, RW Glenny, DD Sheriff, SE Sinclair, NL Polissar and MP Hlastala. The effects of inertial load (+Gz) and countermeasures on the distribution of pulmonary blood flow. *J Appl Physiol* 89: 445-457, 2000.
136. Brogan TV, RG Hedges, S McKinney, HT Robertson, MP Hlastala and ER Swenson. Pulmonary nitric oxide synthase inhibition and inspired CO₂: Effects on \dot{V}_A/\dot{Q} matching and pulmonary blood flow distribution. *Eur Respir J* 16:288-295, 2000.
137. Glenny RW, WJE Lamm, SL Bernard, D An, M Chornuk, SL Pool, WW Wagner, Jr, MP Hlastala and HT Robertson. Redistribution of pulmonary perfusion during weightlessness and increased gravity. *J Appl Physiol* 89:1239-1248, 2000.
138. Glenny RW, HT Robertson and MP Hlastala. Vasomotor regulation has little influence on perfusion heterogeneity and gas exchange in normal primate lungs during normoxia. *J Appl Physiol* 89:2263-2267, 2000.
139. Lim CM, KB Domino, RW Glenny and MP Hlastala. The effect of increasing perfluorocarbon dose on \dot{V}_A/\dot{Q} distribution during partial liquid ventilation in acute lung injury. *Anesthesiol* 94:637-642, 2001.
140. Kreck TC, ED Shade, WJE Lamm, SE McKinney and MP Hlastala. Isocapnic hyperventilation increases carbon monoxide elimination and oxygen delivery. *Am J Pulm Crit Care Med*. 163: 458-462, 2001.
141. Kreck TC, MA Krueger, WA Altemeier, SE Sinclair, HT Robertson, ED Shade, J Hildebrandt, WJE Lamm, DA Frazer, NL Polissar and MP Hlastala. Determination of regional ventilation and perfusion in the lung using xenon and computed tomography. *J Appl Physiol* 91: 1741-1749, 2001
142. Hlastala MP and JE Souders. Editorial: Perfluorocarbon enhanced gas exchange: The easy way. *Am J Resp Crit Care Med* 164:1, 2001.

143. Hübler, M, JE Souders, ED Shade, NL Polissar, C Schimmel, MP Hlastala. Effects of vaporized perfluorocarbon on pulmonary blood flow and ventilation-perfusion distribution in a model of acute respiratory distress. *Anesthesiol* 95:1414-1421, 2001.
144. Hübler, M, JE Souders, ED Shade, NL Polissar, Bleyl, JU, MP Hlastala. Effects of perfluorohexane vapor on relative blood flow distribution in an animal model of surfactant-depleted lung injury. *Crit Care Med* 30: 422-427, 2002.
145. Chang, H, SJ Lai-Fook, KB Domino, C Schimmel, J Hildebrandt, HT Robertson, RW Glenny and MP Hlastala. Spatial distribution of ventilation and perfusion in anesthetized dogs in lateral postures. *J Appl Physiol* 92:745-762, 2002.
146. Hlastala, M. Invited editorial on "The alcohol breath test". *J Appl Physiol* 93: 405-406, 2002.
147. Sinclair, SE, DA Kregenow, WJE Lamm, IR Starr, EY Chi and MP Hlastala. Hypercapnea acidosis is protective in an in vivo model of ventilator-induced lung injury. *Am J Respir Crit Care Med* 166: 403-408, 2002.
148. Anderson, JC, SL Bernard, DL Luchtel, AL Babb and MP Hlastala. Axial and radial distribution of the bronchial vasculature in sheep. *Resp Physiol Neuro* 132: 329-339, 2002.
149. Glenny, RW, MP Hlastala and HT Robertson. Importance of gravity in determining the distribution of pulmonary blood flow. Reply to letter to the editor. *J Appl Physiol* 93:1889-1891, 2002.
150. Anderson, JC, AL Babb and MP Hlastala. Modeling soluble gas exchange in the airways and alveoli. *Ann Biomed Eng* 31:1-21, 2003.
151. Bernard, S, DL Luchtel, MP Hlastala and S. Lakshminarayan. Characterization of bronchial-to-pulmonary communications. *Archiv Physiol Biochem* 111: 317-318, 2003.
152. Hlastala, MP. Highly Soluble Gases Exchange in the Pulmonary Airways. *Archiv Physiol and Biochem* 111: 289-292, 2003.
153. Hlastala, MP, WJE Lamm, A Karp, NL Polissar, IR Starr and RW Glenny. Spatial distribution of hypoxic pulmonary vasoconstriction in the supine pig. *J Appl Physiol* 96: 1589-1599, 2004.

154. Lamm, WJE, IR Starr, B Neradilek, NL Polissar, RW Glenny and MP Hlastala. Hypoxic pulmonary vasoconstriction is heterogeneously distributed in the prone dog. *Respirat Physiol Neurobiol* 144: 281-294, 2004.
155. Schimmel, C, SL Bernard, JC Anderson, NL Polissar, S Lakshminarayan and MP Hlastala. Soluble gas exchange in the pulmonary airways of sheep. *J Appl Physiol* 97: 1702-1708, 2004.
156. Hlastala, MP, NL Polissar and S Oberman. Statistical evaluation of standardized field sobriety tests. *J Forens Sci* 50: 662-669, 2005.
157. Anderson, JC, AL Babb and MP Hlastala. A fractal analysis of the radial distribution of bronchial capillaries around large airways. *J Appl Physiol* 98:850-855, 2005.
158. Tsang, JYC, WJE Lamm, IR Starr and MP Hlastala. Spatial pattern of ventilation perfusion mismatch following acute pulmonary thromboembolism in pigs. *J Appl Physiol* 98: 1862-1868, 2005.
159. Starr, IR, WJE Lamm, B. Neradilek, N Polissar, RW Glenny and MP Hlastala. Regional hypoxic pulmonary vasoconstriction in prone pigs. *J Appl Physiol* 99: 363-370, 2005.
160. Chang, H, SJ Lai-Fook, KB Domino, J Hildebrandt, HT Robertson, RW Glenny and MP Hlastala. Ventilation and perfusion distribution during altered PEEP in the left lung in the left lateral decubitus posture with unchanged tidal volume in dogs. *Chinese J Physiol.* 49: 74-82, 2006.
161. Bernard, S, DL Luchtel, N Polissar, MP Hlastala and S Lakshminarayan. Structure and size of bronchopulmonary anastomoses in sheep lung. *Anat Record A*; (In press, 2006).
162. Chang, H, SJ Lai-Fook, KB Domino, C Schimmel, J Hildebrandt, HT Robertson, RW Glenny and MP Hlastala. Redistribution of blood flow and lung volume between lungs in lateral decubitus postures during unilateral atelectasis and PEEP. *Chinese J Physiol.* 49: 83-95, 2006.
163. Anderson, JC and MP Hlastala. The kinetics of transdermal ethanol exchange. *J Appl Physiol* 100: 649-655, 2006.
164. Anderson, JC, WJE Lamm and MP Hlastala. Measuring airway exchange of endogenous acetone using a single-exhalation breathing maneuver. *J Appl Physiol* 100:880-889, 2006.

165. Sinclair, SE, DA Kregenow, I Starr, C Schimmel, WJE Lamm, MP Hlastala and ER Swenson. Therapeutic hypercapnia and ventilation-perfusion matching in acute lung injury: Low minute ventilation versus inspired CO₂. *Chest* 130: 85-92, 2006.
166. Wagner, WW Jr., WJ Lamm, S Bernard, D An, Chornuk, M, SL Pool, MP Hlastala, HT Robertson and RW Glenny. Paradoxical redistribution of pulmonary blood flow in the left lateral posture: Comparing microgravity and increased gravity. *J Grav Physiol* 13: 25-34, 2006.
167. Hlastala, MP and JC Anderson. The impact of breathing pattern and lung size on the alcohol breath test. *Ann Biomed Eng* 35: 264-272, 2007.
168. Tsang, JYC, WJE Lamm, B Neradilek, NL Polissar and MP Hlastala. Endothelin receptor blockade does not improve hypoxemia following acute pulmonary thromboembolism. *J Appl Physiol* 102: 762-771, 2007.
169. Anderson, JC and MP Hlastala. Breath tests and airway gas exchange. *Pulm Pharmacol Ther* 20:112-117, 2007.
170. Robertson, HT and MP Hlastala. Microsphere maps of regional blood flow and regional ventilation. *J Appl Physiol* 102: 1265-1272, 2007,
171. Lamm, WJE, B Neradilek, NL Polissar and MP Hlastala. Pulmonary response to three hours of hypoxia in prone pigs. *Respir Physiol Neurobiol* 159: 76-84, 2007
172. Hopkins, S, Kleinsasser, A, Bernard, S, Loeckinger, A, Falor, E, Neradilek, B, Pollisar, N and MP Hlastala. Hypoxia has a greater effect than exercise on the redistribution of pulmonary blood flow in swine. *J Appl Physiol* 103:2112-2119, 2007.
173. Tsang, JYC, WJE Lamm, B Neradilek, NL Polissar and MP Hlastala. The unpredictable effect of changing cardiac output on hypoxemia after acute pulmonary thromboembolism. *Clin Med: Circul, Respir, Pulmon* 2:1-12, 2008.
174. Hlastala, MP. Paradigm shift for the alcohol breath test. *J Forens Sci* 55:451-456, 2010.
175. Anderson, JC and MP Hlastala. Impact of airway gas exchange on the multiple inert gas elimination technique: theory. *Ann Biomed Eng* 38: 1017-1030, 2010.
176. Hlastala, MP. Response to Commentary on "Paradigm shift for the alcohol breath test" by TJ Siek. *J Forens Sci* 55: 1665, 2010.

177. Hlastala, MP. Response to Commentary on "Paradigm shift for the alcohol breath test" by JG Wigmore. *J Forens Sci* 56: 268-269, 2011.

BOOKS, BOOK CHAPTERS AND BOOK REVIEWS

1. Hlastala MP and HT Robertson. Evidence for active elimination of CO₂ from the lung. In: *Pulmonary Gas Exchange, Vol. II, Organism and Environment*. Ed. J.B. West. Academic Press, 1980. pp. 241-273.
2. Hlastala MP. Diffusing capacity heterogeneity. In: *Handbook of Physiology, Section 3: The Respiratory System, Volume IV Gas Exchange*. Ed.: Farhi, LE and SM Tenney, American Physiological Society, 1987, pp. 217-232.
3. Hlastala MP. Book review: *The Pathway for Oxygen*, by Ewald Weibel. *J Appl Physiol* 59:1667, 1986.
4. Hlastala MP. Blood gas transport. In: *Pulmonary Diseases and Disorders, Second Edition*. Ed.: A.P. Fishman, McGraw-Hill Book Co., 1988, pp 221-226.
5. Hlastala MP and HT Robertson. Quantitation of ventilation-perfusion heterogeneity. In: *Lung Biology in Health and Disease, Vol. 40, Respiratory Physiology: An Analytical Approach*. Ed: HK Chang and M Paiva. Exec Ed: C Lenfant. Marcel Dekker, Inc., 1989, pp 421-452.
6. Hlastala MP. Gas transport and exchange. In: *Textbook of Physiology*. Eds.: Patton, Fuchs, Hille, Scher and Steiner. Saunders, New York, 1989, pp 1012-1025.
7. Hlastala MP. Ventilation. In: *The Lung: Scientific Foundations. First Edition*, Eds., R.G. Crystal, J.B. West, Raven Press. New York. 1991. Vol 2, pp 1209-1214.8.
8. Swenson ER and MP Hlastala. CO₂ transport and acid base balance: Tissue and cellular. In: *Basic Mechanisms of Pediatric Respiratory Disease: Cellular and Integrative*. Eds., V. Chernick and R.B. Mellins. B.C. Decker, Inc. Philadelphia. 1991. pp 145-161.
9. Hlastala MP and ER Swenson. Airway gas exchange. In: *Lung Biology in Health and Disease, Vol 57. The Bronchial Circulation*. Ed.: J Butler. Exec Ed: C Lenfant. Marcel Dekker, Inc. 1992. pp 417-441.
10. Hlastala MP. Gas exchange efficiency of the lung. In: *Report of the workshop on research in the microgravity environment related to cardiovascular, pulmonary, and blood functions and diseases*. (Ed: Farhi LE and BE Shykoff). National Institutes of Health and National Aeronautics and Space Administration, 1994, pp. 63-65.

11. Hlastala MP and AJ Berger. *Respiration Physiology*. Oxford University Press, New York, 306 pages, 1996.
12. Hlastala MP. Ventilation. In: *The Lung: Scientific Foundations*. Second Edition, Eds., R.G. Crystal, J.B. West, Raven Press. New York. 1996. Vol 2, pp 1209-1214.
13. Hlastala MP and ER Swenson. Blood gas transport. In: *Pulmonary Diseases and Disorders*, Third Edition. Ed.: A.P. Fishman, McGraw-Hill Book Co., 1998. Vol 3, pp 203-206.
14. Hlastala MP and HT Robertson (Eds). Complexity in Structure and Function of the Lung. Vol. 121. In Lenfant C. (Exec Ed). *Lung Biology in Health and Disease Series*. New York: Marcel Dekker, Inc., 1998, pp. 609.
15. George SC, JE Souders and MP Hlastala. Inert Gas Exchange in the Airways. In: *Lung Biology in Health and Disease*, Vol. 121, Complexity in Structure and Function of the Lung. MP Hlastala and HT Robertson (Eds.), Lenfant C (Exec. Ed.). Marcel Dekker, Inc. 1998, pp 205-242.
16. Swenson ER, KD Domino and MP Hlastala. Physiological Effects of Oxygen and Carbon Dioxide on \dot{V}_A/\dot{Q} Heterogeneity. In: *Lung Biology in Health and Disease*, Vol. 121, Complexity in Structure and Function of the Lung. MP Hlastala and HT Robertson (Eds.), Lenfant C (Exec. Ed.). Marcel Dekker, Inc. 1998, pp 511-547.
17. Hlastala MP and AJ Berger. *Respiration Physiology*. Oxford University Press, New York, 275 pages, 2001.
18. Hlastala, MP, HT Robertson and RW Glenny. Pulmonary perfusion distribution: Nongravitational factors In: *Lung Biology in Health and Disease*, Vol. 160, Gravity and the Lung. Prisk, GK, M Paiva and JB West (Eds.), Lenfant C (Exec. Ed.). Marcel Dekker, Inc. 2001, pp163-181.
19. Hlastala, MP. New insights into the mechanisms of pulmonary blood flow distribution. In: *First Dresden Postgraduate Course on Mechanical Ventilation*. Ed: DM Albrecht and T Koch. Dräger Medizintechnik GmbH, Moislinger Allee 53/55, 23542 Lübeck.
20. Hlastala, MP. Book review: *Medical Applications of Computer Modeling: The Respiratory System*, Ed: T Martonen. *Respiratory Care* 47: 5, 2002.
21. Hlastala, MP. Ventilation. In: *Encyclopedia of Respiratory Medicine*. Ed: JJ Laurent and SD Shapiro. Elsevier. 2006. pp 428-434.

22. Hlastala, MP. Uneven Ventilation. In: Encyclopedia of Respiratory Medicine. Ed: JJ Laurent and SD Shapiro. Elsevier. 2006. pp 446-450.
23. Swenson, EW, RA Klocke and MP Hlastala. Blood-Gas Transport. In: Fishman's Pulmonary Diseases, 4th Edition. Ed: A Fishman, J Elias, J Fishman, M Grippi, L. Kaiser, R Senior and A Pack. McGraw-Hill.

OTHER ARTICLES

1. Hlastala MP. Physiological errors associated with alcohol breath testing. The Champion, July, 1985, pp. 16-19.
2. Hlastala MP. The physiology of alcohol breath testing. In: Alcohol and the Law: Recognizing and dealing with alcohol abuse by clients or colleagues. Washington State Bar Association, 1985, pp. 6-1 to 6-15.
3. Hlastala MP. Lung physiology and its implication for breath testing. In: Defending the Drinking Driver. Continuing Legal Education in Colorado, Inc., 1985, pp. 6-1 to 6-12.
4. Hlastala MP. The physiology of alcohol breath testing. In: Upper Midwest advanced DWI practice. Minnesota Continuing Legal Education, 1985. pp. 1-13.
5. Hlastala MP. Physiological errors associated with alcohol breath testing. In: O.V.W.I. - Two years later. Indiana Continuing Legal Education Forum, 1985. pp. VI-1 - VI-12.
6. Hlastala MP. The impact of lung physiology on breath alcohol testing. DWI Journal: Science and Law 1(5):31-48, 1986.
7. Hlastala MP. Breath testing deficiencies. In: Alcohol-related criminal offenses. Washington State Trial Lawyers Association, 1987. pp 96-110.
8. Hlastala MP. Physiology of alcohol in the body. Trial News 23(8):2,6 and 14, 1988.
9. Hlastala MP and SW Hayne. From the perspective of the expert witness. In: The Datamaster on trial. Washington Foundation for Criminal Justice, 1988. pp 280-288.
10. Hlastala MP. Use of an expert witness to attack the Datamaster. In: Criminal Law for the General Practitioner, 1988. pp 341-351.
11. Hlastala MP. Effect of respiratory diseases on alcohol breath tests. Drinking/Driving Law Letter 7(24):1-5, 1988.
12. Hlastala MP. Human physiology and the alcohol breath test. In: Getting tough on DWI: The defense. Minn Soc Crim Just and Wash Found Crim Just, 1989. pp 3-26.

13. Hlastala MP. Human physiology and the alcohol breath test. In: 13th Annual Drunk Driving Seminar. San Diego Trial Lawyers Association, 1989. pp 4.1-4.15.
14. Hlastala MP. The relationship between blood alcohol and breath alcohol from the scientific standpoint. In: The 2nd Annual Aggressive Defense of the Accused Impaired Driver Seminar. Arizona Attorneys for Criminal Justice, 1989. pp 94-118.
15. Hlastala MP. Human physiology and the alcohol breath test. In: Alan Goldstein's Maryland DWI Seminar, 1989. pp 219-242.
16. Hlastala MP. Scientific laws vs. the law. In: 6th Annual Seminar on Aggressive Defense of the Accused Impaired Driver. Arizona Attorneys for Criminal Justice, 1993. pp 155-180.
17. Hlastala MP. Scientific aspects of the alcohol breath test. In: DUI Defense Skills Certification Program. Washington Law School Continuing Legal Education, 1995, pp 1-24.
18. Hlastala MP. The slope detector. Drinking Driving Law Letter, 15:153-157, 1996.
19. Hlastala MP and P Berzins. The two hour rule: How strong is the scientific evidence. Trial News :12, 1996.
20. Hlastala MP. Breath alcohol concentration. In: Defending DUIs. Chemical tests on trial. Washington Foundation for Criminal Justice and the National College for DUI Defense, 1996, pp 311-329.
21. Hlastala MP. Breath alcohol concentration. In: Aggressive defense of the accused impaired driver. Arizona Attorneys for Criminal Justice, 1997, pp. 56-71.
22. Hlastala MP. Breath alcohol concentration. In: Drinking/Driving Law Letter. Eds: Clark, Boardman, Callaghan, Deerfield, IL. Vol 16(19): 367-371, 1997.
23. Hlastala MP. A new paradigm for the alcohol breath test. DWI Journal 13:1-7, 1998.
24. Hlastala MP. The alcohol breath test. In: Aggressive Defense of the Accused Impaired Driver. Arizona Attorneys for Criminal Justice, 1999, pp 215-246.
25. Hlastala MP. Standardized breath testing: A fresh perspective. In: The Seventh Annual DUI Institute: "DUI Science". Washburn School of Law, Topeka, Kansas. May, 1999.

26. Hlastala MP. The alcohol breath test. In: DWI means Defend with Ingenuity Seminar. Las Vegas, NV. September, 1999.
27. Hlastala MP. A new paradigm for the alcohol breath test. In: Science and the Law – Out of the “Frye”ing Pan. 4th Annual Litigators Conference. Alaska Academy of Trial Lawyers. Girdwood, Alaska. April, 2000.
28. Hlastala MP. Advanced Chemical Testing. In: National College for DUI Defense: 2000 Summer Session. James Farragher Campbell. Boston, MA. July 27-29, 2000.
29. Hlastala MP. The DataMaster explained. In: Defending DUIs: an all-new state-of-the-art seminar. Hayne, Fox & Bowman PLLC. Seattle, WA. December, 2000.
30. Hlastala MP. Why breath tests of blood-alcohol don't work. In: DWI on Trial – The Big Apple Seminar. May, 2001.
31. Hlastala MP. Breathing-related limitations to the alcohol breath test. DWI Journal: Science and Law 17:1-4, December, 2002.
32. Hlastala MP. Physiological aspects of alcohol breath testing. In: Rules of the Road VI: Cutting edge issues: California Attorneys for Criminal Justice. pp. 1-26, 2003.
33. Hlastala MP and DC Sleight. Alveolar air – Forensic scientists have it wrong. In: DWI Journal Law & Science 19: 1-5, 2004.
34. Hlastala MP, WJE Lamm and J Nesci. The slope detector does not always detect the presence of mouth alcohol. Champion. March, 2006, pp 57-61.
35. Barone, PT and MP Hlastala. Justice delayed is justice denied: DUI due process violations in SCRAM cases. DWI Journal. May, 2006.
36. Hlastala, MP and PT Barone. Identification of transdermal ethyl alcohol. DWI Journal: Science and Law 22: 1-8, 2007.
37. Hlastala, MP. The alcohol breath test is biased against individuals with smaller lung volumes. DWI Journal: Science and Law 23: 1-7, Nov. 2008.
38. Hlastala, MP. Limitations in transdermal alcohol monitoring. DWI Journal: Science and Law: 24: 1-4, July 2009 and 1-4, Aug 2009.

PATENTS

1. Babb AL and MP Hlastala. Isothermal rebreathing apparatus and method. U.S. Patent #4,671,298. Issued June 9, 1987.
2. Babb AL, MP Hlastala and G Tarbox. Carbon dioxide detection. US Patent #5,197,464. Issued March 30, 1993.
3. Babb AL, MP Hlastala and G Tarbox. Carbon dioxide detection(II). U.S. Patent #5,291,879. Issued March 8, 1994.

ABSTRACTS

1. Hlastala MP and HD Van Liew. Reabsorption of N₂ bubbles in the blood stream - effect of viscosity on boundary layer. Fed Proc 28:720, 1969.
2. Hlastala MP and CJ Lenfant. Analysis of the effect of fluctuating alveolar gases and pulsatile blood flow on alveolar gas exchange. Fed Proc 30:737, 1971.
3. Hlastala MP, B Wranne and CJ Lenfant. Breath by breath determination of cardiac output. Proc Internat Union Physiol Sci 9:251, 1971.
4. Hlastala MP, B Wranne and CJ Lenfant. Cyclical variations in functional residual capacity and other respiratory parameters. Fed Proc 31:736, 1973.
5. Hlastala MP, RD Woodson and J Butler. Regulation of oxygen affinity influence of saturation, 2,3-DPG and CO₂ on Bohr effect. Fed Proc. 32:349, 1973.
6. Hlastala MP, B Wranne and CJ Lenfant. Periodic changes in functional residual capacity and other respiratory variables in resting man. Acta Physiol Scand Suppl 396:74, 1973.
7. Hlastala MP and LE Farhi. Absorption of nitrogen bubbles in flowing blood. Proc Internat Symp Decompression Gas Bubbles, Seattle, WA, 1973.
8. Hlastala MP and J Butler. Transient state diffusion of diethyl ether in subcutaneous tissue. Physiologist 16:343, 1975.
9. Hlastala MP and RD Woodson. Oxygen delivery in the fetus: Influence of CO₂ and the Bohr effect. Proc Internat Union Physiol Sci 11:237, 1974.
10. Hlastala MP, HP McKenna and RL Franada. Influence of carbon monoxide on hemoglobin-ligand binding. Fed Proc 34:452, 1975.

11. Woodson RD, P Malmberg and MP Hlastala. Effect of increased O₂ affinity on experimental hemorrhagic shock. Clin Res 23:436A, 1975.
12. Hlastala MP and B D'Aoust. Effect of pressure and decompression on the distribution of ventilation to perfusion ratio in the lung. Proc Sixth Symp on Underwater Physiol 6:73, 1975.
13. Robertson HT and MP Hlastala. Negative arterial-alveolar P_{CO₂} gradient during normal gas exchange. Fed Proc 35:477, 1976.
14. Woodson RD, P Malmberg and MP Hlastala. Effect of raised blood oxygen affinity (low P₅₀) on oxygen transport and tolerance of hemorrhagic shock. Fed Proc 35:838, 1976.
15. Hlastala MP and HT Robertson. Pulmonary gas exchange after gas embolization. Undersea Biomed Res 3:A37, 1976.
16. Robertson HT and MP Hlastala. The influence of unique properties of CO₂ gas exchange on the Bohr physiological dead space. Am Rev Resp Dis 115:370, 1977.
17. Brookens AR and MP Hlastala. Oxygen delivery in patients receiving blood transfusions. Am Rev Resp Dis 115:187, 1977.
18. Hlastala MP and HT Robertson. Limitations of CO₂ as a measure of physiological dead space. Proc Internatl Union Physiol Sci 13:325, 1977.
19. Hlastala MP, HT Robertson and BK Ross. Dynamics of inert gas elimination after pulmonary gas embolization. Undersea Biomed Res 4:A36, 1977.
20. Ross BK and MP Hlastala. Hemoglobin-oxygen affinity and tissue oxygen supply. Physiologist 20:81, 1977.
21. Truog WE, MP Hlastala, TA Standaert, MP McKenna and WA Hodson. Inert gas elimination technique in small animals. Am Rev Resp Dis 117:303, 1978.
22. Colley PS, FW Cheney and MP Hlastala. Ventilation-perfusion effects of sodium nitroprusside in oleic acid induced pulmonary edema. Fed Proc 37:928, 1978.
23. Finch CA, P Gollnick, MP Hlastala and B Mackler. Lactic acidosis due to tissue iron deficiency. Clin Res 26:553A, 1978.
24. Colley PS, FW Cheney and MP Hlastala. Ventilation-perfusion and gas exchange effects on nitroprusside in dogs with normal and edematous lungs. ASA abstract, p. 69, 1978.

25. Schoene RP, HT Robertson, SC Springmeyer, D Thorning, MP Hlastala and FW Cheney. Evolution of gas exchange, lavage and pathologic patterns in oleic acid injury. *Am Rev Resp Dis* 119:284, 1979.
26. Christopherson SK and MP Hlastala. The effect of gas density on ventilation perfusion distribution and pulmonary oxygen exchange. *Fed Proc* 38:950, 1979.
27. Petrini MF, HT Robertson and MP Hlastala. Separation of respiratory dead space into its series and parallel components. *Fed Proc* 38:949, 1979.
28. Ross BK and MP Hlastala. Muscle oxygen consumption is unaffected by hemoglobin-oxygen affinity. *Fed Proc* 38:1065, 1979.
29. Truog WE, DE Woodrum, MP Hlastala and WA Hodson. Experimental meconium aspiration: Effect of \dot{V}_A/\dot{Q} distribution. *Pediatric Res* 13:543, 1979.
30. Colley MP, FW Cheney and MP Hlastala. Ventilation-perfusion effects of nitroglycerine. *Anesthesiology* 51:5372, 1979.
31. Woodson RD and MP Hlastala. O₂ saturation dependency of H⁺, CO₂ and DPG interaction. *Fed Proc* 39:1093, 1980.
32. Hlastala MP, P Scheid, M Meyer and J Piiper. Retardation of inert gas elimination by stratified inhomogeneity in the lung. *Proc Internatl Union Physiol Sci* 14:473, 1980.
33. Ralph DD, HT Robertson, LJ Weaver, MP Hlastala, CJ Carrico and LD Hudson. Effects of positive end-expiratory pressure on ventilation-perfusion distribution in patients with the adult respiratory distress syndrome. *Am Rev Resp Dis* 121:180, 1980.
34. Christopherson SK and MP Hlastala. Do bubbles facilitate inert gas elimination by the lung? *Undersea Biomed Res* 8:A36, 1981.
35. Ohlsson J, E Forsstrom, H Johansson, MP Hlastala, J Tranesjo and B Wranne. Noninvasiv slagvolymbestamning med CO₂-Aterandningsteknik. En jamforelse med direkt Fick-teknik hos patienter. *Acta Societas Medicorum Suecanae Hygie* 89:178, 1980.
36. Hlastala M, CR Bridges, G Riepl and P Scheid. The CO₂ and fixed acid Root effect in blood of the eel. *Physiologist* 24:134, 1981.
37. Scheid P, MP Hlastala and J Piiper. Effects of stratification in alveolar gas on inert gas elimination from lungs. *Pfluegers Archiv* 391:R51, 1981.

38. Robertson HT, HP McKenna and MP Hlastala. Elimination of infused inert gas from the lung: dependence on molecular weight. *Fed Proc* 41:1108, 1982.
39. Robertson HT, HP McKenna, M Middaugh and MP Hlastala. Elimination of infused inert gases from the lung during high frequency oscillation: dependence on inert gas molecular weight. *Am Rev Resp Dis* 125:232, 1982.
40. Hlastala MP, TA Standaert, DL Luchtel and DJ Pierson. Structure and function of the lung of the Tegu lizard, *Tupinambis Nigropunctatus*. *Physiologist* 25:250, 1982.
41. Robertson HT, HP McKenna and MP Hlastala. Influence of temperature and hemoglobin saturation on partition coefficients for three gases used for inert gas elimination studies. *Physiologist* 25:268, 1982.
42. Zafren K and MP Hlastala. Gas exchange during acute hypoxia in dogs. Third Banff International Hypoxia Symposium, 1983.
43. Roach RC, EL Larson, MP Hlastala and JC Detter. Acetazolamide, 2,3-DPG and P50 at high altitude. *Fed Proc* 42:979, 1983.
44. Ralph DD and MP Hlastala. Interaction of soluble gases with tracheal airway mucosa. *Physiologist* 26:A68, 1983.
45. Hlastala MP, HT Robertson and DD Ralph. Pulmonary function evaluation with tracer gases. *Proc. ACEMB*:130, 1983.
46. McKenna HP and MP Hlastala. An automated method for determining whole blood oxygen dissociation curves using a diode array spectrophotometer. IUPS Satellite Symposium. *Physiology and biochemistry of blood gas transport*, 1983.
47. Hlastala MP and DD Ralph. Interaction of exhaled gas with airway mucosa. *Proc. Internatl. Union Physiol. Sci.* XV:304, 1983.
48. Hlastala MP. Pulmonary gas exchange dependence on gas physical properties. *Proc. Internat. Union Physiol. Sci.* XV:304, 1983.
49. Robertson HT and MP Hlastala. Gas exchange evidence for decreased intrapulmonary erythrocyte transit time relative to plasma. *Fed. Proc.* 43:782, 1984.
50. Robertson HT, S Jindal, S Lakshminarayan, R Albert, W. Kirk, MP Hlastala and J Butler. Gas exchange properties of the bronchial circulation in a dog lobe maintained in zone I conditions. *Amer Rev Resp Dis* 129: A229, 1984.

51. Hlastala MP. Cardiovascular shunts: a gas exchange perspective. Benzonsymposium abstracts 21:20-21, 1984.
52. Gard RJ, MP Hlastala and AL Babb. Heat and water exchange in an airway tissue model. *Physiologist* 27:259, 1984.
53. Hlastala MP, M Middaugh and DD Ralph. Interaction of highly soluble inert gases with airway mucosa during exhalation. *Physiologist* 27:259, 1984.
54. Robertson HT and MP Hlastala. Diffusion resistance in the elimination of intravenous infused inert gases from the lung. *Fed Proc* 44:1897, 1985.
55. Robertson HT and MP Hlastala. Mechanism of diffusion limitation in inert gases eliminated from the lung. *Amer Rev Resp Dis* 131:A312, 1985.
56. Leasa D, E Swenson, R Gard and MP Hlastala. The acetylene rebreathing technique does accurately estimate lobar capillary blood flow. *Amer Rev Resp Dis* 131:A348, 1985.
57. Ralph DD, G Malvin and MP Hlastala. Pulsatile pulmonary blood flow improves ventilation-perfusion matching. *Fred Proc* 44:1896, 1985.
58. Malvin GM and MP Hlastala. Perfusion-oxygen matching in amphibian skin. *Physiologist* 28:283, 1985.
59. Ralph DD, MP Hlastala, M Middaugh, AL Babb and BH Scribner. Interactions of highly soluble gases with airway during exhalation. *Proc Fifth World Cong Internat Soc Artif Organs* 1985.
60. Leasa D, M Hlastala, RK Albert and J Butler. Up with the injured lung explains the benefit of the prone position. *Chest* 88:43S, 1985.
61. Malvin GM and MP Hlastala. Regulation of cutaneous gas exchange in the frog. *Proc Comp Resp Soc* 4:2, 1985.
62. Malvin GM and MP Hlastala. Control of cutaneous blood flow and gas exchange by intrapulmonary oxygen content in the frog. *Fed Proc* 45:758, 1986.
63. Robertson HT, DD Ralph and MP Hlastala. Diffusion dependent differences in the Fowler dead spaces of intravenously infused inert gases. *Fed Proc* 45:394, 1986.
64. Swenson ER, HTR Robertson and MP Hlastala. Gas exchange in the in situ isolated trachea. *Amer Rev Resp Dis* 133:A27, 1986.

65. Swenson ER, HTR Robertson and MP Hlastala. Carbonic anhydrase inhibition (CAI) impairs ventilation-perfusion (\dot{V}_A/\dot{Q}) matching. Proc XXX Internat Cong Physiol Sci XVI:179, 1986.
66. Grønlund J, GM Malvin and MP Hlastala. A method for estimation of blood flow distribution in skeletal muscle by inert gas washout. Proc XXX Internat Cong Physiol Sci XVI:179, 1986.
67. Ohlsson J, J Grønlund, E Swenson and M Hlastala. Effect of acute reduction in alveolar CO₂ flow on expired gas profiles. Proc XXX Internat Cong Physiol Sci XVI:180, 1986.
68. Malvin GM and MP Hlastala. Effects of CO₂ on cutaneous gas exchange in the frog. Proc XXX Internat Cong Physiol Sci XVI:534, 1986.
69. Tsu ME, AL Babb, DD Ralph and MP Hlastala. Analysis of heat, water and soluble gas exchange in an airway. Fed Proc 46:1427, 1987.
70. Malvin GM and MP Hlastala. Capillary recruitment is not the primary mechanism regulating cutaneous gas exchange in the frog. Fed Proc 46:792, 1987.
71. Swenson ER, J Grønlund, J Ohlsson, J Brahm and MP Hlastala. Effects of in vivo inhibition of red cell anion exchange and the Haldane effect on carbon dioxide output in the dog lung. Physiological Society Meeting, University College, London, 1987.
72. Domino KB, FW Cheney and MP Hlastala. Effect of regional alveolar hypoxia on pulmonary gas exchange in dogs. Amer Rev Resp Dis 137:408, 1988.
73. Malvin GM and MP Hlastala. Regional environmental O₂ affects blood flow but not membrane diffusing capacity in frog skin. FASEB J 2:A499, 1988.
74. Swenson ER, HT Robertson, ME Middaugh and MP Hlastala. Inspiration of CO₂ improves ventilation-perfusion matching in the dog. FASEB J 2:A924, 1988.
75. Emery MJ, AM Matsumoto and MP Hlastala. Testosterone decreases respiratory drive during sleep in the infant male primate. FASEB J 3:A546, 1989.
76. Swenson ER, HT Robertson, ME Middaugh and MP Hlastala. Effects of inspired CO₂ on \dot{V}_A/\dot{Q} matching in hyperoxia and mild hypoxia. Am Rev Resp Dis 139:A443, 1989.

77. Domino KB, MP Hlastala, BE Eisenstein and FW Cheney. Hypoxic pulmonary vasoconstriction (HPV) and intralobar perfusion distribution in permeability edema. *Am Rev Resp Dis* 139:A444, 1989.
78. Malvin GM and MP Hlastala. Environmental O₂ does not affect the diffusing capacity to CO of frog skin. *Proc Internat Union Physiol Sci* XVII:175, 1989.
79. Yamashiro SM, ER Swenson, ME Middaugh and MP Hlastala. Effects of body position and end expiratory pressure on gas exchange in normal dogs. *Physiologist* 32:224, 1989.
80. Tsu ME, AL Babb and MP Hlastala. Breathing pattern affects the airway exchange of heat, water and soluble gases. *Proc. IEEE Eng Med Biol Soc* 11:300-301, 1989.
81. Tsang JY, M Middaugh, M Emery and MP Hlastala. Gas exchange and regional redistribution of pulmonary blood flow after acute pulmonary embolism and resuscitation. *FASEB J* 4:A422, 1990.
82. Emery MJ, ME Middaugh, T Tran and MP Hlastala. Lobar differences in heterogeneity of gas exchange. *FASEB J* 4:A944, 1990.
83. Quartararo C, KR Morgan and MP Hlastala. Position dependence of ventilation heterogeneity. *FASEB J* 4:A944, 1990.
84. Middaugh ME and MP Hlastala. Chest wall contribution to \dot{V}_A/\dot{Q} heterogeneity. *Physiologist* 33:A123, 1990.
85. Morgan KR, TL Bucher and MP Hlastala. Metabolism and ventilation in the golden-mantled ground squirrel. *Physiologist* 33:A70, 1990.
86. Domino KB, BE Eisenstein, ER Swenson, YM Lu and MP Hlastala. Interaction of tidal volume with inspired CO₂ on \dot{V}_A/\dot{Q} matching. *Am Rev Resp Dis* 143:A764, 1991.
87. Schoene RB, S Goldberg, M Emery, MP Hlastala and TR Martin. Hypoxia produces high protein in alveolar fluid in young pigs. *Hypoxia Symposium Proc.* 1991. No. 28.
88. Tsang JY, C Quartararo, ME Middaugh, YM Lu and MP Hlastala. Sequencing and distribution of ventilation in oleic acid induced pulmonary edema. *FASEB J.* 5:A683, 1991.
89. George SC, AI Babb, and MP Hlastala. Alcohol exchange with pulmonary airways. *FASEB J.* 6:A1511, 1992.

90. Emery MJ and MP Hlastala. Ventilation distribution in the isolated dog lobe. FASEB J. 6:A1511, 1992.
91. Tsang JY, M Middaugh, T Tran, YM Lu, and MP Hlastala. Lack of shift in ventilation distribution after acute pulmonary embolism. FASEB J. 6:A1476, 1992.
92. Li MH, M Middaugh, T Tran, YM Lu, and MP Hlastala. Transpleural inert gas flux. FASEB J. 6:A1476, 1992.
93. Domino KB, BL Eisenstein, YM Lu, T Tran, and MP Hlastala. Lobar \dot{V}_A/\dot{Q} heterogeneity is increased by increased lobar pulmonary blood flow. FASEB J. 6:A1477, 1992.
94. Domino KB, S Guidotti, T Tran, and MP Hlastala. Hypocapnia-induced ventilation/perfusion mismatch: A direct CO₂- or pH-mediated effect? Anesthesiology (1992).
95. Hlastala MP, GM Malvin, C Quartararo, and J Grønlund. Inert gas washout from muscle-role of diffusion. Undersea Biomed Res. 19:75S, 1992.
96. Hlastala MP. Airway heat and gas exchange. Respiration in health and disease: Lessons from comparative physiology, pp 45, 1992.
97. Hlastala MP. Airway heat and gas exchange. Proc. IEEE-EMBS Conf., 14:695-696, 1992.
98. Emery MJ and MP Hlastala. Reinspired dead space influences on ventilation heterogeneity measured by multiple breath washout. FASEB J. 7:A229, 1993.
99. Li MH, M Middaugh, T Tran, YM Lu and MP Hlastala. Perturbation of MIGET data by transpleural flux of gas in the isolated lung. FASEB J. 7:A228, 1993.
100. Domino KB and MP Hlastala. Effect of metabolic acidosis on pulmonary gas exchange in permeability pulmonary edema. Anesthesiology 79:A2333, 1993.
101. Swenson ER, MM Graham and MP Hlastala. Carbonic anhydrase inhibition slows kinetics of ventilation redistribution following imposed changes in pulmonary blood flow: effects on \dot{V}_A/\dot{Q} matching. Am Rev Res Dis. 147:A973, 1993.
102. George SC, AL Babb and MP Hlastala. Diffusion of alcohol in the respiratory mucosa. Proc Internat Union Physiol Sci XXXII: 108, 1993.
103. Mates EA, JC Jackson, WE Truog, TA Standaert and MP Hlastala. Respiratory gas exchange and inert gas retention during partial liquid ventilation. Proc ISOTT, 1993).

104. George SC, AL Babb and MP Hlastala. Impact of changes in ventilation and inspired air temperature and humidity on airway gas exchange. *Am Rev Respir Dis Crit Care Med.*, 149:A789, 1994.
105. Domino KB, ER Swenson, M Middaugh, B Levings, MJ Emery and MP Hlastala. Effect of inspired CO₂ on gas exchange and ventilation distribution in hypocapnic pigs. *FASEB J.*, 8:A692, 1994.
106. George SC, AL Babb, ME Deffebach and MP Hlastala. Diffusion of water soluble gases in the canine tracheal mucosa. *FASEB J.*, 8:831, 1994.
107. Souders JE, ER Swenson, NL Polissar, ME Middaugh, SC George and MP Hlastala. Perfusion dependence of airway gas exchange. *FASEB J.*, 8:A692, 1994.
108. Mates EA, JC Jackson, J Hildebrandt and MP Hlastala. Gas exchange during partial liquid ventilation (PLV) in oleic acid injured piglets. *FASEB J.*, 8:A692, 1994.
109. Hlastala MP, HJ Kallas, KB Domino, M Middaugh, RW Glenny. Heterogeneity of pulmonary perfusion distribution in isogravitational planes. *Proc Scand Physiol Society*, 1993.
110. Mates EA, P Tarczy-Hornoch, J Hildebrandt, JC Jackson, MP Hlastala. Negative slope of exhaled CO₂ profile: Implications for ventilation heterogeneity during partial liquid ventilation (PLV). *Proc ISOTT*, 1994.
111. George SC, JE Souders, AL Babb, MP Hlastala. Modeling perfusion-dependent tracheal gas exchange. *Ann Biomed Engnr* 22(1):8, 1994.
112. Hlastala MP, SL Bernard, HH Erickson, MR Fedde, MJ Emery, and RW Glenny. Pulmonary perfusion heterogeneity in the standing horse. *Am Rev Respir Crit Care Med* 151:A520, 1995.
113. Tsang J, M Emery, M Middaugh and M Hlastala. Shift in ventilation distribution after acute microembolic injury. *Am Rev Respir Crit Care Med* 151:A232, 1995.
114. Souders JE, NL Polissar and MP Hlastala. Dispersion indices can detect smaller changes in \dot{V}_A/\dot{Q} heterogeneity than standard MIGET parameters. *Am Rev Respir Crit Care Med* 151:785, 1995.
115. Domino KB, ER Swenson, MJ Emery and MP Hlastala. Influence of CO₂ on the ventilation distribution. *Am Rev Respir Crit Care Med* 151:A785, 1995.

116. Kallas HJ, KB Domino, RW Glenny and MP Hlastala. Relative changes in regional pulmonary blood flow (PBF) with positive end-expiratory pressure (PEEP) are not distributed heterogeneously. *Am Rev Respir Crit Care Med* 151:A520, 1995.
117. George SC, JE Souders, AL Babb, MM Twedt and MP Hlastala. Effect of flow rate on soluble gas exchange in the trachea. *FASEB J* 9:868, 1995.
118. Emery MJ, J Hildebrandt, M Middaugh, D Frazer and MP Hlastala. Effect of lung volume on ventilation heterogeneity in the excised canine lobe. *FASEB J* 9:867, 1995.
119. Bernard SL, RW Glenny, MR Fedde, HH Erickson, MJ Emery and MP Hlastala. Pulmonary blood flow redistributes to dorsal regions with exercise in thoroughbred racehorses. *FASEB J* 9:1605, 1995.
120. Tsang J, M Emery, M Middaugh and MP Hlastala. Quantification of ventilatory heterogeneity after oleic acid induced pulmonary edema. *FASEB J* 9:869, 1995.
121. Brogan T, MP Hlastala and ER Swenson. Pulmonary NO synthase inhalation: Effects on \dot{V}_A/\dot{Q} heterogeneity and response to inspired CO₂. *FASEB J* 9:867, 1995.
122. Hlastala MP, HJ Kallas, RW Glenny, and KB Domino. Effect of positive end-expiratory pressure (PEEP) on pulmonary blood flow (PBF) distribution. *Acta Anaesthes. Scand (Suppl 105)* 39:168, 1995.
123. Erickson HH, MR Fedde, SL Bernard, RW Glenny, MJ Emery, RJ Basaraba, EM Gaughan, and MP Hlastala. Redistribution of pulmonary blood flow during exercise may be related to exercise-induced pulmonary hemorrhage. *AAEP Proc* 41:172-173, 1995.
124. Hlastala MP. Gas exchange with the bronchial circulation. *Proc Da Vinci Society*, 1997.
125. Souders JE, SC George and MP Hlastala. Determining the fraction of tracheal blood flow that participates in gas exchange. *Europ Resp J*, 8(19):245S, 1995.
126. Hlastala MP, SL Bernard, HH Erickson, MR Fedde, MJ Emery and RW Glenny. Pulmonary perfusion heterogeneity in the horse during exercise. *Europ Resp J*, 8(19):460S, 1995.
127. Erickson HH, MR Fedde, SL Bernard, RW Glenny, and MP Hlastala. Relationship between the site of EIPH and highest pulmonary blood flow. *Pferdeheilkunde* 12(4):705, 1996.

128. Walther S, K Domino, N Polissar, R Glenny, and M Hlastala. Lungblodflödet har en konstant radiär, men varierande gravitationell gradient hos vakna får. *Acta Medicorum Suecena*, Hygiea 104:221, 1995.
129. Walther S, K Domino, N Polissar, R Glenny and M Hlastala. Effekter av anestesi, mekanisk ventilation och kroppsläge på distribution av lungblodflöde. *Acta Medicorum Suecena*, Hygiea 104:116-117, 1995.
130. Walther S, K Domino, R Glenny, N Polissar, and M Hlastala. Pulmonary blood flow distribution has a central-to-peripheral gradient in awake, prone sheep. *Anesthesiology* 83:A610, 1995.
131. Tsang J, M Emery, M Middaugh and M Hlastala. Embolic size does not affect the degree of ventilatory heterogeneity. *Am Rev Respir Crit Care Med*, 152: A750, 1996.
132. Mann C, S Walther, K Domino, R Glenny, and M Hlastala. Redistribution of pulmonary blood flow with hypoxia. *Am Rev Respir Crit Care Med*, 152: A817, 1996.
133. Doshier JB, JE Souders, SC George and MP Hlastala. Effects of pretest breathing maneuvers on the single breath ethanol profile. *J Invest Med* (In Press).
134. Wanner A, MJ Emery, J Souders and MP Hlastala. Estimation of peripheral vs. proximal blood flow in the airways of dogs. *FASEB J*, 10:A111, 1996.
135. Emery MJ and MP Hlastala. The difference in simultaneously measured SF₆ and He Sn_{III} is a function of volume in excised dog lobes. *FASEB J*, 10:A363, 1996.
136. Twedt MM, J Anderson, AL Babb and MP Hlastala. Effect of solubility on inert gas exchange in the upper airways. *FASEB J*, 10:A362, 1996.
137. Hlastala MP, M Chornuk, A Self, H Kallas, J Burns and R Glenny. Pulmonary blood flow redistribution with increased - G_X. *FASEB J*, 10:A102, 1996.
138. Walther MP, K Domino, C Mann and M Hlastala. Hypoxic pulmonary vasoconstriction (HPV) diverts flow more effectively in supine than in prone position. *Brit J Anaesthesiol* 76(2):49, 1996.
139. Erickson HH, MR Fedde, SL Bernard, RW Glenny and MP Hlastala. Relationship between the site of EIPH and highest pulmonary blood flow. *Pferdeheilkunde* 12(4):705, 1996.

140. Walther S, K Domino, R Glenny and M Hlastala. Positive end-expiratory pressure (PEEP) increases pulmonary blood flow heterogeneity in the supine position. *Brit J Anaesthesiol* 76(2):49, 1996.
141. Hlastala M, C Mann, S Walther and K Domino. Effect of lobar pulmonary blood flow on flow heterogeneity. *Brit J Anaesthesiol* 76(2):48, 1996.
142. Hlastala M, C Mann, S Walther and K Domino. Effect of unilateral hypoxia on pulmonary blood flow heterogeneity. *Europ Respir J* 9(suppl 23): 2925-2935, 1996.
143. Souders JE, J Doshier, SC George and MP Hlastala. Effects of pre-test ventilatory pattern on the single-breath exhalation profile of ethanol. *Anesthesiol* 85(3A):A1149, 1996.
144. Domino KB, SM Walther and MP Hlastala. Pulmonary blood flow heterogeneity is greater in the supine than the prone position in anesthetized sheep. *Anesthesiol* 85:A523, 1996.
145. Hlastala MP, Mates EA, Jackson JC, Hildebrandt J. Gas exchange during partial liquid ventilation. *Ann Biomed Eng* 24(1):S-10, 1996.
146. Hlastala MP, Burns J, Chornuk M and Glenny R. Effects of gravity on spatial distribution of pulmonary blood flow. *Ann Biomed Eng* 24(1):S-65, 1996.
147. Anderson JC, Irfantash S, Bernard SL, Luchtel DL, Twedt MM, Babb AL, Hlastala MP. Bronchial capillary distribution about sheep airways. *Ann Biomed Eng* 24(1):S-17, 1996.
148. Walther S, KB Domino, JE Souders, E Jamieson, RW Glenny and MP Hlastala. Effects of alveolar hypoxia on the pulmonary blood flow distribution (PBF) in pigs. *Am Rev Respir Crit Care Med*, 155:A116, 1997.
149. Sinclair SE, RW Glenny, S McKinney, SL Bernard and MP Hlastala. Pulmonary blood flow distribution is fractal in resting and exercising horses. *Am Rev Respir Crit Care Med*, 155:A117, 1997.
150. Bernard SL, RW Glenny, MR Fedde, HH Erickson and MP Hlastala. Furosemide does not alter pulmonary blood flow distribution in galloping horses. *Am Rev Respir Crit Care Med*, 155:A117, 1997.
151. Glenny RW, S Bernard, HT Robertson and MP Hlastala. Gravity is an important but minor determinant of pulmonary blood flow heterogeneity in the baboon. *FASEB J*, 11:A344, 1997.

152. Souders JE, JB Doshier and MP Hlastala. Spatial redistribution of pulmonary blood flow (PBF) after venous gas emboli. *FASEB J*, 11:A344, 1997.
153. Anderson J, MM Twedt, AL Babb and MP Hlastala. Solubility dependence of gas exchange in pulmonary airways. *FASEB J*, 11:A347, 1997.
154. Hlastala MP, JB Doshier and JE Souders. Spatial distribution of venous gas emboli in the lungs. *UHMS Abstracts (In Press)*.
155. Sinclair SE, J Souders and MP Hlastala. Severity and distribution of ventilator-induced lung injury (VILI) is altered by PEEP, prone position and respiratory frequency in normal rabbits. *Am J Respir Crit Care Med* 157:A107, 1998.
156. Chornuk MA, SL Bernard, JW Burns, RW Glenny, DD Sheriff, SE Sinclair and MP Hlastala. Effects of +Gz and positive pressure breathing on pulmonary blood flow (PBF) heterogeneity. *FASEB J* 12:A499, 1998.
157. Hlastala, MP, SL Bernard, HT Robertson, and RW Glenny. The role of gravity in determining pulmonary blood flow distribution in upright primates. *Europ Respir J: Abstracts* 180S, 1998.
158. Anderson JC, AL Babb, and MP Hlastala. Airway gas exchange: Modeling the anatomy and physiology of the bronchial circulation. *Ann Biomed Engineering* 26: Suppl 1: S-53, 1998.
159. Lamm WJE, RW Glenny, S Bernard, D An, M Chornuk, WW Wagner, MP Hlastala and HT Robertson. Pulmonary blood flow redistributes minimally between weightlessness and 2G. *Am Rev Respir Crit Care Med*, 159: A567, 1999.
160. Lim CM, KB Domino, RW Glenny and MP Hlastala. \dot{V}_A/\dot{Q} distribution changes with increasing perfluorocarbon (PFC) dose in partial liquid ventilation (PLV) for rabbit model of ARDS. *Am Rev Respir Crit Care Med*, 159: A902, 1999.
161. Souders JE, JB Doshier, NL Polissar, ED Shade and MP Hlastala. Spatial redistribution of pulmonary blood flow (PBF) after venous gas emboli is dependent on position. *FASEB J*. 13: 1999).
162. Hlastala MP, WJE Lamm, RW Glenny, S Bernard, D An, M Chornuk, WW Wagner, Jr. and HT Robertson. Spatial distribution of pulmonary blood flow in microgravity. *Europ Resp J*. 14:622, 1999.
163. Hlastala MP, M Mure, RW Glenny, KB Domino. Spatial correlation of ventilation and perfusion in the pig. *Pulmonary Circulation VII Abstracts* page A40, 1999.

164. Krueger MA, S McKinney, WA Altemeier and MP Hlastala. Influence of acceleration on fractal properties of pulmonary blood flow distribution. *Am Rev Respir Crit Care Med*, 160: 2000.
165. Kreck TC, ED Shade, WJE Lamm, SE McKinney and MP Hlastala. Isocapnic hyperventilation for carbon monoxide poisoning. *Am Rev Respir Crit Care Med*, 160: 2000.
166. Chang H, J Hildebrandt, KB Domino, RW Glenny and MP Hlastala. Spatial distributions of \dot{V}_A and \dot{Q} in the lateral decubitus posture with and without PEEP. *Am Rev Respir Crit Care Med*, 160: 2000.
167. Sinclair SE, DA Frazer and MP Hlastala. Prone posture reduces ventilation inhomogeneity in the rabbit. *Exp Biol* 14: 2000.
168. Hlastala MP, MA Krueger, S McKinney and SE Sinclair. Fractal nature of pulmonary blood flow distribution in the lungs. *UHMS Abstracts*: (In press).
169. Aardal S, W Lamm, and M Hlastala. Recovery of ventilation-perfusion matching after atelectasis and one lung ventilation. *Europ Soc Intens Care Med Abstracts*: (In press).
170. Mure M, KB Domino, SGE Lindahl, MP Hlastala, WA Altemeier and RW Glenny. Spatial distribution of ventilation and perfusion with and without abdominal distension. *Europ Soc Intens Care Med Abstracts* (In press).
171. Kreck T, M Hlastala, M Krueger and HT Robertson. High-resolution determination of ventilation and perfusion using xenon wash-in. *Ann Biomed Eng* 28 (Suppl): S-44, 2000.
172. Krueger M, W Altemeier and M Hlastala. Fractal dimension changes with posture. *Ann Biomed Eng* 28 (Suppl): S-49, 2000.
173. Hlastala M. Exchange of soluble gases in the respiratory system. *Ann Biomed Eng* 28 (Suppl): S-46, 2000.
174. Hübler, M, J Souders, E Shade, J Bleyl, MP Hlastala. Effects of perfluorohexane-vapor on relative blood flow distribution in an animal model of surfactant-depleted lung injury. *Anesthesiology* 93:A-452, 2000.
175. Hlastala, MP, WJE Lamm, SJ Lai-Fook. Spatial redistribution of pulmonary blood flow by hypoxic pulmonary vasoconstriction in vivo. *Scand Soc Anaesthesiol Int Care Med*. (In press), 2001.

176. Hlastala, MP, WJE Lamm, SJ Lai-Fook. Spatial redistribution of pulmonary blood flow by hypoxic pulmonary vasoconstriction in vivo. *Europ Resp Soc Abstracts (In press)*, 2001.
177. Hlastala, MP. The alcohol breath test: use your lungs wisely!. *Da Vinci Society Abstracts (In press, 2001)*.
178. Chang H, J Hildebrandt and MP Hlastala. Spatial distributions of V_A and Q during left lung atelectasis and PEEP in right and left lateral decubitus postures. *Am J Resp Crit Care Med* 163: A920, 2001
179. Chang H, J Hildebrandt and MP Hlastala. Redistribution of blood flow and lung volume between lungs in lateral decubitus post during unilateral atelectasis and PEEP. *Am J Resp Crit Care Med* 163: A920, 2001
180. Sinclair SE, C Schimmel and MP Hlastala. Prone posture and PEEP improve dorsal-caudal ventilation in mechanically ventilated rabbits. *Am Resp Crit Care Med* 163: A684, 2001.
181. Krueger MA, TC Kreck, HT Robertson and MP Hlastala. Variance of regional ventilation and perfusion is larger in sub-acinar compared to supra-acinar regions of lung as measured by xenon wash-in. *Am Resp Crit Care Med* 163: A239, 2001.
182. Kreck TC, MA Krueger, HT Robertson and MP Hlastala. Both regional ventilation and perfusion affect accumulation of xenon in the lung during wash-in. *Am Resp Crit Care Med* 163: A239, 2001.
183. Hübler M, Souders ME, Hlastala MP, Schimmel C, Bleyl JE, Albrecht DM. Einfluss von Perfluorhexan-Dampf auf die Verteilung von Ventilation and Perfusion in einem Modell des akuten Lungenschades. *Anaesthesiol Intensivmed* 42:868-9, 2001.
184. Lamm, WJE, RW Glenny, I Starr, A Karp, NL Polissar and MP Hlastala. Hypoxic pulmonary vasoconstriction (HPV) shows regional variation in response to hypoxia. *Exp Biol* A876, 2002.
185. Krueger, MA, TC Kreck, HT Robertson, MP Hlastala. Sensitivity analysis of the CT/Xenon pulmonary washing model using latin hypercube sampling. *Exp Biol* A877, 2002.
186. Brogan, TV, HT Robertson, WJE Lamm, HE Souders, MP Hlastala and ER Swenson. Carbon dioxide added to the later half of inspiration improves ventilation-perfusion matching without accompanying respiratory acidosis. *Exp Biol* A876, 2002.

187. Robertson, HT, M Krueger, TC Kreck, WJE Lamm, MP Hlastala. Inhaled 1.0- μ m fluorescent microspheres (FMS) with rV_A calculated from sequential CT images of pulmonary xenon washing (CT/Xe). . Exp Biol A877, 2002.
188. Hlastala, MP, WJE Lamm, SJ Lai-Fook, A Karp and N. Polissar. Hypoxic pulmonary vasoconstriction (HPV is Counterproductive in global hypoxia. Amer J Resp Crit Care Med 165: A705, 2002
189. Hlastala, MP, WJE Lamm, IR Starr, A Karp, N Polissar and R Glenny. Hypoxic pulmonary vasoconstriction (HPV) shows regional variation in hypoxia response. Eur Resp J Abst 165: A784, 2002.
190. Hlastala, MP, WJE Lamm, IR Starr, A Karp, N Polissar and R Glenny. Hypoxic pulmonary vasoconstriction (HPV) shows regional variation in hypoxia response. Eur Resp J Abst (2002).
191. Hlastala, MP, WJE Lamm, NL Polissar, RW Glenny. Hypoxic pulmonary vasoconstriction is heterogeneously distributed in the supine pig.. Europ Resp J Abst (2003).
192. Souders, JE, NL Polissar, SL Bernard, MP Hlastala. Excretion of high solubility gases across the trachea is dependent on the tracheal ventilation/perfusion ratio. Exp Biol (In press, 2003).
193. Brogan, TV, WJ Lamm, MP Hlastala, C Schimmel and ER Swenson. Effect of Inspired carbon dioxide on ventilation-perfusion matching in rabbits. Amer J Resp Crit Care Med 167: A705, 2003.
194. Brogan, TV, HT Robertson, WJE Lamm, J Souders, MP Hlastala and ER Swenson. Effect of Inspired CO_2 on V_A/Q matching in dogs measured by microspheres. Amer J Resp Crit Care Med 167: A422, 2003.
195. Hlastala, MP, WJE Lamm, NL Polissar and RW Glenny. Hypoxic pulmonary vasoconstriction is heterogeneously distributed in the supine pig. Eur Resp J 22(suppl 45): 270s, 2003.
196. Chang, H, SJ Lai-Fook, J Hildebrandt, KB Domino and MP Hlastala. Redistribution of blood flow and lung volume between lungs in lateral decubitus postures during unilateral atelectasis and PEEP. Eur Resp J 22(suppl. 45): 270s, 2003.
197. Hlastala, MP, C Schimmel, JC Anderson, S Bernard and S Lakshminarayan. Exchange of highly soluble gases in the lung airways with the bronchial circulation. Eur Resp J 24(Suppl 48): 327s, 2004.

198. Tsang, JY, WJ Lamm, I Starr and MP Hlastala. Endothelin antagonist does not improve ventilation/perfusion mismatch following acute pulmonary thromboembolism. *Amer J Resp Crit Care Med* 168: A258, 2005.
199. Anderson, JC and MP Hlastala. Impact of airway gas exchange on the multiple inert gas elimination technique. *Amer J Resp Crit Care Med* 168: A581, 2005.
200. Kleinsasser, A, SR Hopkins, E Falor, S Bernard, D An and MP Hlastala. The effects of exercise and hypoxia on pulmonary blood flow distribution in swine. *Amer J Resp Crit Care Med* 168: A580, 2005.
201. Hlastala, MP, A Kleinsasser, S Bernard, D An, E Falor and SR Hopkins. Exercise and hypoxia redistribute pulmonary blood flow to the dorsal-caudal lung regions in the pig. *Hypoxia Symposium*, 2005.
202. Corley, RA, KR Minard, DR Einstein, RE Jacob, S Kabilan, LL Trease, EA Hoffman, E Postlethwaite, C Plopper, JS Kimbell, J Harkema, M Hlastala and C Timchalk. Advancements in modeling the respiratory system. Workshop: "Towards the virtual human: Adding more physiological detail to biologically based models used in risk assessments". 45th Annual Meeting of the Society of Toxicology. 2006.
203. Tsang, JY, WJE Lamm and MP Hlastala. Redistribution of ventilation following acute pulmonary thromboembolism is Correlated with Regional Carbon Dioxide Tension. *Amer J Resp Crit Care Med* 169: A509, 2006.
204. Lamm, WJE, B Neradilek and MP Hlastala. Hypoxic pulmonary vasoconstriction responses varies both spatially and temporally within the lung. *Amer J Resp Crit Care Med* 169: A716, 2006.
205. Tsang, JY, WJ Lamm and MP Hlastala. The effect of increased cardiac output on gas exchange following acute pulmonary thromboembolism. *Amer J Resp Crit Care Med*. 172: A940, 2007.
206. Tsang, JY, WJ Lamm, MP Hlastala. Regional carbon dioxide tension has minimal effect on the redistribution of ventilation beyond 30 minutes following acute pulmonary thromboembolism. *Amer J Resp Crit Care Med*. 177: A221, 2008.
207. Kabilan, S, A Kuprat, RA Corley, MP Hlastala, JB Bassingthwaighte, DR Einstein. Multi-scale modeling of the redent respiratory system. *BMES Abstracts* 2009.

208. Kabilan, S, A Kuprat, RA Corley, MP Hlastala, DR Einstein. Multi-scale modeling of the rodent respiratory system. Soc of Toxicol. Abstracts 2010.
209. Kabilan, S, A. Kuprat, RA Corley, JP Carson, KR Minard, RE Jacob, MP Hlastala and DR Einstein. Multiscale modeling of the rodent respiratory system. BMES Abst. 2010.
210. Kabilan, S, A Kuprat, RA Corley, JP Carson, KR Minard, RE Jacob, MP Hlastala and DR Einstein. Multiscale modeling of the rodent respiratory system. BMES Abst. 2011.