

CURRICULUM VITAE

Name Richard D. Branson, M.Sc., R.R.T.

Office Address Division of Trauma and Critical Care
Department of Surgery
University of Cincinnati Medical Center
PO Box 670558, Room 1571
Cincinnati, OH 45267-0558

Home Address 615 Distant Island Drive
Beaufort SC 29907

Telephone (513) 558-6785, Fax (513) 558-3747

e-mail Richard.Branson@UC.edu

Education

1977-1979 A.S., College of Mount St. Joseph, Cincinnati OH
1977-1979 R.R.T., Christ Hospital School of Respiratory Therapy, Cincinnati OH
1994-1996 B.A., College of Mount St. Joseph, Cincinnati OH
2001-2004 M.Sc., The George Washington University, Washington, DC

Positions Held

1/12- 1/14 UC Health Research Executive Committee

10/10 – present Professor of Surgery, Director of Clinical Research, University of Cincinnati College of Medicine, Cincinnati, OH

2/10 – present Medical Director, Post Approval Monitoring Program, Office of Research Compliance University of Cincinnati

3/05-1/11 Adjunct Faculty, College of Pharmacy, University of Cincinnati

5/05 – present Adjunct Faculty, USAF School of Aerospace Medicine

7/02-12/03 Graduate Teaching Assistant, Adjunct Faculty, College of Health Sciences, George Washington University, Washington D. C.

8/99- 10/10 Associate Professor of Surgery, Director of Clinical Research, University of Cincinnati College of Medicine, Cincinnati OH

9/93-8/99 Assistant Professor of Clinical Surgery, Department of Surgery, University of Cincinnati College of Medicine, Cincinnati OH

12/84-8/93 Clinical Instructor, Division of Trauma and Critical Care, Department of Surgery, University of Cincinnati College of Medicine, Cincinnati OH

1982-1984 Clinical Instructor and Advisory Board Member, Cincinnati Technical College, Cincinnati OH

1982-1984 Clinical Instructor and Advisory Board Member, College of Mount St. Joseph, Cincinnati OH

- 1980-1984 ! Supervisor, Department of Respiratory Therapy, University of Cincinnati Medical Center, Cincinnati OH
- 1978-1980 ! Staff Therapist and Clinical Coordinator - Newborn ICU, Children's Hospital Medical Center, Cincinnati OH

Licensure

1979 ! Registered Respiratory Therapist No. 10886, National Board of Respiratory Care

Certificates

- 1984-present Instructor, Advanced Cardiac Life Support, American Heart Association
- 1984 Advanced Cardiopulmonary Dynamics, Bird Institute of Biomedical Technology
- 1979-present Basic Cardiac Life Support, American Heart Association

Honors

- 2011 ! Jimmy Young Medal, American Association for Respiratory Care
- 2010 ! Top Reviewer, CHEST, American College of Chest Physicians
- 2005 ! Life Membership, American Association for Respiratory Care
- 2005 ! Forrest M Bird Lifetime Scientific Achievement Award, American Association for Respiratory Care
- 2004 ! National Alpha Eta Honor Society, George Washington University
- 2002 ! Fellow, American College of Critical Care Medicine
- 2000 ! Fellow, American Association for Respiratory Care
- 1996 ! The Allen DeVilbiss Technology Paper Award, American Respiratory Care Foundation
- 1995 ! Best Original Paper, American Respiratory Care Foundation
- 1995 ! Lifecare Fellowship in Mechanical Ventilation, American Respiratory Care Foundation
- 1993 ! Golden Tree of Life Award, New York Society of Respiratory Care
- 1989 ! Armour Literary Award, American Association of Respiratory Care
- 1987 ! Armour Literary Award, American Association of Respiratory Care
- 1985 ! Armour Literary Award, American Association of Respiratory Care

Memberships

- 2001 Association of Clinical Research Professionals
- 1998 American Thoracic Society
- 1996 American College of Chest Physicians
- 1994 American Society for Testing Materials
- 1994 International Standards Organization
- 1993 National Institutes of Health, SBIR Grant Review SSS 8
- 1987 American Society of Parenteral and Enteral Nutrition
- 1984 Society of Critical Care Medicine
- 1983 Ohio Society of Critical Care Medicine
- 1979 Critical Care Section, American Association for Respiratory Care
- 1977 American Association for Respiratory Care
- 1977 Ohio Society of Respiratory Care

Committee Appointments

American Association for Respiratory Care: !

2018- present Editor-in-Chief, *Respiratory Care* +
2008- 2018 Deputy Editor, *Respiratory Care* +
1998-2000 Chair, Fellows Committee !
1997-2007 Associate Editor, *Respiratory Care* +
1993-1997 Member, Respiratory Care Research Council !
1989-present Member, Committee on Guidelines - Mechanical Ventilation !
1988-present Editorial Board, *Respiratory Care* !
1986-1988 Member, Research Committee !
1988-1990 Chairman, Adult Acute Care Section !
1988 Member, Ad-Hoc Committee on Ventilator Dependent Units !
1986-1988 Chair-Elect, Adult Acute Care Section !
1986-1988 Consulting Editor, *Respiratory Care* !
1998-1999 Chairman, American College of Respiratory Care Selection Cmte !

American Society for Testing Materials (ASTM): !

1994-present Member, Committee F29 on Anesthesia and Respiratory Equipment !

International Standards Organization (ISO): !

1994-present Member, Technical Committee ISO/TC 121 - Anaesthetic and respiratory equipment !

American Heart Association !

2008- 2012 Emergency Cardiovascular Care Basic Life Support (BLS) Subcommittee !
2006 – 2012 ACLS subcommittee on devices !

American Thoracic Society !

2001 Member, Committee on Guidelines for Inhaled Nitric Oxide Therapy !

Society of Critical Care Medicine: !

1988-2001 Member, Committee on Standards for Critical Care Units !
1998-2003 Member, Membership Committee !
1998-2001 Member, Critical Care in the Community Hospital Guidelines !
1998-2001 Member, Program Committee !
1998-2000 Member, Models of Critical Care Practice Committee !
2003-2006 Member, Safety Committee !
2003-2005 Chair, Respiratory Care Section !
2006- 2010 Fundamentals of Disaster Committee !
2006 – 2010 Compensation Committee !
2009-2011 Strategic Education Committee !
2013-2014 Program Committee !
2015 Co-chair Program Committee !

American College of Critical Care Medicine !

2001 Fellow
2005-2012 Board of Regents
2006-2010 Co-chair Committee of Guidelines
2006 -present Member, Emerging Paradigms in Critical Care Conference
2009 -2010 Secretary Treasurer, ACCM Board of Regents
2009-2010 Credentials Committee, ACCM
2010-2011 Vice-Chancellor, ACCM Board of Regents
2011-2012 Chancellor, ACCM Board of Regents

Emergency Care Research Institute
2008 – present Editorial Board, Health Devices
2000 – present Clinical Reviewer

Food & Drug Administration
2004-present Panel Member Anesthesia and Respiratory Devices

Reviewer

Annals of Intensive Care Medicine
American Journal of Respiratory and Critical Care Medicine
Chest
Critical Care Medicine
Critical Care
Intensive Care Medicine – Editorial Board Member
JAMA
Journal of Critical Care
Journal of Trauma
Lung
Medical Engineering & Physics
Military Medicine
Nutrition
Patient Education and Counseling
Pediatric Research
Respiratory Care – Deputy Editor
Respirology
Transactions on Biomedical Engineering

Publications

1. ! Branson RD, Hurst JM, DeHaven CB. Synchronous independent lung ventilation in the treatment of unilateral pulmonary contusion: A report of two cases. *Respir Care* 1984; 29:361-367.
2. ! Branson RD. Dyspnea and crepitation in an infant. *Respir Care* 1984; 29:763-764.
3. ! Branson RD, Hurst JM, DeHaven CB. Use of high frequency jet ventilation during mechanical hyperventilation for control of elevated intracranial pressure. *Respir Care* 1984; 29:1221-1225.

4. ! Hurst JM, Saul T, DeHaven CB, Branson RD. Use of high frequency jet ventilation during mechanical hyperventilation to reduce intracranial pressure in patients with multiple organ-system injury. *Neurosurg* 1984; 15:530-534.
5. ! Hurst JM, DeHaven CB, Branson RD. Comparison of conventional mechanical ventilation and Synchronous Independent Lung Ventilation (SILV) in the treatment of unilateral lung injury. *J Trauma* 1985; 25:766-770.
6. ! Branson RD, Hurst JM, DeHaven CB. Mask CPAP: State of the art. *Respir Care* 1985; 30:846-857.
7. ! Hurst JM, DeHaven CB, Branson RD. Use of CPAP mask as the sole mode of ventilatory support in trauma patients with mild to moderate respiratory insufficiency. *J Trauma* 1985; 25:1065-1068.
8. ! DeHaven CB, Hurst JM, and Branson RD. Postextubation hypoxemia treated with a continuous positive airway pressure mask. *Crit Care Med* 1985; 13:46-48.
9. ! Hurst JM, DeHaven CB, Branson RD, Solomkin J. Combined use of high-frequency jet ventilation and induced hypothermia in the treatment of refractory respiratory failure. *Crit Care Med* 1985; 13:771-772.
10. ! Branson RD, Hurst JM. Book Review: Mechanical Ventilation. *Respir Care* 1985; 30:720-721.
11. ! Adams KS, Branson RD. Unusual finding in resolving pneumonia. *Respir Care* 1985; 30:160-162.
12. ! Hurst JM, Zumwalt R, Branson RD, DeHaven CB. Bronchopulmonary dysplasia in an adult: A case report. *Respir Care* 1985; 30:759-763.
13. ! Branson RD, Hurst JM, Adams KS, Kessinger CK. Ventilators for aeromedical transport: Description and performance evaluation. *Hosp Aviation* 1985; 4:13-19.
14. ! Branson RD, Hurst JM, Adams KS, Kessinger CK. Utilization of mechanical ventilators in hospital based air ambulance programs. *Hosp Aviation* 1986; 5:6-7.
15. ! DeHaven CB, Hurst JM, Branson RD. Evaluation of two different extubation criteria: Attributes contributing to success. *Crit Care Med* 1986; 14:92-94.
16. ! Branson RD, Hurst JM. Book Review: Comprehensive Management of Respiratory Emergencies. *Respir Care* 1986; 31:425.
17. ! Branson RD, Hurst JM. Book Review: Decision Making in Critical Care. *Respir Care* 1986; 31:425-426.

18. ! Branson RD. Response to "One-way valves in CPAP systems". *Respir Care* 1986; 31:540.
19. ! Kessinger CK, Branson RD, Hurst JM. Evaluation of blunt chest injury. *Respir Care* 1986; 31:725-726.
20. ! Branson RD. Home oxygen therapy with high humidity for tracheostomy patients. *RX Home Care* 1986; 8:49-52.
21. ! Adams KS, Branson RD. Respiratory distress following thymectomy. *Respir Care* 1986; 31:1225-1226.
22. ! Hurst JM, Branson RD. Current concepts of high-frequency ventilation. *Curr Surg* 1987; 44:7-12.
23. ! Hurst JM, Branson RD, DeHaven CB. The role of high-frequency ventilation in post-traumatic respiratory insufficiency. *J Trauma* 1987; 27:236-242.
24. ! Branson RD. Humidification, a dry subject, but... (editorial). *Respir Care* 1987; 32:731-732.
25. ! Branson RD, Hurst JM, Warner B, Bower R, Arita A. Measured vs predicted resting energy expenditure in mechanically ventilated patients with COPD. *Respir Care* 1987; 32:748-752.
26. ! Barrette RR, Hurst JM, Branson RD, Davis Jr K. A comparison of conventional mechanical hyperventilation with two forms of high-frequency ventilation for the control of intracranial pressure in closed-head injury. *Respir Care* 1987; 32:733-740.
27. ! Branson RD, Hurst JM. Laboratory evaluation of moisture output of seven airway heat and moisture exchangers. *Respir Care* 1987; 32:741-747.
28. ! Stormer TA, Branson PS, Branson RD. PFT Corner: Noisy breathing in a 16 month old. *Respir Care* 1987;32:806-807.
29. ! Adams KS, Branson RD, Hurst JM. Monitoring oxygenation with oximetry during transport. *Resp Management* 1987; 17:63-69.
30. ! Branson RD, Hurst JM. Nutrition and respiratory function: Food for thought (editorial). *Respir Care* 1988;33:89-92.
31. ! Branson RD. Ventilators and loss of electrical power. Response and responsibility (editorial). *Respir Care* 1988; 33:177-178.
32. ! Branson RD, Hurst JM, Davis Jr K, Pulsfort R. A laboratory evaluation of the Biergy VVR calorimeter. *Respir Care* 1988; 33:341-347.

33. ! Branson RD. PEEP without endotracheal intubation. *Respir Care* 1988; 33:598-610.
34. ! Branson RD. Contamination of multiple-use humidifiers in ambulances. *Ann Emerg Med* 1988; 17:761.
35. ! Branson RD. The responsibility of medical-product evaluators and inventors to avoid conflict of interest (editorial). *Respir Care* 1988; 33:769-770.
36. ! Ploysongsang Y, Branson RD, Rashkin MC, Hurst JM. Pressure flow characteristics of commonly used heat-moisture exchangers. *Amer Rev Respir Dis* 1988; 138:675-678.
37. ! Hurst JM, Branson RD, Davis Jr K. High frequency percussive ventilation in the management of elevated intracranial pressure. *J Trauma* 1988; 28:1363-1367.
38. ! O'Donahue WJ, Branson RD, Hoppough JM, Make BJ. Criteria for establishing units for chronic ventilator-dependent patients. *Respir Care* 1988; 33:1044-1045.
39. ! Task Force on Guidelines. Recommendations for services and personnel for delivery of care in a critical care setting. *Crit Care Med* 1988; 16:809-813.
40. ! Hurst JM, Branson RD, Davis Jr K, Barrette RR. Cardiopulmonary effects of pressure support ventilation. *Arch Surg* 1989; 124:1067-1070.
41. ! Branson RD, Hurst JM, Davis Jr K, Campbell RS. Measurement of maximal inspiratory pressure: A comparison of three methods. *Respir Care* 1989; 34:789-794.
42. ! Ploysongsang Y, Branson RD, Hurst JM, Rashkin M. Effect of flow rate and duration of use on the pressure drop across six artificial noses. *Respir Care* 1989; 34:902-907.
43. ! Branson RD. Artificial noses. The unanswered questions. *Respir Care* 1989; 34:969-971.
44. ! Hurst JM, Davis Jr K, Branson RD, Johannigman JA. Comparison of blood gases during transport using two methods of ventilatory support. *J Trauma* 1989; 29:1637-1640.
45. ! Hurst JM, Davis Jr K, Branson RD, Adams KS, Barrette RS. Comparison of conventional mechanical ventilation and high frequency ventilation: A prospective, randomized trial in patients with respiratory failure. *Ann Surg* 1990; 21:486-491.
46. ! Branson RD. The measurement of energy expenditure: Instrumentation, practical considerations, and clinical application. *Respir Care* 1990; 35:640-668.

47. ! Johannigman JA, Branson RD, Campbell RS, Hurst JM. Laboratory and clinical evaluation of the Max transport ventilator. *Respir Care* 1990; 35:952-959.
48. ! Campbell RS, Branson RD, Hurst JM. Non-ventilatory cause of hypercapnia during weaning. *Respir Care* 1990; 35:1001-1002.
49. ! Branson RD, Campbell RS, Davis Jr K, Johannigman JA, Hurst JM. Comparison of the effects of pressure support ventilation by two ventilators. *Respir Care* 1990; 35:1049-1055.
50. ! Branson RD, Campbell RS, Davis Jr K, Johannigman JA, Johnson DJ, Hurst JM. Altering flowrate during maximum pressure support ventilation: Effects on cardiorespiratory function. *Respir Care* 1990; 35:1056-1064.
51. ! Branson RD. Pioneers in respiratory care: Forrest M. Bird. *AARC Times* 1990; 14:51-57.
52. ! Branson RD. Humidification of inspired gases during mechanical ventilation. *RT* 1991; 3:54-66.
53. ! Johannigman JA, Branson RD, Davis Jr K, Hurst JM. Techniques of emergency ventilation: A model to evaluate tidal volume, airway pressure, and gastric insufflation. *J Trauma* 1991; 31:93-98.
54. ! Johannigman JA, Branson RD. Oxygen enrichment of expired gas for mouth-to-mask resuscitation. *Respir Care* 1991; 36:99-103.
55. ! Branson RD. Enhanced capabilities of current ICU ventilators: Do they really benefit patients? *Respir Care* 1991; 36:362-376.
56. ! Branson RD. Book Review: *Clinical Applications of Ventilatory Support*. *Respir Care* 1991; 36:439.
57. ! Branson RD. Book Review: *Resuscitation Handbook*. *Respir Care* 1991; 36:439-440.
58. ! Johnson DJ, Johannigman JA, Branson RD, Davis Jr K, Hurst JM. The effects of low dose dopamine on splanchnic blood flow during PEEP ventilation for acute lung injury. *J Surg Res* 1991; 50:344-349.
59. ! Branson RD, Campbell RS, Thompson D. Ventilator circuits: What you see may not be what you get. *Respir Care* 1991; 36:629-630.
60. ! Branson RD. The environment is our concern. *AARC Times* 1991; 15:96-97.
61. ! Branson RD. Ventilator circuit resistance: A clarification. *Respir Care* 1991; 36:874.

62. ! Task Force on Guidelines. Guidelines for standards of care for patients with acute respiratory failure on mechanical ventilatory support. Crit Care Med 1991; 19:275-278.
63. ! Purcell PN, Johannigman JA, Branson RD, Johnson DJ. PEEP ventilation for acute lung injury decreases hepatic oxygen supply and increases hepatic oxygen demand. Current Surgery 1991; 48:435-438.
64. ! Purcell PN, Johnson DJ, Branson RD, Davis Jr K. Systemic hemodynamics estimate changes in gut perfusion during lung injury managed with positive end-expiratory pressure (PEEP). Surg Forum 1991; 42:48-49.
65. ! Rouse MJ, Branson RD, Semonin-Holleran R. Mechanical ventilation during air medical transport: Techniques and devices. J Air Med Transport 1992; 11:5-8.
66. ! Branson RD, Campbell RS. Sighs: Wasted breath or breath of fresh air? Respir Care 1992; 37:462-468.
67. ! Branson RD, Campbell RS. Monitoring respiratory function in the ICU. RT 1992; 3:24-28.
68. ! Branson RD. Intrahospital transport of critically ill, mechanically ventilated patients. Respir Care 1992; 37:775-795.
69. ! Purcell PN, Branson RD, Hurst JM, Davis Jr K, Johnson DJ. Gut feeding and hepatic hemodynamics during PEEP ventilation for lung injury. J Surg Res 1992; 53:335-341.
70. ! Purcell PN, Branson RD, Schroeder TJ, Davis Jr K, Johnson DJ. Monoethylglycinexylidide (MEGX) production parallels changes in hepatic blood flow and oxygen delivery in lung injury managed with positive end-expiratory pressure. J Trauma 1992; 33:482-486.
71. ! Campbell RS, Branson RD. How ventilators provide temporary O₂ enrichment: What happens when you press the 100% suction button? Respir Care 1992; 37:933-937.
72. ! Branson RD, Campbell RS, Chatburn RL, Covington J. Clinical Practice Guidelines: Patient Ventilator System Check. Respir Care 1992; 37:882-886.
73. ! Branson RD, Campbell RS, Chatburn RL, Covington J. Clinical Practice Guidelines: Humidification During Mechanical Ventilation. Respir Care 1992; 37:887-890.
74. ! Branson RD, Campbell RS. Some history related to the sigh. Letter to the editor. Respir Care 1992;37:951-952.

75. ! Branson RD. 'Bye sigh. Letter to the editor. *Respir Care* 1992; 37:952.
76. ! Branson RD, Brougher P, Chatburn RL, East TD, Marini JJ, MacIntyre NR. Consensus statement on the essentials of mechanical ventilators. *Respir Care* 1992; 37:1000-1008.
77. ! Branson RD, Chatburn RL. Technical description and classification of modes of ventilator operation. *Respir Care* 1992; 37:1026-1044.
78. ! Purcell PN, Branson RD, Davis Jr K, Johnson DJ. Histamine-2 blocker infusion decreases portal venous blood flow and hepatic blood flow in anesthetized canines. *Surg Forum* 1992; 43:53-55.
79. ! Hurst JM, Davis K Jr, Johnson DJ, Branson RD, Campbell RS, Branson PS. Cost and complications during in-hospital transport of critically ill patients: a prospective cohort study. *J Trauma*. 1992 Oct;33(4):582-5.
80. ! Purcell PN, Davis Jr K, Branson RD, Johnson DJ. Continuous duodenal feeding restores gut blood flow and increases gut oxygen utilization during PEEP ventilation for lung injury. *Am J Surg* 1993; 165:188-194.
81. ! Branson RD, Chatburn RL. Humidification of inspired gases during mechanical ventilation. *Respir Care* 1993; 38:461-468.
82. ! Campbell RS, Branson RD. Ventilatory support for the 90's: Pressure support ventilation. *Respir Care* 1993; 38:526-537.
83. ! Branson RD, Campbell RS, Chatburn RL, Covington J. AARC Clinical Practice Guideline: Endotracheal suctioning of mechanically ventilated adults and children with artificial airways. *Respir Care* 1993; 38:500-504.
84. ! Branson RD. The nuts and bolts of increasing arterial oxygenation: Devices and techniques. *Resp Care* 1993; 38:672-686.
85. ! Davis Jr K, Branson RD, Campbell RS, Porembka D, Johnson DJ. The addition of sighs during pressure support ventilation. Is there a benefit? *Chest* 1993; 104:867-870.
86. ! Branson RD, Davis Jr K, Campbell RS, Johnson DJ, Porembka DT. Humidification in the intensive care unit: Prospective study of a new protocol utilizing heated humidification and a hygroscopic condenser humidifier. *Chest* 1993; 104:1800-1805.
87. ! Davis Jr. K, Johnson DJ, Branson RD, Campbell RS, Johannigman JA, Porembka D. Airway pressure release ventilation. *Arch Surg* 1993; 128:1348-1352.
88. ! Branson RD. Faulty ventilator and functionally crossed pipelines (letter). *Anaesthesia* 1993; 48:270.

89. ! Valente JF, Anderson GL, Branson RD, Johnson DJ, Davis Jr K, Porembka D. Disadvantages of prolonged propofol sedation in the critical care unit. *Crit Care Med* 1994; 22:710-712.
90. ! Branson RD. Decreasing the work of breathing: How much of a change is important? *Respir Care* 1994; 39:187-189.
91. ! Branson RD. Flow-triggering systems. *Respir Care* 1994; 39:138-144.
92. ! Davis Jr. K, Branson RD, Porembka D. A comparison of the imposed work of breathing with endotracheal and tracheostomy tubes in a lung model. *Respir Care* 1994; 39:611-616.
93. ! Branson RD, Campbell RS, Davis Jr K, Johnson DJ. Comparison of pressure and flow triggering systems during continuous positive airway pressure. *Chest* 1994; 106:540-544.
94. ! Branson RD, Fischer JE. Indirect calorimetry and its application in the critical care setting. *Pathways in Critical Care* 1994; 1:1-5.
95. ! Branson RD. Technical aspects of metabolic measurements (editorial). *Nutrition* 1995; 11:176.
96. ! Branson RD, Johannigman JA. Ventilatory support during cardiopulmonary resuscitation. *Respir Care* 1995; 40:479-497.
97. ! Haas CF, Branson RD, Folk LM, Campbell RS, Wise CR, Davis Jr K, Dechert RE, Weg JG: Patient-determined inspiratory flow during assisted mechanical ventilation. *Respir Care* 1995; 40:716-721.
98. ! Johannigman JA, Branson RD, Johnson DJ, Davis Jr K, Hurst JM. Out-of-hospital ventilation: Bag-valve device vs transport ventilator. *Acad Emerg Med* 1995; 2:719-724.
99. ! Branson RD. Broadening our outlook - Oxygen therapy in the People's Republic of China (editorial). *Respir Care* 1995; 40:810.
100. ! Davis Jr K, Johannigman JA, Johnson Jr. RC, Branson RD. Lung compliance following cardiac arrest. *Acad Emerg Med* 1995; 2:874-878.
101. ! Hess D, Branson RD. Case studies on mechanical ventilator innovations: Perspectives of two clinicians. *Respir Care* 1995; 40:957.
102. ! Branson RD, Davis Jr K. Work of breathing imposed by five ventilators used for long-term support: The effects of PEEP and simulated patient demand. *Respir Care* 1995; 40:1270-1278.

103. ! Branson RD, MacIntyre NR. Dual-control modes of mechanical ventilation. *Respir Care* 1996; 41:294-302.
104. ! Branson RD. Humidity and standards: More questions than answers (letter). *Respir Care* 1996; 41:344-345.
105. ! Hurst JM, Branson RD. Liquid breathing - partial liquid ventilation. *Respir Care* 1996; 41:416-423.
106. ! Branson RD, Davis Jr K. Evaluation of 21 passive humidifiers according to the ISO 9360 standard: moisture output, dead space, and flow resistance. *Respir Care* 1996; 41:736-743.
107. ! Branson RD, Davis Jr K, Brown R, Rashkin M. Comparison of three humidification techniques during mechanical ventilation: patient selection, cost, and infection considerations. *Respir Care* 1996; 41:809-816.
108. ! Branson RD. What is tracheal pressure-triggering and do we need it? NO! We don't need it! (Editorial) *Respir Care* 1996; 41:526-528.
109. ! Davis Jr K, Branson RD, Campbell RS, Porembka DT. Comparison of volume control and pressure control ventilation: Is flow waveform the difference? *J Trauma* 1996; 41:808-814.
110. ! Campbell RS, Branson RD, Burke W, Covington J, Graybeal J. Capnography/capnometry during mechanical ventilation. AARC Clinical Practice Guideline. *Respir Care* 1996; 40:1321-1324.
111. ! Johannigman JA, Branson RD. Ventilatory support in the field. *Respiratory Care Clinics of North America*. W.B. Saunders, Philadelphia, PA, 1996.
112. ! Branson RD, Meredith R. Role of the respiratory care practitioner in the emergency department. *Respir Care* 1997; 41:141-147.
113. ! Grolman W, Blom ED, Branson RD, Schouwenburg PF, Hamaker RC. An efficiency comparison of four heat and moisture exchangers used in the laryngectomized patient. *Laryngoscope* 1997; 107:814-820.
114. ! Branson RD, Campbell RS, Johannigman JA. Excessive work of breathing, active exhalation, and retardation of expiratory flow: What's the problem and where's the problem? *Respir Care* 1997; 42:791-795.
115. ! Branson RD, Campbell RS, Davis Jr K. Effect of expiratory flow on moisture output of passive humidifiers as measured by the ISO 9360 standard. *Respir Care* 1997; 42:960-964.

116. ! Campbell RS, Branson RD, Johannigman JA, Davis Jr K. Erratic ventilator triggering during neuromuscular blockade. *Respir Care* 1997; 42:1048-1056.
117. ! Branson RD. Is a nose just a nose? (editorial) *Chest* 1997; 112:581.
118. ! Johannigman JA, Davis Jr K, Campbell RS, Branson RD, Luchette FA, Hurst JM. Use of the rapid/shallow breathing index as an indicator of patient work of breathing during pressure support ventilation. *Surgery* 1997; 122:737-741.
119. ! Johannigman JA, Davis Jr K, Campbell RS, Luchette FA, Hurst JM, Branson RD. Inhaled nitric oxide in ARDS. *J Trauma* 1997; 43:904-909.
120. ! Branson RD. Airway pressures and volutrauma. (editorial) *Respir Care* 1997; 42:1167-1169.
121. ! Hess DR, Ritz R, Branson RD. Delivery systems for inhaled nitric oxide. *Respiratory Care Clinics of North America*. 1997;3:371-410.
122. ! Branson RD, Campbell RS. Triggering the ventilator. *Current Opinion in Critical Care* 1998; 4:48-58.
123. ! Branson RD, Campbell RS, Davis Jr K, Porembka DT. Anaesthesia Circuits, humidity output, and mucociliary structure and function. *Anaesthesia and Intensive Care* 1998; 26:178
124. ! Johannigman JA, Campbell RS, Branson RD, Hurst JM. Ventilatory support of the critically injured patient. *New Horizons* 1999;7:116-130.
125. ! Branson RD. The effects of inadequate humidity. *Respiratory Care Clinics of North America*. 1998;4:199-214.
126. ! Branson RD, Campbell RS. Humidification in the intensive care unit. *Respiratory Care Clinics of North America*. 1998;4:305-320.
127. ! Branson RD. Jack Emerson: The man behind the machines. Notes on his life and contributions to respiratory care. *Respiratory Care* 1998;43:567-571.
128. ! Davis Jr. K, Campbell RS, Johannigman JA, Valente JF, Branson RD. Changes in Respiratory Mechanics After Tracheostomy. *Arch Surg* 1999; 134:59-62.
129. ! Branson RD, Campbell RS. Pressure Support Ventilation, Patient-Ventilator Synchrony, and Ventilator Algorithms. *Respiratory Care* 1998; 43:1045-1047.
130. ! Branson RD. New modes of mechanical ventilation. *Current Opinion in Critical Care* 1999; 5:33-42.
131. ! Branson RD, Hess DR, Campbell RS, Johannigman JA. Inhaled Nitric Oxide:

- Delivery Systems and Monitoring. *Respiratory Care* 1999;44:281-307.
132. ! Davis K Jr, Evans SL, Johannigman JA, Campbell RS, Luchette FA, Porembka D, Branson RD. Extended use of heat and moisture exchangers does not effect efficacy or safety. *Critical Care Medicine* 2000;28:1412-1418.
133. ! Branson RD. Humidification for patients with artificial airways. *Respiratory Care* 1999;44:630-641.
134. ! Branson RD, Campbell RS, Johannigman JA, Ottaway M, Davis K Jr., Luchette FA, Frame SB. Comparison of Conventional Heated Humidification with A New Active Hygroscopic Heat and Moisture Exchanger In Mechanically Ventilated Patients. *Respiratory Care* 1999;44:912-917.
135. ! Johannigman JA, Davis K Jr., Campbell RS, Luchette FA, Frame SB, Branson RD. The effects of PEEP on response to inhaled nitric oxide: Changing non-responders to responders. *Surgery* 2000;127:390-394.
136. ! Branson RD, Campbell RS, Davis K Jr. New modes of mechanical ventilation. *International Anesthesiology Clinics* 1999;37:103-125.
137. ! Luchette FA, Porembka D, Davis K Jr., Branson RD, James L, Hurst JM, Johannigman JA, Campbell RS. Effects of body temperature on accuracy of continuous cardiac output measurements. *Journal of Investigative Surgery* 2000;13:147-152.
138. ! Davis K Jr., Johannigman JA, Campbell RS, Marraccini A, Luchette FA, Frame SB, Branson RD. The acute effects of body position strategies and respiratory therapy in paralyzed patients with acute lung injury. *Critical Care* 2001;5:81-87.
139. ! Johannigman JA, Davis K Jr., Miller SL, Luchette FA, Frame SB, Branson RD. Prone Positioning for Acute Respiratory Distress Syndrome in the Surgical Intensive Care Unit: Who, When, and How Long? *Surgery* 2000;128:708-716.
140. ! Hess DR, Branson RD. Ventilators and weaning modes. *Respiratory Care Clinics of North America* 2000;6:193-225.
141. ! Campbell RS, Davis K Jr, Johannigman JA, Branson RD. The effects of passive humidifier deadspace on respiratory variables in paralyzed and spontaneously breathing patients. *Respir Care* 2000;45:306-312.
142. ! Branson RD. Techniques for automated feedback control of mechanical ventilation. *Seminars in respiratory and critical care medicine*. 2000;21:203-210.
143. ! Johannigman JA, Davis K Jr., Miller S, Campbell RS, Luchette FA, Frame SB, Branson RD. Inhaled nitric oxide and prone positioning: synergistic therapies for ARDS. *J Trauma* 2001;50:589-596.

144. ! Branson RD, Davis K. Jr. Dual control modes. *Respiratory Care Clinics of North America* 2001;7(3):397-408.
145. ! Campbell RS, Branson RD, Johannigman JA. Adaptive support ventilation. *Respiratory Care Clinics of North America* 2001;7(3):425-440.
146. ! Hess D, Mason S, Branson RD. High frequency ventilation: Design and Equipment Issues. *Respiratory Care Clinics of North America* 2001;7(4):638-651.
147. ! Branson RD. Dual control modes, closed loop ventilation, handguns & tequila. (editorial) *Respiratory Care* 2001;46:232-233.
148. ! Austin PA, Campbell RS, Johannigman JA, Branson RD. Work of breathing characteristics of seven portable ventilators. *Resuscitation*, 2001;49:163-172.
149. ! Kosowosky JM, Stephanides SL, Branson RD, Sayre MR. Prehospital use of continuous positive airway pressure for presumed pulmonary edema: a preliminary case series. *Prehosp Emerg Care* 2001;5:190-196.
150. ! Austin PA, Johannigman JA, Campbell RS, Branson RD. Thermal imaging of portable ventilators. *Military Medicine* 2001;166:843-847.
151. ! Brilli RJ, Spevetz A, Branson RD, and the American College of Critical Care Task Force. Critical care delivery in the intensive care unit: Defining clinical roles and the best practice model. *Crit Care Med* 2001;29:2007-2019.
152. ! Branson RD, Campbell RS, Davis K, Johannigman JA. Closed loop ventilation. *Respiratory Care* 2002;47:427-453.
153. ! Austin PA, Campbell RS, Johannigman JA, Branson RD. Transport ventilators in 2001. *Respiratory Care Clinics of North America* 2002;8:1-32.
154. ! Austin PA, Campbell RS, Johannigman JA, Branson RD. Work of breathing during ventilator failure in portable and ICU ventilators. *Respiratory Care* 2002;47(6):667-674.
155. ! Campbell RS, Austin PA, Matacia GM, Banks G, Johannigman JA, Davis K, Luchette FA, Miller SL, Branson RD. Battery life of eight portable ventilators: Effect of control variable, PEEP, and FIO₂. *Respiratory Care* 2002;47:1173-1183.
156. ! Johannigman JA, Miller SM, Davis BR, Davis K Jr., Campbell RS, Branson RD. Influence of low tidal volumes on gas exchange in ARDS and the role of recruitment maneuvers. *Journal of Trauma* 2003;54:320-324.
157. ! Branson RD. Endotracheal tubes and imposed work of breathing. What should we do about it, if anything? (Editorial). *Critical Care* 2003;7:347-348.

158. ! Branson RD. Understanding and implementing advances in ventilator capabilities. *Current Opinion in Critical Care* 2004;10:23-32.
159. ! Branson RD, Mannheimer PD. Forehead oximetry in critically ill patients: the case for a new monitoring site. *Respiratory Care Clinics of North America* 2004;10(3):359-367.
160. ! Branson RD. Anatomy of a Research Paper. *Respiratory Care* 2004;49(10):730-739.
161. ! Stewart CM, Branson RD, Goody C. Comparison of two systems for measuring energy expenditure. *Journal of Parenteral and Enteral Nutrition* 2005;29:212-217.
162. ! Branson RD. Ventilator associated pneumonia; role of the ventilator circuit. *Respiratory Care* 2005;50:774-787.
163. ! Branson RD, Johannigman JA. The measurement of energy expenditure. *Nutrition in Clinical Practice* 2004;19:622-636.
164. ! Branson RD. Functional principles of positive pressure ventilators: implications for patient ventilator interaction. *Respir Care Clin N Am.* 2005 Jun;11(2):119-45
165. ! Branson RD, Johannigman JA. What is the evidence base for the newer ventilation modes? *Respiratory Care* 2004;49:742-760.
166. ! Branson RD, Johannigman JA. The role of ventilator graphics when setting dual-control modes. *Respir Care.* 2005 Feb;50(2):187-201.
167. ! Rubinson LR and the Working Group on Emergency Mass Critical Care. Augmentation of hospital critical care capacity after bioterrorist attacks or epidemics: Recommendations of the Working Group on Emergency Mass Critical Care. *Critical Care Medicine* 2005;33.
168. ! Branson R. New Ventilator Modes: The Shape of Things to Come. *Respir Care* 2005;50:677-679.
169. ! Branson R. Ventilation during cardiopulmonary resuscitation: The right tool for the job. *Respir Care* 2005;50:720-723.
170. ! Rubinson L, Branson RD, Pesick N, Talmor D. Positive pressure ventilation equipment for mass casualty respiratory failure. *Biosecurity and Bioterrorism* 2006;4(2):1-12.
171. ! Hurst V, West S, Austin PN, Branson RD, Beck G. Comparison of bystander cardiopulmonary resuscitation (BCPR) performance in the absence and presence of timing devices for coordinating delivery of ventilatory breaths and cardiac

- compressions in a model of adult cardiopulmonary arrest. *Resuscitation* (2007) 73, 123—130
172. ! Branson RD. Humidification of respired gases during mechanical ventilation: mechanical considerations. *Respiratory Care Clinics of North America* 2006;12:253-261.
173. ! Daugherty EL, Branson RD, Rubinson L. Mass casualty respiratory failure. *Curr Opin Crit Care*. 2007 Feb;13(1):51-6.
174. ! Branson RD and Rubinson L. A single ventilator for multiple patients: Understanding the multiple limitations. *Acad Emerg Med*. 2006 Dec;13(12):1352-3.(letter)
175. ! Salas N, Wisor B, Agazio J, Branson RD, Austin PA. Comparison of Ventilation and Cardiac Compressions When Utilizing the Impact Model 730 Automatic Transport Ventilator Versus a Conventional Bag Valve with a Facemask in a Model of Adult Cardiopulmonary Arrest. *Resuscitation* 2007 Jul;74(1):94-101.
176. ! Branson RD, Davis K, Jr., Butler K. African Americans participation in clinical trials. *Am J Surg*. 2007 Jan;193(1):32-9
177. ! Kallet RH, Branson RD. Do the NIH ARDS clinical trials network PEEP/FIO2 tables provide the best evidence guide to balancing PEEP and FIO2 settings in adults. *Respir Care* 2007;52:461-475.
178. ! Branson RD, Chatburn RL. Should adaptive pressure control modes be utilized for virtually all patients receiving mechanical ventilation. *Respir Care* 2007;52:478-485.
179. ! Branson RD. Secretion management in the mechanically ventilated patient. *Respir Care*. 2007 Oct;52(10):1328-42.
180. ! Branson RD, Johannigman JA, Daugherty EL, Rubinson L. Surge capacity mechanical ventilation. *Respir Care* 2008;53:78-90.
181. ! Branson RD, Rubinson L. Mass casualty care. *Respir Care* 2008;53:38-39.
182. ! Barnes SA, Branson RD, Beck G, Johannigman JA. En-route care in the air: A snapshot of mechanical ventilation at 37,000 feet. *J Trauma* 2008;64:S129-S135.
183. ! Johannigman JA, Branson RD, Beck G, Lacroy D. Oxygen Conservation with autonomous control of inspired oxygen concentration in ventilated trauma patients. *J Trauma* 2009;66:386-392.
184. ! Johannigman JA, Barnes SA, Muskat P, Davis K, Beck G, Branson RD. Autonomous control of oxygenation. *J Trauma*. 2008 Apr;64(4 Suppl):S295-301.

185. ! Johannigman JA, Barnes SA, Muskat P, Davis K, Branson RD. Autonomous control of ventilation. *J Trauma*. 2008 Apr;64(4 Suppl):S302-20.
186. ! Rodriguez D, Branson RD, Barnes SA, Johannigman JA. Evaluation of battery life of the LTV-1000 external lithium ion battery under varying loads. *Military Medicine* 2008; 173(8):792-5.
187. ! Johannigman JA, Branson RD, Barnes SL, Muskat P, Beck G. Closed loop control of oxygenation and ventilation. *International Journal of Gravitational Physiology* 2007;14:P35-38.
188. ! Branson RD, Davis K. Do closed loop modes of assist control ventilation reduce ventilator induced lung injury? *Clinics in Chest Medicine* 2008;29:343-350.
189. ! Robinson BRH, Mueller E, Henson K, Branson R, Barsoum S, Tsuei B. A Nurse Implemented Analgesia-Sedation-Delirium Protocol for Critically Ill Trauma Patients. *J Trauma* 2008;65:517-526.
190. ! Branson RD. Mass casualty respiratory care: a discussion of issues of interest. *Respir Care*. 2008 Feb;53(2):239-48.
191. ! Rubinson L, Hick JL, Curtis JR, Branson RD, et al. Definitive Care for the Critically Ill During a Disaster: Medical Resources for Surge Capacity. *Chest* 2008; 133:32S–50S.
192. ! Branson RD, Rubinson L. One ventilator, multiple patients – What the data really supports. *Resuscitation* 2008;79:171-172.
193. ! Branson RD, Rubinson L. Response to non-invasive ventilation during mass casualty respiratory failure. *Respir Care* 2008; Jul;53(7):917-20. (letter)
194. ! Robinson BRH, Athota K, Branson RD. Inhalational therapies in the ICU. *Current Opinion in Critical Care* 2009; 2009 Feb;15(1):1-9.
195. ! Rodriguez D, Branson RD, Dorlac W, Dorlac G, Barnes S, Johannigman JA. Performance of ventilators at simulated altitude. *J Trauma* 2009;66:S172-S177.
196. ! Branson RD. Humidification of inspired gases; A search for rational endpoints. *Respir Care* 2009 Apr;54(4):450-2. (editorial).
197. ! Blakeman TC, Branson RD. Evaluation of the cylinder duration calculator of the LTV-1000 ventilator. *Respir Care* 2009;54: 1183-6.
198. ! Branson RD, Johannigman JA. Innovations in mechanical ventilation. *Respir Care* 2009 ;54:933-947.
199. ! Johannigman JA, Branson RD, Edwards MG. Closed loop control of inspired

- oxygen concentration in trauma patients. *J Am Coll Surg*. 2009 May;208(5):763-8.
200. ! Robinson BRH, Branson RD. Consequences of ventilator asynchrony: Why can't we all get along? *Crit Care Med* 2009;37:2848-9. (editorial)
201. ! Blakeman TC, Branson RD, Robinson BRH. Evaluation of the battery life of four ICU ventilators. *Respiratory Care* 2010;55(3):317-21.
202. ! Daugherty E, Branson RD, Desai A, Rubinson L. Infection Control in Mass Respiratory Failure: Preparing to Respond to H1N1. *Critical Care Medicine* 2010;38(4 Suppl):e103-9.
203. ! Rodriguez D, Blakeman TC, Dorlac W, Johannigman JA, Branson RD. Maximizing oxygen delivery during mechanical ventilation with use of a portable concentrator. *J Trauma* 2010;69:S87-S93.
204. ! Rodriguez D, Johannigman JA, Branson RD. Ventilation at altitude. (letter) *J Trauma* 2010;68:249.
205. ! Branson RD, Rodriguez D, Dorlac W, Johannigman JA. Performance of oxygen concentrators at altitude. *J Aviation, Space, & Environ Med* 2010(submitted for publication)
206. ! Burns JB Jr, Branson R, Barnes SL, Tsuei BJ. Emergency airway placement by EMS providers: comparison between the King LT supra-laryngeal airway and endotracheal intubation. *Prehosp Disaster Med*. 2010 Jan-Feb;25(1):92-5.
207. ! Blakeman TC, Toth P, Rodriguez D, Branson RD. Mechanical ventilation in the hot zone: Effects of a CBRN filter on patient protection and battery life. *Resuscitation* 2010; 81(9):1148-51.
208. ! Branson RD, Robinson BRH. Oxygen: when is more the enemy of good? *Intensive Care Medicine* 2011;Jan;37(1):1-3; PMID: 20878145.
209. ! Rubinson L, Vaughn F, Nelson S, Giordano S, Kallstrom T, Buckley T, Burney T, Hupert N, Mutter R, Handrigan M, Yeskey K, Lurie N, Branson R. Mechanical ventilators in US acute care hospitals. *Disaster Medicine and Public Health Preparedness*. 2010;4;199-206.
210. ! Cave DM, Gazmuri RJ, Otto CW, Nadkarni VM, Cheng A, Brooks SC, Daya M, Sutton RM, Branson R, Hazinski MF. Part 7: CPR techniques and devices: 2010 American Heart Association Guidelines for Cardiopulmonary Resuscitation and Emergency Cardiovascular Care. *Circulation*. 2010 Nov 2;122(18 Suppl 3):S720-8.
211. ! Branson RD, Blakeman TC. Weighed, measured and found wanting. *Crit Care Med* 2011;38:598-599.

212. ! Branson RD. Patient ventilator synchrony; The last 40 years. *Respir Care* 2011;56(1):15–22.
213. ! Blakeman TC, Rodriguez D, Petro M, Dorlac W, Branson RD. Laboratory Evaluation of the SAVe Simplified Automated Resuscitator. *Military Medicine* 2011;176:84-88.
214. ! Branson RD, Blakeman TC, Robinson BR, Johannigman JA. Use of a single ventilator to support 4 patients: laboratory evaluation of a limited concept. *Respir Care*. 2012 Mar;57(3):399-403. Epub 2011 Oct 12. PubMed PMID: 22005780.
215. ! Rubin, BK; Dhand, R; Ruppel, GL; Branson, R D; Hess, DR. Respiratory Care Year in Review 2010: Part 1. Asthma, COPD, Pulmonary Function Testing, Ventilator-Associated Pneumonia. *Respir Care* 2011;56:488-502.
216. ! Hurst VW, West SM, Austin PN, Branson RD, Beck G. Cardiopulmonary resuscitation during space flight: Examining the role of timing devices. *Aviation, Space, & Environmental Medicine* 2011;82:810-813.
217. ! Branson RD. Patient needs should drive ventilator selection for stockpiling: Handy devices may not lend a hand. *Respir Care* 2011;56:879-991.
218. ! Blakeman TC, Rodriguez D, Hanseman D, Branson RD. Evaluation of portable home ventilators. *Respir Care* 2011; 56(11):1791-8.
219. ! Branson RD, Hess DR. Variability - the spice of life? *Crit Care Med* 2011;39(10):2363-4.
220. ! Branson RD. Disaster planning for pediatrics. *Respir Care* 2011;56:1457-1463.
221. ! Blakeman TC, Rodriguez D, Dorlac WC, Hanseman DJ, Hattery E, Branson RD. Performance of portable ventilators for mass casualty care. *Prehosp Disaster Med* 2011;26:330-334.
222. ! Rodriguez D Jr, Gomaa D, Blakeman T, Petro M, Dorlac W, Johannigman J, Branson R. Comparison of airway control methods and ventilation success with an automatic resuscitator. *J Spec Oper Med*. 2012 Summer;12(2):65-70. PubMed PMID: 22707027.
223. ! Branson RD. Important aspects of ventilator triggering – A nod to trigger reliability. *Minerva Anestesiologica* 2012; PMID: 22772851
224. ! Schragger JL, Branson RD, Johannigman JA. Lessons from the tip of the spear: Medical Advancements from Iraq and Afghanistan. *Respir Care* 2012;57:1305-1313.

225. ! Hess DR, Branson RD. Know your ventilator to beat the leak. *Chest*. 2012 Aug 1;142(2):274-5. PubMed PMID: 22871746.
226. ! Blakeman TC, Branson RD. Evaluation of Four New Generation Portable Ventilators. *Respir Care*. 2012 Jul 10. [Epub ahead of print] PubMed PMID: 22781705.
227. ! Branson RD. Modes to facilitate ventilator weaning. *Respir Care*. 2012 Oct;57(10):1635-48. PubMed PMID: 23013901.
228. ! Blakeman TC, Branson RD. Oxygen supplies in disaster management. *Respir Care*. 2013 Jan;58(1):173-83. doi: 10.4187/respcare.02088. PubMed PMID: 23271827.
229. ! Branson RD, Johannigman JA. Pre-hospital oxygen therapy. *Respir Care*. 2013 Jan;58(1):86-97. doi: 10.4187/respcare.02251. PubMed PMID: 23271821.
230. ! Robinson BR, Cotton BA, Pritts TA, Branson R, Holcomb JB, Muskat P, Fox EE, Wade CE, del Junco DJ, Bulger EM, Cohen MJ, Schreiber MA, Myers JG, Brasel KJ, Phelan HA, Alarcon LH, Rahbar MH, Callcut RA; PROMMTT study group. Application of the Berlin definition in PROMMTT patients: the impact of resuscitation on the incidence of hypoxemia. *J Trauma Acute Care Surg*. 2013 Jul;75(1 Suppl 1):S61-7. doi: 10.1097/TA.0b013e31828fa408. PubMed PMID: 23778513; PubMed Central PMCID:PMC3744064.
231. ! Robinson BR, Blakeman T, Toth P, Hanseman DJ, Mueller E, Branson R. Patient ventilator asynchrony is a traumatically injured population. *Respir Care*. 2013 Mar 21. [Epub ahead of print] PubMed PMID: 23513248.
232. ! Branson RD, Blakeman TC, Robinson BR. Asynchrony and dyspnea. *Respir Care*. 2013 Jun;58(6):973-89. doi: 10.4187/respcare.02507. PubMed PMID: 23709195.
233. ! Blakeman TC, Branson RD. Inter- and intra-hospital transport of the critically ill. *Respir Care*. 2013 Jun;58(6):1008-23. doi: 10.4187/respcare.02404. PubMed PMID: 23709197.
234. ! Strickland SL, Rubin BK, Drescher GS, Haas CF, O'Malley CA, Volsko TA, Branson RD, Hess DR. AARC clinical practice guideline: effectiveness of non-pharmacologic airway clearance therapies in hospitalized patients. *Respir Care* 2013 Dec;58(12):2187-93. Epub 2013 Nov 12.
235. ! McMullan J, Rodriguez D, Hart KW, Lindsell CJ, Vonderschmidt K, Wayne B, Branson R. Prevalence of prehospital hypoxemia and oxygen use in trauma

- patients. *Mil Med.* 2013 Oct;178(10):1121-5.
236. ! Ingalls N, Zonies D, Bailey JA, Martin KD, Iddins BO, Carlton PK, Hanseman D, Branson R, Dorlac W, Johannigman J. A review of the first 10 years of critical care aeromedical transport during operation iraqi freedom and operation enduring freedom: the importance of evacuation timing. *JAMA Surg.* 2014 Aug 1;149(8):807-13.
237. ! Gustafson JD, Yang S, Blakeman TC, Dorlac WC, Branson R. Pulsed dosed delivery of oxygen in mechanically ventilated pigs with acute lung injury. *J Trauma Acute Care Surg.* 2013 Oct;75(5):775-9.
238. ! Branson RD. The scientific basis for postoperative respiratory care. *Respir Care.* 2013 Nov;58(11):1974-84. PubMed PMID: 24155356.
239. ! Blakeman TC, Branson RD. Evaluation of a portable ventilator for non-invasive open ventilation. *COPD.* 2014 Sep;11(5):568-74.
240. ! Branson RD, Gomaa D, Rodriquez D. Management of the airway. *Respir Care.* 2014 Jun;59(6):974-89.
241. ! Klompas M, Branson R, Eichenwald EC, Greene LR, Howell MD, Lee G, Magill SS, Maragakis LL, Priebe GP, Speck K, Yokoe DS, Berenholtz SM. Strategies to prevent ventilator-associated pneumonia in acute care hospitals: 2014 update. *Infect Control Hosp Epidemiol.* 2014 Aug;35(8):915-36.
242. ! Athota KP, Millar D, Branson RD, Tsuei BJ. A practical approach to the use of prone therapy in acute respiratory distress syndrome. *Expert Rev Respir Med.* 2014 Aug;8(4):453-63.
243. ! Einav S, Hick JL, Hanfling D, Erstad BL, Toner ES, Branson RD, Kanter RK, Kissoon N, Dichter JR, Devereaux A, Christian MD, on behalf of the Task Force for Mass Critical Care. Surge Capacity Logistics: Care of the Critically Ill and Injured During Pandemics and Disasters: CHEST Consensus Statement *Chest.* Published online August 21, 2014. 10.1378/chest.14-0734
244. ! Britton T, Blakeman TC, Eggert J, Rodriquez D, Ortiz H, Branson RD. Managing endotracheal tube cuff pressure at altitude: A comparison of four methods. *J Trauma Acute Care Surg.* 2014 Sep;77(3 Suppl 2):S240-4.
245. ! Blakeman T, Britton T, Rodriquez D Jr, Branson R. Performance of portable ventilators at altitude. *J Trauma Acute Care Surg.* 2014 Sep;77(3 Suppl 2):S151-5.

246. ! Tsuei BJ, Hanseman DJ, Blakeman MJ, Blakeman TC, Yang SH, Branson RD, Gerlach TW. Accuracy of noninvasive hemoglobin monitoring in patients at risk for hemorrhage. *J Trauma Acute Care Surg.* 2014 Sep;77(3 Suppl 2):S134-9.
247. ! Patel N, Branson R, Salter M, Henkel S, Seeton R, Khan M, Solanki D, Koutrouvelis A, Li H, Indrikovs A, Kinsky MP. "2014 Military Supplement" Intrathoracic Pressure Regulation Augments Stroke Volume And Ventricular Function In Human Hemorrhage. *Shock.* 2015 Feb 13. [Epub ahead of print]
248. ! Gomaa D, Branson RD. Endotracheal tube holders and the prone position: a cause for concern. *Respir Care.* 2015 Feb;60(2):e41-2.
249. ! Johannigman JA, Zonies D, DuBose JA, Blakeman TC, Hanseman D, Branson RD, Reducing secondary insults in traumatic brain injury, *Mil Med* 2015;180(3):50-55.
250. ! Branson RD, Hess DR. Lost in translation; Failure of Tracheal Tube Modifications to Impact Ventilator-associated Pneumonia. *Am J Respir Crit Care Med.* 2015 Mar 15;191(6):606-8.
251. ! Blakeman, TC., Rodriquez, D, Gerlach, TW, Dorlac, WC, Johannigman, JA, Branson, RD. Oxygen requirements to reverse altitude induced hypoxemia with continuous and pulsed dose oxygen. *Aerospace Medicine and Human Performance.* 2015;86(4):351-356.
252. ! Jernigan PL, Hoehn RS, Blakeman TC, Heyl J, Robinson BR, Pritts TA, Branson RD. Portable mechanical ventilation with closed-loop control of inspired fraction of oxygen maintains oxygenation in the setting of hemorrhage and lung injury. *J Trauma Acute Care Surg.* 2015 Jan;79(1):53-9. doi: 10.1097/TA
253. ! Zaza S, Koonin LM, Ajao A, Nystrom SV, Branson R, Patel A, Bray B, Iademarco MF. A Conceptual Framework for Allocation of Federally Stockpiled Ventilators During Large-Scale Public Health Emergencies. *Health Secur.* 2016 Feb 1. [Epub ahead of print] PubMed PMID: 26828799.
254. ! Johannigman J, Gerlach T, Cox D, Juhasz J, Britton T, Elterman J, Rodriquez D Jr, Blakeman T, Branson R. Hypoxemia during aeromedical evacuation of the walking wounded. *J Trauma Acute Care Surg.* 2015 Oct;79(4 Suppl 2):S216-20.
255. ! Eddy Fan, Lorenzo Del Sorbo, Ewan C. Goligher, Carol L. Hodgson, Laveena

- Munshi, Allan J. Walkey, Neill K. J. Adhikari, Marcelo B. P. Amato, Richard !
 Branson, Roy G. Brower, Niall D. Ferguson, Ognjen Gajic, Luciano Gattinoni, Dean !
 Hess, Jordi Mancebo, Maureen O. Meade, Daniel F McAuley, Antonio Pesenti, V. !
 Marco Ranieri, Gordon D. Rubenfeld, Eileen Rubin, Maureen Seckel, Arthur S. !
 Slutsky, Daniel Talmor, B. Taylor Thompson, Hannah Wunsch, Elizabeth Uleryk, !
 Jan Brozek, and Laurent J. Brochard; on behalf of the ATS, ESICM, and SCCM. !
 An Official ATS/ESICM/SCCM Clinical Practice Guideline: Mechanical Ventilation in !
 Adult Patients with Acute Respiratory Distress Syndrome. *Am J Respir Crit Care !
 Med* 2017;20:528-533. !
256. ! Liu NT, Salter MG, Khan MN, Branson RD, Enkhbaatar P, Kramer GC, Salinas J, Marques NR, Kinsky MP. Closed-Loop Control of FiO₂ Rapidly Identifies Need For Rescue Ventilation and Reduces ARDS Severity in a Conscious Sheep Model of Burn and Smoke Inhalation Injury. *Shock*. 2017 Feb;47(2):200-207. doi:10.1097/SHK.0000000000000686. PubMed PMID: 27392155.
257. ! McMullan J, Hart KW, Barczak C, Lindsell CJ, Branson R. Supplemental Oxygen Requirements of Critically Injured Adults: An Observational Trial. *Mil Med*. 2016 Aug;181(8):767-72. doi: 10.7205/MILMED-D-15-00356. PubMed PMID: 27483512.
258. ! Blakeman T, Rodriguez D Jr, Woods J, Cox D, Elterman J, Branson R. Automated control of endotracheal tube cuff pressure during simulated flight. *J Trauma Acute Care Surg*. 2016 Nov;81(5 Suppl 2 Proceedings of the 2015 Military Health System Research Symposium):S116-S120. PubMed PMID: 27602899.
259. ! Branson RD, Kacmarek RM. Intermittent Mandatory Ventilation: What's in a Name? *Respir Care*. 2016 Sep;61(9):1282-3. doi: 10.4187/respcare.05155. PubMed PMID:27587876.
260. ! McMullan J, Hart KW, Barczak C, Lindsell CJ, Branson R. Supplemental Oxygen Requirements of Critically Injured Adults: An Observational Trial. *Mil Med*. 2016 Aug;181(8):767-72. doi: 10.7205/MILMED-D-15-00356. PubMed PMID: 27483512.
261. ! Han MK, Martinez CH, Au DH, Bourbeau J, Boyd CM, Branson R, Criner GJ, Kalhan R, Kallstrom TJ, King A, Krishnan JA, Lareau SC, Lee TA, Lindell K, Mannino DM, Martinez FJ, Meldrum C, Press VG, Thomashow B, Tycon L, Sullivan JL, Walsh J, Wilson KC, Wright J, Yawn B, Zueger PM, Bhatt SP, Dransfield MT. Meeting the challenge of COPD care delivery in the USA: a multiprovider perspective. *Lancet Respir Med*. 2016 Jun;4(6):473-526. doi: 10.1016/S2213-2600(16)00094-1. Review. PubMed PMID: 27185520.

262. ! Kacmarek RM, Branson RD. Should Intermittent Mandatory Ventilation Be Abolished? *Respir Care*. 2016 Jun;61(6):854-66. doi: 10.4187/respcare.04887. PubMed PMID: 27235318.
263. ! Kallet RH, Branson RD. Should Oxygen Therapy Be Tightly Regulated to Minimize Hyperoxia in Critically Ill Patients? *Respir Care*. 2016 Jun;61(6):801-17. doi:10.4187/respcare.04933. PubMed PMID: 27235315.
264. ! Gangidine MM, Blakeman TC, Branson RD, Johannigman JA. System Design Verification for Closed Loop Control of Oxygenation With Concentrator Integration. *Mil Med*. 2016 May;181(5 Suppl):177-83. doi:10.7205/MILMED-D-15-00150. PubMed PMID: 27168570.
265. ! Blakeman TC, Rodriguez D Jr, Britton TJ, Johannigman JA, Petro MC, Branson RD. Evaluation of Oxygen Concentrators and Chemical Oxygen Generators at Altitude and Temperature Extremes. *Mil Med*. 2016 May;181(5 Suppl):160-8. doi:10.7205/MILMED-D-15-00130. PubMed PMID: 27168568.
266. ! Blakeman TC, Rodriguez D Jr, Britton TJ, Johannigman JA, Petro MC, Branson RD. Performance of Portable Ventilators Following Storage at Temperature Extremes. *Mil Med*. 2016 May;181(5 Suppl):156-9. doi: 10.7205/MILMED-D-15-00135. PubMed PMID: 27168567.
267. ! Blakeman T, Rodriguez D Jr, Petro M, Branson R. Evaluation of Intensive Care Unit Ventilators at Altitude. *Air Med J*. 2017 Sep - Oct;36(5):258-262. doi: 10.1016/j.amj.2017.05.001. Epub 2017 Jun 17. PubMed PMID: 28886787.
268. ! Branson R, Rodriguez D Jr. Cuff Pressure Confusion: Solutions Are Abundant. *Air Med J*. 2017 Sep - Oct;36(5):223. doi: 10.1016/j.amj.2017.04.005. Epub 2017 May 6. PubMed PMID: 28886776.
269. ! Branson RD, Griebel J, Rodriguez D Jr. A bench study of inhaled nitric oxide delivery during high frequency percussive ventilation. *Pediatr Pulmonol*. 2018 Mar;53(3):337-341
270. ! Branson RD. Leadership by Example: The Editorial Tenure of Dean Hess. *Respir Care*. 2018 Jan;63(1):118. doi: 10.4187/respcare.05983.
271. ! Chang R, Fox EE, Greene TJ, Swartz MD, DeSantis SM, Stein DM, Bulger EM, Melton SM, Goodman MD, Schreiber MA, Zielinski MD, O'Keefe T, Inaba K, Tomasek JS, Podbielski JM, Appana S, Yi M, Johansson PI, Henriksen HH, Stensballe J, Steinmetz J, Wade CE, Holcomb JB; PROHS Study Group.

Abnormalities of laboratory coagulation tests versus clinically evident coagulopathic bleeding: results from the prehospital resuscitation on helicopters study (PROHS). *Surgery*. 2017 Dec 27. pii: S0039-6060(17)30788-2.

272. ! Robinson BRH, Cohen MJ, Holcomb JB, Pritts TA, Goma D, Fox EE, Branson RD, Callcut RA, Cotton BA, Schreiber MA, Brasel KJ, Pittet JF, Inaba K, Kerby JD, Scalea TM, Wade CE, Bulger EM; PROPPR Study Group. Risk Factors for the Development of Acute Respiratory Distress Syndrome Following Hemorrhage. *Shock*. 2017 Nov 30.
273. ! Tekkadine S, Droege CA, Ernst N, Droege ME, Webb M, Branson RD, Gerlach TW, Robinson BRH, Johannigman JA, Mueller EW. Ketamine versus hydromorphone patient-controlled analgesia for acute pain in trauma patients. *J Surg Research* 2018;225:6-14.
274. ! Branson RD. Automation of Mechanical Ventilation. *Crit Care Clin*. 2018;34(3):383-394.
275. ! Branson RD. Oxygen Therapy in COPD. *Respir Care*. 2018;63(6):734-748.

Abstracts

1. ! Hurst JM, DeHaven CB, Branson RD. Comparison of Conventional Mechanical Ventilation and Synchronous Independent Lung Ventilation in the Treatment of Unilateral Lung Pathology. *American Association for the Surgery of Trauma*, September 1984.
2. ! Branson RD, Hurst JM, DeHaven CB. Use of Mask CPAP in the Treatment of Acute Respiratory Failure. *American Association of Respiratory Therapy*, November 1984.
3. ! Branson RD, Hurst JM, DeHaven CB. Comparison of Synchronous Independent Lung Ventilation and Mechanical Ventilation in the Treatment of Unilateral Pulmonary Contusion. *American Association of Respiratory Therapy*, November 1984.
4. ! Hurst JM, Saul T, DeHaven CB, Branson RD. Use of High-Frequency Jet Ventilation During Mechanical Hyperventilation to Reduce Intracranial Pressure. *The Congress of Neurological Surgeons*, April 1985.
5. ! Hurst JM, DeHaven CB, Branson RD. The Role of High-Frequency Ventilation in Post Traumatic Respiratory Insufficiency. *American Association for the Surgery of Trauma*, September 1985.
6. ! DeHaven CB, Hurst JM, Branson RD. High-Frequency Pulse Generator Improves Gas Exchange in Surgical Patients. *American Association of Respiratory Therapy*,

November 1985.

7. ! Adams KS, Branson RD, Hurst JM. Monitoring of Oxygenation During Diagnostic Procedures by Pulse Oximetry. American Association of Respiratory Therapy, November 1985.
8. ! Branson RD, Hurst JM, Adams KS, Kessinger C, DeHaven CB. A New Transport Ventilator: Clinical and Laboratory Evaluation. American Association of Respiratory Therapy, November 1985.
9. ! Hurst JM, Saul T, Branson RD, DeHaven CB. The Role of High-Frequency Percussive Ventilation (HFPV) in the Management of Increased Intracranial Pressure (ICP). 15th Annual Symposium, Society of Critical Care Medicine, Washington DC, 1986.
10. ! Hurst JM, Branson RD, DeHaven CB, Davis K Jr, Adams KS. Comparison of Intermittent Mandatory Ventilation (IMV) and High-Frequency Percussive Ventilation (HFPV) in Acute Respiratory Failure. 15th Annual Symposium, Society of Critical Care Medicine, Washington DC, 1986.
11. ! Branson RD, Ploysongsang Y, Hurst JM, Rashkin MM. Flow Resistance Characteristics of Commonly Used Hygroscopic Condensers Humidifiers. 15th Annual Symposium, Society of Critical Care Medicine, Washington DC, 1986.
12. ! Jacobs M, Tenneberg S, Huth C, Branson RD, Adams KS. Pulmonary Tc-99m DTPA Clearance in Patients With Respiratory Failure. Society of Nuclear Medicine, 33rd Meeting, Washington DC, June 1986.
13. ! Ploysongsang Y, Branson RD, Hurst JM, Rashkin MM. Resistive Properties of Heat and Moisture Exchanges. American Thoracic Society, Kansas City MO, May 1986.
14. ! Branson RD, Hurst JM, Warner B, Bower R, Arita A. Measured vs Predicted Energy Expenditure In Mechanically Ventilated COPD Patients. American Association of Respiratory Care, Dallas TX, 1986.
15. ! Branson RD, Hurst JM. Moisture Output of Heat and Moisture Exchangers. American Association of Respiratory Care, Dallas TX, 1986.
16. ! Adams KS, Branson RD, Hurst JM. Variabilities in Delivered Tidal Volume and Rate During Manual Ventilation. American Association of Respiratory Care, Dallas TX, 1986.
17. ! Kessinger C, Branson RD, Adams KS, Pulsfort R, Hurst JM. Humidification of High Flow CPAP Systems. American Association of Respiratory Care, Dallas TX, 1986.
18. ! Tennenberg S, Seger SM, Huth C, Branson RD. Increased Radioaerosol Lung Clearance in the Adult Respiratory Distress Syndrome: The Role of Positive End-Expiratory Pressure, Functional Residual Capacity and Radioisotope Integrity. Society of Critical Care Medicine, Anaheim CA, 1987.

19. ! Barrette RR, Hurst JM, Branson RD, Davis K Jr. Chest Trauma in the Elderly: Determinants of Survival. 9th Annual Trauma Symposium, Baltimore MD, 1987.
20. ! Branson RD, Hurst JM. Effects of Inspiratory Flow Pattern on Airway Pressure, Ventilation, and Hemodynamics. American Association of Respiratory Care, Las Vegas NV, 1987.
21. ! Hurst JM, Branson RD, Davis K Jr. Use of Pressure Support Ventilation in Weaning Trauma Patients. Eastern Association for the Surgery of Trauma, Long Boat Key FL, 1988.
22. ! Davis K Jr, Barrette RR, Branson RD, Hurst JM. Temporary Abdominal Closure With Silastic in the Face of Increase Intra-Abdominal Pressure. Eastern Association for the Surgery of Trauma, Long Boat Key FL, 1988.
23. ! Branson RD, Hurst JM, Davis K Jr. Evaluation of a Closed Circuit Calorimeter. American College of Chest Physicians, Anaheim CA, 1988.
24. ! Hurst JM, Branson RD, Davis K Jr. Cardiopulmonary Effects of Pressure Support Ventilation in Trauma Patients. American Association for the Surgery of Trauma, Newport Beach CA, 1988.
25. ! Branson RD, Hurst JM, Davis K Jr. Measurement of Maximum Inspiratory Pressure: A Comparison of Two Techniques. American Association of Respiratory Care, Orlando FL, 1988.
26. ! Branson RD, Hurst JM, Davis K Jr, Campbell R. Comparison of Maximum Inspiratory Pressure Measurements: Manual vs the 7200a. American Association of Respiratory Care, Orlando FL, 1988.
27. ! Hurst JM, Davis K Jr, Branson RD, Johannigman JA. Comparison of Blood Gases During Transport Using Two Methods of Ventilatory Support. Eastern Association for the Society of Trauma, Long Boat Key FL, 1989.
28. ! Branson RD, Hurst JM, Davis K Jr, Bower RH. Comparison of Open Circuit and Closed Circuit Methods for Measuring Oxygen Consumption. American Society of Parenteral and Enteral Nutrition, Miami FL, 1989.
29. ! Lacy J, Branson RD, Hurst JM, Bower RH. Twenty-four Hour vs 2 Hour Window Indirect Calorimetry Comparison on Ventilator Dependent Surgical Intensive Care Patients. American Society of Parenteral and Enteral Nutrition, Miami FL, 1989.
30. ! Johannigman JA, Branson RD, Hurst JM, Davis K Jr, Johnson DJ. Change in Oxygen Consumption While Breathing Through Endotracheal Tubes. Society of Critical Care Medicine, New Orleans, LA, 1989.

31. ! Hurst JM, Davis K Jr, Branson RD, Ashbrock S, Steele J, Johannigman JA. Ventilatory Support in the Field: A Prospective Study. Society of Critical Care Medicine, New Orleans LA, 1989.
32. ! Branson RD, Hurst JM, Davis K Jr, Bower RH. Comparison of O₂ Consumption Measurements During Mechanical Ventilation. Society of Critical Care Medicine, New Orleans LA, 1989.
33. ! Porembka DT, Selhorst SC, Orlowski JP, Davis K, Branson RD. The Effect of Bile Aspiration on Pulmonary Physiology in the Pig. Society of Critical Care Medicine, New Orleans LA, 1989.
34. ! Hurst JM, Branson RD, Davis K Jr, Ashbrock S, Steele J. Ventilatory Support in the Field. Sixth World Congress on Emergency and Disaster Medicine, Hong Kong, 1989.
35. ! Branson RD, Hurst JM, Davis K Jr, Campbell R. Comparison of the Effects of Pressure Support Ventilation Delivered by Two Ventilators. American Association for Respiratory Care, Anaheim CA, 1989.
36. ! Branson RD, Hurst JM, Davis K Jr, Johnson DJ, Johannigman JJ. Measured Versus Predicted Energy Expenditure in the First Twenty-four Hours After Trauma. 12th National Trauma Symposium, Baltimore MD, 1990.
37. ! Johnson DJ, Davis K Jr, Johannigman JA, Branson RD, Hurst JM. Liver Blood Flow During Mechanical Ventilation for Lung Injury is Not PEEP Dependent. Society of Critical Care Medicine, San Francisco CA, 1990.
38. ! Johannigman JA, Branson RD. Oxygen Enrichment Utilizing Mouth to Mask Technique. Third Annual Trauma, Anesthesia, and Critical Care Symposium, Baltimore MD, 1990.
39. ! Branson RD, Campbell RS, Davis K Jr, Hurst JM. Effects of Varying Inspiratory Flowrate During Pressure Support Ventilation. American College of Chest Physicians, Toronto, 1990.
40. ! Johnson DJ, Johannigman JA, Branson RD, Davis K Jr, Hurst JM. Dopamine Improves Gut Blood Flow and Oxygen Delivery During PEEP Ventilation. Association for Academic Surgery, Houston TX, 1990.
41. ! Campbell RS, Branson RD, Hurst JM. Accuracy, Reusability and Durability of the Hamilton Variable Orifice Flowsensor. American Association for Respiratory Care, New Orleans LA, 1990.
42. ! Johannigman JA, Branson RD, Campbell RS, Hurst JM. Laboratory and Clinical Evaluation of the Max Transport Ventilator. American Association for Respiratory Care, New Orleans LA, 1990.

43. ! Purcell PN, Branson RD, Davis K Jr, Hurst JM, Johnson DJ. Gut feeding improves hepatic blood flow and oxygen delivery during PEEP ventilation for acute lung injury. *J Surg Res* 1991;51:355.
44. ! Davis K Jr, Branson RD, Campbell RS, Johnson DJ, Hurst JM. Airway Pressure Release Ventilation in Patients With Adult Respiratory Distress Syndrome. Society of Critical Care Medicine, Washington DC, 1991.
45. ! Purcell PN, Johannigman JA, Branson RD, Johnson DJ. Gut Hemodynamics During High-Frequency Percussive Ventilation for Acute Lung Injury. Society of Critical Care Medicine, Washington DC, Crit Care Med 19:S12, 1991.
46. ! Branson RD, Campbell RS, Davis K Jr, Hurst JM. Failure Rates of Pulse Oximeters: Transmittance vs Reflectance. American College of Chest Physicians, San Francisco CA, 1991.
47. ! Campbell RS, Branson RD, Davis K Jr, Hurst JM. Accuracy of a New Reflectance Oximeter. American College of Chest Physicians, San Francisco CA, 1991.
48. ! Branson RD, Campbell RS, Srivastava P, Davis K Jr, Johnson DJ, Hurst JM. Volume Monitoring Accuracy of Four Ventilators and the Bicore CP-100 Monitor. American Association of Respiratory Care, Atlanta GA, 1991.
49. ! Campbell RS, Branson RD, Osler JW. Compliance Characteristics of Adult Ventilator Circuits. American Association of Respiratory Care, Atlanta GA, 1991.
50. ! Osler JW, Campbell RS, Branson RD. Resistance Characteristics of Adult Ventilator Circuits. American Association of Respiratory Care, Atlanta GA, 1991.
51. ! Branson RD, Davis K Jr, Johnson DJ. A simple method for stabilizing inspired oxygen concentrations for metabolic measurements. American Society of Parenteral and Enteral Nutrition, Orlando FL, January 1992.
52. ! Porembka DT, Hoit B, McMannis K, Branson RD, Campbell RS, Davis K Jr. Trans-esophageal echocardiographic evaluation of left ventricular diastolic function in patients with severe acute lung injury. Society of Critical Care Medicine, San Antonio TX, 1992.
53. ! Purcell PN, Davis K Jr, Srivastava P, Branson RD, Johnson DJ. Hepatic venous oxygen saturation estimates hepatic oxygen delivery and extraction in flow limited oxygen consumption states. Presented at the Society of Critical Care Medicine meeting, San Antonio TX, May 1992, Crit Care Med 1992;20:S92.
54. ! Purcell PN, Branson RD, Davis K Jr, Schroeder TJ, Johnson DJ. Monoethylglycinexylidide (MEGX) production parallels changes in hepatic blood flow and oxygen delivery in lung injury managed with PEEP ventilation. Presented at the Western Trauma Association Annual Meeting. *J Trauma* 1992;33:S23.

55. ! Branson RD, Haas C, Campbell RS, Folk LM, Wise CR, Davis K Jr, Dechert RE, Johnson DJ, Weg JG. Patient determined inspiratory flowrate during assist/control ventilation: A pilot study. American College of Chest Physicians, Chicago IL, 1992.
56. ! Campbell RS, Branson RD, Davis K Jr, Johnson DJ, Ivey T. Passive vs active humidification after cardiac surgery. A prospective randomized study. American College of Chest Physicians, Chicago IL, 1992.
57. ! Porembka DT, Hoit B, McMannis K, Branson RD, Campbell RS, Davis K Jr. Evaluation of mitral inflow velocities and pulmonary vein flows in acute lung injury (ALI). 10th World Congress of Anaesthesiologists, The Hague, The Netherlands, June 12-19, 1992.
58. ! Branson RD, Campbell RS, Davis K Jr, Johnson DJ. The effects of mask design on delivered volumes during ventilation of the unintubated patient. American Association of Respiratory Care, San Antonio TX, 1992.
59. ! Campbell RS, Branson RD, Davis K Jr, Johnson DJ, Porembka D. Comparison of PCV and VCV with a descending flow waveform. American Association of Respiratory Care, San Antonio TX, 1992.
60. ! Branson RD, Campbell RS, Davis K Jr, Johnson DJ. The addition of sighs during pressure support ventilation. Is there a benefit? American Association of Respiratory Care, San Antonio TX, 1992.
61. ! Blom ED, Branson RD. Laboratory and clinical investigation of postlaryngectomy airway humidification and filtration. Annual meeting of the American Speech-Language-Hearing Association, San Antonio TX, November 19-23, 1992.
62. ! Purcell PN, Davis K Jr, Branson RD, Johnson DJ. Continuous duodenal feeding restores gut blood flow and increases gut oxygen utilization during PEEP ventilation for lung injury. *Am J Surg* 1992;163:626.
63. ! Davis K Jr, Campbell RS, Branson RD, Johnson DJ, Valente JF, Porembka D. Changes in respiratory mechanics following tracheostomy. Society of Critical Care Medicine, New York NY, June 1993, *Crit Care Med* 1993;21:S211.
64. ! Davis K Jr, Campbell RS, Branson RD, Johnson DJ, Anderson GL, Porembka D. Does the oxygen cost of breathing reflect the mechanical work of breathing? Society of Critical Care Medicine, New York NY, June 8-11 1993, *Crit Care Med* 1993;21:S242.
65. ! Porembka D, Hoit B, McMannis K, Johnson D, Davis K, Branson R. Correlation of pulmonary artery occlusion pressure with pulmonary venous flow pattern by transesophageal echocardiography. Society of Critical Care Medicine, New York NY, June 8-11 1993, *Crit Care Med* 1993;21:S268.
66. ! Porembka D, Valente JF, Anderson GL, Davis K Jr, Branson RD, Johnson DJ.

Postoperative detection of patient foramen ovale by transesophageal echocardiography. Society of Critical Care Medicine, New York NY, June 8-II, 1993, Crit Care Med 1993;21:S269.

67. ! Davis K Jr, Purcell PN, Nussbaum MT, Holleran R, Thomson D, Storer D, Johnson DJ. Prehospital factors predict temperature loss following trauma and air medical evacuation from the scene. Crit Care Med 1993;21:S5.
68. ! Branson RD, Campbell RS, Davis K Jr, Johnson DJ, Porembka D. Protocol for humidification during mechanical ventilation. Presented at the American College of Chest Physician's 59th Annual International Scientific Assembly, Orlando FL, October 1993.
69. ! Branson RD, Campbell RS, Davis K Jr, Johnson DJ. A comparison of pressure and flow triggering systems. Presented at the American College of Chest Physician's 59th Annual International Scientific Assembly, Orlando FL, October 1993.
70. ! Porembka D, Anderson G, Valente J, Johnson D, Davis K Jr, Branson R. Can transesophageal echocardiography be utilized for the estimation of left ventricular filling in critically ill patients? Anesthesiology 1993;79:A308.
71. ! Davis K Jr, Branson RD, Porembka DT. Pressure control vs volume control: Is flow waveform the difference? Society of Critical Care Medicine, Orlando FL, January 30-February 3, 1994, Crit Care Med 1994;22: A89.
72. ! Davis K Jr, Campbell RS, Branson RD, Johnson DJ, Valente JF, Porembka D. Changes in respiratory mechanics following tracheostomy. Spring Meeting of the Ohio Chapter of the American College of Surgeons, Dayton OH, May 19-21, 1994.
73. ! Porembka DT, Anderson G, Valente J, Davis K Jr, Branson RD, Johnson DJ. Transesophageal echocardiographic evaluation of intraarterial shunt in critically ill patients. Anesth Analg 1994;78:S345.
74. ! Branson RD, Davis K Jr, Johnson RC, Campbell RS, Tabor T. Manual ventilation during cardiopulmonary resuscitation. American Association of Respiratory Care, Las Vegas NV, December 1994.
75. ! Branson RD, Davis K Jr, Laboratory evaluation of artificial noses. American Association of Respiratory Care, Las Vegas NV, December 1994.
76. ! Branson RD, Davis K Jr, Porembka DT. Reassessment of humidification supplied by the circle system using ISO 9360: Conventional vs a co-axial circuit. American Society of Anesthesiologists, Atlanta GA, October 22-23, 1995.
77. ! Branson RD, Davis K Jr, Johannigman JA. Comparison of the imposed work of breathing during IMV in five ventilators for sub-acute care. Presented at the American Association of Respiratory Care Annual Meeting, Orlando FL, December 1995.

78. ! Branson RD, Davis K Jr, Johannigman JA. Comparison of imposed work of breathing, rise time, and pressure overshoot during PSV with two ventilators. Presented at the American Association of Respiratory Care Annual Meeting, Orlando FL, December 1995.
79. ! Branson RD, Davis K Jr, Johannigman J, Porembka D, Luchette F. A comparison of humidification techniques in the ICU. Society of Critical Care Medicine, New Orleans LA, February 6-9, 1996.
80. ! Branson RD, Davis K Jr, Campbell RS, Porembka DT, Lilly N. Anesthesia circuits, humidity output and mucociliary integrity. 11th World Congress of Anaesthesiologists, Sydney, Australia, April 14-20, 1996.
81. ! Campbell RS, Branson RD, Davis K Jr. Effect of humidification technique (HT) on tidal volume (VT) delivery and measurement using three adult ventilators. American Association for Respiratory Care, San Diego CA, 1996.
82. ! Campbell RS, Branson RD, Johannigman JA, Davis K Jr. Effect ventilation technique on tidal volume (VT) delivery and gastric insufflation (GI) during simulated prehospital mask ventilation. American Association for Respiratory Care, San Diego CA, 1996.
83. ! Campbell RS, Branson RD, Johannigman JA. Laboratory evaluation of the Drager Oxylog 2000 transport ventilator. American Association for Respiratory Care, San Diego CA, 1996.
84. ! Branson RD, Campbell RS, Davis K Jr., Luchette FA, Johannigman JA. Comparison of cardiorespiratory variables during weaning using the T-Bird and 7200ae. American Association for Respiratory Care, San Diego CA, 1996.
85. ! Branson RD, Campbell RS, Davis K Jr. Effect of expiratory flow on moisture output of passive humidifiers as measured by ISO 9360. American Association for Respiratory Care, San Diego CA, 1996.
86. ! Wilson TN, Branson RD. Home mechanical ventilator circuit change frequency: Surveys of clinician recommendations and actual practice in the home. American Association for Respiratory Care, San Diego CA, 1996.
87. ! Campbell RS, Johannigman JA, Davis K Jr, Branson RD. A comparison of the imposed work of breathing in four transport ventilators. Society of Critical Care Medicine, San Diego CA, 1997.
88. ! Johannigman JA, Davis K Jr, Campbell RS, Porembka DT, Luchette F, Hurst J, Branson RD. Nitric oxide (NO) by inhalation for acute respiratory distress syndrome (ARDS) associated with liver transplantation (LT): Response and dose response. Society of Critical Care Medicine, San Diego CA, 1997.

89. ! Johannigman JA, Davis K Jr, Campbell RS, Luchette FA, Hurst JM, Branson RD. Nitric oxide inhalation in acute respiratory distress syndrome: response and dose response. Eastern Association for the Surgery of Trauma, Sannibel Island, FL, 1997.
90. ! Johannigman JA, Davis K Jr, Campbell RS, Branson RD, Luchette FA, Hurst JM. Does the rapid shallow breathing index (f/Vt) reflect measured patient work of breathing during weaning? Central Surgical Association, Chicago, IL, 1997.
91. ! Campbell RS, Lawson JJ, Johannigman JA, Luchette FA, Davis K Jr, Hurst JM, Branson RD. Effect of the intrapulmonary percussive ventilator (IPV) on volume (VT) and pressure (P) delivered during mechanical ventilation (MV) of a test lung. American College of Chest Physicians, New Orleans, LA, 1997.
92. ! Branson RD, Campbell RS, Johannigman JA, Rashkin M, Davis K Jr, Ploysongsang Y. Effect of body position (BP) on pulmonary mechanics, gas exchange, and lung volumes in obese subjects without lung disease. American College of Chest Physicians, New Orleans, LA, 1997.
93. ! Johannigman JA, Campbell RS, Branson RD, Rashkin M, Davis K Jr, Ploysongsang Y. Effect of body position (BP) on pulmonary mechanics, gas exchange, and lung volumes in elderly subjects without lung disease. American College of Chest Physicians, New Orleans, LA, 1997.
94. ! Branson RD, Campbell RS, Davis K Jr,. Laboratory evaluation of artificial noses. American Association of Respiratory Care, New Orleans, LA, 1997.
95. ! Campbell RS, Johannigman JA, Davis K Jr., Branson RD. Evaluation of the Impact 754 portable ventilator. American Association of Respiratory Care, New Orleans, LA, 1997.
96. ! Campbell RS, Lawson JJ, Branson RD, Johannigman JA, Luchette FA, Davis K Jr. Laboratory evaluation of the pressure and volume delivery of the intrapulmonary percussive ventilator (IPV). American Association of Respiratory Care, New Orleans, LA, 1997.
97. ! Lawson JJ, Campbell RS, Branson RD, Johannigman JA, Luchette FA, Davis K Jr. Comparison of the pressure (P) and tidal volume (VT) delivery of two intrapulmonary percussion ventilators (IPV): home unit vs hospital unit. American Association of Respiratory Care, New Orleans, LA, 1997.
98. ! Campbell RS, Branson RD, Johannigman JA, Porembka DT, Luchette FA, Davis K Jr. Breathing pattern and gas exchange alterations associated with the deadspace of heat and moisture exchangers. Society of Critical Care Medicine, San Antonio, TX, 1998.
99. ! Branson RD, Campbell RS, Davis K Jr, Johannigman JA. Comparison of the physiological effects of automated turning and percussion to manual turning and percussion in paralyzed patients with acute lung injury. American Thoracic Society 1998 International Conference, Chicago, IL, 1998.

100. ! Branson RD, Campbell RS, Davis K Jr, Johannigman JA, Porembka DT, Luchette FA. Prolonged use of heat and moisture exchangers (HME) does not effect efficiency or incidence of nosocomial pneumonia. American Thoracic Society 1998 International Conference, Chicago, IL, 1998.
101. ! Campbell RS, Sinamban RP, Johannigman JA, Luchette FA, Frame SB, Davis K Jr, Branson RD. Clinical Evaluation of a new closed loop ventilation mode: adaptive supportive ventilation (ASV). American Association for Respiratory Care, Atlanta, Georgia, 1998.
102. ! Branson RD, Campbell RS, Ottaway M, Johannigman JA. Comparison of conventional heated humidification to a new active heat and moisture exchanger in the ICU. American Association for Respiratory Care, Atlanta, Georgia, 1998.
103. ! Bates KM, Campbell RS, Lawson JJ, Branson RD. Laboratory evaluation of automatic tube compensation (ATC). American Association for Respiratory Care, Atlanta, Georgia, 1998.
104. ! Campbell RS, Lawson JJ, Branson RD. Laboratory evaluation of different methods to provide tracheal pressure triggering (TPTr). American Association for Respiratory Care, Atlanta, Georgia, 1998.
105. ! Campbell RS, Branson RD Lawson JJ. Laboratory comparison of automatic ET tube compensation (ATC) and tracheal pressure triggering (TPTr). American Association for Respiratory Care, Atlanta, Georgia, 1998.
106. ! Lawson JJ, Campbell RS, Sinamban RP, Johannigman JA, Davis K Jr, Frame SB, Branson RD. Laboratory evaluation of three "dual-control" (DC) modes of mechanical ventilation (MV). American Association for Respiratory Care, Atlanta, Georgia, 1998.
107. ! Johannigman JJ, Davis K Jr, Campbell RS, Luchette FA, Frame SB, Branson RD. Positive end-expiratory pressure (PEEP) and response to inhaled nitric oxide (INO): Changing non-responders to responders. Western Trauma Association, Crested Butte, Colorado, 1998.
108. ! Branson RD, Campbell RS, Davis K Jr. Laboratory evaluation of ulti-mist heat and moisture exchangers. American Association for respiratory Care, Las Vega, NV, 1999.
109. ! Branson RD, Hess DR, Lee S, Se Silva A. Evaluation of flow delivery accuracy in two ventilators designed for neonatal through adult application. American Association for respiratory Care, Las Vegas, NV, 1999.
110. ! Campbell RS, Austin P, Lawson JJ, Johannigman JA, Davis K Jr, Branson RD. Laboratory evaluation of four portable ventilators. American Association for respiratory Care, Las Vegas, NV, 1999.

111. ! Wehrman A, Bates K, Campbell RS, Branson RD. Manual ventilation during anesthesia: effects of breathing bag size and shape. American Association for respiratory Care, Las Vegas, NV, 1999.
112. ! Campbell RS, Austin P, Lawson JJ, Johannigman JA, Singh C, Banks G, Branson R. Laboratory and clinical evaluation of the LTV 1000 portable ventilator. American Association for respiratory Care, Las Vegas, NV, 1999.
113. ! Campbell RS, Branson RD, Johannigman JA, Luchette FA, Davis K Jr, Frame SB. Clinical evaluation of the achieva ventilator, American Association for respiratory Care, Las Vegas, NV, 1999.
114. ! Branson RD, Campbell RS, Austin PN, Johannigman JA, Luchette FA, Frame SB, Davis K Jr. Evaluation of two adjustable flow generators. Society of Critical Care Medicine, Orlando, FL, 2000.
115. ! Austin PN, Campbell RS, Johannigman JA, Luchette FA, Frame SB, Davis K Jr, Branson RD. The effect of pressure support ventilation on imposed work of breathing: A comparison of four portable ventilators. Society of Critical Care Medicine, Orlando, FL, 2000.
116. ! Campbell RS, Austin PN, Johannigman JA, Luchette FA, Frame SB, Davis K Jr, Branson RD. Comparison of the imposed work of breathing of 9 portable ventilators. Society of Critical Care Medicine, Orlando, FL, 2000.
117. ! Johannigman JA, Davis K Jr, Campbell RS, Luchette FA, Frame SB, Branson RD. Prone Position. Central Surgical, 2000.
118. ! Kosowsky J, Branson RD, Stephanides SL, Crocco TJ, Abraham WT, Sayre M. Training paramedics to administer continuous positive airway pressure (CPAP) to patients with presumed cardiogenic pulmonary edema. Academic Emergency Medicine 1999.
119. ! Branson RD, Campbell RS. Volume monitoring accuracy of cradle to the grave ventilators in the neonatal range. American Association for Respiratory Care, Cincinnati, OH 2000 .
120. ! Bates KM, Campbell RS, Johannigman JA, Luchette FA, Davis K Jr., Miller SL, Frame SB, Branson RD. Laboratory evaluation of four disposable CPAP valves. American Association for Respiratory Care, Cincinnati, OH 2000.
121. ! Miller SL, Campbell RS, Johannigman JA, Montgomery EA, Luchette FA, Solomkin JS, Mann DC, Branson RD. Diagnosis of ventilator associated pneumonia: Bronchoscopic BAL vs blind, mini-BAL using the combicath. American Association for Respiratory Care, Cincinnati, OH 2000.
122. ! Banks G, Campbell RS, Johannigman JA, Luchette FA, Davis K Jr., Miller SL, Frame

- SB, Branson RD. Laboratory evaluation of dual control modes of ventilation of three adult ventilators. American Association for Respiratory Care, Cincinnati, OH 2000.
123. ! Austin PA, Campbell RS, Johannigman JA, Miller SL, Luchette FA, Davis K Jr., Branson RD. Laboratory evaluation of the vent F2 circuit. American Association for Respiratory Care, Cincinnati, OH 2000.
124. ! Campbell RS, Lawson JL, Miller SL, Johannigman JA, Luchette FA, Davis K Jr., Austin P, Branson RD. Evaluation of tube compensation and pressure support on reducing imposed work of breathing in response to variations in inspiratory drive. American Association for Respiratory Care, Cincinnati, OH 2000.
125. ! Johannigman JA, Davis K Jr., Miller SM, Campbell RS, Luchette FA, Frame SB, Branson RD. Inhaled nitric oxide and prone positioning in ARDS: synergistic therapies. American Association for the Surgery of Trauma, San Antonio, TX 2000.
126. ! Campbell RS, Austin PA, Johannigman JA, Branson RD. Effects of PEEP on battery life of portable ventilators. Society of Critical Care Medicine. San Francisco, CA, 2001.
127. ! Austin PA, Campbell RS, Johannigman JA, Beery T, Succop P, Branson RD, Sommers M. Imposed inspiratory work of breathing and breathing comfort of nonintubated volunteers during spontaneous breathing with three portable ventilators and a critical care ventilator. American Association of Nurse Anesthetists, 2001.
128. ! Austin PA, Campbell RS, Branson RD. Laboratory evaluation of two single limb breathing circuits. American Association of Nurse Anesthetists, 2001.
129. ! Branson RD, Campbell RS, Davis K, Johannigman JA. Evaluation of HME performance, laboratory vs. clinical moisture output. American College of Chest Physicians, Philadelphia, 2001.
130. ! Johannigman JA, Miller SM, Davis K Jr., Campbell RS, Luchette FA, Branson RD. Influence of low tidal volumes on gas exchange in ARDS and the role of recruitment maneuvers. Western Association for the Surgery of Trauma, 2001.
131. ! Walsh J, Branson RD, Kacmarek RM, Hess D. Assessment of expiratory valve resistance in adult ventilators. American Association for Respiratory Care, San Antonio, TX, 2001.
132. ! Austin PN, Moschel, S, Ehrler C, Campbell RS, Branson RD. Resistance characteristics of ultrathin walled and conventional endotracheal tubes for neonates. American Association for Respiratory Care, San Antonio, TX, 2001.
133. ! Campbell RS, Austin PN, Branson RD, Johannigman JA, Luchette FA, Miller SL, Davis K. Tracheal gas insufflation during pressure control ventilation. American Association for Respiratory Care, San Antonio, TX, 2001.

134. ! Austin PA, Campbell RS, Matacia GM, Banks G, Johannigman JA, Davis K, Luchette FA, Miller SL, Branson RD. Battery life of eight portable ventilators: Effect of control variable, PEEP, and FIO₂. American Association for Respiratory Care, San Antonio, TX, 2001.
135. ! Campbell RS, Austin PN, Branson RD, Johannigman JA, Luchette FA, Miller SL, Davis K, Effect of internal and external nebulizer flow on tidal volume delivery during mechanical ventilation. American Association for Respiratory Care, San Antonio, TX, 2001.
136. ! Campbell RS, Banks G, Branson RD, Solomkin JS. Adequacy of non-bronchoscopic, protected, bronchoalveolar lavage specimens obtained by respiratory care practitioners for diagnosing ventilator associated pneumonia. American Association for Respiratory Care, San Antonio, TX, 2001.
137. ! Campbell RS, Branson RD, Austin PN, Johannigman JA, Luchette FA, Miller SL, Davis K. Effect of tracheal gas insufflation during dual control ventilation. American Association for Respiratory Care, San Antonio, TX, 2001.
138. ! Branson RD, Campbell RS, Johannigman JA, Davis K Jr. Gas Temperature of Portable Ventilators. Society of Critical Care Medicine, San Antonio, TX, 2003.
139. ! Branson RD, Davis B, Campbell RS, Johannigman JA, Davis K. A comparison of Reflective forehead oximetry and digit transmission oximetry in mechanically ventilated patients. Society of Critical Care Medicine, San Antonio, TX, 2003.
140. ! Davis BR, Campbell RS, Johannigman JA, Davis K, Porembka D, Miller SM, Branson RD. Clinical utility of an automated pressure volume maneuver. Society of Critical Care Medicine, San Antonio, TX, 2003.
141. ! Campbell RS, Davis B, Davis K, Johannigman JA, Branson RD. Inter-rater variability in estimating the lower inflection point from pressure volume curves generated using two different techniques. American Association for Respiratory Care, Tampa, FL, 2002.
142. ! Campbell RS, Davis B, Davis K, Johannigman JA, Branson RD. Laboratory evaluation of an automated pressure volume curve maneuver. American Association for Respiratory Care, Tampa, FL, 2002
143. ! Branson RD, Davis B, Davis K, Singh C, Blakeman C, Campbell RS, Johannigman JA. A Comparison of Reflective and Transmission Oximetry in Patients with Poor Perfusion. American Association for Respiratory Care Las Vegas, NV, 2003.
144. ! Campbell RS, Shapiro, MS, Branson RD, Cuschieri J, Davis BR, Davis K, McDonald A, Miller SM, Johannigman JA, Solomkin JS. Predictive value of the gram stain in the diagnosis of ventilator associated pneumonia from bronchoscopic and blind bronchoalveolar lavage fluid. American Association for Respiratory Care Las Vegas, NV, 2003.

145. ! Davis K, Branson RD, Johannigman JA. INO for ARDS: Are there Racial Differences? Society of Black Academic Surgeons, Wash. DC, 2004.
146. ! Salas N, Wisor B, Agazio J, RN, PhD2, Branson RD, Austin P. Comparison of ventilation and cardiac compressions utilizing the Impact Model 730 ventilator and a conventional bag valve with a facemask in a model of adult cardiopulmonary arrest. AMSUS, 2004.
147. ! Beck G, Branson RD, Johannigman JA, LaCroy D. Lightweight trauma module (LTM). 24th Army Science Conference, Orlando, FL, 2004.
148. ! Salas N, Wisor B, Agazio J, RN, PhD2, Branson RD, Austin P. Comparison of ventilation and cardiac compressions utilizing the Impact Model 730 ventilator and a conventional bag valve with a facemask in a model of adult cardiopulmonary arrest. American Association for Respiratory Care, New Orleans, LA, 2004.
149. ! Branson RD. Performance of a Heat & Moisture Exchanger Designed to Allow Aerosol Delivery. American Association for Respiratory Care, New Orleans, LA, 2004.
150. ! Branson RD, Johannigman JA. Effect of Closed Circuit Suctioning on Airway Pressures and Portable Ventilator Performance. American Association for Respiratory Care, New Orleans, LA, 2004.
151. ! Branson RD, Johannigman JA. Evaluation of Portable Automatic Resuscitators Under Changing Impedance Conditions: A Lung Model Study. American Association for Respiratory Care, New Orleans, LA, 2004.
152. ! Hurst V, Beck G, Austin P, Branson RD. Metronome to coordinate the breaths and cardiac compressions delivered by minimally-trained caregivers during two-person CPR. Aerospace Medical Association 76th Annual Scientific Meeting, Kansas City, MO, 2005.
153. ! Salas N, Wisor B, Agazio J, Branson RD, Austin PA. Comparison of Ventilation and Cardiac Compressions When Utilizing the Impact Model 730 Automatic Transport Ventilator Versus a Conventional Bag Valve with a Facemask in a Model of Adult Cardiopulmonary Arrest. American Association of Nurse Anesthetists 2005.
154. ! Branson RD, Johannigman JA. Comparison of Continuous Flow and a Demand CPAP System for Use in Emergency Care of Congestive Heart Failure. American Association for Respiratory Care 2005 San Antonio. TX.
155. ! Branson RD, Johannigman JA, Davis K. Trigger Reliability in portable ventilators. American Association for Respiratory Care 2005 San Antonio. TX.
156. ! Babic M, Branson RD, Stoller JK. Evaluation of the Surevent Emergency Transport Ventilator. American Association for Respiratory Care 2005 San Antonio. TX.

157. ! Josephs S, Lyons E, Branson RD. Assessment of Oxygen Consumption from Standard E Cylinders by Fluidic, Turbine, and Compressor Style Portable Mechanical Ventilators . Emergency and Intensive Care, March 2006 Brussels, Belgium.
158. ! Lyons E, Branson RD, Johannigman JA, Davis K. Portable ventilators: A comparison of duration of operation from an E-cylinder. American Association for Respiratory Care, Las Vegas, NV, Dec. 2006.
159. ! Branson RD, Lyons E, Johannigman JA, Davis K, Tsuei B. Comparison of Comparison of Three New Generation Pulse Oximeters During Routine ICU Monitoring of Ventilated Patients American Association for Respiratory Care, Las Vegas, NV, Dec. 2006.
160. ! Johannigman JA, Branson RD, Beck G, Lacroix D. Oxygen Conservation with autonomous control of inspired oxygen concentration in ventilated trauma patients. Western Trauma Society, Steamboat Springs, CO, Feb. 2007.
161. ! Branson RD, Lyons E, Davis K, Johannigman JA. Bench evaluation of three automatic resuscitators. Society of Critical Care Medicine, Orlando, FL Feb. 2007.
162. ! Barnes S, Branson RD, Huezo K, Rodriguez D, Muskat P, Johannigman J. En route combat casualty care at 37000 feet: Oxygen use and oxygenation in a hypobaric environment. American Association for the Surgery of Trauma 2007.
163. ! Rodriquez D, Barnes S, Johannigman JA, Branson. Evaluation of operating times of the LTV-1000 lithium ion battery, American Association for Respiratory Care Orlando, FL, 2007.
164. ! Robinson B, Mueller E, Henson K, Branson R, Barsoum S, Tseui B. A Nurse Implemented Analgesia-Sedation-Delirium Protocol for Critically Ill Trauma Patients. Eastern Association for Trauma, Jacksonville, FL, 2008.
165. ! Branson RD, DeVries D. Evaluation of portable oxygen concentrators. American College of Chest Physicians, Philadelphia, PA, October, 2008.
166. ! Branson RD, Robinson BRH, Blakeman TC, Johannigman JA. One ventilator, four patients; A laboratory evaluation. Society of Critical Care Medicine Nashville, TN, Feb. 2, 2009.
167. ! Blakeman TC, Rodriquez D, Toth P, Branson RD. Mechanical ventilation in the hot zone: Effects of a CBRN filter on patient protection and battery life. American Association for Respiratory Care. Las Vegas, NV, Dec, 2010.
168. ! Blakeman TC, Rodriquez D, Toth P, Branson RD. Work of breathing in portable ventilators. American Association for Respiratory Care. Las Vegas, NV, Dec, 2010.
169. ! Blakeman TC, Rodriquez D, Toth P, Branson RD. Laboratory evaluation of the SAVE

- automatic resuscitator. American Association for Respiratory Care. Las Vegas, NV, Dec, 2010.
170. ! Johannigman JA, Branson RD, Blakeman TC, et al. Closed loop control of inspired oxygen. Air Force Medical Society. Washington, DC, August 2-4, 2011.
171. ! Johannigman JA, Dorlac W, Branson RD. Effects of aeromedical evacuation on intracranial pressure. Air Force Medical Society. Washington, DC, August 2-4, 2011.
172. ! Branson RD, Rodriguez D, McMullan JT, Lindsell CJ. Pre-hospital use of oxygen in trauma patients. Air Force Medical Society. Washington, DC, August 2-4, 2011.
173. ! Johannigman JA, Branson RD, Blakeman TC, Dwvedi A, Shukla R. Closed loop control of FIO₂ in multiple trauma patients. ATACCC, Ft. Lauderdale, FL. August, 2011.
174. ! McMullan JT, Rodriguez D, Hart K, Lindsell CJ, Johannigman JA, Branson RD. Pre-hospital use of oxygen. ATACCC, Ft. Lauderdale, FL. August, 2011.
175. ! McMullan J, Rodriguez D Jr, Hart K, Lindsell CJ, Branson R. Prevalence of hypoxemia and oxygen use in trauma patients prior to hospital arrival. *Ann Emerg Med* 2011; 58(4):S242.
176. ! McMullan J, Hart K, Lindsell CJ, Branson R. Pre-hospital oxygen use in patients with decreased Glasgow Coma Scale, paramedic suspicion of traumatic brain injury, or confirmed head/neck injury. *Neurocritical Care* 2011; 15(supp):S250.
177. ! McMullan J, Hart K, Lindsell CJ, Branson R. Pre-hospital GCS and paramedic impression of TBI are insensitive predictors of actual head injury. *Neurocritical Care* 2011; 15(supp):S123.
178. ! Branson RD, Cipollone J, Blakeman TC. Evaluation of a volume targeted NIV device: Evaluation of the Breathe Technologies Non-invasive ventilation system, (NIOV). American Association for Respiratory Care, Tampa, FL, Nov. 2011.
179. ! Blakeman TC, Hanseman D, Branson RB. Evaluation of four new generation portable ventilators. American Association for Respiratory Care, Tampa, FL, Nov. 2011.
180. ! Gustafson J, Blakeman TC, Dorlac W, Johannigman JA, Branson RD. Pulsed dose delivery of oxygen in mechanically ventilated pigs with acute lung injury. American College of Chest Physicians, Atlanta, GA, Oct, 2012.
181. ! Branson RD, Tsuei BJ, Hanseman D, Blakeman M, Blakeman C, Johannigman JA. Hyperoxia in trauma patients. SCCM. San Juan, Puerto Rico, Jan., 2013.
182. ! Liu NT, Branson RD, Enkheebetaar P, Salter MG, Kramer GC, Salins J, Kinsky MP. Closed loop FIO₂ smart oxygenation system to detect pulmonary injury. MHSRS, Ft. Lauderdale, FL, August 2014.

Book Chapters *

1. ! Branson RD, Hurst JM, DeHaven CB. Continuous Positive Airway Pressure Applied by Face Mask. IN Pierson D (ed) Respiratory Intensive Care. Daedalus Publishers, Dallas, TX, 1986.
2. ! DeForge W, Branson RD. Assisted Mechanical Ventilation. IN Blodgett D (ed) Manual of Respiratory Care Procedures. J.B. Lippincott Publishers, Philadelphia, PA, 1987.
3. ! Branson RD, Seger SM. Bland Aerosol Therapy. IN Stoller JK, Kacmarek B (eds), Current Techniques and Therapy in Respiratory Care. B.C Decker Publishers, Philadelphia PA, 1988.
4. ! Hurst JM, Davis K Jr, Branson RD. Application of High Frequency Ventilation in Surgical Practice. IN Baker RJ (ed), Problems in General Surgery: Management of the Critically Ill Patient. J.B. Lippincott Publishers, Philadelphia PA, Volume 4, No. 4, 1988.
5. ! Davis K Jr, Hurst JM, Branson RD. High-frequency Percussive Ventilation. IN Branson RD, Hurst JM, Davis K Jr (eds), Problems in Respiratory Care: Alternate Modes of Ventilatory Support. J.B. Lippincott Publishers, Philadelphia PA, Volume 2, No. 2, 1989.
6. ! Branson RD. Independent Lung Ventilation. IN Branson RD, Hurst JM, Davis K Jr (eds), Problems in Respiratory Care: Alternate Modes of Ventilatory Support. J.B. Lippincott Publishers, Philadelphia PA, Volume 2, No. 2, 1989.
7. ! Hurst JM, Davis K Jr, Branson RD. The Thorax. IN Moore EE (ed), Early Care of the Injured Patient. B.C. Decker Inc, Philadelphia PA, 1989.
8. ! Malinowski T, Sheldon RL, Branson RD. Respiratory Monitoring in the Intensive Care Unit. IN Wilkins RL, Sheldon RL, Krider SJ (eds), Clinical Assessment in Respiratory Care. C.V. Mosby, 1990.
9. ! Branson RD, McGough EK. Transport Ventilators. IN Banner MJ (ed), Problems in Critical Care: Positive Pressure Ventilation. J.B. Lippincott Publishers, Philadelphia PA, Volume 4, No. 2, 1990.
10. ! Hurst JM, Branson RD, Davis K Jr, Johannigman JA. Cardiopulmonary Resuscitation. IN Burton GG, Hodgkin JE, Ward JJ (eds), Respiratory Care: A Guide to Clinical Practice. J.B. Lippincott Publishers, Philadelphia PA, 1991.

11. ! Branson RD. Perioperative Respiratory Care. IN Pierson DJ, Kacmarek RM (eds), Foundations in Respiratory Care. Churchill Livingstone, New York, 1992.
12. ! Branson RD, Hurst JM. Differential Lung Ventilation. IN Perel A, Stock MC (eds), Handbook of Mechanical Ventilatory Support. Williams and Wilkins, Baltimore, Maryland, 1992.
13. ! Branson RD, Campbell RS. Impedance Pneumography, Apnea Monitoring, and Respiratory Inductive Plethysmography. IN Kacmarek RM, Hess D, Stoller JK (eds), Monitoring in Respiratory Care. Mosby, St. Louis MO, 1993.
14. ! Campbell RS, Branson RD, Chatburn RL. Mechanical Ventilation. IN Barnes TA (ed) Core Textbook of Respiratory Care Practice, 2nd Edition. Mosby, St. Louis MO, 1994.
15. ! Braman SS, Branson RD. Transport of the Ventilator-Supported Patient. IN Tobin MJ (ed), Principles and Practice of Mechanical Ventilation. McGraw-Hill, Inc, New York NY, 1994.
16. ! Branson RD, Chatburn RL. New Generation of Microprocessor-Based Ventilators. IN Tobin MT (ed), Principles and Practice of Mechanical Ventilation. McGraw-Hill, Inc., New York NY, 1994.
17. ! Branson RD, Lacy J, Berry S. Indirect Calorimetry and Nutritional Monitoring. IN Levine R, Fromm (eds), Critical Care Monitoring: From Prehospital to the ICU. Mosby, Philadelphia PA, 1995.
18. ! Branson RD. Monitoring Ventilator Function. IN Vendor J (ed), Critical Care Clinics - Respiratory Procedures and Monitoring. W.B. Saunders, Philadelphia PA, 1995.
19. ! Deshpande VM, Hess D, Branson RD. Physical Properties of Gases and Principles of Gas Movement. IN Branson RD, Hess D, Chatburn RL (eds), Respiratory Care Equipment. J.B. Lippincott, Philadelphia PA, 1995.
20. ! Langenderfer R, Branson RD. Compressed Gases: Manufacture, Storage, and Piping Systems. IN Branson RD, Hess D, Chatburn RL (eds), Respiratory Care Equipment. J.B. Lippincott, Philadelphia PA, 1995.
21. ! Branson RD. Gas Delivery Systems: Regulators, Flowmeters, and Therapy Devices. IN Branson RD, Hess D, Chatburn RL (eds), Respiratory Care Equipment. J.B. Lippincott, Philadelphia PA, 1995.
22. ! Hess D, Branson RD. Humidification: Humidifiers and Nebulizers. IN Branson RD, Hess D, Chatburn RL (eds), Respiratory Care Equipment. J.B. Lippincott, Philadelphia PA, 1995.

23. ! Fluck RR, Hess D, Branson RD. Airway and Suction Equipment. IN Branson RD, Hess D, Chatburn RL (eds), Respiratory Care Equipment. J.B. Lippincott, Philadelphia PA, 1995.
24. ! Hess D, Branson RD. Noninvasive Respiratory Monitoring Equipment. IN Branson RD, Hess D, Chatburn RL (eds), Respiratory Care Equipment. J.B. Lippincott, Philadelphia PA, 1995.
25. ! Branson RD. Airway Pressure Monitoring Devices. IN Branson RD, Hess D, Chatburn RL (eds), Respiratory Care Equipment. J.B. Lippincott, Philadelphia PA, 1995.
26. ! Hess D, Branson RD. Devices for Chest Physiotherapy, Incentive Spirometry, and Intermittent Positive Pressure Breathing. IN Branson RD, Hess D, Chatburn RL (eds), Respiratory Care Equipment. J.B. Lippincott, Philadelphia PA, 1995.
27. ! Chatburn RL, Branson RD. Mechanical Ventilators. IN Branson RD, Hess D, Chatburn RL (eds), Respiratory Care Equipment. J.B. Lippincott, Philadelphia PA, 1995.
28. ! Branson RD. Transport Ventilators. IN Branson RD, Hess D, Chatburn RL (eds), Respiratory Care Equipment. J.B. Lippincott, Philadelphia PA, 1995.
29. ! Branson RD. High Frequency Ventilators. IN Branson RD, Hess D, Chatburn RL (eds), Respiratory Care Equipment. J.B. Lippincott, Philadelphia PA, 1995.
30. ! Branson RD. Spontaneous Breathing Systems - IMV and CPAP. IN Branson RD, Hess D, Chatburn RL (eds), Respiratory Care Equipment. J.B. Lippincott, Philadelphia PA, 1995.
31. ! Grahm A, Branson RD. Approval and Surveillance of Medical Devices. IN Branson RD, Hess D, Chatburn RL (eds), Respiratory Care Equipment. J.B. Lippincott, Philadelphia PA, 1995.
32. ! Hess DR, Branson RD. Physical properties of gases and principles of gas movement. IN Branson RD, Hess DR, Chatburn RL. Respiratory Care Equipment 2nd Edition. J.B. Lippincott, Philadelphia, PA, 1998.
33. ! Langenderfer R, Branson RD. Compressed gases: manufacture, storage, and piping systems. . IN Branson RD, Hess DR, Chatburn RL. Respiratory Care Equipment 2nd Edition. J.B. Lippincott, Philadelphia, PA, 1998.
34. ! Branson RD. Gas delivery systems: regulators, flowmeters, and therapy devices. . IN Branson RD, Hess DR, Chatburn RL. Respiratory Care Equipment 2nd Edition. J.B. Lippincott, Philadelphia, PA, 1998.
35. ! Hess DR, Branson RD. Humidification. . IN Branson RD, Hess DR, Chatburn RL.

- Respiratory Care Equipment 2nd Edition. J.B. Lippincott, Philadelphia, PA, 1998.
36. ! Hess DR, Branson RD. Airway and suction equipment. . IN Branson RD, Hess DR, Chatburn RL. Respiratory Care Equipment 2nd Edition. J.B. Lippincott, Philadelphia, PA, 1998.
 37. ! Hess DR, Branson RD. Noninvasive respiratory monitoring equipment. . IN Branson RD, Hess DR, Chatburn RL. Respiratory Care Equipment 2nd Edition. J.B. Lippincott, Philadelphia, PA, 1998.
 38. ! Branson RD, Hess DR. Bedside monitoring of respiratory mechanics. . IN Branson RD, Hess DR, Chatburn RL. Respiratory Care Equipment 2nd Edition. J.B. Lippincott, Philadelphia, PA, 1998.
 39. ! Branson RD, Campbell RS. Cardiovascular monitoring. . IN Branson RD, Hess DR, Chatburn RL. Respiratory Care Equipment 2nd Edition. J.B. Lippincott, Philadelphia, PA, 1998.
 40. ! Hess DR, Branson RD. Chest physiotherapy, incentive spirometry, intermittent positive pressure breathing, secretion clearance, and inspiratory muscle training. . IN Branson RD, Hess DR, Chatburn RL. Respiratory Care Equipment 2nd Edition. J.B. Lippincott, Philadelphia, PA, 1998.
 41. ! Branson RD. Transport ventilators. . IN Branson RD, Hess DR, Chatburn RL. Respiratory Care Equipment 2nd Edition. J.B. Lippincott, Philadelphia, PA, 1998.
 42. ! Chatburn RL, Branson RD. High frequency ventilators. . IN Branson RD, Hess DR, Chatburn RL. Respiratory Care Equipment 2nd Edition. J.B. Lippincott, Philadelphia, PA, 1998.
 43. ! Branson RD. Spontaneous breathing systems: IMV and CPAP. . IN Branson RD, Hess DR, Chatburn RL. Respiratory Care Equipment 2nd Edition. J.B. Lippincott, Philadelphia, PA, 1998.
 44. ! Crowley JA, Branson RD. Approval and surveillance of medical devices. . IN Branson RD, Hess DR, Chatburn RL. Respiratory Care Equipment 2nd Edition. J.B. Lippincott, Philadelphia, PA, 1998.
 45. ! Hess DR, Branson RD. New modes of ventilation. IN Fink MP, Hill N. Lung Biology in Health and Disease. Volume 146. Mechanical Ventilatory Support. Marcell Dekker 2001.
 46. ! Branson RD, Campbell RS, Hurst JM. Chest Trauma. IN Hess DR, MacIntyre. Respiratory Care Principles and Practice. W.B. Saunders 2001.
 47. ! Branson RD, Chatburn RL. Classification of mechanical ventilators. IN MacIntyre NR and Branson RD. Mechanical Ventilation. W.B. Saunders 2000.

48. ! Branson RD, Campbell RS. Modes of mechanical ventilation. IN MacIntyre NR and Branson RD. Mechanical Ventilation. W.B. Saunders 2000.
49. ! Branson RD. The patient ventilator interface: ventilator circuit, airway care, and suctioning. IN MacIntyre NR and Branson RD. Mechanical Ventilation. W.B. Saunders 2000.
50. ! Branson RD. Humidification and aerosol therapy during mechanical ventilation. IN MacIntyre NR and Branson RD. Mechanical Ventilation. W.B. Saunders 2000.
51. ! Branson RD, Johannigman JA, Campbell RS. Mechanical ventilation during transport and cardiopulmonary resuscitation. IN MacIntyre NR and Branson RD. Mechanical Ventilation. W.B. Saunders 2000.
52. ! Hess D, Branson RD. Mechanical Ventilation. IN Hess DR, MacIntyre NR, Mishoe SC, Galvin WF, Adams A, Saposnick AB. Respiratory Care Principles and Practice. Page 782-809. Saunders 2002.
53. ! Branson RD, Campbell RS, Hurst JM. Chest Trauma. IN Hess DR, MacIntyre NR, Mishoe SC, Galvin WF, Adams A, Saposnick AB. Respiratory Care Principles and Practice. Page 1081-1092. Saunders 2002.
54. ! Branson RD, MacIntyre NR. Feedback Control of Mechanical Ventilation. IN Tobin MJ, Principles and Practice of Mechanical Ventilation. McGaw Hill. 2006 pp 393-402.
55. ! Branson RD, Johannigman JA. Transport of the patient on ventilatory support. IN Tobin MJ, Principles and Practice of Mechanical Ventilation. McGaw Hill 2006 pp 609-624.
56. ! Cheadle WG, Branson RD. Respiratory failure and mechanical ventilation. IN Baker R, Fischer JE. Mastery of Surgery. Lippincott Williams and Wilkins. 2006 pp 74-87.
57. ! Chatburn RL, Branson RD. Classification of mechanical ventilators. IN MacIntyre NR and Branson RD. Mechanical Ventilation. Elsevier, Philadelphia, PA. 2008. pp 1-48.
58. ! Branson RD. Modes of ventilator operation. IN MacIntyre NR and Branson RD. Mechanical Ventilation. Elsevier, Philadelphia, PA. 2008. pp 49-88.
59. ! Branson RD. The patient ventilator interface: Ventilator circuit, airway care, and suctioning. IN MacIntyre NR and Branson RD. Mechanical Ventilation. Elsevier, Philadelphia, PA. 2008. pp 89-110.
60. ! Branson RD. Humidification and aerosol therapy. IN MacIntyre NR and Branson RD. Mechanical Ventilation. Elsevier, Philadelphia, PA. 2008. pp 111-145.

61. ! Branson RD, Johannigman JA. Nutrition. IN MacIntyre NR and Branson RD. Mechanical Ventilation. Elsevier, Philadelphia, PA. 2008. pp 217-234.
62. ! Branson RD, Johannigman JA. Mechanical ventilation during transport and cardiopulmonary resuscitation. IN MacIntyre NR and Branson RD. Mechanical Ventilation. Elsevier, Philadelphia, PA. 2008. pp 339-365.
63. ! Branson RD, Rodriguez D, Blakeman TC. Mechanical ventilation in disaster management. IN Esquinas AM (ed): Applied Technologies in Pulmonary Medicine. Basel, Karger 2011, pp 238-245.
64. ! Branson RD, Robinson BRH. Aerosolized Antibiotics. IN Vincent JL (ed) Encyclopedia of Intensive Care Medicine Springer, 2011, pp .
65. ! Branson RD, Mason P, Johannigman JA. Transport of the Mechanically ventilated patient. IN Tobin MJ. Principles and Practices of Mechanical Ventilation. McGraw Hill, 2013.
66. ! MacIntyre NR, Branson RD. Feedback modes of ventilation. IN Tobin MJ. Principles and Practices of Mechanical Ventilation. McGraw Hill, 2013.

Text Edited

1. ! Branson RD, MacIntyre NR. Editors-in-Chief, Problems in Respiratory Care. J.B. Lippincott Publishers, Philadelphia PA, 1988-1991.
2. ! Branson RD, Hess D, Chatburn RL. Respiratory Care Equipment. J.B. Lippincott Publishers, Philadelphia PA, 1995.
3. ! Branson RD, MacIntyre NR. Editors-in-Chief, Respiratory Care Clinics of North America. W.B. Saunders, Philadelphia PA, 1995-present.
4. ! Branson RD, Hess DR, Chatburn RL. Respiratory Care Equipment 2nd Edition. J.B. Lippincott, Philadelphia, PA, 1998.
5. ! MacIntyre NR, Branson RD. Mechanical Ventilation. 2000. WB Saunders, Philadelphia, PA.
6. ! MacIntyre NR, Branson RD. Ventilacion Mecanica. 2002. McGraw Hill, New York, NY.
7. ! MacIntyre NR, Branson RD. Mechanical ventilation. 2008. 2nd Edition Elsevier, Philadelphia, PA.

Guest Editor *

1. ! Branson RD, Hurst JM. The Cincinnati Issue: Respiratory Care. September 1987.
2. ! Branson RD, Hurst JM, Davis K Jr. Alternate Modes of Ventilatory Support. Problems in Respiratory Care. January-March 1989. J.B. Lippincott Publishers, Philadelphia PA.
3. ! Branson RD, MacIntyre NR. Conference on the Essentials of Mechanical Ventilators. Respiratory Care, September 1992.
4. ! Branson RD, Davis K Jr. Respiratory Care of the Trauma Patient Part I. Respiratory Care Clinics of North America. W.B. Saunders, Philadelphia PA, Volume 2, No 3, September 1996.
5. ! Branson RD, Davis K Jr. Respiratory Care of the Trauma Patient Part II. Respiratory Care Clinics of North America. W.B. Saunders, Philadelphia PA, Volume 3, No 1, March 1997.
6. ! Branson RD, Peterson BD, Carson KD. Humidification: Current Therapy and ! Controversy. W.B. Saunders, Philadelphia PA Volume 4, No 3, June 1998. !
7. ! Branson RD, MacIntyre NR. Current Clinical Controversies in Respiratory Care. W.B Saunders, Philadelphia PA Volume 10, No 3, Sept. 2004.
8. ! Branson RD, Rubinson L. Mass Casualty Respiratory Failure. Respir Care Vol 53, January and February 2008.
9. ! Branson RD. Critical care and respiratory care consultant. Taber's Cyclopedic Medical Dictionary. 21st Edition. FA Davis. 2009.
10. Branson RD. !Critical care and respiratory care consultant. Taber's Cyclopedic Medical Dictionary. 22st Edition. FA Davis. 2011.

Grant Funding

Current

FA8650-12-2-6B10 (Johannigman/Branson) 05/09/2012-05/08/2015 1.20 cal
United States Air Force \$126,047

Closed Loop Control of Oxygen Delivery and Oxygen Generation

Aims of this project include creation of a control system interface to allow ventilator control of two different oxygen concentrators using continuous flow output of the concentrator and pulse dose delivery, measurement of the oxygen delivered by these techniques, and overall system efficacy determination based on oxygen delivered, power consumption, and complexity.

FA8650-12-2-6B11 (Johannigman/Branson) 05/08/2012-05/07/2015 1.20 cal
United States Air Force \$236,248

Closed Loop Control of Mechanical Ventilation

The goals of this study are to identify the ventilator requirements of civilian trauma patients, examine the potential role of end-tidal carbon dioxide monitoring in trauma patients for control of ventilation, and to use the height and predicted body weight to guide ventilator settings through either a decision assist mechanism or full closed loop control.

FA8650-12-2-6B12 (Branson) 07/11/2012-12/10/2013 2.40 cal

United States Air Force \$101,364

Performance of the Volumetric Diffusive Respirator at Altitude

The main objective of this study is to evaluate the VDR-4, a ventilator used by the USAF Acute Lung Team assess the function of this device upon and any and all associated changes in gas density at altitude during aeromedical evacuation of critically injured casualties.

N00014-10-1-0252 (Johannigman) 01/01/2010-3/31/2014 3.00 cal

Office of Naval Research \$243,971

Automatic Control of Inspired Oxygen and PEEP in Mechanically Ventilated Trauma Patients

Goals of this project include delivery of oxygen to patients to prevent hypoxemia, and apply PEEP to minimize compressed O₂ and stabilize lung volume, with PEEP and FIO₂ controllers working in an integrated fashion to patients in order to support the critically injured until critical care physician support is reached.

Role: Co-I

FA8650-13-2-6B15 (McMullan) 12/20/2012-03/19/2014 0.60 cal

United States Air Force \$15,339

Oxygen Flow Rate Requirements of Critically Injured Patients

The main objective of this study is to determine and optimize oxygen flow rates for critically injured trauma patients under parameters of altitude and various transport conditions for future device implementation and usage.

Role: Co-I

U01 HL077863 (sub# 0008027A) 01/01/2011-12/31/2014 1.80 cal

NIH prime (UTHSC) (Muskat) \$411,111

Prospective, Randomized Optimal Platelet and Plasma Ratios (PROPPR)

This is a multi-center clinical trial with goals of examining the platelet and plasma ratios that are optimal for massive transfusion into critically injured patients. Role: Co-I

FA8650-13-2-6B16 (Branson) 04/01/2013-09/30/2014 0.60 cal

United States Air Force \$117,193

Performance of Chemical Oxygen Generators and Concentrators for En Route Care at Altitude and Temperature Extremes

The main objective of this study is to evaluate the efficacy of several types of portable and/or chemical oxygen generators and for delivery of oxygen and maintenance of a desired oxygen concentration level to critically injured patients while traveling at altitude to emergency care facilities.

W81XWH-12-1-0598 (Kinsky) (subcontract) 09/30/2012-09/29/2015 0.60 cal

University of Texas Medical Branch at Galveston \$14,936

Smart Oxygen Monitors to Diagnose and Treat Cardiopulmonary Injuries

Specific functional evaluation of the CLO₂-FiO₂ oxygen monitoring system will be performed and analyzed by the main clinical site. This system, among others, will be reviewed and assessed and the SOS algorithm to detect pulmonary injury will be refined.

Role: Site Principal Investigator

FA8650-13-2-6B19 (Branson) 06/03/2013-03/02/2014 0.60 cal

United States Air Force \$96,355

Performance of Portable Ventilators for En Route Care at Altitude and Temperature Extremes

The main objective of this study is to evaluate the efficacy of several types of portable and/or chemical oxygen generators and concentrators for delivery of oxygen and maintenance of a desired oxygen concentration level to critically injured patients while traveling at altitude to emergency care facilities.

1UM1HL08724 (sub from Beth Israel) 09/01/2013-06/30/2014 1.20 cal

NIH/NHLBI prime, UC PI: Johannigman \$36,428 plus per patient reimbursement

EPVent 2-A Phase II Trial Esophageal Pressure Guided Ventilation

The main goals of this project include evaluation of mechanical ventilation in SICU and MICU patients using either esophageal manometry or standard of care ventilation mechanisms.

Evaluation will be achieved by daily measurements along with changes in PEEP as per protocol specifications.

Completed

1. ! Title: Automatic Control of Inspired Oxygen in Mechanically Ventilated

Trauma Patients

Office of Naval Research

5/1/2006-7/31/2009

85% Effort

PI: Dr. Jay Johannigman

Project Total \$: \$932,646

Role: Co-investigator

2. ! Title: Evaluation of Oxygen Concentrators at Altitude

National Space BioMedical Research Institute

4/1/2008-3/31/2009

15% Effort !

PI: Dr. Jay Johannigman

Project Total \$: \$100,000 !

Role: Co-Investigator !

3. Title: Pre-clinical and Regulatory Affairs as a Precursor of Testing an Algorithm for Setting PEEP and FIO₂ via Closed Loop

Office of Naval Research

3/15/2007-1/14/2008

PI: Dr. Jay Johannigman

Project Total \$: 80,000

20% Effort

Role: Co-Investigator

4. !Title: Determination of Oxygen Requirement in Hypoxic Environments

National Space BioMedical Research Institute

8/1/2006-7/31/2007

36% Effort !

PI: Dr. Jay Johannigman

Project Total \$: \$100,000 !

Role: Co-Investigator !

5. Title: Clinical Interventions to Increase Organ Procurement
 University of Pittsburgh 9/1/2005-8/31/2006 15% Effort
 PI: Dr. Steven Rudich Project Total \$: \$41,916
 Role: Site coordinator
6. Title: Reducing Secondary Insults in TBI
 Department of Defense 9/30/2009-9/29/2011 10% Effort
 PI: Dr. Jay Johannigman Project Total \$: \$450,000
 Role: Co-investigator
7. Title: Success of ventilation with varying airways using the SAVe resuscitator in a human simulator.
 Department of Defense 9/30/2009-9/29/2011 20% Effort !
 PI: Richard Branson Project Total \$: \$52,000 !
8. Title: Prospective Observational Multicenter Massive Transfusion Study (PROMMT)
 University of Texas Health Science Center 6/1/09-9/15/2010 20% Effort
 PI: Dr. Peter Muskat Project Total \$: \$ 381,921
 Role: Coordinator
9. Title: Do Trauma Patients Need Oxygen? Prevalence of Pre-hospital Hypoxemia in Trauma Patients
 The Henry Jackson Foundation (USAF) 8/1/09-8/16/10 20% Effort
 PI: Dr. Jason McMullan Project Total \$: \$224,007
 Role: Co-investigator
10. Title: Determining the Oxygen Requirements Using an Oxygen Concentrator at Altitude
 HPW 711th (USAF) 2/1/2011 – 1/30/2013 30% Effort !
 PI: Richard Branson Project Total: \$784,000 !
 Role: PI !
11. Title: Effect of Omega-3 Fatty Acid Supplementation on Infection Rate and Morbidity in Multisystem Trauma Patients
 Department of Defense 9/30/2009-9/29/2011 10% Effort !
 PI: Dr. Athota Project Total \$: \$654,960 !
 Role: Co-investigator !

Pending

711 HPW 14-013 (PI Branson) 12/01/2013-11/30/2014 1.20 cal
 United States Air Force / DoD \$67,365
 Correction of Altitude Induced Changes in Performance of the Volumetric Diffusive Respirator (VDR) Ventilator

Major goals of this study include determination of ability of CCATT members to correct altitude induced changes in VDR performance and restore lung protective ventilation, and to determine the best method for monitoring altitude induced changes and returning parameter settings to lung protective baseline settings.

711 HPW 14-011 (PI Blakeman) 12/01/2013-11/30/2014 0.60 cal

United States Air Force / DoD \$87,294

Automatic Tracheal Tube Cuff Management at Altitude

The major goal of this study will be achieved through evaluation of three automatic ETT cuff pressure adjustment devices with changes simulated altitude during ascent, at altitude, and descent in an altitude chamber. This study will evaluate 2 sizes of ETT with each device to determine if the use of any of these devices may be superior to the current ETT cuff management practice in the aeromedical evacuation environment.

Role: Co-I

711 HPW 14-016 (PI Branson) 12/01/2013-11/30/214 1.20 cal

United States Air Force / DoD \$100,703

Impact of Hypobarism During Simulated Transport on CCATT Performance

The major objectives of this study are to determine the physiologic response to hypobarism during training flights in CCATT Teams, and to determine the relationship between physiologic derangements during flight and student performance.

711 HPW 14-017 (PI Gomaa) 12/01/2013-11/30/2014 2.40 cal

United States Air Force / DoD \$94,932

Impact of Changes in Oxygenation on Non-Invasive Hemoglobin (SpHgb)

The goals of this project are to evaluate the impact of extremes of oxygenation, both hypoxemia and hyperoxia on the measured SpHgb, and to compare the SpHgb to the measured Hgb from a finger stick in normal volunteers at altitude with and without hypoxemia/hyperoxemia.

Role: Co-I

711 HPW 14-060 (PI Johannigman) 12/01/2013-11/30/2014 1.20 cal

United States Air Force / DoD \$156,820

Critical Care Air Transport Team Registry

The main objective of this project is to create searchable CCATT registry containing 5300 AF 3899 data.

USAMRAA (sub from U of MI) 01/01/2014-12/31/2015 0.60 cal

W81XWH-13-CCCJPC6-FSERC #13057137 (prime) \$182,787

UC PI: Johannigman

Noninvasive Bioinformatic Based Methods for Multi-Echelon Casualty Monitoring

The main goal of this project is to perform required testing of the BEAM device described in the full proposal submission, as well as compilation of the data that will be used to generate the algorithms required for further testing.

Ventec Group LLC 10/01/2013-09/30/2015 1.20 cal

NIH SBIR prime; UC PI Branson \$47,034

Portable Life-Support Ventilator with Integral Oxygen

During Phase I of this SBIR project, the product will be developed, tested, and evaluated. During Phase II, the main goals will be to evaluate oxygen delivery of the piece of equipment in a porcine model of respiratory failure. This phase of the study will be a cross-over trial with each animal servicing as their own control

*Updated 1-JAN-2018