

CURRICULUM VITAE

DEREK C. ANGUS, MD, MPH

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Biographical

Name Derek Calder Angus

Citizenship British (US Permanent Resident)

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University of Pittsburgh School of Medicine
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Education and Training

Undergraduate

10/79 – 07/84 University of Glasgow School of Medicine MB, ChB

Graduate

09/90 – 04/92 University of Pittsburgh Graduate School of Public Health MPH
Department of Health Services Administration

Post-graduate

University of Glasgow and affiliated teaching hospitals, Glasgow, United Kingdom

08/84 – 01/85 Western Infirmary Intern, Internal Medicine
02/85 – 07/85 Western Infirmary Intern, Surgery
08/85 – 07/87 Southern General Hospital Resident, Internal Medicine
08/87 – 07/88 Southern General Hospital Medical Registrar (Chief Resident)

University of Pittsburgh, Pittsburgh, United States

07/89 – 06/91 School of Medicine and UPMC Fellow, Critical Care Medicine
07/90 – 10/92 International Resuscitation Research Center Research Fellow
(Mentor: Peter Safar)
07/90 – 10/92 Schools of Medicine, Engineering, Public Health, and Research Fellow in Disaster
Public and International Affairs and Emergency Medicine

Appointments and Positions

Academic

School of Medicine, University of Pittsburgh, Pittsburgh, United States

11/92 – 06/98 Department of Anesthesiology/CCM Assistant Professor
01/94 – 08/98 Department of Medicine Assistant Professor (2^o appt)
11/94 – 06/01 Safar Resuscitation Center Scientist (2^o appt)
07/98 – 06/03 Department of Anesthesiology/CCM Associate Professor
09/98 – present Department of Medicine Associate Professor (2^o appt)
07/03 – 07/05 Department of Critical Care Medicine Professor
08/05 – present Department of Critical Care Medicine Professor with Tenure

10/08 – present	Clinical and Translational Science Institute	Professor (2 ^o appt)
11/09 – present	Department of Critical Care Medicine	Mitchell P. Fink Endowed Chair
07/13 – present	Department of Critical Care Medicine	Distinguished Professor

Graduate School of Public Health, University of Pittsburgh, Pittsburgh, United States

09/00 – 06/01	Department of Health Services Administration	Associate Professor (2 ^o appt)
07/01 – 10/08	Department of Health Policy & Management	Associate Professor (2 ^o appt)
10/08 – present	Department of Health Policy & Management	Professor (2 ^o appt)

University of Paris-Descartes, Paris, France

07/06 – 06/07	Réanimation Médicale	Professeur Associé
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University of Oxford, Oxford, United Kingdom

11/12 – present	Nuffield Department of Medicine	Honorary Fellow
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Non-academic

08/88 – 06/89	Medecins Sans Frontieres	Physician
07/90 – 06/91	Central Medical Center, Pittsburgh, PA	Intensivist, Cardiothoracic ICU

UPMC Presbyterian, Pittsburgh, PA

07/90 – 06/91	Presbyterian-University Hospital	Intensivist, Transplant ICU
07/91 – present	UPMC Presbyterian	Critical Care Attending
07/94 – 06/00	UPMC Presbyterian	Internal Medicine Attending

Veteran Affairs Medical Center, Pittsburgh, PA

11/94 – 06/00	Veterans Affairs Medical Center	Critical Care Attending
11/94 – 06/00	Veterans Affairs Medical Center, Pittsburgh, PA	Internal Medicine Attending

University of Pittsburgh School of Medicine, Pittsburgh, PA

12/01 – 01/08	Department of Critical Care Medicine	Vice Chair for Research
01/08 – present	Department of Critical Care Medicine	Chair

UPMC Health System, Pittsburgh, PA

01/08 – present	Department of Critical Care Medicine	Chair
07/15 – present	ICU Service Center	Physician Director

Certification and Licensure

Specialty certification

1987	The Royal College of Physicians of the United Kingdom (MRCP (UK))
1988	Educational Commission for Foreign Medical Graduates Certification
1989	Advanced Cardiac Life Support Certification (ACLS)
1989	Advanced Trauma Life Support Certification (ATLS)
1990	Base Station Medic Command Certification
1990	Federal Licensing Examination (FLEX)
1991	European Diploma in Intensive Care Medicine
1995	American Board of Internal Medicine – Internal Medicine (Recertified, 2005)
1997	American Board of Internal Medicine – Critical Care Medicine (Recertified, 2007 and 2017)

Medical licensure

1984 – present	General Medical Council	United Kingdom
1988 – 1989	Medical Council	Hong Kong
1989 – 1991	Bureau of Professional and Occupational Affairs (GMT license)	Pennsylvania
1991 – present	Bureau of Professional and Occupational Affairs	Pennsylvania

Memberships in Professional and Scientific Societies

1983 – 1989	British Medical Association
1987 – 1989	Royal College of Physicians and Surgeons of Glasgow
1990 – present	Society of Critical Care Medicine
1990 – present	American College of Chest Physicians (inducted as Fellow, 1994)
1990 – 1994	National Association of Emergency Medical Services Physicians
1990 – 2004	World Association for Disaster and Emergency Medicine
1991 – 1996	International Trauma Anesthesia and Critical Care Society
1994 – present	American Thoracic Society
1995 – present	Association for Health Services Research
1995	American College of Physicians
1996	American Medical Association
1997 – present	European Society of Intensive Care Medicine (inducted as Honorary Lifetime Member, 2015)
1997 – present	American College of Critical Care Medicine (inducted as Master, 2012)
2005 – present	Royal College of Physicians of the United Kingdom (inducted as Fellow, 2005)
2017 – present	Association of American Physicians (inducted as Member, 2017)

Honors

Undergraduate awards

1979 – 1983	William Whyte Scholarship (National Bursary Award, Scotland)
1979 – 1984	10 awards of merit and distinction in degree exams, University of Glasgow School of Medicine

Inductions and academic honors

1994	Fellow, American College of Chest Physicians (FCCP)
1997	Fellow, American College of Critical Care Medicine (FCCM)
2005	Fellow, Royal College of Physicians (United Kingdom) (FRCP)
2009	Mitchell P. Fink Endowed Chair, University of Pittsburgh
2009	Distinguished Investigator Award, American College of Critical Care Medicine
2012	Master of Critical Care Medicine, American College of Critical Care Medicine
2013	Distinguished Professor of Critical Care Medicine, University of Pittsburgh
2015	Honorary Member, European Society of Intensive Care Medicine
2017	Member, Association of American Physicians

Awards and recognition for clinical excellence

1995	Outstanding Clinician Award, Critical Care Medicine, University of Pittsburgh
2005 – present	Best Doctors in America
2012 - present	Best Doctors in Pittsburgh, Pittsburgh Magazine

Awards for individual scholarly works

1995	Young Investigator Award, American College of Chest Physicians
1996	Co-author, Young Investigator Award, American College of Chest Physicians

- 1998 Co-author, Young Investigator Award, American College of Chest Physicians
- 1999 Internal Medicine Specialty Research Award, Society of Critical Care Medicine
- 2001 Senior author, Pediatrics Specialty Research Award, Society of Critical Care Medicine
- 2001 Senior author, Healthcare Industry Specialty Research Award, Society of Critical Care Medicine
- 2001 Senior author, Best Original Research Award, Society of Critical Care Medicine
- 2002 Senior author, Healthcare Industry Specialty Research Award, Society of Critical Care Medicine
- 2002 Internal Medicine Specialty Research Award, Society of Critical Care Medicine
- 2003 Senior author, Healthcare Industry Specialty Research Award, Society of Critical Care Medicine
- 2005 Senior Author, Educational Scholarship Award, Society of Critical Care Medicine
- 2005 Co-Author, Educational Scholarship Award, Society of Critical Care Medicine
- 2005 Co-Author, Educational Healthcare Specialty Award, Society of Critical Care Medicine
- 2007 Senior Author, Best Abstract, American College of Emergency Physicians Annual Scientific Meeting
- 2007 Senior Author, Best Abstract (one of four ‘Best’), European Society of Intensive Care Medicine Annual Scientific Meeting
- 2008 Co-Author, Young Investigator Award, Society of Critical Care Medicine Annual Scientific Meeting
- 2009 Senior Author, Institute of Industrial Engineers Transactions Best Applied Paper of the Year Prize in Operations Engineering and Analysis
- 2011 Senior Author, Best Abstract, 31st International Symposium on Intensive Care and Emergency Medicine, Brussels, Belgium
- 2014 Number “One” most viewed manuscript by the “Read by QxMD”
- 2015 Best Poster Award, Organization and Outcomes Track, International Symposium on Intensive Care and Emergency Medicine
- 2015 Top 10 Outstanding Clinical Research Achievements, Clinical Research Forum, Washington, DC
- 2016 Best Poster Award, Organization and Outcomes Track, International Symposium on Intensive Care and Emergency Medicine
- 2017 Co-author, Mohan et al, BMJ ‘Christmas edition’, British Medical Association

Professional society service awards

- 1999 Presidential Citation Award, Society of Critical Care Medicine
- 1999 Council Member, Pan-American Iberian Federation of Intensive Care Societies
- 2001 Presidential Citation, American Thoracic Society
- 2004 Presidential Citation, Society of Critical Care Medicine
- 2005 Presidential Citation, Society of Critical Care Medicine
- 2006 Presidential Citation, Society of Critical Care Medicine
- 2008 Presidential Citation, Society of Critical Care Medicine
- 2011 Presidential Citation, Society of Critical Care Medicine
- 2013 Presidential Citation, Society of Critical Care Medicine

Honorary lectureships

- 2001 The Gregory Mark Taubin Lecture, Children’s National Medical Center, Washington, DC.
- 2005 The Virginia Apgar Lecture, Columbia University, New York, NY
- 2006 The Gillian Hansen Lecture, Intensive Care Society of the United Kingdom
- 2011 The Daniel P. Schuster Memorial Lecture, Washington University, St. Louis, MO
- 2011 The Roger C. Bone Memorial Lecture, Rush University Medical Center, Chicago, IL
- 2013 The Thomas Hicks Memorial Lecture, Northwestern University, Chicago, IL
- 2013 The Thomas J. Iberti Memorial Lecture, Mount Sinai School of Medicine, New York, NY
- 2014 The Distinguished Professor Lecture, Institute for Healthcare Policy and Innovation, University of Michigan, Ann Arbor, MI
- 2017 The Charles H. Rammelkamp, Jr. Lecture, Case Western Reserve University, Cleveland, OH
- 2017 The Torsten Gordh State of the Art Lecture, Scandinavian Society of Anesthesiology and Intensive Care, Malmo, Sweden

Miscellaneous

- 2014 Top 20 Health Leaders, *HealthLeaders* Magazine

Publications

Publication metrics (March 2018)

Metric	Thomson-Reuters	Google Scholar
H-index	80	100
Total citation count	37,857	78,774
ISI 'Highly Cited' papers	29	

Refereed articles

1. Ricci EM, Pretto EA, Safar P, Klain M, [Angus DC](#). Disaster reanimatology potentials: A structured interview study in Armenia. Method for evaluation of medical response to major disasters. *Prehospital Disaster Med* 1991; 6(2): 159-66.
2. Pretto EA, Ricci EM, Klain M, Safar P and other members of the Disaster Reanimatology Study Group ([Angus DC](#), member of Disaster Reanimatology Study Group). Disaster reanimatology potentials: A structured interview study in Armenia III. Results, conclusions and recommendations. *Prehospital Disaster Med* 1992; 7: 327-37.
3. Doyle H, Kramer D, Marino I, [Angus DC](#), Gayowski T. Advances in transplantation. *Clinical Anaesthesiology* 1992; 6: 307-26.
4. [Angus DC](#), Pretto EA, Abrams JI, Safar P. Recommendations for life supporting First-Aid training of the lay public for disaster preparedness. *Prehospital Disaster Med* 1993; 8(2):157-60.
5. Abrams JI, Pretto EA, [Angus DC](#), Safar P. Guidelines for rescue training of the lay public. *Prehospital Disaster Med* 1993;8(2):151-6.
6. [Angus DC](#), Kvetan V. Organization and management of critical care systems in unconventional situations. *Crit Care Clin* 1993; 9(3):521-42.
7. Bissell RA, Pretto EA, [Angus DC](#), Shen B, Sawyers A, Ruiz V, Ceciliano N, Shurtleff D. Post-preparedness medical disaster response in Costa Rica. *Prehospital Disaster Med* 1994; 9(2):96-106.
8. Pretto EA, [Angus DC](#), Abrams JI, Shen B, Bissel RA, Ruiz Castro VM, Sawyers A, Watoh Y, Ceciliano N, Ricci EM. An analysis of prehospital mortality in an earthquake. *Prehospital Disaster Med* 1994; 9(2):107-17.
9. Mateo R, Jethmalani S, [Angus DC](#), Gorscan J III, Uretsky B, Fung J. Interferon-associated left ventricular dysfunction in a liver transplant recipient. *Dig Dis Sci*. 1996 Jul; 41(7):1500-3.
10. Snyder JV, Sirio CA, [Angus DC](#), Hravnak MT, Kobert SN, Sinz EH, Rudy EB. Trial of nurse practitioners in intensive care. *New Horiz* 1994;2(3):296-304.
11. Sirio CA, [Angus DC](#), Rosenthal GA. Cleveland Health Quality Choice (CHQC)--An ongoing collaborative, community-based outcomes assessment program. *New Horiz* 1994; 2(3):321-5.
12. Linden PK, [Angus DC](#), Chelluri L, Branch R. The influence of clinical study design on cost-effectiveness projections for the treatment of gram-negative sepsis with human anti-endotoxin antibody. *J Crit Care* 1995;10(4):154-64.
13. [Angus DC](#), Linde-Zwirble WT, Sirio CA, Rotondi AJ, Chelluri L, Newbold RC III, Lave JR, Pinsky MR. The effect of managed care on ICU length of stay: Implications for Medicare. *JAMA* 1996;276(13):1075-82.
14. Lee KH, [Angus DC](#), Abramson NS. Cardiopulmonary resuscitation: What cost to cheat death? *Crit Care Med* 1996;24(12):2046-52.
15. Johnson JP, Johnston JR, Flick R, Singh A, [Angus DC](#), Greenberg A. Acute renal failure in recipients of organ transplantation and nontransplantation patients: Comparison of characteristics and mortality. *Ren Fail* 1997;19(3):461-73.
16. [Angus DC](#), Sirio CA, Clermont G, Bion J. International comparisons of critical care outcome and resource consumption. *Crit Care Clin* 1997;13(2):389-407.
17. [Angus DC](#), Lidsky N, Dotterweich LM, Pinsky MR. The influence of high-frequency jet ventilation with varying cardiac-cycle specific synchronization on cardiac output in ARDS. *Chest* 1997;112(6):1600-6.

18. Angus DC, Pretto EA, Abrams JI, Ceciliano N, Watoh Y, Kirimli B, Certug A, Comfort LK, and the Disaster Reanimatology Study Group (DRSG). Epidemiologic assessment of mortality, building collapse pattern, and medical response after the 1992 earthquake in Turkey. *Prehospital Disaster Med* 1997;12(3):222-31.
19. Clermont G, Angus DC, Linde-Zwirble WT, Lave J, Pinsky MR. Measuring resource use in the ICU with computerized therapeutic intervention scoring system-based data. *Chest* 1998;113(2):434-42.
20. Comfort L, Tekin A, Pretto E, Kirimli B, Angus DC, and the International, Interdisciplinary Disaster Research Group. Time, knowledge, and action: The effect of trauma upon community capacity for action. *Int J Mass Emerg and Disasters* 1998;16: 73-91.
21. Beloucif S, Payen D, on behalf of the Working Group (Angus DC, member) on Inhaled NO in the ICU of the European Society of Intensive Care Medicine. A European survey of the use of inhaled nitric oxide in the ICU. Working Group on Inhaled NO in the ICU of the European Society of Intensive Care Medicine. *Intensive Care Med* 1998;24(8):864-77.
22. Angus DC, Ramakrishnan N. Health services and outcomes research in critical care. *Crit Care and Shock* 1998;2: 109-16.
23. Fraley DS, Burr R, Bernardini J, Angus DC, Kramer DJ, Johnson JP. Impact of acute renal failure on mortality in end stage liver disease with or without transplantation. *Kidney Int* 1998;54(2):518-24.
24. Sirio CA, Shepardson LB, Rotondi AJ, Cooper GS, Angus DC, Harper DL, Rosenthal GE. Community-wide assessment of intensive care outcomes using a physiologically based prognostic measure: Implications for critical care delivery from Cleveland Health Quality Choice. *Chest* 1999;115(3):793-801.
25. Rubenfeld G, Angus DC, Curtis R, Connors A, Bernard G, Pinsky MR. Outcomes research in critical care: Results of the American Thoracic Society Workshop on Outcomes Research Part I. *Am J Respir Crit Care Med* 1999;159: 1-10.
26. Pronovost P, Angus DC. Using large-scale databases to measure outcomes in critical care. *Crit Care Clin*. 1999;15(3):615-31.
27. Pronovost P, Angus DC. Determining the Value of Critical Care. *Clin Pulm Med*. 1999;6(5):302-8.
28. Lee KH, Angus DC. Benchmarking cardiac surgery and critical care. *New Horiz* 1999 7: 579-84.
29. East TD, Heermann LK, Bradshaw RL, Lugo A, Sailors M, Ershler L, Wallace CJ, Morris AH, McKinley B, Marquez A, Tonnesen A, Parmley L, Shoemaker W, Meade P, Thaut P, Hill T, Young M, Baughman J, Olterman M, Gooder V, Quinn B, Summer W, Valentine V, Carlson J, Bonnell B, deBoisblanc B, McClarity Z, Cachere J, Kovitz K, Gallagher E, Pinsky M, Angus DC, Cohen M, Hudson L, Steinberg K. Efficacy of computerized decision support for mechanical ventilation: Results of a prospective multi-center randomized trial. *Proc AMIA Symp*. 1999;251-5. PMID: PMC2232746
30. Angus DC, Clermont G, Kramer DJ, Linde-Zwirble WT, Pinsky MR. Short and long-term outcome prediction with the Acute Physiology and Chronic Health Evaluation II system after orthotopic liver transplantation. *Crit Care Med* 2000;28(1):150-6.
31. Angus DC, Birmingham MC, Balk RA, Scannon PJ, Collins D, Kruse JA, Graham DR, Dedhia HV, Homann S, MacIntyre N. E5 murine monoclonal antiendotoxin antibody in gram-negative sepsis: A randomized controlled trial. E5 study investigators. *JAMA* 2000; 283(13):1723-30.
32. Rotondi AJ, Angus DC, Sirio CA, Pinsky MR. Assessing intensive care unit performance: a new conceptual framework. *Curr Opin Crit Care* 2000;6(3):155-7.
33. Pronovost PJ, Angus DC, Miller MR. Design considerations in clinical trials on acutely ill patients. *Research Practitioner* 2000;1:47-54.
34. Angus DC. Study design issues in sepsis trials. *Sepsis* 2000;4(1):7-13.
35. Esteban A, Anzueto A, Alia I, Gordo F, Apezteguia C, Palizas F, Cide D, Goldwasser R, Soto L, Bugedo G, Rodrigo C, Pimentel J, Raimondi G, Tobin MJ, for the Mechanical Ventilation International Study Group (Angus DC, member). How is mechanical ventilation employed in the intensive care unit? An international utilization review. *Am J Respir Crit Care Med* 2000;161(5):1450-8.

36. [Angus DC](#), Kelley MA, Schmitz RJ, White A, Popovich J, for the Committee on Manpower for Pulmonary and Critical Care Societies (COMPACCS). Caring for the critically ill patient. Current and projected workforce requirements for care of the critically ill and patients with pulmonary disease: Can we meet the requirements of an aging population? *JAMA* 2000;284(21):2762-70.
37. Evans TW, Albert RK, [Angus DC](#), Bion JF, Chiche J-D, Epstein SK, Fagon JY, Ranieri M, Sznajder JI, Torres A, Walley KR. International Consensus Conferences in Intensive Care Medicine: Noninvasive positive pressure ventilation in acute respiratory failure. *Am J Respir Crit Care Med* 2001;163(1):283-91.
38. Evans TW, Albert RK, [Angus DC](#), Bion J, Chiche J-D, Epstein S, Fagon JY, Ranieri M, Sznajder JI, Torres A, Walley K. International Consensus Conferences in Intensive Care Medicine: Non-invasive positive pressure ventilation in acute respiratory failure. *Intensive Care Med* 2000;27(1):166-78.
39. Clermont G, [Angus DC](#), DiRusso SM, Griffin M, Linde-Zwirble WT. Predicting hospital mortality for patients in the intensive care unit: a comparison of artificial neural networks with logistic regression models. *Crit Care Med* 2001;29(2):291-6.
40. Cohen J, Guyatt G, Bernard G, Calandra T, Cook DJ, Elbourne D, Marshall J, Nunn A, Opal S ([Angus DC](#), panelist). New strategies for clinical trials in patients with sepsis and septic shock. *Crit Care Med* 2001;29(4):880-6.
41. Pronovost PJ, [Angus DC](#). Economics of end-of-life care in the ICU. *Crit Care Med* 2001;29:N46-51.
42. [Angus DC](#), Musthafa AA, Clermont G, Griffin MF, Linde-Zwirble WT, Dremsizov TT, Pinsky MR. Quality-adjusted survival in the first year after the acute respiratory distress syndrome. *Am J Respir Crit Care Med* 2001;163(6):1389-94.
43. [Angus DC](#), Linde-Zwirble WT, Lidicker J, Clermont G, Carcillo J, Pinsky MR. Epidemiology of severe sepsis in the United States: Analysis of incidence, outcome, and associated costs of care. *Crit Care Med* 2001;29(7):1303-10.
44. [Angus DC](#), Wax RS. The epidemiology of sepsis: An update. *Crit Care Med* 2001;29:S109-16.
45. Vincent J-L, [Angus DC](#), Annane D, Bernard G, Faist E, Giroir B, Reinhart K. Clinical expert round table discussion (session 5) at the Margaux Conference on Critical Illness: Outcomes of clinical trials in sepsis: Lessons learned. *Crit Care Med* 2001;29:S136-7.
46. [Angus DC](#), Linde-Zwirble WT, Clermont G, Griffin M, Clark RH. Epidemiology of neonatal respiratory failure in the United States: Projections from California and New York. *Am J Respir Crit Care Med* 2001;164(7):1154-60.
47. Kellum JA, [Angus DC](#), Johnson JP, Leblanc M, Griffin M, Ramakrishnan N, Linde-Zwirble WT. Continuous versus intermittent renal replacement therapy: A meta-analysis. *Intensive Care Med* 2002;28(1):29-37.
48. Esteban A, Anzueto A, Frutos F, Alia I, Brochard L, Stewart TE, Benito S, Epstein SK, Apezteguia C, Nightingale P, Arroliga AC, Tobin MJ; for the Mechanical Ventilation International Study Group ([Angus DC](#), member). Characteristics and outcomes in adult patients receiving mechanical ventilation: A 28-day international study. *JAMA* 2002;287(3):345-55.
49. [Angus DC](#), Rubenfeld GD, Roberts MS, Curtis JR, Connors AF, Cook DJ, Lave JR, Pinsky MR. Understanding costs and cost-effectiveness in critical care: Report from the Second American Thoracic Society Workshop on Outcomes Research. *Am J Respir Crit Care Med* 2002;165(4):540-50.
50. Kaplan V, [Angus DC](#), Griffin MF, Clermont G, Watson RS, Linde-Zwirble WT. Hospitalized community-acquired pneumonia in the elderly: Age- and sex-related patterns of care and outcome in the United States. *Am J Respir Crit Care Med* 2002;165(6):766-72.
51. Rotondi AJ, Sirio CA, [Angus DC](#), Pinsky MR. A new conceptual framework for ICU performance appraisal and improvement. *J Crit Care* 2002;17(1):16-28.
52. Kalassian KG, Dremsizov T, [Angus DC](#). Translating research evidence into clinical practice: New challenges for critical care. *Critical Care* 2002;6(1):11-4. PMID: PMC137390
53. Clermont G, [Angus DC](#), Linde-Zwirble WT, Griffin MF, Fine MJ, Pinsky MR. Does acute organ dysfunction predict patient-centered outcomes? *Chest* 2002;121(6):1963-71.
54. Watson RS, [Angus DC](#). Assessing outcomes in critical care. *J Intensive Care Med* 2002;17(3):103-11.

55. Clermont G, Acker CG, [Angus DC](#), Sirio CA, Pinsky MR, Johnson JP. Renal failure in the ICU: Comparison of the impact of acute renal failure and end-stage renal disease on ICU outcomes. *Kidney Int* 2002;62(3):986-96.
56. [Angus DC](#), Marrie TJ, Obrosky DS, Clermont G, Dremsizov TT, Coley C, Fine MJ, Singer DE, Kapoor WN. Severe community-acquired pneumonia: Use of intensive care services and evaluation of the American and British Thoracic Society Diagnostic criteria. *Am J Respir Crit Care Med* 2002;166(5):717-23.
57. Kellum JA, Mehta, R, [Angus DC](#), Palevsky P, Ronco C, for the ADQI Workgroup. The first international consensus conference on continuous renal replacement therapy. *Kidney Int* 2002;62(5):1855-63.
58. Pronovost PJ, [Angus DC](#), Dorman T, Robinson KA, Dremsizov TT, Young TL. Physician staffing patterns and clinical outcomes in critically ill patients: A systematic review. *JAMA* 2002;288(17):2151-62.
59. Bellomo R, [Angus DC](#), Star RA. The Acute Dialysis Quality Initiative--Part II: Patient selection for CRRT. *Adv Ren Replace Ther* 2002;9(4):255-9.
60. [Angus DC](#), Linde-Zwirble WT, Clermont G, Ball DE, Basson BR, Ely EW, Laterre PF, Vincent JL, Bernard GR, van Hout B, for the PROWESS Investigators. Cost-effectiveness of drotrecogin alfa (activated) in the treatment of severe sepsis. *Crit Care Med* 2003;31(1):1-11.
61. Ely EW, Laterre PF, [Angus DC](#), Helterbrand JD, Levy H, Dhainaut JF, Vincent JL, Macias WL, Bernard GR, for the PROWESS Sepsis Study Group. Drotrecogin alfa (activated) administration across clinically important subgroups of patients with severe sepsis. *Crit Care Med* 2003;31(1):12-9.
62. Coughlin MA, [Angus DC](#). Economic evaluation of new therapies in critical illness. *Crit Care Med* 2003;31:57-16.
63. Kaplan V, Clermont G, Griffin MF, Kasal J, Watson RS, Linde-Zwirble WT, [Angus DC](#). Pneumonia: still the old man's friend? *Arch Intern Med* 2003;163(3):317-23.
64. Watson RS, Carcillo JA, Linde-Zwirble WT, Clermont G, Lidicker J, [Angus DC](#). The epidemiology of severe sepsis in children in the United States. *Am J Respir Crit Care Med* 2003;167(5):695-701. PMID 12433670
65. Miranda DR, Nap R, de Rijk A, Schaufeli W, Iapichino G, and the members of the TISS Working Group ([Angus DC](#), member). Nursing activities score. *Crit Care Med* 2003;31(2):374-82.
66. Vincent J-L, [Angus DC](#), Artigas A, Kalil A, Basson BR, Jamal HH, Johnson III G, Bernard GR. Effects of drotrecogin alfa (activated) on organ dysfunction in the PROWESS trial. *Crit Care Med* 2003;31(3):834-40.
67. [Angus DC](#), Carlet J, on behalf of the 2002 Brussels Roundtable Participants. Surviving intensive care: A report from the 2002 Brussels Roundtable. *Intensive Care Med* 2003;29(3):368-77.
68. [Angus DC](#), Burgner D, Wunderink R, Mira JP, Gerlach H, Wiedermann CJ, Vincent JL. The PIRO concept: P is for predisposition. *Critical Care* 2003;7(3):248-51. PMCID: PMC270687
69. Kellum JA, [Angus DC](#). Genetic variation and risk of sepsis. *Minerva Anesthesiol* 2003;69(4):245-53.
70. Levy MM, Fink M, Marshall JC, Abraham E, [Angus DC](#), Cook D, Cohen J, Opal SM, Vincent JL, Ramsay G, for the International Sepsis Definitions Conference. 2001 SCCM/ESICM/ACCP/ATS/SIS International Sepsis Definitions Conference. *Crit Care Med* 2003;31(4):1250-6.
71. Levy MM, Fink M, Marshall JC, Abraham E, [Angus DC](#), Cook D, Cohen J, Opal SM, Vincent JL, Ramsay G, for the International Sepsis Definitions Conference. 2001 SCCM/ESICM/ACCP/ATS/SIS International Sepsis Definitions Conference. *Intensive Care Med* 2003;29(4):530-8.
72. Wood KA, Huang DT, [Angus DC](#). Improving clinical trial design in acute lung injury. *Crit Care Med* 2003;31(4 Suppl):S305-11.
73. Chelluri L, Mendelsohn AB, Belle SH, Rotondi AJ, [Angus DC](#), Donahoe MP, Sirio CA, Schulz R, Pinsky MR. Hospital costs in patients receiving prolonged mechanical ventilation. Does age have an impact? *Crit Care Med* 2003;31(6):1746-51.
74. Ely EW, [Angus DC](#), Williams MD, Bates B, Qualy R, Bernard GR. Drotrecogin alfa (activated) treatment of older patients with severe sepsis. *Clin Infect Dis* 2003;37(2):187-95.

75. Weycker D, Akhras KS, Edelsberg J, Angus DC, Oster G. Long-term mortality and medical-care charges in patients with severe sepsis. *Crit Care Med* 2003;31(9):2316-23.
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Letters, editorials, viewpoints and other publications

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2. Angus DC, Pinsky MR. Digestive tract decontamination for ICU patients: A meta-analysis [commentary]. *ACP Journal Club* 1992;116:12. Comment on: Vandenbroucke-Grauls CM, Vandenbroucke JP. Effect of selective decontamination of the digestive tract on respiratory tract infections and mortality in the intensive care unit. *Lancet* 1991;338:859-862.
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4. Chelluri L, Angus DC, Sirio CA. An international randomized trial comparing four thrombolytic strategies for acute myocardial infarction: GUSTO criticized [letter]. *N Engl J Med* 1994;330:505.
5. Angus DC. Selective decontamination of the digestive tract: A meta-analysis [commentary]. *ACP Journal Club* 1994;120:66-67. Comment on: Heyland DK, Cook DJ, Jaeschke R, et al. Selective decontamination of the digestive tract: An overview. *Chest* 1994;1221-1229.
6. Angus DC, Straube RC. Scoring Systems in the Intensive Care Unit: Their value in determining costs and outcomes, *Controversies in Critical Care* 1996;3(1):1-5.
7. Angus DC, Pinsky MR. Risk prediction: Judging the judges [Editorial]. *Intensive Care Med* 1997;23:363-365.
8. Linde-Zwirble WT, Angus DC. Can scoring systems assess ICU performance? [Editorial]. *J Intensive Care Med* 1998;13:155-157.
9. Angus DC. Grappling with ICU quality – does the readmission rate tell us anything? [Editorial]. *Crit Care Med* 1998;26:1779-1780.
10. Angus DC, Ramakrishnan N. National ICU datasets: Lost at sea without a compass? [Editorial]. *Crit Care Med* 1999; 27:8;1659-1661.
11. Nissen NN, Angus DC. Analysis of the effect of conversion from open to closed surgical intensive care unit [commentary]. *ATS Journal Club, Critical Care Outcomes Section*; April 1999.
12. Nissen NN, Angus DC. Selective decontamination of the digestive tract reduces mortality and some nosocomial infections in critically ill surgical patients [commentary]. *ACP Journal Club* 1999;131:37. Comment on: Nathens AB, Marshall JC. Selective decontamination of the digestive tract in surgical patients. A systematic review of the evidence. *Arch Surg* 1999;134:170-176.
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14. Angus DC. Scoring system fatigue... and the search for a way forward [Editorial]. *Crit Care Med* 2000;28:2145-2146.
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16. Angus DC, Black N. Wider lessons of the pulmonary artery catheter trial. Intensivists are rising to the challenge of evaluating established practices [Editorial]. *BMJ* 2001;322:446.
17. Angus DC. Demands of an aging population for critical care and pulmonary service: In reply to letters to the editor [letter]. *JAMA* 2001;285:1018.
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26. Angus DC. Towards better care: An exploration of some barriers and solutions to research transfer in the intensive care unit. *Curr Opin Crit Care* 2003;9:306-307.
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29. Ely EW, Laterre P-F, Angus DC, Bernard GR. The authors reply [Response to a letter to the Editor entitled "Drotrecogin alfa (activated) administration: Too many subgroups"]. *Crit Care Med* 2003;31:2564-2565.
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32. Angus DC. Do findings of high mortality from pneumonia in the elderly make it the old man's friend?—Reply. *JAMA Intern Med* 2004;164:225.
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103. [Angus DC](#). Early, goal-directed therapy for septic shock – A patient-level meta-analysis. [Reply] *N Engl J Med* 2017;377(10):995. doi: 10.1056/NEJMc1708979. PMID:28877020
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105. [Angus DC](#). Admitting elderly patients to the intensive care unit – Is it the right decision? [Editorial] *JAMA* 2017;318(15):1443-1444. doi: 10.1001/jama.2017.14535. PMID:28973429

Professional Activities

Teaching (courses and educational preceptorships)

- | | |
|-------------|---|
| 1985 – 1988 | Instructor, Physical Diagnosis, 3 rd year medical students. University of Glasgow School of Medicine. |
| 1985 – 1988 | Instructor, Physical Diagnosis, 4 th year medical students. University of Glasgow School of Medicine. |
| 1985 – 1988 | Lecturer, Topics in Internal Medicine, 5 th year medical students. University of Glasgow School of Medicine. |
| 1985 – 1988 | Lecturer, “Introduction to Clinical Medicine”. University of Glasgow School of Nursing. |
| 1985 – 1988 | Lecturer, “Nervous System Disorders”. University of Glasgow School of Chiropody. |
| 1988 – 1989 | Course Leader, “Life Supporting First Aid”, Health Workers. United Nations High Commissioner for Refugees, Hong Kong. |
| 1988 – 1989 | Instructor, Public Health Issues. United Nations High Commissioner for Refugees, Hong Kong. |

- 1991 – 1992 Advisor: Yukihiro Wato, MD, Disaster Reanimatology Fellowship. University of Pittsburgh Schools of Medicine, Engineering, Public Health, Public and International Affairs and the International Resuscitation Research Center.
- 1992 – 1993 Advisor: Norma Ceciliano, MD, Disaster Reanimatology Fellowship. University of Pittsburgh Schools of Medicine, Engineering, Public Health, Public and International Affairs and the International Resuscitation Research Center.
- 1992 – 1994 Educational Preceptor: John Kellum, MD, Critical Care Medicine Fellowship, University of Pittsburgh School of Medicine.
- 1992 – 1994 Educational Preceptor: Ronald Mignella, MD, Critical Care Medicine Fellowship, University of Pittsburgh School of Medicine.
- 1992 – 1995 Lecturer (monthly), “Hypotension”, Medical Student Critical Care Medicine Lecture Series, Department of Anesthesiology/CCM, University of Pittsburgh Medical Center, Pittsburgh, PA. Paul Rogers, MD.
- 1993 – 1995 Educational Preceptor: Kang H Lee, MD, Critical Care Medicine Fellowship, University of Pittsburgh School of Medicine.
- 1994 – 1997 Lecturer (monthly), “The Chest X-ray in the ICU,” Multidisciplinary Critical Care Medicine Training Program, University of Pittsburgh School of Medicine.
- 1994 – 1997 Lecturer (monthly), “The EKG in the ICU,” Multidisciplinary Critical Care Medicine Training Program, University of Pittsburgh School of Medicine.
- 1994 – 1996 Attending, Resident Teaching Rounds, Department of Medicine, University of Pittsburgh School of Medicine.
- 1994 – 1995 Educational Preceptor: Paul McHenry, MD, Critical Care Medicine Fellowship, University of Pittsburgh School of Medicine.
- 1994 – 1996 Educational Preceptor: Navdeep Mehta, MD, Critical Care Medicine Fellowship, University of Pittsburgh School of Medicine.
- 1995 – 1996 Attending, Resident Teaching Rounds, Department of Medicine, Veterans Affairs Medical Center, University of Pittsburgh School of Medicine.
- 1995 Visiting Professor, Universidad Catolica de Chile, Santiago, Chile.
- 1996 Organizer: Critical Care Orientation Programs for Senior Management, Ohmeda, Inc., University of Pittsburgh Medical Center and West Penn Hospital, Pittsburgh, PA, and Latrobe Hospital, Latrobe, PA.
- 1997 Educational Preceptor: David FM Lawrie, University of Aberdeen Medical Student Elective, Critical Care Medicine Division, University of Pittsburgh Medical Center.
- 1998 Course Coordinator: Health Services Research & Administration, Critical Care Medicine Fellowship Lecture Series, University of Pittsburgh School of Medicine.
- 1998 – 1999 Education Preceptor: Hari Nagaraj, MD, Critical Care Medicine Fellowship, University of Pittsburgh School of Medicine.
- 1998 – 2000 Education Preceptor: Randy Wax, MD, Critical Care Medicine Fellowship, University of Pittsburgh School of Medicine.
- 1998 Visiting Professor, Universidad Catolica de Chile, Santiago, Chile.
- 1999 – 2000 Co-organizer (with Jeffrey Whittle, MD): Large database analysis. Clinical Effectiveness Program, School of Medicine and Graduate School of Public Health, University of Pittsburgh.
- 2000 – 2001 Education Preceptor: Alison Morris-Gimbel, MD, Critical Care Medicine Fellowship, University of Pittsburgh School of Medicine.

- 2000 – 2001 Coordinator: Division of Critical Care Medicine Grand Rounds, University of Pittsburgh, Pittsburgh, PA.
- 2001 – 2002 Education Preceptor: Ezz Fam, MD, Critical Care Medicine Fellowship, University of Pittsburgh School of Medicine.
- 2001 – 2002 Education Preceptor: Omer Bajwa, MD, Critical Care Medicine Fellowship, University of Pittsburgh School of Medicine.
- 2001 – 2002 Thesis Advisor: Zdenek Valenta, PhD, University of Pittsburgh, Department of Biostatistics.
- 2002 - Coordinator: Department of Critical Care Medicine Grand Rounds, University of Pittsburgh, Pittsburgh, PA.
- 2002 – 2003 Education Preceptor: Clinical Trials Practicum, University of Pittsburgh.
- 2006 – 2007 Co-organizer : Journal Club, Département de Réanimation Médicale, Hôpital Cochin, Université Paris V, Paris, France.

Seminars and invited lectures (Total Intramural: 94; Total Extramural: 796)

Intramural

- 05-85 *Ischemia Induced Short Bowel Syndrome*. Grand Rounds, Western Infirmary, Glasgow University School of Medicine, Glasgow, UK. Stuart McPherson, MB, ChB.
- 05-86 *Acromegaly*. Grand Rounds, Southern General Hospital, Glasgow University School of Medicine, Glasgow, UK. John F Robinson, MB, ChB.
- 03-87 *Wegener’s Granulomatosis*. Grand Rounds, Southern General Hospital, Glasgow University School of Medicine, Glasgow, UK. John F Robinson, MB, ChB.
- 11-89 *Anesthesia and Liver Transplantation*. Grand Rounds, Department of Anesthesiology, Eye and Ear Hospital, Pittsburgh, PA. Robert Krohner, DO.
- 02-90 *Pre-eclampsia in the ICU*. Division of Critical Care Medicine Grand Rounds, University of Pittsburgh, Pittsburgh, PA. Keith L Stein, MD.
- 04-90 *The Hepatorenal Syndrome*. Critical Care Medicine Lecture Series, Department of Anesthesiology and Critical Care Medicine, University of Pittsburgh Medical Center, Pittsburgh, PA. Keith L Stein, MD.
- 05-90 *Disaster Reanimatology*. Lecture Series, Division of Critical Care Medicine, Department of Anesthesiology, University of Pittsburgh Medical Center, Pittsburgh, PA. Keith L Stein, MD.
- 09-90 *FK-506, A Clinical Trial*. Speaker, Journal Club, Division of Critical Care Medicine, Department of Anesthesiology, University of Pittsburgh Medical Center, Pittsburgh, PA. Adelaide Miro, MD.
- 12-90 *Selective Bowel Decontamination*. Critical Care Research Conference, University of Pittsburgh, Pittsburgh, PA. Michael R Pinsky, MD.
- 02-91 *Disaster Reanimatology*. Critical Care Research Conference, University of Pittsburgh, Pittsburgh, PA. Michael R Pinsky, MD.
- 03-91 *Validity and Reliability Analyses of Health Survey Techniques*. Seminar, Department of Health Services Administration, University of Pittsburgh Graduate School of Public Health, Pittsburgh, PA. Richard Sass, PhD.
- 05-91 *Islet Cell Transplantation*. Lecture Series, Division of Critical Care Medicine, Department of Anesthesiology, University of Pittsburgh Medical Center, Pittsburgh, PA. David J Powner, MD.
- 05-91 *Cross-Sectional Survey Techniques in Disaster Reanimatology*. Research Seminar, International Resuscitation Research Center, University of Pittsburgh, Pittsburgh, PA. Peter Safar, MD.

- 06-91 *Disaster Reanimatology*. Anesthesiology Research Conference, University of Pittsburgh, Pittsburgh, PA. David Strum, MD.
- 06-91 *Cytokines Update*. Lecture Series, Division of Critical Care Medicine, Department of Anesthesiology, University of Pittsburgh Medical Center, Pittsburgh, PA. David J Powner, MD.
- 01-92 *Sepsis*. Critical Care Medicine Research Conference, University of Pittsburgh, Pittsburgh, PA. Michael R Pinsky, MD.
- 02-92 *Multidisciplinary Evaluation of Critical Care Application*. Critical Care Medicine Research Conference, University of Pittsburgh, Pittsburgh, PA. Michael R Pinsky, MD.
- 03-92 *Prospective Comparison of Fungal Colonization Patterns in OLTX Candidates Receiving Prophylactic Mycostatin or Fluconazole*. Critical Care Medicine Research Conference, University of Pittsburgh, Pittsburgh, PA. Michael R Pinsky, MD.
- 03-92 *Preventing Ventilator Associated Pneumonia*, (presented by Sunil Lalla, MD). Faculty Sponsor, Critical Care Medicine Journal Club, Department of Anesthesiology and Critical Care Medicine, University of Pittsburgh Medical Center, Pittsburgh, PA. Adelaide Miro, MD.
- 11-92 *Controversies in ICU Prognostication*. Lecture Series, Division of Critical Care Medicine, Department of Anesthesiology, University of Pittsburgh Medical Center, Pittsburgh, PA. David J Powner, MD.
- 11-92 *Outcome Prognostication in Liver Transplantation*. Critical Care Medicine Research Conference, University of Pittsburgh, Pittsburgh, PA. Michael R Pinsky, MD.
- 12-92 *Fluid Resuscitation Strategies following Penetrating Injuries* (presented by Harold Marshall, MD). Faculty Sponsor, Critical Care Medicine Journal Club, Department of Anesthesiology and Critical Care Medicine, University of Pittsburgh Medical Center, Pittsburgh, PA. Adelaide Miro, MD.
- 04-93 *Cost-Effectiveness of New Therapeutic Agents*. Research Conference, International Resuscitation Research Center, University of Pittsburgh, Pittsburgh, PA. Peter Safar, MD.
- 05-93 *Evaluation of the Influence of Gastro-Intestinal Flora on Circulating Inflammatory Mediators in End Stage Liver Disease*. Anesthesiology Research Conference, University of Pittsburgh, Pittsburgh, PA. David Strum, MD.
- 03-94 *The Influence of Selection Bias on Cost-Effectiveness Projections from Randomized Clinical Trials*. Anesthesiology Research Conference, University of Pittsburgh, Pittsburgh, PA. David Strum, MD.
- 11-94 *The Use of Computerized Protocols in the Management of Adult Respiratory Distress Syndrome*. Critical Care Medicine Research Conference, University of Pittsburgh, Pittsburgh, PA. Michael R Pinsky, MD.
- 12-94 *Rural-Urban Differences in the Use of Critical Care Services*. Critical Care Medicine Research Conference, University of Pittsburgh, Pittsburgh, PA. Michael R Pinsky, MD.
- 03-95 *ICU Severity Scoring Systems*. Invited Speaker, Internal Medicine Resident Lecture Series, Department of Medicine, Veterans Affairs Medical Center, Pittsburgh, PA. Josh Metlay, MD.
- 03-95 *Understanding Severity Scoring Systems*. Invited Speaker, Internal Medicine Resident Lecture Series, Department of Medicine, University of Pittsburgh Medical Center, Pittsburgh, PA. Emanuel Vergis, MD.
- 03-95 *Overview of Health Economics in the ICU: Macro and Micro Issues*. Critical Care Medicine Lecture Series, Department of Anesthesiology and Critical Care Medicine, University of Pittsburgh Medical Center, Pittsburgh, PA. David J Powner, MD.
- 03-95 *Overview of Severity Systems: Strengths, Weaknesses and Implications for Use*. Critical Care Medicine Lecture Series, Department of Anesthesiology and Critical Care Medicine, University of Pittsburgh Medical Center, Pittsburgh, PA. David J Powner, MD.
- 04-95 *Prevention of Radiocontrast Nephropathy* (presented by Suresh Lakshminarayan, MD). Faculty Sponsor, Critical Care Medicine Journal Club, Department of Anesthesiology and Critical Care Medicine, University of Pittsburgh Medical Center, Pittsburgh, PA. John Kellum, MD.
- 11-95 *The Effect of Managed Care on ICU Resource Utilization*. Research Conference, Division of Critical Care Medicine, Department of Anesthesiology, University of Pittsburgh, Pittsburgh, PA. Michael R Pinsky, MD.

- 11-95 *The Impact of Managed Care on the ICU*. Health Services Research Seminar, Health Services Institute, University of Pittsburgh, PA. Jeffrey Whittle, MD, MPH.
- 02-96 *Protocolized Care in the ICU*. Lecture Series, Division of Critical Care Medicine, Department of Anesthesiology, University of Pittsburgh, Pittsburgh, PA. Michael R Pinsky, MD.
- 03-96 *Future Challenges in Critical Care Medicine*. Speaker, Critical Care Orientation Program for Ohmeda, Inc. Senior Management, University of Pittsburgh Medical Center, Pittsburgh, PA. Mary Beth Coleman, RN, MBA.
- 05-96 *Prospective Validation of Artificial Neural Network Trained to Identify Acute Myocardial Infarction* (presented by Stephen DiRusso, MD). Faculty Sponsor, Critical Care Medicine Journal Club, Department of Anesthesiology and Critical Care Medicine, University of Pittsburgh Medical Center, Pittsburgh, PA. John Kellum, MD.
- 11-96 *Resource Consumption in ARDS*. Research Conference, Division of Critical Care Medicine, Department of Anesthesiology, University of Pittsburgh, Pittsburgh, PA. Michael R Pinsky, MD.
- 11-96 *How to Report Report Cards*. Grand Rounds, Critical Care Medicine Division, Department of Anesthesiology and Critical Care Medicine, University of Pittsburgh School of Medicine, Pittsburgh, PA. Joseph Darby, MD.
- 12-96 *Judging the Judges: Assessing (Outcome) Model Performance*. Grand Rounds, Renal Division, Department of Medicine, University of Pittsburgh School of Medicine, Pittsburgh, PA. John P. Johnson, MD.
- 12-96 *Quantitating Organ Failure* (presented by Husni Dweik, MD). Faculty Sponsor, Critical Care Medicine Journal Club, Department of Anesthesiology and Critical Care Medicine, University of Pittsburgh Medical Center, Pittsburgh, PA. John Kellum, MD.
- 03-97 *The Principles of Cost-Effectiveness Analysis*. Lecture Series, Division of Critical Care Medicine, Department of Anesthesiology, University of Pittsburgh School of Medicine, Pittsburgh, PA. David J. Powner, MD.
- 01-98 *Discourse on method: Measuring whether things work in the ICU*. Grand Rounds, Division of Critical Care Medicine, Department of Anesthesiology, University of Pittsburgh, Pittsburgh, PA. David Powner, MD.
- 02-98 *Discourse on method: Measuring whether things work in the ICU*. Grand Rounds, Division of Critical Care Medicine, Department of Anesthesiology, University of Pittsburgh, Pittsburgh, PA. Charles Boucek, MD.
- 10-98 *Overview of Randomized Clinical Trials*, Speaker, Clinical Epidemiology & Biostatistics Course, University of Pittsburgh School of Medicine, Pittsburgh, PA. Jeff Whittle, MD, MPH.
- 02-99 *Using Databases to Assess Health Care*. Speaker, Acute Care Nurse Practitioner Role Seminar, School of Nursing, University of Pittsburgh, PA. Leslie Hoffman, PhD, RN, FAAN.
- 05-99 *A sobering view of critical care in the US: results from the COMPACCS survey*. Division of Critical Care Medicine Grand Rounds, University of Pittsburgh, Pittsburgh, PA, Michael Pinsky, MD.
- 05-99 *Critical care and pulmonary workforce requirements for the United States in the early twenty-first century*. Center for Research on Health Care, University of Pittsburgh, Pittsburgh, PA, Jeff Whittle, PhD.
- 11-99 *Genetic and inflammatory markers of sepsis*. Mini-symposium, Grenvik Lectureship, University of Pittsburgh, Pittsburgh, PA.
- 12-99 *Outcomes assessment using large datasets*. Doctoral Research Course, School of Nursing, University of Pittsburgh, Pittsburgh, PA. Lynda J Davidson, RN, PhD.
- 12-99 *Genetic and inflammatory markers of sepsis*. Research Lecture Series, Division of Critical Care Medicine, Department of Anesthesiology, University of Pittsburgh, Pittsburgh, PA.
- 02-00 *Evidence-based medicine*. Grand Rounds, Division of Critical Care Medicine, University of Pittsburgh, Pittsburgh, PA. Michael R Pinsky, MD.
- 02-00 *Epidemiology of sepsis*. Grand Rounds, Division of Critical Care Medicine, University of Pittsburgh, Pittsburgh, PA.
- 02-00 *Using databases to assess health care outcomes*. Doctoral Research Course, School of Nursing, University of Pittsburgh, Pittsburgh, PA. Leslie A. Hoffman, RN, PhD.

- 03-00 *Economic analyses in Critical Care I*. Lecture Series, Division of Critical Care Medicine, Department of Anesthesiology, University of Pittsburgh School of Medicine, Pittsburgh, PA. Paul Rogers, MD.
- 02-01 *Cost-effectiveness assessment in the ICU*. Speaker, fellow tutorial, Division of Critical Care Medicine, Department of Anesthesiology, University of Pittsburgh, Pittsburgh, PA.
- 03-01 *Economic analysis of the pulmonary artery catheter*. Research Lecture Series, Division of Critical Care Medicine, University of Pittsburgh, Pittsburgh, PA.
- 11-01 *Genetic and Inflammatory Markers of Sepsis (GenIMS)*. Research Lecture Series, Division of Critical Care Medicine, University of Pittsburgh, Pittsburgh, PA.
- 01-03 *Surviving intensive care*. Research Lecture Series, Department of Critical Care Medicine, University of Pittsburgh, Pittsburgh, PA.
- 11-03 *Inside the ICU*. Speaker, Mini Medical School, University of Pittsburgh, Pittsburgh, PA.
- 02-06 *Epidemiology of Neonatal Respiratory Failure*. Grand Rounds, Division of Newborn Medicine, Children's Hospital of Pittsburgh and Magee-Womens Hospital, Pittsburgh, PA.
- 08-06 *Changing practice in the ICU: When is the evidence enough?* Speaker, Département de Réanimation Médicale, Hôpital Cochin, Université Paris V, Paris, France.
- 04-07 *Translational Research in Critical Care, Part 1: Setting acute illness in a framework of long-term health: What happens to those who survive acute, life-threatening events?* Speaker, Département de Réanimation Médicale, Hôpital Cochin, Université Paris V, Paris, France.
- 04-07 *Translational Research in Critical Care, Part 2: Assessing markers and mediators in large-scale human studies: Is there a chance for personalized medicine in critical care?* Speaker, Département de Réanimation Médicale, Hôpital Cochin, Université Paris V, Paris, France.
- 05-07 *Translational Research in Critical Care, Part 3: Placing value on medical innovation: Are we spending society's wealth properly on our sickest patients?* Speaker, Département de Réanimation Médicale, Hôpital Cochin, Université Paris V, Paris, France.
- 05-07 *Translational Research in Critical Care, Part 4: Converting evidence into improved practice: Just when and how should we change how we care for the critically ill?* Speaker, Département de Réanimation Médicale, Hôpital Cochin, Université Paris V, Paris, France.
- 10-07 *Clinical Research Investigation and systems Modeling of Acute Illness (CRISMA)*. Speaker, 2nd Annual Faculty Research Day, Safa Center for Resuscitation Research, University of Pittsburgh, Pittsburgh, PA.
- 03-08 *Sepsis: To Solve, Survive or Surrender*. Grand Rounds, Division of Pediatrics, Children's Hospital of Pittsburgh, Pittsburgh, PA.
- 01-10 *Making sepsis care b-b-better? Bundles, biomarkers, and bungles*. Speaker, Grand Rounds, Division of Pulmonary, Allergy & Critical Care Medicine, University of Pittsburgh School of Medicine, Pittsburgh, PA.
- 05-10 *What Health Care Reform Should Mean to Intensivists*. Speaker, Pediatric Critical Care Medicine Colloquium, University of Pittsburgh School of Medicine, Pittsburgh, PA.
- 08-10 *Negotiating Compensation*. Speaker, Critical Care Medicine Professionalism and Leadership Course, University of Pittsburgh, Pittsburgh, PA.
- 12-10 *Sepsis in 2011: Challenges and opportunities*. Speaker, Internal Medicine Grand Rounds, University of Pittsburgh, Pittsburgh, PA.
- 07-11 *Sepsis in 2011: Challenges and opportunities*. Speaker, Critical Care Medicine Fellows Lecture, University of Pittsburgh, Pittsburgh, PA.
- 07-11 *Sepsis as a model for systemic inflammation*. Speaker, PancreasFest 2011, University of Pittsburgh, Division of Gastroenterology, Hepatology and Nutrition, Pittsburgh, PA.
- 08-11 *Negotiating Compensation*. Speaker, Critical Care Medicine Professionalism and Leadership Course, University of Pittsburgh, Pittsburgh, PA.

- 09-11 *AKI and sepsis*. Speaker, Thematic Seminar on Acute Kidney Injury, Department of Critical Care Medicine; Renal-Electrolyte Division, Department of Medicine; Pittsburgh Center for Kidney Research, Pittsburgh, PA.
- 02-12 *Surviving sepsis: Making moves on an old foe*. The Seventh Annual University of Pittsburgh Winter Academy, Naples, FL.
- 06-12 *Caring for the critically ill in the 21st century*. Inaugural Lecture for Dr. Mitchell P. Fink Endowed Chair in Critical Care Medicine, University of Pittsburgh School of Medicine, Pittsburgh, PA.
- 08-12 *Negotiating Compensation*. Speaker, Critical Care Medicine Professionalism and Leadership Course, University of Pittsburgh, Pittsburgh, PA.
- 10-12 *The conundrum of clinical investigation in ARDS*. Speaker, Pittsburgh International Lung Conference, Acute Lung Injury: New Mechanisms, Future Therapies, and the Translation to Clinical Care, University of Pittsburgh, Pittsburgh, PA.
- 12-12 *Making inroads in sepsis*. Speaker, Grand Rounds, Children's Hospital of Pittsburgh of UPMC, Pittsburgh, PA.
- 01-13 *Caring for the critically ill*, Speaker, Orthopaedic Surgery Grand Rounds, Pittsburgh, PA.
- 08-13 *Negotiating Compensation*. Speaker, Critical Care Medicine Professionalism and Leadership Course, University of Pittsburgh, Pittsburgh, PA.
- 07-14 *Negotiating Compensation*. Speaker, Critical Care Medicine Leadership Course, University of Pittsburgh, Pittsburgh, PA.
- 10-14 *Early goal-directed therapy in sepsis*, Speaker, Department of Medicine Grand Rounds, University of Pittsburgh, Pittsburgh, PA.
- 02-15 *Where do we begin?* Speaker, Sepsis Detection and Management at UPMC, Pittsburgh, PA.
- 07-15 *Negotiating Compensation*. Speaker, Critical Care Medicine Leadership Course, University of Pittsburgh, Pittsburgh, PA.
- 01-16 *Fusing RCTs with EHR 'Big Data'*, Speaker, Health Services Research Seminar Series, University of Pittsburgh, Pittsburgh, PA.
- 01-16 *ICU trials in the digital age*, Speaker, Department of Critical Care Medicine Grand Rounds, University of Pittsburgh, Pittsburgh, PA.
- 04-16 *RCTs in the digital age: Fusing care with research*, Speaker, K12 Retreat, Children's Hospital of Pittsburgh of UPMC, Pittsburgh, PA.
- 07-16 *Negotiating compensation for your first job*. Speaker, Critical Care Medicine Leadership Course, University of Pittsburgh, Pittsburgh, PA.
- 01-17 *Making inroads in sepsis*. Speaker, Department of Medicine Grand Rounds, University of Pittsburgh School of Medicine, Pittsburgh, PA.
- 03-17 *Critical care evidence generation in the digital age*. Speaker, Department of Critical Care Medicine Professor's Corner, University of Pittsburgh School of Medicine, Pittsburgh, PA.
- 07-17 *Negotiating compensation*. Speaker, Critical Care Medicine Leadership Course, University of Pittsburgh, Pittsburgh, PA.
- 08-17 *Managing critical illness in the digital age*. Speaker, Department of Biomedical Informatics Training Program 2017 Retreat, University of Pittsburgh, Pittsburgh, PA.

Extramural

- 05-87 *Wegener's Granulomatosis*. Grand Rounds, West of Scotland Rheumatology Society, Glasgow, UK. Denis A Pitkeathly, MB, ChB.
- 03-91 *Update in Critical Care: Liver and Islet Cell Transplantation*. Grand Rounds, Western Infirmary, Glasgow University School of Medicine, Glasgow, UK. Andrew Bradley, MB, ChB.

- 05-91 *Disaster-Mass Casualty-Military Anesthesia: Part II*. Panelist, Panel Session, 4th Annual Trauma Anesthesia and Critical Care Symposium, Baltimore, MD.
- 10-91 *Refugee Emergency Health Care*. Speaker, Emergency Health Services Management Course, University of Maryland, Baltimore, MD. Richard A Bissell, PhD.
- 06-92 *Critical Care Disaster Response Exercise*. Speaker, Society of Critical Care Medicine 21st Annual Meeting, San Antonio, Tx.
- 07-92 *Current Concepts in Disaster Medicine*, Grand Rounds, Ege University, Izmir, Turkey, A. Tutan, MD.
- 08-92 *Epidemiology of Disasters and Earthquake Injury Patterns*. Speaker, Disaster Medicine 101, Central United States Earthquake Consortium and Centers for Disease Control, Memphis, TN.
- 06-93 *Disaster Preparedness and Disaster Response Management*. Invited Speaker, Managing Emergency Medical Service, Department of Emergency Health Services, University of Maryland Baltimore County and the Maryland Institute for Emergency Medical Services Systems (MIEMSS), Baltimore, MD. Richard A Bissell, PhD.
- 02-95 *Cost-Effectiveness Projections for Inhaled Nitric Oxide in the Treatment Of Acute Respiratory Distress Syndrome*. Speaker, Multicenter trial of Inhaled Nitric Oxide for Acute Respiratory Distress Syndrome Investigators' Meeting, San Francisco, CA. Michael Damask, MD.
- 03-95 *Cost-Effectiveness Projections for Inhaled Nitric Oxide in the Treatment of Acute Respiratory Distress Syndrome*. Speaker, British Oxygen Company board presentation, Ohmeda Pharmaceuticals, Inc., Liberty Corner, NJ. Ashleigh Palmer.
- 04-95 *ICU Utilization in the US: Too Much, Too Little, or Just Enough?* Speaker, The Center for Critical Care at St. Francis and Pittsburgh Critical Care Associates, Current Controversies in Critical Care Medicine, Taos, NM. David Crippen, MD.
- 04-95 *Pitfalls of Prognostication Systems in the ICU*. Speaker, The Center for Critical Care at St. Francis and Pittsburgh Critical Care Associates, Current Controversies in Critical Care Medicine, Taos, NM. David Crippen, MD.
- 05-95 *Tabletop Disaster Response Exercise*. Speaker, International Trauma Anesthesia and Critical Care Society 8th Annual Meeting, Baltimore, MD.
- 09-95 *Decision-Making in Intensive Care*. International Pharmaceutical Development Project Leaders' Meeting, British Oxygen Company, PLC, Ohmeda Pharmaceuticals, Inc., Liberty Corner, NJ. Ashleigh Palmer.
- 09-95 *Cost-Effectiveness Projections for Inhaled Nitric Oxide in Acute Respiratory Distress Syndrome – International Perspectives*. International Pharmaceutical Development Project Leaders' Meeting, British Oxygen Company [BOC], PLC, Ohmeda Pharmaceuticals, Inc., Liberty Corner, NJ. Ashleigh Palmer.
- 11-95 *Perspectives in the Acute Respiratory Distress Syndrome*. Speaker, National Critical Care Society of Chile Annual Scientific Meeting, Santiago, Chile.
- 11-95 *ICU Management of Acute Liver Failure*. Speaker, National Critical Care Society of Chile Annual Scientific Meeting, Santiago, Chile.
- 11-95 *Training in Critical Care Medicine*. Panelist, Roundtable Discussion, National Critical Care Society of Chile Annual Scientific Meeting, Santiago, Chile.
- 11-95 *Fulminant Hepatic Failure*. Grand Rounds, Department of Anesthesiology, Universidad Catolica de Chile, Santiago, Chile. Gorge D'Agnino, MD.
- 11-95 *Acute Respiratory Distress Syndrome*. Grand Rounds, Department of Anesthesiology, Universidad Catolica de Chile, Santiago, Chile. Gorge D'Agnino, MD.
- 01-96 *Clinical Sepsis Trials*. Speaker, E5 Sepsis Trial Investigators' Meeting, New Orleans, LA. Pfizer, Inc.
- 02-96 *The ICU*. Speaker, Ohmeda PPD Inc Senior Management Strategy Meeting, Short Hills, NJ. Ashleigh Palmer.
- 04-96 *Analysis of European and Japanese Incidence of ARDS*. Speaker, Pharmaco-economic Review, Ohmeda Pharmaceuticals, Inc., Liberty Corner, NJ. Ashleigh Palmer.

- 04-96 *Analysis of US Incidence of ARDS*. Speaker, Pharmaco-economic Review, Ohmeda Pharmaceuticals, Inc., Liberty Corner, NJ. Ashleigh Palmer.
- 04-96 *Resource use in ARDS: Results from a Phase II Trial of inhaled NO*. Speaker, Pharmaco-economic Review, Ohmeda Pharmaceuticals, Inc., Liberty Corner, NJ. Ashleigh Palmer.
- 06-96 *Market Potential and Pharmaco-Economics of Inhaled NO in ARDS*. Speaker, International Inhaled Nitric Oxide Workshop, Basking Ridge, NJ. Ashleigh Palmer.
- 08-96 *DO₂ and VO₂ as End-Points in Resuscitation*. Session Moderator, The Third Indonesian Symposium on Shock and Critical Care Medicine, Jakarta, Indonesia.
- 08-96 *Immune Response to Critical Illness*. Session Moderator, The Third Indonesian Symposium on Shock and Critical Care Medicine, Jakarta, Indonesia.
- 08-96 *Understanding Outcomes from Clinical Trials*. Speaker, The Third Indonesian Symposium on Shock and Critical Care Medicine, Jakarta, Indonesia.
- 08-96 *Acute Renal Failure in the ICU*. Case Discussant, The Third Indonesian Symposium on Shock and Critical Care Medicine, Jakarta, Indonesia.
- 09-96 *Management of the Immunocompromised Host in the ICU*. Speaker, The Third Indonesian Symposium on Shock and Critical Care Medicine, Jakarta, Indonesia.
- 09-96 *Critical Care Update: Issues in Clinical Trial Design*. Grand Rounds, Department of Anesthesiology, National University Hospital, Singapore. Kang H. Lee, MD.
- 10-96 *Pharmacoeconomics in Intensive Care*. Speaker, New York Chapter Society of Critical Care Medicine, NY Metropolitan Symposium on Critical Care Management: Costs, Outcomes and Managed Care, New York, NY.
- 10-96 *Administrative Perspective on Clinical Trials*. Speaker, New York Chapter Society of Critical Care Medicine, NY Metropolitan Symposium on Critical Care Management: Costs, Outcomes and Managed Care, New York, NY.
- 10-96 *Regionalization and Competition*. Workshop Co-Chair and Speaker, New York Chapter Society of Critical Care Medicine, NY Metropolitan Symposium on Critical Care Management: Costs, Outcomes and Managed Care. New York, NY.
- 10-96 *The Effect of Managed Care on ICU Length of Stay*. Speaker, New York Chapter Society of Critical Care Medicine, NY Metropolitan Symposium on Critical Care Management: Costs, Outcomes and Managed Care. New York, NY.
- 11-96 *Managing Intensive Care: The Use of Outcomes Assessment Tools*. Grand Rounds, West Penn Hospital, Pittsburgh, PA. Raye Budway, MD.
- 11-96 *Cost-effectiveness Assessment of Therapies in ARDS*. Speaker, Inhaled Nitric Oxide Phase III Investigators' Meeting (sponsored by Ohmeda PPD, Inc.), Laguna Beach, CA. Richard Straube, MD.
- 11-96 *Education and Training in Disaster Medicine*. Speaker, APICE (Anaesthesia, Pain, Intensive Care and Emergency Medicine) Annual Meeting, Trieste, Italy.
- 11-96 *Understanding the Cost and Long-Term Outcome of ARDS*. Speaker, APICE (Anaesthesia, Pain, Intensive Care and Emergency Medicine) Annual Meeting, Trieste, Italy.
- 12-96 *A Global Perspective on Pharmacoeconomics*. Speaker, American Society of Hospital Pharmacists, New Orleans.
- 12-96 *Quality of Care and Allocation of Critically Ill Patients*. Speaker, Intensive Care Medicine in Dialogue Workshop, Vienna, Austria. Alfons F. Hammerle, MD
- 12-96 *Defining the Episode of Acute Lung Injury*. Speaker, Intensive Care Medicine in Dialogue Workshop, Vienna, Austria. Alfons F. Hammerle, MD
- 12-96 *NIH Recommendations on Cost-effectiveness*. Speaker, E5 Investigators' Meeting, Pfizer, Inc., Philadelphia, PA. Jacqueline Doyle, RN, MBA.
- 12-96 *Understanding Pharmacoeconomics and Cost-effectiveness Analyses*. Speaker, Ohmeda PPD, Inc., Liberty Corner, NJ. Ashleigh Palmer.

- 02-97 *Critical Care Medicine Practice Patterns—Today and Tomorrow*. Speaker, Critical Care Medicine Junior Leadership Program. Society of Critical Care Medicine Annual Scientific Assembly, San Diego, CA.
- 02-97 *Implications of the Costs of Pro-Inflammatory vs Anti-Inflammatory Strategies in Sepsis*. Speaker, “Pro-Inflammatory vs. Anti-Inflammatory Strategies in Sepsis,” Society of Critical Care Medicine Annual Scientific Assembly, San Diego, CA.
- 02-97 *Pharmacoeconomics in Intensive Care*. Speaker, Daybreak Session: “Sepsis in the 90’s,” Society of Critical Care Medicine Annual Scientific Assembly, San Diego, CA.
- 04-97 *The Use of Large-scale Datasets and Outcomes Models in Critical Care Medicine*. American Thoracic Society Critical Care Assembly Workshop on Outcomes Tools in Critical Care, Toronto, Canada.
- 05-97 *Judging the Judges: Assessment of Risk Prediction Models*. Grand Rounds, Pulmonary and Critical Care Medicine Division, Department of Medicine, Henry Ford Hospital, Detroit, MI. John Popovich, MD.
- 05-97 *Cost-effectiveness of ARDS Therapies*. Research Conference, Pulmonary and Critical Care Medicine Division, Department of Medicine, Henry Ford Hospital, Detroit, MI. John Popovich, MD.
- 05-97 *Assessing Pulmonary and Critical Care Workforce Requirements (COMPACCS Study Methodology)*. Speaker, American Thoracic Society Annual Scientific Assembly, San Francisco, CA.
- 08-97 *Outcome Prediction and Resource Utilization*. Speaker, Singapore Society of Critical Care Medicine Symposium, Singapore.
- 08-97 *Administration of Clinical Trials*. Speaker, Singapore Society of Critical Care Medicine Symposium, Singapore.
- 08-97 *Clinical Trial Administrative Requirements*. Speaker, Clinical Trial Design, the Fourth Indonesian Symposium on Shock and Critical Care Medicine, Jakarta, Indonesia.
- 08-97 *Cost and Resource Use in the Critically Ill*. Speaker, The Fourth Indonesian Symposium on Shock and Critical Care Medicine, Jakarta, Indonesia.
- 08-97 *ARDS: Incidence, Mortality and Other Questions*. Speaker, The Fourth Indonesian Symposium on Shock and Critical Care Medicine, Jakarta, Indonesia.
- 08-97 *Continuous Renal Replacement Therapies*. Session Moderator, The Fourth Indonesian Symposium on Shock and Critical Care Medicine, Jakarta, Indonesia.
- 08-97 *Quality Assurance and Scoring Systems Improve ICU Outcomes [Pro]*. Speaker, Critical Care Controversies Conference, Sydney, Australia. Malcolm Fisher, MD.
- 08-97 *Randomized Clinical Trials are Impossible in Intensive Care [Con]*. Speaker, Critical Care Controversies Conference, Sydney, Australia. Malcolm Fisher, MD.
- 09-97 *Managed Care: Prospects and Problems*. Speaker, “Scoring and outcome: Databases in ICU,” European Society of Intensive Care Medicine, Annual Scientific Assembly, Paris, France.
- 09-97 *Pharmacoeconomic Considerations*. Faculty, American Thoracic Society Roundtable Program, “The Potential Role of Immunomodulation in Pulmonary Infections”, Marina Del Rey, CA.
- 10-97 *Managing the ICU of the Future: What Will Intensivists Do and What Should Intensivists Do?* Chair and Speaker, Panel Discussion; Annual International Scientific Assembly, American College of Chest Physicians.
- 11-97 *Double-blind, randomized, placebo-controlled, parallel-group, multicenter study of the safety and efficacy of intravenous taurolidine in septic patients*. Presentation, Wallace Laboratories in Princeton, NJ.
- 11-97 *Understanding Costs and Cost-effectiveness in the ICU*. Speaker, Controlling Costs in the ICU: Proven Strategies for Cost Reduction and Outcomes Improvement. Cambridge Health Services, Washington, DC.
- 02-98 *The Impact of Managed Care on Outcomes*. Speaker, Society of Critical Care Medicine Annual Scientific Assembly, San Antonio, TX.
- 02-98 *Practice Patterns, Managed Care, and Regionalization*. Speaker, Society of Critical Care Medicine Annual Scientific Assembly, San Antonio, TX.

- 02-98 *Critical Care at the End of the Twentieth Century.* Speaker, Society of Critical Care Medicine Annual Scientific Assembly, Commission on Manpower for Pulmonary and Critical Care Services (COMPACCS) Advisory Panel, Joint Commission of the ATS, ACCP, and SCCM. San Antonio, TX.
- 02-98 *Pulmonary and Critical Care Manpower Requirements: Results of the COMPACCS Study.* Speaker, Fellowship Directors Meeting, Society of Critical Care Medicine Annual Scientific Assembly, San Antonio, TX.
- 02-98 *Severity Scoring Systems: Are they useful?* Session Moderator, Society of Critical Care Medicine Annual Scientific Assembly, San Antonio, TX.
- 02-98 *Computers and technology in the ICU.* Session Moderator, Society of Critical Care Medicine Annual Scientific Assembly, San Antonio, TX.
- 03-98 *The influence of Changing Health Care Trends in the ICU.* Grand Rounds, St. Francis Hospital, Pittsburgh, PA. Michael Hansen, MD.
- 03-98 *Choosing outcomes in RCTs: Which Ones Count?* Speaker, 14th Annual CNMC Symposium on ECMO and Advanced Therapies for Respiratory Failure, Keystone, CO.
- 03-98 *How to assess ICU performance.* Session Moderator, International Symposium on Intensive Care and Emergency Medicine, Brussels, Belgium.
- 03-98 *Sepsis, ARDS, and organ injury.* Session Moderator, International Symposium on Intensive Care and Emergency Medicine, Brussels, Belgium.
- 03-98 *Outcomes Assessment: Can scoring systems assess ICU performance?* Speaker, International Symposium on Intensive Care and Emergency Medicine, Brussels, Belgium.
- 03-98 *Discourse on method: Measuring whether things work in the ICU.* Speaker, International Symposium on Intensive Care and Emergency Medicine, Brussels, Belgium.
- 03-98 *The Perfect Clinical Trial.* Panelist, International Symposium on Intensive Care and Emergency Medicine, Brussels, Belgium.
- 04-98 *COMPACCS: The Practice of Critical Care in the US at the Close of the Twentieth Century,* American Thoracic Society Annual Scientific Assembly, Chicago, IL.
- 06-98 *Cost Effectiveness in Sepsis Studies.* Speaker, Eli Lilly and Company, Protein C Worldwide Evaluation in Severe Sepsis (PROWESS) Affiliate Training Meeting, Indianapolis, IN.
- 06-98 *The Role of Critical Paths on Patient Care.* Speaker, 5th National Congress of Internal Medicine, Portuguese Society of Internal Medicine, Lisbon, Portugal.
- 06-98 *The Impact of Managed Care on Patient Outcome and Cost.* Speaker, 5th National Congress of Internal Medicine, Portuguese Society of Internal Medicine, Lisbon, Portugal.
- 06-98 *Cost Effectiveness in Sepsis Studies,* Speaker, Eli Lilly and Company, Protein C Worldwide Evaluation in Severe Sepsis (PROWESS) Investigator Meeting, Monte Carlo, Monaco.
- 07-98 *Cost Effectiveness in Sepsis Studies,* Speaker, Eli Lilly and Company, Protein C Worldwide Evaluation in Severe Sepsis (PROWESS) Investigator Meeting, San Diego, CA.
- 08-98 *Cost Effectiveness in Sepsis Studies,* Speaker, Eli Lilly and Company, Protein C Worldwide Evaluation in Severe Sepsis (PROWESS) Investigator Meeting, Johannesburg, S. Africa.
- 08-98 *Cost Effectiveness in Sepsis Studies,* Speaker, Eli Lilly and Company, Protein C Worldwide Evaluation in Severe Sepsis (PROWESS) Investigator Meeting, Florianopolis, Brazil.
- 09-98 *Cost Effectiveness in Sepsis Studies,* Speaker, Eli Lilly and Company, Protein C Worldwide Evaluation in Severe Sepsis (PROWESS) Investigator Meeting, Miami, FL.
- 10-98 *The Impact of Health Care Systems on Intensive Care Medicine.* Speaker, The 1998 Toronto Critical Care Medicine Symposium, Toronto, Canada.

- 10-98 *From Concepts to Syndromes to Diseases*. Speaker, The 1998 Toronto Critical Care Medicine Symposium, Toronto, Canada.
- 10-98 *Clinical Trial Design*. Tutorial Session, The 1998 Toronto Critical Care Medicine Symposium, Toronto, Canada.
- 10-98 *Uses and abuses of evidence appraisal*. Chair, Panel Discussion, The 1998 Toronto Critical Care Medicine Symposium, Toronto, Canada.
- 11-98 *Why Do Sepsis Studies Fail?* Speaker, XVI Congreso Chileno de Medicina Intensiva, Termas de Chillán, Chile.
- 11-98 *Severity Scoring Systems: What Are Their Current Roles – And What Are Their Limitations?* Speaker, XVI Congreso Chileno de Medicina Intensiva, Termas de Chillán, Chile.
- 11-98 *Understanding the Costs of Intensive Care*. Speaker, XVI Congreso Chileno de Medicina Intensiva, Termas de Chillán, Chile.
- 11-98 *The Use of Guidelines and Protocols for the Management of the Critically Ill*. Speaker, XVI Congreso Chileno de Medicina Intensiva, Termas de Chillán, Chile.
- 11-98 *Do Scoring Systems Really Provide Performance Assessment?* Speaker, Annual International Scientific Assembly, American College of Chest Physicians, Toronto, Canada.
- 12-98 *Information Management and Treatment Outcomes*. Speaker, 52nd Postgraduate Assembly in Anesthesiology of The New York State Society of Anesthesiologists, Inc., New York, NY.
- 01-99 *Alternatives to the RCT: Better, Worse or Different?* Speaker, 28th Educational & Scientific Symposium, Society for Critical Care Medicine, San Francisco, CA.
- 01-99 *Manpower Forecasts in Critical Care: Report of the COMPACCS Committee*, Speaker and Panelist, Roundtable Discussion, 28th Educational & Scientific Symposium, Society for Critical Care Medicine, San Francisco, CA.
- 01-99 *The Cost-effectiveness of Inhaled Nitric Oxide*. Speaker, 28th Educational & Scientific Symposium, Society for Critical Care Medicine, San Francisco, CA.
- 02-99 *Workforce Projections for Critical Care and Pulmonary Specialists*, Speaker. Summit Meeting, Executive Committees of ACCP, SCCM, and ATS, Phoenix, AZ.
- 02-99 *Clinical Trials: Design & Statistical Approach*, Speaker, 15th Annual CNMC Symposium on ECMO & Advanced Therapies for Respiratory Failure, Keystone, CO.
- 03-99 *Critical Care in the US: Rumbblings from south of the border*. Grand Rounds, Mt. Sinai Hospital, Toronto, Ontario, Arthur S. Slutsky, MD.
- 03-99 *Cost-effectiveness Analysis in the ICU*, Respiratory Research Conference, Mt. Sinai Hospital, Toronto, Ontario, Arthur S. Slutsky, MD.
- 03-99 *Discourse on method: Measuring whether things work in the ICU*. Speaker, Australian and New Zealand Intensive Care Society, Sydney, Australia.
- 03-99 *Do ICU scoring systems assess ICU performance?* Speaker, Australian and New Zealand Intensive Care Society, Sydney, Australia.
- 03-99 *Understanding costs and cost-effectiveness in critical care*. Speaker, Australian and New Zealand Intensive Care Society, Sydney, Australia.
- 04-99 *ICU Management and Outcome*. Facilitator, Poster Session, American Thoracic Society International Conference, San Diego, CA.
- 04-99 *Acute Respiratory Distress Syndrome: Definitions and Outcome*. Chair, Poster Discussion Session, American Thoracic Society International Conference, San Diego, CA.
- 06-99 *Choosing the right end point*. Speaker, 6th Pan American Iberian Congress of Critical Care Medicine, Quito, Ecuador.
- 06-99 *Measuring the Cost-Effectiveness of New Therapies*. Speaker, 6th Pan American Iberian Congress of Critical Care Medicine, Quito, Ecuador.

- 06-99 *Alternative study designs to the RCT.* Speaker, 6th Pan American Iberian Congress of Critical Care Medicine, Quito, Ecuador.
- 06-99 *Can scoring systems assess ICU performance?* Speaker, 6th Pan American Iberian Congress of Critical Care Medicine, Quito, Ecuador.
- 06-99 *Pro-Con: Scoring systems measure ICU performance.* Speaker, 6th Pan American Iberian Congress of Critical Care Medicine, Quito, Ecuador.
- 07-99 *Inhaled nitric oxide in neonatal respiratory failure.* Expert Panel, INO Therapeutics, Inc., Boston, MA.
- 08-99 *Critical Care in the US.* Speaker, SW Pennsylvania Chapter, Society of Critical Care Medicine, Pittsburgh, PA.
- 10-99 *Flying with large databases:* Speaker, 12th Annual Congress, European Society of Intensive Care Medicine, Berlin, Germany.
- 10-99 *Clinical Trials in Sepsis.* Chair, Discussion session. 12th Annual Congress, European Society of Intensive Care Medicine, Berlin, Germany.
- 10-99 *The Quality of an ICU Survivor's Life.* Panelist, Round Table Conference. 12th Annual Congress, European Society of Intensive Care Medicine, Berlin, Germany.
- 10-99 *ICU Outcome – is it worth it?* Speaker, Plenary Address, Toronto Critical Care Medicine Symposium, Toronto, Canada.
- 10-99 *How to improve sepsis trial design – report from sepsis roundtable.* Speaker, Toronto Critical Care Medicine Symposium, Toronto, Canada.
- 10-99 *Health services research issues. Critical care literature review.* Speaker, American College of Chest Physicians Annual Scientific Assembly, Chicago, IL.
- 10-99 *Meet the expert. Severity scoring systems.* Speaker, American College of Chest Physicians Annual Scientific Assembly, Chicago, IL.
- 11-99 *Scoring systems, critical care outcome and resource consumption.* Visiting Professor, Anaesthesiology and Intensive Care Teaching Course, University of Basel/Kantonsspital, Basel, Switzerland.
- 11-99 *Health economics in intensive care.* Visiting Professor, Anaesthesiology and Intensive Care Teaching Course, University of Basel/Kantonsspital, Basel, Switzerland.
- 11-99 *The incidence and mortality of sepsis.* Speaker, 14th Annual Anaesthesia, Pain, Intensive Care and Emergency Medicine International Symposium. Trieste, Italy.
- 12-99 *Cost-effectiveness of ventilator management.* Speaker, Ventilator management: Controlling costs, maximizing reimbursement and providing optimal therapy. Cambridge Health Resources. Washington, DC.
- 12-99 *How to measure the impact of quality improvement efforts on patient-centered outcomes in ventilated patients.* Speaker, Ventilator Management. Controlling costs, maximizing reimbursement and providing optimal therapy. Cambridge Health Resources. Washington, DC.
- 12-99 *The epidemiology of sepsis in the US.* Speaker, Knoll Laboratories, Mount Olive, NJ.
- 02-00 *Outcomes Reporting: Where are we going?* Speaker, Annual Scientific Assembly of the Society of Critical Care Medicine, Orlando, FL.
- 02-00 *Outcomes Research: What data should we collect? What is important? How do we do it?* Speaker, Annual Scientific Assembly of the Society of Critical Care Medicine, Orlando, FL.
- 02-00 *Neonatal respiratory failure: Adding cost to the equation.* Speaker, Annual Scientific Assembly of the Society of Critical Care Medicine, Orlando, FL.
- 02-00 *The critically ill patient: quality reports.* Speaker, Annual Scientific Assembly of the Society of Critical Care Medicine, Orlando, FL.
- 02-00 *Epidemiology of sepsis.* Speaker, Annual Scientific Assembly of the Society of Critical Care Medicine, Orlando, FL.

- 02-00 *Resource management in the ICU.* Moderator (with A. Thompson), Annual Scientific Assembly of the Society of Critical Care Medicine, Orlando, FL.
- 02-00 *An epidemiologic assessment of the genetic and inflammatory markers of sepsis.* Speaker, Sepsis round table, VI International Symposium on Intensive Care Medicine, Oporto, Portugal.
- 02-00 *The epidemiology, incidence and mortality of mechanical ventilation and ARDS.* Speaker, *The use of meta-analysis in the critically ill* round table, VI International Symposium on Intensive Care Medicine, Oporto, Portugal.
- 02-00 *The use of meta-analysis in the critically ill.* Panelist, Roundtable, VI International Symposium on Intensive Care Medicine, Oporto, Portugal.
- 02-00 *What is new in my ICU?* Speaker, *What is new in my ICU* round table, VI International Symposium on Intensive Care Medicine, Oporto, Portugal.
- 02-00 *Scoring systems – everything you wanted to know in 20 minutes.* Speaker, VI International Symposium on Intensive Care Medicine, Oporto, Portugal.
- 03-00 *Scientific design and hypothesis of Euricus-II.* Speaker, Second European ICU Study Symposium, Groningen, the Netherlands.
- 03-00 *How to choose the right outcome.* Speaker, Roundtable conference. The role of health services research in critical care, J. Bion and W. Sibbald (chairs), Brussels, Belgium.
- 03-00 *The cost of dying.* Speaker, International Symposium on Intensive Care and Emergency Medicine, Brussels, Belgium.
- 03-00 *Cost of new therapies.* Speaker, International Symposium on Intensive Care and Emergency Medicine, Brussels, Belgium.
- 03-00 *Our performance is evaluated by HMOs.* Speaker, International Symposium on Intensive Care and Emergency Medicine, Brussels, Belgium.
- 03-00 *Tutorial: Health economics.* Speaker, International Symposium on Intensive Care and Emergency Medicine, Brussels, Belgium.
- 03-00 *Alternatives to randomized controlled trials.* Speaker, International Symposium on Intensive Care and Emergency Medicine, Brussels, Belgium.
- 03-00 *Could prognostic information guide care?* Speaker, International Symposium on Intensive Care and Emergency Medicine, Brussels, Belgium.
- 03-00 *The ICU Physician outside ICU boundaries.* Moderator, Roundtable. International Symposium on Intensive Care and Emergency Medicine, Brussels, Belgium.
- 05-00 *Neonatal respiratory failure: A little epidemiology, and ... a little cost-effectiveness.* Speaker, INO Therapeutics Forum on reimbursement issues related to inhaled nitric oxide, Boston, MA.
- 08-00 *Consensus methodology.* Speaker, Acute Dialysis Quality Initiative, Society of Critical Care Medicine and American Society of Nephrology, New York, NY.
- 08-00 *Sepsis.* Speaker, Goldman, Sachs, and Co., New York, NY.
- 09-00 *ICU performance assessment: Where is it going ... and what does it give us?* Speaker, 5th Annual Chicago Conference on Current Issues in Pulmonary & Critical Care Medicine, American Thoracic Society, Chicago, IL.
- 09-00 *What is the effect of monitoring intensity on case finding and time factor?* Speaker, 3rd European-North American Experts Conference on ARDS, Barcelona, Spain.
- 09-00 *Long-term Follow-Up and Quality of Life.* Speaker, 3rd European-North American Experts Conference on ARDS, Barcelona, Spain.
- 10-00 *Critical Care Needs in the US.* Speaker, European Society of Intensive Care Medicine 13th Annual Congress, Rome, Italy.

- 10-00 *Health demographics: An international perspective.* Speaker, European Society of Intensive Care Medicine 13th Annual Congress, Rome, Italy.
- 10-00 *Outcomes in high-risk patients.* Thematic session co-chairperson, Society of Intensive Care Medicine 13th Annual Congress, Rome, Italy.
- 10-00 *Economic analysis of Inhaled Nitric Oxide in the treatment of ARDS: Economic sub-study to NO-06.* Speaker, INO Therapeutics, Clinton, NJ.
- 10-00 *Health services research issues in critical care.* Post-graduate course lecture, American College of Chest Physicians Annual Scientific Assembly, San Francisco, CA.
- 10-00 *The epidemiology of ARDS: Case definition, incidence & outcome.* Speaker, American College of Chest Physicians Annual Scientific Assembly, San Francisco, CA.
- 10-00 *Improving outcomes in intensive care.* Speaker, American College of Chest Physicians Annual Scientific Assembly, San Francisco, CA.
- 10-00 *Critical care and pulmonary needs in the US.* Speaker, American College of Chest Physicians Annual Scientific Assembly, San Francisco, CA.
- 10-00 *Medical errors.* Speaker, 2000 Toronto Critical Care Medicine Symposium, Toronto, Canada.
- 10-00 *Improving practice and avoiding errors.* Speaker, 2000 Toronto Critical Care Medicine Symposium, Toronto, Canada.
- 10-00 *Economic costs of ARDS.* Speaker, 2000 Toronto Critical Care Medicine Symposium, Toronto, Canada.
- 10-00 *Gender differences in sepsis.* Speaker, 2000 Toronto Critical Care Medicine Symposium, Toronto, Canada.
- 10-00 *Update on sepsis trials.* Speaker, 2000 Toronto Critical Care Medicine Symposium, Toronto, Canada.
- 11-00 *The epidemiology of sepsis – quantifying the magnitude of the problem.* Speaker, Margaux Conference on Critical Illness 2000, Margaux, France.
- 11-00 *Management and analysis of large databases.* Lecturer, 2nd International Congress of Critical Care Medicine on the Internet, Lisbon, Portugal. [via internet]
- 11-00 *Cost-effectiveness analysis of inhaled nitric oxide (iNO) in premature infants.* Speaker, NHLBI Inhaled Nitric Oxide in Premature Respiratory Failure Investigators' Meeting, Chicago, IL.
- 01-01 *The efficacy of drotrecogin alpha (activated) on organ dysfunction and functional recovery in severe sepsis.* Speaker, PROWESS Investigators' Meeting, Amelia Island, FL.
- 02-01 *Cost-effectiveness analysis of rhAPC.* Speaker, Eli Lilly and Company, Indianapolis, IN.
- 02-01 *An epidemiological assessment of the use of intensive care at the end of life in the US.* Speaker, Robert Wood Johnson Foundation End-of-Life Critical Care Peer Workgroup, San Francisco, CA.
- 02-01 *A “hard look” at how critical care is changing under healthcare reform.* Speaker, The 30th International Educational & Scientific Symposium of the Society of Critical Care Medicine, San Francisco, CA.
- 02-01 *Quantifying the impact of sepsis.* Speaker, The 30th International Educational & Scientific Symposium of the Society of Critical Care Medicine, San Francisco, CA.
- 02-01 *The effect of drotrecogin alpha (activated) on organ dysfunction and functional recovery in severe sepsis.* Speaker, The 30th International Educational & Scientific Symposium of the Society of Critical Care Medicine, San Francisco, CA.
- 02-01 *The cost of dying.* Speaker, The 30th International Educational & Scientific Symposium of the Society of Critical Care Medicine, San Francisco, CA.
- 02-01 *Management issues in head trauma.* Co-moderator, The 30th International Educational & Scientific Symposium of the Society of Critical Care Medicine, San Francisco, CA.

- 02-01 *Economic outcomes.* Speaker, The 30th International Educational & Scientific Symposium of the Society of Critical Care Medicine, San Francisco, CA.
- 02-01 *Quantifying the impact of sepsis.* Speaker, The 30th International Educational & Scientific Symposium of the Society of Critical Care Medicine, San Francisco, CA.
- 03-01 *Economic analysis of the PA catheter (EA-PAC).* Speaker, ARDSNet Investigators' Meeting, Washington, DC.
- 03-01 *Scoring systems and critical care outcome assessment.* Speaker, 6th International Conference on Continuous Renal Replacement Therapy, San Diego, CA.
- 03-01 *Evidence-based medicine and critical care.* Speaker, 6th International Conference on Continuous Renal Replacement Therapy, San Diego, CA.
- 03-01 *Clinical trials in the critically ill – Part I.* Speaker, 6th International Conference on Continuous Renal Replacement Therapy, San Diego, CA.
- 03-01 *Emerging therapeutic options for severe sepsis.* Chair, Knoll Pharmaceutical Global Advisory Board, Brussels, Belgium.
- 03-01 *The epidemiology of sepsis.* Plenary lecturer, 21st International Symposium on Intensive Care and Emergency Medicine, Brussels, Belgium.
- 03-01 *ARDS: Incidence and mortality.* Speaker, 21st International Symposium on Intensive Care and Emergency Medicine, Brussels, Belgium.
- 03-01 *Outcome studies are useful: Pro.* Debate speaker, 21st International Symposium on Intensive Care and Emergency Medicine, Brussels, Belgium.
- 03-01 *Costs of dying.* Speaker, 21st International Symposium on Intensive Care and Emergency Medicine, Brussels, Belgium.
- 03-01 *ICU organization as a determinant of outcome.* Workshop moderator, 21st International Symposium on Intensive Care and Emergency Medicine, Brussels, Belgium.
- 03-01 *Critical care in the U.S.* Speaker, 21st International Symposium on Intensive Care and Emergency Medicine, Brussels, Belgium.
- 03-01 *Alternatives to randomized controlled trials.* Speaker, 21st International Symposium on Intensive Care and Emergency Medicine, Brussels, Belgium.
- 03-01 *Outcome.* Co-moderator, with J. Carlet, 21st International Symposium on Intensive Care and Emergency Medicine, Brussels, Belgium.
- 03-01 *How to assess ICU performance.* Speaker, 21st International Symposium on Intensive Care and Emergency Medicine, Brussels, Belgium.
- 04-01 *Critical care orientation program.* Speaker and chair, Eli Lilly and Company. University of Pittsburgh and University of Pittsburgh Medical center, Pittsburgh, PA.
- 04-01 *Costs and benefits in critical care.* Lecturer, 28th Annual Course “Respiratory and Critical Care 2001”, Harvard Medical School, Department of Continuing Education, Cambridge, MA.
- 05-01 *The incidence and mortality of sepsis.* Speaker, Third Congress of the Asociacion Colombiana de Medicina Critica y Cuidado Intensivo, Cartagena de Indias, Columbia.
- 05-01 *The incidence and mortality of ARDS.* Speaker, Third Congress of the Asociacion Colombiana de Medicina Critica y Cuidado Intensivo, Cartagena de Indias, Columbia.
- 05-01 *Assessing the performance of mortality prediction scoring systems.* Speaker, Third Congress of the Asociacion Colombiana de Medicina Critica y Cuidado Intensivo, Cartagena de Indias, Columbia.
- 05-01 *Patient-centered outcomes and economic analysis of Pafase in severe sepsis.* Speaker, Investigators' meeting of the ICOS Pafase clinical trial, Miami, FL.
- 05-01 *Summary of the PROWESS Trial.* Speaker, Critical Care East Advisory Board, Eli Lilly and Company, Miami, FL.

- 05-01 *Dissemination of PROWESS findings.* Chair, Critical Care East Advisory Board, Eli Lilly and Company, Miami, FL.
- 05-01 *Answering clinical questions with secondary databases: Strengths and pitfalls.* Lecturer, Post-Graduate Course *Clinical and Outcomes Research Methods: Strategies For the Underfunded*, American Thoracic Society 97th International Conference, San Francisco, CA.
- 08-01 *Sepsis in the U.S.* Eli Lilly and Company speaker series, Pittsburgh, PA.
- 09-01 *The epidemiology of severe sepsis in the United States.* Medical Grand Rounds, Shadyside Hospital, University of Pittsburgh Medical Center, Pittsburgh, PA. Ezz-Eldin Moukamal, MD.
- 09-01 *Changes and challenges in the relation of health care and intensive care medicine.* Speaker, *The influence of managed care on intensive care*, Workshop, Philipp G.H. Metnitz, MD, PhD, Vienna, Austria.
- 09-01 *Economics of end of life care in the ICU.* Speaker, *Anesthesia & Intensive Care: The Emerging Discipline*, Austrian International Congress and Rudolf Kucher Forum, Vienna, Austria.
- 09-01 *Quantifying the impact of sepsis: Clinical, human and ergonomic costs.* Speaker, *Anesthesia & Intensive Care: The Emerging Discipline*, Austrian International Congress and Rudolf Kucher Forum, Vienna, Austria.
- 10-01 *Diagnosis and definitions of ARDS.* Round table co-chair. 8th World Congress of Intensive and Critical Care Medicine, Sydney, Australia.
- 10-01 *Do intensivists make a difference?* Speaker, *Better ways to use doctors and nurses* plenary session. 8th World Congress of Intensive and Critical Care Medicine, Sydney, Australia.
- 10-01 *Sepsis in the ICU.* Speaker, *Drotrecogin alfa (activated) for the treatment of severe sepsis: Implications for patient identification and management* Program. 8th World Congress of Intensive and Critical Care Medicine, Sydney, Australia.
- 10-01 *Evidence based medicine.* Workshop faculty (with W. Sibbald, G. Doig, and J. Kellum). 8th World Congress of Intensive and Critical Care Medicine, Sydney, Australia.
- 10-01 *Performance assessment for intensivists.* Speaker, *Quality and outcomes of ICU medical practice 1* plenary session. 8th World Congress of Intensive and Critical Care Medicine, Sydney, Australia.
- 10-01 *Acute renal replacement therapy.* Session co-chair. International Symposium on Critical Care Nephrology 2001, Melbourne, Australia.
- 10-01 *Large RCTs in sepsis: What have we learned?* Speaker, International Symposium on Critical Care Nephrology 2001, Melbourne, Australia.
- 11-01 *Epidemiology and cost of sepsis.* Speaker, American College of Chest Physicians Annual Scientific Assembly, Philadelphia, PA.
- 11-01 *Health economics evaluation: Comparing the cost-effectiveness of drotrecogin alfa (activated) in the treatment of severe sepsis.* Speaker, American College of Chest Physicians Annual Scientific Assembly, Philadelphia, PA.
- 11-01 *Intensivists: Do we have enough?* Panel discussion faculty, American College of Chest Physicians Annual Scientific Assembly, Philadelphia, PA.
- 11-01 *Cost-effectiveness analysis in the ICU: Assessing the worth of what we do.* Panel discussion moderator. American College of Chest Physicians Annual Scientific Assembly, Philadelphia, PA.
- 12-01 *The epidemiology of neonatal respiratory failure in the United States.* Annual Gregory Mark Taubin Lecture, Children's National Medical Center, Washington, DC.
- 12-01 *Epidemiology of sepsis.* Speaker, Research Conference series, Children's National Medical Center, Washington, DC.
- 12-01 *Epidemiology of sepsis and emerging treatments.* Speaker, Downstate University Hospital and Kings County Medical Center, New York, NY.
- 12-01 *Epidemiology of sepsis and emerging treatments.* Speaker, Dinner and Theater Program, Eli Lilly and Company, New York, NY.

- 12-01 *Sepsis in the US: An update on incidence, outcome, and treatment.* Grand Rounds, Long Island District Hospitals, New York, NY.
- 12-01 *Epidemiology of sepsis and emerging treatments.* Grand Rounds, Mount Sinai Medical Center, New York, NY.
- 01-02 *Emerging treatments for sepsis.* Speaker, Salem Chest Specialists, Eli Lilly and Company, Winston-Salem, NC.
- 01-02 *Emerging treatments for sepsis.* Speaker, Dinner Lecture, Eli Lilly and Company, Greensboro, NC.
- 01-02 *Sepsis in the US: Epidemiology and emerging treatments.* Speaker, Forsyth Medical Center, Winston-Salem, NC.
- 01-02 *The value of the intensivist in the ICU environment.* Grand Rounds, Moses Cone Hospital, Greensboro, NC.
- 01-02 *Cost-effectiveness of drotrecogin alfa (activated) in severe sepsis.* Speaker, The 31st International Educational & Scientific Symposium of the Society of Critical Care Medicine, San Diego, CA.
- 03-02 *Natural history of critical illness: Survival.* Speaker, *Surviving intensive care* Round table conference, Brussels, Belgium.
- 03-02 *Natural history of critical illness: Economic consequences.* Speaker, *Surviving intensive care* Round table conference, Brussels, Belgium.
- 03-02 *Quality of care – organization: What is the future?* Speaker, 22nd International Symposium on Intensive Care and Emergency Medicine, Brussels, Belgium.
- 03-02 *ICU outcome.* Moderator, 22nd International Symposium on Intensive Care and Emergency Medicine, Brussels, Belgium.
- 03-02 *ICU outcome: What needs to be done?* Speaker, 22nd International Symposium on Intensive Care and Emergency Medicine, Brussels, Belgium.
- 04-02 *Designing and conducting population-based genetic studies of critical illness and sepsis.* Speaker, Functional Genomics of Critical Illness and Injury, National Institutes of Health, Bethesda, MD.
- 05-02 *Economics of sepsis treatment.* Speaker, The Intensive Care Society Spring Meeting 2002, Edinburgh, Scotland.
- 05-02 *Problems with scoring.* Speaker, The Intensive Care Society Spring Meeting 2002, Edinburgh, Scotland.
- 05-02 *Development of clinical strategies for Xigris.* Chair, The East Coast Critical Care Advisory Board, Eli Lilly and Company, Atlanta, GA.
- 05-02 *Social and economic implications of severe sepsis.* Speaker, American Thoracic Society 98th International Conference, Atlanta, GA.
- 05-02 *Economic analyses in critical illness and sepsis.* Grand Rounds, Johns Hopkins School of Medicine, Baltimore, MD. Todd Dorman, MD.
- 07-02 *Economic analysis of the PA catheter (EA-PAC).* Speaker, EA-PAC Advisory Board Meeting, Pittsburgh, PA.
- 07-02 *Cost-effectiveness analyses in critical care: The Xigris case.* Grand Rounds, Montefiore Medical Center, New York, NY. Vladimir Kvetan, MD.
- 07-02 *Pharmacoeconomics in critical care.* Speaker, Dinner Lecture, Eli Lilly and Company, New York, NY.
- 09-02 *Epidemiology of severe sepsis and cost-effectiveness of Xigris.* Educational Speaker, Eli Lilly and Company, taped in Pittsburgh, PA.
- 09-02 *Cost-effectiveness assessment in critical care: The Xigris case.* Speaker, 13th Argentinean Congress on Intensive care, Buenos Aires, Argentina.
- 09-02 *Las nuevas guías de ATS en evaluación de costo/efectividad en UTI [The new ATS guidelines for assessing cost-effectiveness in the ICU].* Speaker, 13th Argentinean Congress on Intensive care, Buenos Aires, Argentina.
- 09-02 *Evaluación del costo/efectividad en UTI [Assessing cost-effectiveness in the ICU].* Speaker, 13th Argentinean Congress on Intensive care, Buenos Aires, Argentina.

- 09-02 *Prediccion de riesgos en UTI: Neuvos desafios [Scoring systems in the ICU: New challenges]*. Speaker, 13th Argentinean Congress on Intensive care, Buenos Aires, Argentina.
- 09-02 *The epidemiology of severe sepsis*. Speaker, 13th Argentinean Congress on Intensive care, Buenos Aires, Argentina.
- 09-02 *Epidemiologia del fallo agudo respiratorio en neonatologia [Epidemiology of neonatal respiratory failure]*. Speaker, 13th Argentinean Congress on Intensive care, Buenos Aires, Argentina.
- 09-02 *Incidence and outcome of ARDS*. Speaker, 13th Argentinean Congress on Intensive care, Buenos Aires, Argentina.
- 10-02 *Surviving intensive care*. Grand Rounds, Mayo Clinic, Rochester, MN. Rolf Hubmayer, MD.
- 10-02 *New thoughts on the definition, incidence, and outcome of severe sepsis*. Speaker, University of Minnesota, St. Paul, MN.
- 11-02 *Limitations of genomic research*. Speaker, *Genetics of Sepsis*, Toronto Critical Care Meeting 2002, Toronto, Canada.
- 11-02 *Is the treatment cost-effective – convincing administrators*. Speaker, *Sepsis Forum*, Toronto Critical Care Meeting 2002, Toronto, Canada.
- 11-02 *The costs of sepsis*. Speaker, *Nocomial infections*, Toronto Critical Care Meeting 2002, Toronto, Canada.
- 11-02 *Continuous vs intermittent renal replacement therapy, is one better?* Speaker, *Extracorporeal treatments*, Toronto Critical Care Meeting 2002, Toronto, Canada.
- 11-02 *Sepsis: Is it in your genes?* Speaker, *New developments in sepsis session*, American College of Chest Physicians Annual Scientific Assembly, San Diego, CA.
- 11-02 *Best Critical Care Medicine: Are we or are we not putting it into practice?* Session chair, American College of Chest Physicians Annual Scientific Assembly, San Diego, CA.
- 11-02 *Epidemiology and outcomes of sepsis*. Session moderator, American College of Chest Physicians Annual Scientific Assembly, San Diego, CA.
- 11-02 *Cost in sepsis*. Speaker, *Epidemiology and outcomes of sepsis session*, American College of Chest Physicians Annual Scientific Assembly, San Diego, CA.
- 11-02 *The effect of drotrecogin alfa (activated) on long-term survival after severe sepsis*. Speaker, *Treatment of severe sepsis with drotrecogin alfa (activated) session*, American College of Chest Physicians Annual Scientific Assembly, San Diego, CA.
- 11-02 *The effect of drotrecogin alfa (activated) on long-term survival after severe sepsis*. Speaker, American College of Chest Physicians Annual Scientific Assembly, San Diego, CA.
- 11-02 *Sepsis: New understanding of who gets sick, who recovers and what it means*. Panel discussion moderator, American College of Chest Physicians Annual Scientific Assembly, San Diego, CA.
- 11-02 *Improving clinical trial design in ALI and ARDS*. Speaker, *Epidemiology and evaluation of ALI*, 4th Margaux Conference on Critical Illness, ALI: Understanding the Mechanisms of Injury and Repair, Margaux, Portugal.
- 11-02 *The epidemiology of end-of-life care*. Speaker, *Critical points in end-of-life ICU patients session* 17th International Symposium on Critical Care Medicine APICE 2002, Trieste, Italy.
- 11-02 *Sepsis and functional reserve*. Speaker, *Sepsis and MODS – to be or not to be, an evidence-based process session* 17th International Symposium on Critical Care Medicine APICE 2002, Trieste, Italy.
- 11-02 *Sepsis and MODS – to be or not to be, an evidence-based process: Quantification of organ dysfunction/failure*. Session co-chair, 17th International Symposium on Critical Care Medicine APICE 2002, Trieste, Italy.
- 11-02 *Cost-effectiveness of drotrecogin alpha (activated) in severe sepsis*. Speaker, *Preventative measures, diagnostic and management procedures session*, 17th International Symposium on Critical Care Medicine APICE 2002, Trieste, Italy.
- 12-02 *Finding policy tools to impact workforce supply*. Speaker, American Thoracic Society Health Care Policy Committee, Washington, DC.

- 12-02 *Cost-effectiveness in sepsis management.* Speaker, Sepsis Forum, Hong Kong Society of CCM Scientific Symposium and Annual General Meeting 2002, Hong Kong.
- 12-02 *Treatment of severe sepsis with drotrecogin alpha (activated): Long-term follow-up.* Speaker, VIC ANZICS Interhospital Education Meeting, Melbourne, Australia.
- 12-02 *Long-term follow-up: Is it still as good as 28 days?* Speaker, Behind PROWESS, the year after, Prince of Wales Intensive Care Services, Sydney, Australia.
- 12-02 *PROWESS: Beyond day 28.* Speaker [presentation to Brisbane intensivists], Eli Lilly-Australia, Brisbane, Australia.
- 12-02 *The effect of drotrecogin alfa (activated) on long-term survival after severe sepsis.* Speaker, ICU Journal Club, Royal North Shore Hospital, Sydney, Australia.
- 01-03 *Measuring sepsis mortality: Predictor of short and long term outcome in severe sepsis (EVBI, with literature review).* Lilly GMC 2003: Evidence Based Medicine in Critical Care, San Antonio, TX
- 01-03 *The impact of EGDT on cost and mortality.* Speaker, *Early goal directed therapy and management of the septic patient* Daybreak Panel, The 32nd International Educational & Scientific Symposium of the Society of Critical Care Medicine, San Antonio, TX.
- 01-03 *Ethics: End-of-life care.* Session moderator, The 32nd International Educational & Scientific Symposium of the Society of Critical Care Medicine, San Antonio, TX.
- 01-03 *Dying in America: The role of critical care services at the end-of-life.* Speaker, *Ethics: end-of-life care session*, The 32nd International Educational & Scientific Symposium of the Society of Critical Care Medicine, San Antonio, TX.
- 02-03 *Long-term outcomes of the severe sepsis patient treated with drotrecogin alfa (activated).* Speaker, *Increasing survival in the severe sepsis patient: Applying evidence-based medicine into your practice session*, The 32nd International Educational & Scientific Symposium of the Society of Critical Care Medicine, San Antonio, TX.
- 02-03 *Sepsis: New developments in clinical management.* Session moderator, The 32nd International Educational & Scientific Symposium of the Society of Critical Care Medicine, San Antonio, TX.
- 02-03 *Sepsis: The new epidemiology of a heterogeneous syndrome.* Speaker, *Sepsis: New developments in clinical management session*, The 32nd International Educational & Scientific Symposium of the Society of Critical Care Medicine, San Antonio, TX.
- 02-03 *Renal failure in the ICU – Comparisons of the impact of acute renal failure and end stage renal disease on outcomes.* Speaker, Dinner Lecture, McKay Dee Hospital and Ogden Regional Hospital Critical Care Physicians, Ogden, UT.
- 02-03 *Assessing outcomes in the ICU.* Speaker, Dinner Lecture, McKay Dee Hospital and Ogden Regional Hospital Critical Care Physicians, Ogden, UT.
- 02-03 *Long-term outcomes of the severe sepsis patient treated with drotrecogin alfa (activated).* Internal Medicine Grand Rounds, University of Utah, Provo, UT.
- 02-03 *New thoughts on the definition, incidence, and outcome of severe sepsis.* Speaker, Critical Care Physician Lecture, St. Mark's Hospital, Salt Lake City, UT.
- 02-03 *The EA-PAC Study: Economic impact of the pulmonary artery catheter.* Speaker, LDS Hospital, Salt Lake City, UT.
- 02-03 *New thoughts on the definition, incidence, and outcome of severe sepsis.* Pulmonary/Critical Care Medicine Grand Rounds, University of Utah, Salt Lake City, UT.
- 02-03 *Resuscitation of patients in shock.* Pulmonary/Critical Care Fellows Conference, University of Utah, Salt Lake City, UT.
- 03-03 *Leadership skills in bedside clinical trials and investigator-initiated research.* Speaker, The New York Academy of Science Symposium on Management, New York, NY.
- 03-03 *Manpower and staffing: COMPACCS and beyond.* Speaker, The New York Academy of Science Symposium on Management, New York, NY.

- 03-03 *How to use genetic tools in clinical research: An inception cohort study of pneumonia and sepsis.* Grand Rounds, Duke University, Durham, NC.
- 03-03 *Surviving intensive care.* Speaker, Cardiac Conference, Duke University, Durham, NC.
- 03-03 *Sepsis definitions: The PIRO approach.* Speaker, The Second CRRT Conference, San Diego, CA.
- 03-03 *Dialysis for ARF: Is it cost-effective?* Speaker, The Second CRRT Conference, San Diego, CA.
- 03-03 *Controversies in management of the critically ill patient: Fluid management.* Co-Chair, The Second CRRT Conference, San Diego, CA.
- 03-03 *Critical care delivery: Future innovations.* Speaker, The Second CRRT Conference, San Diego, CA.
- 03-03 *The changing spectrum of acute renal failure.* Panel Discussion Moderator, The Second CRRT Conference, San Diego, CA.
- 03-03 *Effect of drotrecogin alfa (activated) on hospital and long-term mortality.* Speaker, 23rd International Symposium on Intensive Care and Emergency Medicine, Brussels, Belgium.
- 03-03 *Epidemiology of severe sepsis in the US.* Speaker, 23rd International Symposium on Intensive Care and Emergency Medicine, Brussels, Belgium.
- 03-03 *The long term effects of our ICU outcome interventions.* Speaker, 23rd International Symposium on Intensive Care and Emergency Medicine, Brussels, Belgium.
- 03-03 *Organization factors improve ICU outcome.* Speaker, 23rd International Symposium on Intensive Care and Emergency Medicine, Brussels, Belgium.
- 03-03 *Putting a price on intensive care – ‘Is intensive care worth it?’* Speaker, 23rd International Symposium on Intensive Care and Emergency Medicine, Brussels, Belgium.
- 03-03 *Randomized trials determine “best practice” in the ICU: Pro. Pro-Con Debate,* 23rd International Symposium on Intensive Care and Emergency Medicine, Brussels, Belgium.
- 03-03 *Issues in clinical trials.* A roundtable moderator, 23rd International Symposium on Intensive Care and Emergency Medicine, Brussels, Belgium.
- 03-03 *Translating research findings into practice changes.* A roundtable participant, 23rd International Symposium on Intensive Care and Emergency Medicine, Brussels, Belgium.
- 03-03 *The PIRO concept: P.* Speaker, 23rd International Symposium on Intensive Care and Emergency Medicine, Brussels, Belgium.
- 03-03 *The long-term effects of our interventions.* Speaker, 23rd International Symposium on Intensive Care and Emergency Medicine, Brussels, Belgium.
- 05-03 *Epidemiology of severe community-acquired pneumonia.* Speaker, ICOS Corporation, Bothell, WA.
- 05-03 *The trials and pitfalls of conducting a multicentered genetic study.* Lecturer, Post-Graduate Course *Functional economics and the future of translational research in the ICU*, American Thoracic Society 99th International Conference, Seattle, WA.
- 05-03 *What endpoints we need to achieve beyond survival.* Speaker, American Thoracic Society 99th International Conference, Seattle, WA.
- 05-03 *Cost effectiveness of current therapies.* Speaker, American Thoracic Society 99th International Conference, Seattle, WA.
- 05-03 *Long term follow-up data and cost containment from PROWESS.* Speaker, American Thoracic Society 99th International Conference, Seattle, WA.
- 05-03 *New thoughts on the epidemiology of sepsis.* Speaker, Case Western Reserve University, Cleveland, OH.
- 06-03 *The new epidemiology and genetics of sepsis.* Speaker, Annual Meeting of the Council of Pan American and Iberic Federation of National Societies of Intensive Care and Critical Care Medicine, Cancun, Mexico.

- 06-03 *Surviving intensive care: Long-term outcomes of critical illness.* Speaker, Annual Meeting of the Council of Pan American and Iberic Federation of National Societies of Intensive Care and Critical Care Medicine, Cancun, Mexico.
- 06-03 *Long-term outcomes and quality of life.* Speaker, International Sepsis Forum, 2003 Cambridge Colloquium on Outcome Measures in Sepsis, Cambridge, UK.
- 06-03 *New epidemiology of sepsis.* Speaker, Critical Care: Sepsis Management, Kaiser Permanente Symposium, San Francisco, CA.
- 06-03 *Current and future critical care medicine delivery in the USA.* Speaker, Critical Care: Sepsis Management, Kaiser Permanente Symposium, San Francisco, CA.
- 06-03 *Impact of pathophysiology of sepsis.* Speaker, University of California at San Francisco, San Francisco, CA.
- 07-03 *Long-term outcomes and cost-effectiveness of patient's treated with drotrecogin alfa (activated) for severe sepsis.* Dinner speaker, LAC & USC key surgery and pulmonary/critical care medicine staff, Los Angeles, CA.
- 07-03 *Epidemiology and genetics of sepsis.* Speaker, UCLA pulmonary/critical care medicine staff, Los Angeles, CA.
- 08-03 *The epidemiology of neonatal respiratory failure in the United States.* Speaker, The Jerry Elliot Memorial Lectureship at the 32nd Aspen Conference on Perinatal Research, Mead Johnson Nutritionals, Aspen, CO.
- 08-03 *Cost-effectiveness and long-term follow-up of drotrecogin alfa (activated).* Speaker, Trauma Research Conference, Swedish Medical Center, Englewood, CO.
- 08-03 *Cost-effectiveness and long-term follow-up of drotrecogin alfa (activated).* Speaker, Trauma Grand Rounds, Swedish Medical Center, Englewood, CO.
- 08-03 *Cost-effectiveness and long-term follow-up of drotrecogin alfa (activated).* Speaker, Medical Center of Aurora, Aurora, CO.
- 08-03 *Cost-effectiveness and long-term follow-up of drotrecogin alfa (activated).* Speaker, St. Anthony Central Hospital, Denver, CO.
- 08-03 *Long-term follow-up and cost-effectiveness of therapies for sepsis.* Speaker, Denver Health Medical Center, Denver, CO.
- 08-03 *Cost effectiveness and long term follow up of drotrecogin (activated).* Dinner Lecture, Brodmore Hotel, Colorado Springs, CO.
- 09-03 *Incidence of sepsis.* Speaker, 1st International Congress of the German Sepsis Society, Weimar, Germany.
- 09-03 *Drotrecogin alfa (activated): Cost vs. benefit.* Speaker, Changing standards of Care in the ICU: Using Evidence-Based Medicine at the Bedside. Providence, RI.
- 09-03 *Surviving intensive care.* Speaker, Changing standards of Care in the ICU: Using Evidence-Based Medicine at the Bedside. Providence, RI.
- 09-03 *Current & future critical care delivery in the United States.* Speaker, Department of Surgery, Via Christi Medical Center – St. Francis, Wichita, KS.
- 09-03 *Current & future critical care delivery in the United States.* Speaker, Grand Rounds, Via Christi Medical Center – St. Joseph, Wichita, KS.
- 10-03 *Early goal-directed therapy and management of the septic patient.* Chair, CHEST 2003 American College of Chest Physicians Annual Scientific Assembly, Orlando, FL.
- 10-03 *The impact of EGDT on cost and mortality: Implications for my institution.* Speaker, CHEST 2003 American College of Chest Physicians Annual Scientific Assembly, Orlando, FL.
- 10-03 *Cost-effectiveness in pulmonary and critical care medicine: Assessing the value of what we do.* Speaker, CHEST 2003 American College of Chest Physicians Annual Scientific Assembly, Orlando, FL.
- 10-03 *Sepsis: Bringing new therapies from bench to bedside in the ICU: Cost implications and challenges.* Speaker, CHEST 2003 American College of Chest Physicians Annual Scientific Assembly, Orlando, FL.

- 10-03 *Current controversies in critical care.* Moderator, CHEST 2003 American College of Chest Physicians Annual Scientific Assembly, Orlando, FL.
- 11-03 *Surviving the ICU.* Speaker, 4th Symposium on Intensive Care, Critical Care Issues 2003, Brugge, Belgium.
- 11-03 *The trials and pitfalls of conducting large scale translational research projects.* Speaker, Complex Systems in Critical Illness Workshop Pittsburgh, PA.
- 01-04 *How do you perform ICU outcomes research?* Speaker, Scottish Intensive Care Society Annual Meeting, Glasgow, Scotland.
- 01-04 *How I read a scientific paper.* Speaker, Scottish Intensive Care Society Annual Meeting, Glasgow, Scotland.
- 01-04 *Surviving intensive care.* Speaker, Scottish Intensive Care Society Annual Meeting, Glasgow, Scotland.
- 02-04 *The trials and pitfalls of large scale genetic studies.* Speaker, Society of Critical Care Medicine, 33rd Critical Care Congress, Orlando, FL.
- 02-04 *The challenges of staffing U.S. ICU's with intensivists.* Speaker, Society of Critical Care Medicine, 33rd Critical Care Congress, Orlando, FL.
- 02-04 *Staffing the ICU: Who, how and how much?* Session Moderator, Society of Critical Care Medicine, 33rd Critical Care Congress, Orlando, FL.
- 02-04 *Long-term outcomes after critical illness.* Session Moderator, Society of Critical Care Medicine, 33rd Critical Care Congress, Orlando, FL.
- 02-04 *ARDS outcomes.* Speaker, Society of Critical Care Medicine, 33rd Critical Care Congress, Orlando, FL.
- 02-04 *Surviving intensive care.* Speaker, Society of Critical Care Medicine, 33rd Critical Care Congress, Orlando, FL.
- 03-04 *Genetic and inflammatory markers in sepsis and pneumonia: Preliminary results from GenIMS study.* Speaker, 6th World Congress on Trauma, Shock, Inflammation & Sepsis, Munich, Germany
- 03-04 *Evaluating the value of monitoring techniques: Lessons learned from PA catheter.* Speaker, 6th World Congress on Trauma, Shock, Inflammation & Sepsis, Munich, Germany
- 03-04 *Long term outcomes and quality of life.* Speaker, 6th World Congress on Trauma, Shock, Inflammation & Sepsis, Munich, Germany
- 03-04 *Cost effectiveness and value of rhAPC.* Speaker, 6th World Congress on Trauma, Shock, Inflammation & Sepsis, Munich, Germany
- 03-04 *An epidemiologic approach to the study of genetic polymorphism in sepsis.* Speaker, 6th World Congress on Trauma, Shock, Inflammation, and Sepsis, Munich, Germany.
- 03-04 *The impact of organizational factors on ICU outcome.* Speaker, 8th International Symposium on Intensive Care Medicine and Anesthesiology, Brazil.
- 03-04 *Surviving intensive care.* Speaker, 8th International Symposium on Intensive Care Medicine and Anesthesiology, Brazil.
- 03-04 *Genetics of sepsis.* Speaker, 8th International Symposium on Intensive Care Medicine and Anesthesiology, Brazil.
- 03-04 *Epidemiology of sepsis.* Speaker, 8th International Symposium on Intensive Care Medicine and Anesthesiology, Brazil.
- 03-04 *Pitfalls in genetic studies.* Speaker, 24th International Symposium on Intensive Care and Emergency Medicine, Brussels, Belgium.
- 03-04 *Medical emergency team.* Roundtable moderator, 24th International Symposium on Intensive Care and Emergency Medicine, Brussels, Belgium.
- 03-04 *When is the evidence enough?* Speaker, 24th International Symposium on Intensive Care and Emergency Medicine, Brussels, Belgium.

- 04-04 *Cost-effectiveness of management.* Speaker, 24th International Symposium on Intensive Care and Emergency Medicine, Brussels, Belgium.
- 04-04 *Incidence and outcome.* Speaker, 24th International Symposium on Intensive Care and Emergency Medicine, Brussels, Belgium.
- 04-04 *Long term quality of life: View from the US.* Speaker, 24th International Symposium on Intensive Care and Emergency Medicine, Brussels, Belgium.
- 04-04 *End of life care: How I do it.* Roundtable Speaker, 24th International Symposium on Intensive Care and Emergency Medicine, Brussels, Belgium.
- 04-04 *How to assess your performance.* Speaker, 24th International Symposium on Intensive Care and Emergency Medicine, Brussels, Belgium.
- 05-04 *Epidemiology of sepsis.* Speaker, American Thoracic Society 100th International Conference, Orlando, FL.
- 05-04 *Pathogenesis and Management of Sepsis.* Session Moderator. American Thoracic Society 100th International Conference, Orlando, FL.
- 05-04 *Sources of research data.* . Speaker, American Thoracic Society 100th International Conference, Orlando, FL.
- 05-04 *Do people die “of” or “with” acute renal failure?* Speaker, American Thoracic Society 100th International Conference, Orlando, FL.
- 05-04 *Optimizing recovery from intensive care: Tying it all together.* Speaker, American Thoracic Society 100th International Conference, Orlando, FL.
- 05-04 *Optimizing recovery from intensive care: Tying it all together.* Speaker, American Thoracic Society 100th International Conference, Orlando, FL.
- 05-04 *Organizing critical care for the 21st century: Can critical care become safer?* Speaker, American Thoracic Society 100th International Conference, Orlando, FL.
- 05-04 *From bench to bedside: How do we increase the likelihood of positive phase III trials?* Speaker, American Thoracic Society 100th International Conference, Orlando, FL.
- 06-04 *Incidence and definition of SIRS, sepsis and MOF.* Speaker, Third International Course on Critical Care Nephrology, Vicenza, Italy.
- 06-04 *CRRT: Selection of patients and starting criteria.* Speaker, Third International Course on Critical Care Nephrology, Vicenza, Italy.
- 06-04 *The PIRO concept: The “P” is for predisposition.* Speaker, Congress of Spanish Society of Intensive Care, Tarragona, Spain.
- 06-04 *Strategies for error prevention based on evidence.* Speaker, Congress of Spanish Society of Intensive Care, Tarragona, Spain.
- 06-04 *Impact of acute renal failure and it’s treatment for the prognosis in critical care.* Speaker, Congress of Spanish Society of Intensive Care, Tarragona, Spain.
- 10-04 *Predisposition to sepsis.* Speaker, European Society of Intensive Care Medicine (ESICM), Berlin, Germany.
- 10-04 *A systems approach to improving patient safety in the critically ill.* Speaker, European Society of Intensive Care medicine (ESICM), Berlin, Germany.
- 10-04 *What I Learned Today.* Speaker, European Society of Intensive Care Medicine (ESICM), Berlin, Germany.
- 10-04 *Cost-effectiveness of inhaled nitric oxide in the treatment of neonatal respiratory failure in the U.S.”* Speaker, INO Therapeutics Speaker Training and Orientation, Chicago, IL.
- 10-04 *Surviving intensive care.* Speaker, 3rd Annual Pittsburgh International Lung Conference (PLIC), Nemaconlin Woodlands, PA
- 10-04 *An international perspective on ICNARC.* Speaker, ICNARC 10th Anniversary Annual Meeting, London, England

- 10-04 *Plenary Address*. Speaker, Toronto Critical Care Medicine Symposium, Toronto, Canada.
- 10-04 *Coping with shortages of ICU physicians*. Speaker, Toronto Critical Care Medicine Symposium, Toronto, Canada.
- 10-04 *Genetics of Sepsis*. Speaker, Toronto Critical Care Medicine Symposium, Toronto, Canada.
- 01-05 *The consequences of what we do: Impacting long-term recovery from critical illness*. Session Moderator, Society of Critical Care Medicine, 34th Critical Care Congress, Phoenix, Arizona
- 01-05 *New epidemiology of sepsis: why molecular biology is coming to the bedside*. Speaker, Society of Critical Care Medicine, 34th Critical Care Congress, Phoenix, Arizona
- 01-05 *Epidemiology and outcomes / Oral abstracts presentation*. Session Moderator, Society of Critical Care Medicine, 34th Critical Care Congress, Phoenix, Arizona
- 01-05 *The incidence of mortality in severe sepsis*, Speaker, Society of Critical Care Medicine, 34th Critical Care Congress, Phoenix, Arizona.
- 01-05 *Who should work in the ICU? And how will we get them to do it?* Session Moderator, Society of Critical Care Medicine, 34th Critical Care Congress, Phoenix, Arizona
- 01-05 *Long Term Outcomes: Whose responsibility and why should we care?* Speaker, Society of Critical Care Medicine, 34th Critical Care Congress, Phoenix, Arizona.
- 01-05 *Studying the effect of polymorphisms on outcomes in community acquired pneumonia*. Speaker, Society of Critical Care Medicine, 34th Critical Care Congress, Phoenix, Arizona.
- 02-05 *Long term sequelae of critical care*. Speaker, Canadian Critical Care Conference, Whistler, BC.
- 02-05 *What can we do to make critical care better?* Speaker, Canadian Critical Care Conference, Whistler, BC.
- 02-05 *Assessing cost-effectiveness in critical care*. Speaker, Canadian Critical Care Conference, Whistler, BC.
- 03-05 *Population health needs and health care funding in 2015: “gap analysis”* Speaker, Round Table Conference, 25th International Symposium on Intensive Care and Emergency Medicine, Brussels, Belgium
- 03-05 *The cytokine response*. Speaker, 25th International Symposium on Intensive Care and Emergency Medicine, Brussels, Belgium.
- 03-05 *How we will improve the delivery of intensive care*. Speaker, 25th International Symposium on Intensive Care and Emergency Medicine, Brussels, Belgium.
- 03-05 *Epidemiology*. Speaker, 25th International Symposium on Intensive Care and Emergency Medicine, Brussels, Belgium.
- 03-05 *Improving trial design*. Speaker, 25th International Symposium on Intensive Care and Emergency Medicine, Brussels, Belgium.
- 03-05 *Community acquired pneumonia*. Speaker, 25th International Symposium on Intensive Care and Emergency Medicine, Brussels, Belgium.
- 03-05 *Cost-effectiveness of our therapies*. Speaker, 25th International Symposium on Intensive Care and Emergency Medicine, Brussels, Belgium.
- 03-05 *In sepsis / ARDS*. Speaker, 25th International Symposium on Intensive Care and Emergency Medicine, Brussels, Belgium.
- 03-05 *How to implement research*. Speaker, 25th International Symposium on Intensive Care and Emergency Medicine, Brussels, Belgium.
- 05-05 *Surviving intensive care*. Speaker, Grand Rounds, North Shore Hospital, Long Island, NY
- 05-05 *Surviving intensive care*. Speaker, Virginia Apgar Visiting Professor, Columbia University Hospital, New York, NY
- 05-05 *New approaches to sepsis in the intensive care unit*. Speaker, College of Anaesthetists RCSI Annual Scientific Meeting, Dublin, Ireland.

- 05-05 *Challenges and solutions for better, safer patient care.* Speaker, College of Anaesthetists RCSI Annual Scientific Meeting, Dublin, Ireland.
- 06-05 *Surviving intensive care.* Speaker, 19th Annual Critical Care Symposium, Susquehanna Health System, Williamsport, PA
- 06-05 *Organization and Delivery of Intensive Care Services.* Speaker, 19th Annual Critical Care Symposium, Susquehanna Health System, Williamsport, PA
- 06-05 *How can we avoid next generation sepsis-related deaths?* Speaker, 3rd ISICM for Latin America, Sao Paulo, Brazil
- 06-05 *Cost-effectiveness in Sepsis Treatments.* Speaker, 3rd ISICM for Latin America, Sao Paulo, Brazil
- 06-05 *Epidemiology of sepsis.* Speaker, 3rd ISICM for Latin America, Sao Paulo, Brazil
- 06-05 *PIRO system: Time for Implementation?* Speaker, 3rd ISICM for Latin America, Sao Paulo, Brazil
- 06-05 *Future directions in the treatment of sepsis.* Speaker, Sepsis Symposium, Rio de Janeiro, Brazil
- 09-05 *Sepsis, and The Case for Translational Research,* Grand Rounds, Vanderbilt University, Nashville, TN
- 09-05 *Changing Critical Care Practice: When is the evidence enough?* Grand Rounds, Vanderbilt University, Nashville, TN
- 10-05 *What Cost a Survivor?* Speaker, 30th ANZICS Meeting, Adelaide, Australia
- 10-05 *Long-Term Outcomes of Critical Illness,* Speaker, 30th ANZICS Meeting, Adelaide Australia
- 10-05 *Evidence-Based Medicine Is The Way Forward: Pro-Con,* Speaker, 30th ANZICS Meeting, Adelaide Australia
- 10-05 *Why We Are The Best – US,* Speaker, 30th ANZICS Meeting, Adelaide Australia
- 01-06 *Procalcitonin in patients suspected for pneumonia,* Speaker, Society of Critical Care Medicine 35th Critical Care Conference, San Francisco, California.
- 01-06 *Critical Care Workforce (COMPACCS report),* Speaker, Society of Critical Care Medicine 35th Critical Care Conference, San Francisco, California.
- 01-06 *Implementing and interdisciplinary ICU quality improvement program: Where the rubber meets the road.* Session Moderator, Society of Critical Care Medicine 35th Critical Care Conference, San Francisco, California.
- 01-06 *What is ICU quality and why should we care?* Speaker, Society of Critical Care Medicine 35th Critical Care Conference, San Francisco, California.
- 01-06 *How will the intensive care service differ in the future?* Speaker, Society of Critical Care Medicine 35th Critical Care Conference, San Francisco, California.
- 02-06 *Adopting evidence: When is it enough?* Speaker, Canadian Critical Care Conference, Whistler, BC.
- 02-06 *The best bang for your buck.* Speaker, Canadian Critical Care Conference, Whistler, BC.
- 02-06 *Organization and delivery of critical care services in the US.* Speaker, Canadian Critical Care Conference, Whistler, BC.
- 03-06 *Sepsis and pneumonia.* Speaker, 26th International Symposium on Intensive Care and Emergency Medicine, Brussels, Belgium.
- 03-06 *Epidemiology of Sepsis.* Speaker, 26th International Symposium on Intensive Care and Emergency Medicine, Brussels, Belgium.
- 03-06 *Current epidemiology.* Speaker, 26th International Symposium on Intensive Care and Emergency Medicine, Brussels, Belgium.
- 03-06 *Organizational factors and outcome.* Speaker, 26th International Symposium on Intensive Care and Emergency Medicine, Brussels, Belgium.
- 05-06 *Genetics of sepsis.* Speaker, XII Brazilian Congress of Intensive Care Medicine, Recife, Brazil.
- 05-06 *Costs in the ICU.* Speaker, Brazilian Congress of Intensive Care Medicine, Recife, Brazil.

- 06-06 *Making translational research work in sepsis: Barriers and solutions.* Speaker, International Sepsis Forum 5th Colloquium, Toledo, Spain.
- 06-06 *Alteration in the host response and sepsis.* Session Moderator, International Sepsis Forum 5th Colloquium, Toledo, Spain.
- 06-06 *How to evaluate quality of life after ICU?* Speaker, Tuscany Critical Care Group Annual Meeting, Florence, Italy.
- 09-06 *Clinical challenge session: Mortality in my ICU is rising: What shall I do?* Discussant, European Society of Intensive Care Medicine 19th Annual Congress, Barcelona, Spain.
- 09-06 *Using biomarkers to guide antibiotic use.* Speaker, European Society of Intensive Care Medicine 19th Annual Congress, Barcelona, Spain.
- 09-06 *Genetics of community-acquired pneumonia.* Speaker, European Society of Intensive Care Medicine 19th Annual Congress, Barcelona, Spain.
- 09-06 *Outcome of patients with acute hepatic failure.* Session Moderator, European Society of Intensive Care Medicine 19th Annual Congress, Barcelona, Spain.
- 09-06 *The International Sepsis Forum: Thanks to recent definitive trials, we now know.* Session Moderator, European Society of Intensive Care Medicine 19th Annual Congress, Barcelona, Spain.
- 10-06 *Barriers to ICU-based clinical trials.* Speaker, International Sepsis Forum 6th Colloquium, Park City, Utah.
- 12-06 *Epidemiology in critical care research.* Speaker, UK Intensive Care Society State of the Art Meeting, London, England.
- 12-06 *Optimizing the organization of critical care services.* Speaker, UK Intensive Care Society State of the Art Meeting, London, England.
- 02-07 *Relation between critical care and chronic health.* Speaker, 15th Winter Symposium on Intensive Care, Crans-Montana, Switzerland.
- 02-07 *Round Table: Clinical Research – ethics and consent.* Speaker, 15th Winter Symposium on Intensive Care, Crans-Montana, Switzerland.
- 02-07 *Gender, race and genes in sepsis.* Speaker, 15th Winter Symposium on Intensive Care, Crans-Montana, Switzerland.
- 02-07 *Shortage of intensivists: Really?* Speaker, 15th Winter Symposium on Intensive Care, Crans-Montana, Switzerland.
- 02-07 *End-of-life care in the ICU.* Speaker, 15th Winter Symposium on Intensive Care, Crans-Montana, Switzerland.
- 02-07 *Pro/Con Debate: CPR – We have made great progress.* Speaker (Con position), 15th Winter Symposium on Intensive Care, Crans-Montana, Switzerland.
- 03-07 *Large observational studies in the ICU.* Speaker, Australia and New Zealand Intensive Care Society (ANZICS) Clinical Trials Group 9th Annual Meeting, Noosa Head, Australia.
- 03-07 *ProCESS: A multi-centre trial of early goal directed therapy – going multi-national.* Speaker, Australia and New Zealand Intensive Care Society (ANZICS) Clinical Trials Group 9th Annual Meeting, Noosa Head, Australia.
- 03-07 *Pro/Con Debate: We can use biomarkers to guide care in CAP.* Speaker (con position) 7th World Congress on Trauma, Shock, Inflammation, and Sepsis Meeting, Munich, Germany.
- 03-07 *The burden of sepsis: Epidemiologic and economic aspects.* Speaker, 7th World Congress Trauma, Shock, Inflammation, and Sepsis Meeting, Munich, Germany.
- 03-07 *Alternative trial design.* Speaker, 7th World Congress Trauma, Shock, Inflammation, and Sepsis Meeting, Munich, Germany.
- 03-07 *Early-goal directed therapy.* Speaker, 27th ISICEM Meeting, Brussels, Belgium.
- 03-07 *The burden they experience.* Speaker, 27th ISICEM Meeting, Brussels, Belgium.
- 03-07 *Long term outcomes.* Speaker, 27th ISICEM Meeting, Brussels, Belgium.

- 03-07 *Genetic factors... still looking.* Speaker, 27th ISICEM Meeting, Brussels, Belgium.
- 03-07 *Unresolved inflammation and long term outcomes.* Speaker, 27th ISICEM Meeting, Brussels, Belgium.
- 03-07 *Influence of race and socio-economic status.* Speaker, 27th ISICEM Meeting, Brussels, Belgium.
- 03-07 *Do we need trauma centers?* Speaker, 27th ISICEM Meeting, Brussels, Belgium.
- 03-07 *Increasing demand for intensivists.* Speaker, 27th ISICEM Meeting, Brussels, Belgium.
- 04-07 *An outsider's view of ICNARC and the Case Mix Programme and some challenges for the future.* Speaker, 10th Annual Meeting of the Case Mix Programme, The Royal College of Surgeons of England, London, England.
- 05-07 *Life after critical care.* Speaker, American Thoracic Society, International Conference. San Francisco, CA.
- 05-07 *The case for a Department of Critical Care Medicine.* Speaker, American Thoracic Society, International Conference, San Francisco, CA.
- 06-07 *Epidemiologic evidence for a link between acute sepsis and chronic health.* Speaker, International Sepsis Forum, 6th Annual Colloquium, Annapolis, MD.
- 09-07 *Targets for improved care and outcome in sepsis.* Speaker, International Sepsis Forum, Sepsis 2007, An International Symposium, Paris, France.
- 09-07 *Non-mortality endpoints.* Speaker, International Sepsis Forum, Sepsis 2007, An International Symposium, Paris, France.
- 10-07 *The Surviving Sepsis Campaign has achieved its goals: Con.* European Society of Intensive Care Medicine Annual Congress, Berlin, Germany.
- 10-07 *What's our job: art, science, or engineering?* Speaker, European Society of Intensive Care Medicine Annual Congress, Berlin, Germany.
- 11-07 *A translational research paradigm for critical care.* Speaker, Fifth Symposium of the Functional Genomics of Critical Illness and Injury Meeting, Bethesda, Maryland.
- 01-08 *The role of Procalcitonin and other biomarkers in severe sepsis and severe CAP.* Speaker, Surviving Sepsis Campaign Data Analysis Meeting, New York, New York.
- 01-08 *Regionalizing critical care services.* Speaker, International Society of Intensive Care and Emergency Medicine 16th Winter Meeting, Steamboat Springs, Colorado.
- 01-08 *Early goal directed therapy in sepsis.* Speaker, International Society of Intensive Care and Emergency Medicine 16th Winter Meeting, Steamboat Springs, Colorado.
- 01-08 *Gender and race differences.* Speaker, International Society of Intensive Care and Emergency Medicine 16th Winter Meeting, Steamboat Springs, Colorado.
- 01-08 *How I deal with relatives.* Round table participant. International Society of Intensive Care and Emergency Medicine 16th Winter Meeting, Steamboat Springs, Colorado.
- 01-08 *Palliative care in the ICU.* Round table participant. International Society of Intensive Care and Emergency Medicine 16th Winter Meeting, Steamboat Springs, Colorado.
- 02-08 *What Journals Look for to Publish: How It Works and How to Get It In.* Speaker, 5th Annual Canadian Critical Care Conference, Whistler, BC.
- 02-08 *Genetics and Molecular Markers to the Bedside: Ready for Prime Time?* Speaker, 5th Annual Canadian Critical Care Conference, Whistler, BC.
- 03-08 *Report of the Round Table Conference on Improving Clinical Trials in the Critically Ill.* Speaker, 28th International Symposium on Intensive Care and Emergency Medicine, Brussels, Belgium.
- 03-08 *Do we need to study it further?* Speaker, 28th International Symposium on Intensive Care and Emergency Medicine, Brussels, Belgium.

- 03-08 *Regionalizing critical care services.* Speaker, 28th International Symposium on Intensive Care and Emergency Medicine, Brussels, Belgium.
- 03-08 *We must consider gender and race.* Speaker, 28th International Symposium on Intensive Care and Emergency Medicine, Brussels, Belgium.
- 03-08 *Genetic factors.* Speaker, 28th International Symposium on Intensive Care and Emergency Medicine, Brussels, Belgium.
- 04-08 *Early goal directed therapy in septic shock.* Speaker, Patient Journey from ER to ICU, Edinburgh, Scotland.
- 05-08 *Genetic background, morbidity and development of multi-organ failure – What has been proven.* Speaker, International Sepsis Forum, 7th Annual Colloquium, Chapel Hill, NC.
- 06-08 *Early Goal Directed Therapy in Septic Shock.* Grand Rounds, Department of Anesthesia and Critical Care, Shriners' Hospital, Boston, MA.
- 08-08 *Early Goal Directed Therapy in Septic Shock.* Grand Rounds, Department of Medicine, Mercy Hospital of Pittsburgh, Pittsburgh, PA.
- 08-08 *Improving clinical trials in the critically ill.* Speaker, 18th Argentine Congress on Intensive Care, 3rd Argentine Congress on Emergency, Trauma and Critical Care, Buenos Aires, Argentina.
- 08-08 *Epidemiology and clinical management.* Speaker, 18th Argentine Congress on Intensive Care, 3rd Argentine Congress on Emergency, Trauma and Critical Care, Buenos Aires, Argentina.
- 08-08 *Early goal directed therapy for sepsis.* Speaker, 18th Argentine Congress on Intensive Care, 3rd Argentine Congress on Emergency, Trauma and Critical Care, Buenos Aires, Argentina.
- 08-08 *The relationship between acute critical illness and long-term health.* Speaker, 18th Argentine Congress on Intensive Care, 3rd Argentine Congress on Emergency, Trauma and Critical Care, Buenos Aires, Argentina.
- 08-08 *Racial variation in the incidence, care, and outcomes of severe sepsis: Analysis of population, patient and hospital characteristics.* Round table participant, 18th Argentine Congress on Intensive Care, 3rd Argentine Congress on Emergency, Trauma and Critical Care, Buenos Aires, Argentina.
- 09-08 *Sepsis: Predisposition and outcome.* Chair, 21st Annual Congress of the European Society of Intensive Care Medicine, Lisbon, Portugal.
- 09-08 *Impact of socio-economic burden.* Speaker, 21st Annual Congress of the European Society of Intensive Care Medicine, Lisbon, Portugal.
- 09-08 *Organ dysfunction: Biomarkers vs scores.* Speaker, 21st Annual Congress of the European Society of Intensive Care Medicine, Lisbon, Portugal.
- 09-08 *Controversies in sepsis.* Chair, 21st Annual Congress of the European Society of Intensive Care Medicine, Lisbon, Portugal.
- 11-08 *Early goal directed therapy.* Speaker, Sepsis 2008, Granada, Spain.
- 11-08 *Host Response.* Chair, Sepsis 2008, Granada, Spain.
- 11-08 *Statins.* Speaker, Sepsis 2008, Granada, Spain.
- 02-09 *Future of clinical trials in sepsis.* Speaker, Society of Critical Care Medicine, Nashville, TN.
- 02-09 *Future global research – genetic studies.* Speaker, Society of Critical Care Medicine, Nashville, TN.
- 02-09 *Working 9pm to 5am – Who will replace and take care of us.* Chair, Society of Critical Care Medicine, Nashville, TN.
- 02-09 *Impending critical care manpower crisis.* Speaker, Society of Critical Care Medicine, Nashville, TN.
- 02-09 *Seeing intensive care from 50,000 feet. The case for finding our inner administrator.* Speaker, 2009 Canadian Critical Care Conference, Whistler, BC.
- 02-09 *The economics of death and dying in the ICU.* Speaker, 2009 Canadian Critical Care Conference, Whistler, BC.

- 03-09 *Early goal directed therapy for septic shock.* Speaker, 2009 Pediatric Acute Lung Injury and Sepsis Investigators (PALISI) Meeting, Snowbird, UT
- 03-09 *Biomarkers in pneumonia and sepsis.* Speaker, 2009 Pediatric Acute Lung Injury and Sepsis Investigators (PALISI) Meeting, Snowbird, UT
- 04-09 *Clinical Crossroads.* Grand Rounds Presenter, Beth Israel Deaconess Medical Center, Boston, MA
- 05-09 *Early Goal Directed Therapy: Reconsidering the evidence and the indications today.* Speaker, 7th Critical Care and Emergency Medicine Meeting of the Greek Armed Forces Medical Corps, Athens, Greece
- 05-09 *The sepsis bundle: pro.* Speaker, 7th Critical Care and Emergency Medicine Meeting of the Greek Armed Forces Medical Corps, Athens, Greece
- 05-09 *Using biomarkers and functional genomics technology to guide antibiotic therapy in the septic patient.* Speaker, 7th Critical Care and Emergency Medicine Meeting of the Greek Armed Forces Medical Corps, Athens, Greece
- 06-09 *Multicenter Early Goal Directed Therapy Trial for Septic Shock.* Speaker, 5th International Symposium on ISICEM for Latin America 2009, Sao Paulo, Brazil
- 06-09 *Growth of Intensive Care Unit Resource Use.* Speaker, 5th International Symposium on ISICEM for Latin America 2009, Sao Paulo, Brazil
- 06-09 *Realistic Simulation in the ICU Patient Admission Process.* Speaker, 5th International Symposium on ISICEM for Latin America 2009, Sao Paulo, Brazil
- 09-09 *Testing resuscitation strategies for septic shock.* Speaker, Snyder Critical Care Medicine Research Day, Calgary, Canada.
- 10-09 *ICU volume, models of care and patient safety.* Speaker, 22nd Annual Congress of the European Society of Intensive Care Medicine, Vienna, Austria
- 10-09 *Can we have cost considerations in medical decisions? Yes.* Speaker, 22nd Annual Congress of the European Society of Intensive Care Medicine, Vienna, Austria
- 10-09 *Do we need intensivists in the ICU? Yes, sure!* Speaker, 22nd Annual Congress of the European Society of Intensive Care Medicine, Vienna, Austria
- 10-09 *PCT measurement should now be the standard of care in patients with suspected infection – Con.* Speaker, 22nd Annual Congress of the European Society of Intensive Care Medicine, Vienna, Austria
- 11-09 *Toll-like receptors in sepsis and critical illness.* Co-Chair, Sepsis 2009, Amsterdam, Netherlands
- 11-09 *EGDT and other “bundle” trials in sepsis.* Speaker, Sepsis 2009, Amsterdam, Netherlands
- 01-10 *We should use biomarkers to guide care for sepsis patients: CON.* Speaker, Society for Critical Care Medicine, Miami, FL
- 01-10 *How best to generate new evidence? The conduct of clinical trials.* Speaker, Society for Critical Care Medicine, Miami, FL
- 03-10 *ICU freakonomics: Why we act the way we do, and how we can change behavior and practice.* Speaker, International Symposium on Intensive Care and Emergency Medicine Round Table, Brussels, Belgium
- 03-10 *ICU bundles: Advantages and limitations.* Speaker, International Symposium on Intensive Care and Emergency Medicine, Brussels, Belgium
- 03-10 *Using simulators as teaching tools.* Speaker, International Symposium on Intensive Care and Emergency Medicine, Brussels, Belgium
- 03-10 *Freakonomics and ICU bandwagons.* Speaker, International Symposium on Intensive Care and Emergency Medicine, Brussels, Belgium
- 03-10 *Long term outcomes in sepsis.* Speaker, International Symposium on Intensive Care and Emergency Medicine, Brussels, Belgium

- 03-10 *Round Table, My experience with H1N1.* Moderator, International Symposium on Intensive Care and Emergency Medicine, Brussels, Belgium
- 03-10 *Methodological challenges.* Speaker, International Symposium on Intensive Care and Emergency Medicine, Brussels, Belgium
- 03-10 *Intensive care without borders.* Moderator, International Symposium on Intensive Care and Emergency Medicine, Brussels, Belgium
- 05-10 *Sepsis 2010: an update,* Speaker, Institut d'Or, Rio de Janeiro, Brazil.
- 05-10 *Sepsis bundles and protocols,* Speaker, Sepsis Forum, Buzios, Brazil.
- 05-10 *Study design challenges in sepsis and critical care,* Speaker, Sepsis Forum, Buzios, Brazil.
- 05-10 *Towards theragnostics in sepsis and critical care,* Speaker, Sepsis Forum, Buzios, Brazil.
- 05-10 *Long term outcome from sepsis,* Speaker, Sepsis Forum, Buzios, Brazil.
- 05-10 *Early goal directed therapy for sepsis.* Speaker, Evidence 2 Excellence (E2E) Sepsis Management Group WedEx lecture, University of British Columbia, Vancouver, BC.
- 07-10 *SSC: a critical perspective,* Speaker, 5th International Critical Care Course, Santiago, Chile.
- 07-10 *What to do with steroids after the Corticus trial?* Speaker, 5th International Critical Care Course, Santiago, Chile.
- 07-10 *EDGT trial: critical analysis and perspectives,* Speaker, 5th International Critical Care Course, Santiago, Chile.
- 07-10 *Which is the best resuscitation goal in septic shock? the clinician individualized approach,* Speaker, 5th International Critical Care Course, Santiago, Chile.
- 09-10 *The burden of sepsis in the developed world.* Speaker, Sepsis 2010, Paris France.
- 09-10 *How and why sepsis kills.* Co-Chair, Sepsis 2010, Paris, France.
- 09-10 *Round Table: Why do so many sepsis trials fail? Update on ongoing trials.* Co-Chair, Sepsis 2010, Paris, France.
- 09-10 *Early goal directed therapy: ProCESS, ARISE and ProMISE.* Speaker, Sepsis 2010, Paris, France.
- 09-10 *Sepsis: The global burden of disease.* Speaker, Merinoff Symposium 2010: Sepsis, Manhasset, NY.
- 10-10 *ICU Organization,* Chair, European Society of Intensive Care Medicine 23rd Annual Congress, Barcelona, Spain.
- 10-10 *Making sense of controversies,* Speaker, Society of Intensive Care Medicine 23rd Annual Congress, Barcelona, Spain.
- 10-10 *Outcome and ethnicity,* Speaker, Society of Intensive Care Medicine 23rd Annual Congress, Barcelona, Spain.
- 10-10 *Pro: Hemodynamic monitoring in septic sock – an arterial,* Speaker, Society of Intensive Care Medicine 23rd Annual Congress, Barcelona, Spain.
- 11-10 *Sepsis I: How can sepsis impact on gender and race?* Speaker, Critical Care Canada Forum, Toronto, Canada.
- 11-10 *Sepsis II: Therapeutics,* Moderator, Critical Care Canada Forum, Toronto, Canada.
- 11-10 *Sepsis II: Studying the basic resuscitation: Why the ProCESS study?"* Speaker, Critical Care Canada Forum, Toronto, Canada.
- 11-10 *Clinical Research I: New ways to get answers about sepsis,* Speaker, Critical Care Canada Forum, Toronto, Canada.
- 12-10 *Sepsis bundles,* Speaker, Latin-American Symposium in Sepsis, San Carlos, Costa Rica.
- 12-10 *Early goal directed therapy for sepsis,* Speaker, Latin-American Symposium in Sepsis, San Carlos, Costa Rica.
- 12-10 *Biomarkers in sepsis,* Speaker, Latin-American Symposium in Sepsis, San Carlos, Costa Rica.
- 01-11 *Emerging advances and new paradigms for sepsis management – The critical care perspective for 2011 and beyond,* Chair and Speaker, 40th Annual Scientific Congress, Society of Critical Care Medicine, San Diego, CA.
- 01-11 *Clinical trials in sepsis: Recent studies and advances,* Speaker, 40th Annual Scientific Congress, Society of Critical Care Medicine, San Diego, CA.

- 01-11 *Controversies in clinical trials*, Moderator, 40th Annual Scientific Congress, Society of Critical Care Medicine, San Diego, CA.
- 01-11 *Problems with sepsis trials*, Speaker, 40th Annual Scientific Congress, Society of Critical Care Medicine, San Diego, CA.
- 01-11 *Sepsis in 2011: Challenges and opportunities*, Speaker, Daniel Schuster Memorial Lecture, Washington University, St. Louis, MO.
- 01-11 *Early goal directed therapy for sepsis*, Speaker, Pediatric Grand Rounds, Washington University, St. Louis, MO.
- 02-11 *Sepsis in 2011: Challenges and opportunities*, Speaker, The 38th Annual Meeting of the Japanese Society of Intensive Care Medicine, Yokohama, Japan.
- 03-11 *Has the outcome from sepsis changed? Sepsis, any change?* Speaker, 31st International Symposium on Intensive Care and Emergency Medicine, Brussels, Belgium.
- 03-11 *Is the Rivers way the only one? Improving early management of sepsis.* Speaker, 31st International Symposium on Intensive Care and Emergency Medicine, Brussels, Belgium.
- 03-11 *How to improve our decision-making, Team building.* Speaker, 31st International Symposium on Intensive Care and Emergency Medicine, Brussels, Belgium.
- 03-11 *Challenges to sepsis research, MOF: New therapies on the horizon.* Speaker, 31st International Symposium on Intensive Care and Emergency Medicine, Brussels, Belgium.
- 03-11 *The major problems in my environment – workshop.* Moderator, Speaker, 31st International Symposium on Intensive Care and Emergency Medicine, Brussels, Belgium.
- 04-11 *What every intensivist needs to know.* Speaker, Singapore ANZICS Intensive Care Forum, Singapore.
- 04-11 *ICU use at end of life.* Speaker, Singapore ANZICS Intensive Care Forum, Singapore.
- 04-11 *Life after ICU-Linking evidence to practice.* Speaker, Singapore ANZICS Intensive Care Forum, Singapore.
- 04-11 *Critical Care Medicine – Current and future challenges.* Chairperson, Round table discussion, Speaker, Singapore ANZICS Intensive Care Forum, Singapore.
- 05-11 *Sepsis in 2011: Challenges and opportunities.* Speaker, Anesthesiology Grand Rounds, University of California at San Francisco, San Francisco, CA.
- 05-11 *Measuring whether resuscitation strategies really work.* Speaker, American Thoracic Society 2011 International Conference, Denver CO.
- 05-11 *Racial disparities in the ICU.* Speaker, American Thoracic Society 2011 International Conference, Denver CO.
- 05-11 *Is 24 hour intensivist coverage better than just daytime?* Speaker, American Thoracic Society 2011 International Conference, Denver CO.
- 06-11 *Multicenter early goal directed therapy trial for septic shock.* Speaker, 6th International Symposium on Intensive Care and Emergency Medicine, Sao Paulo, Brazil.
- 06-11 *Thought outside the box: intensive care unit freakonomics and decision making in the intensive care unit.* Speaker, 6th International Symposium on Intensive Care and Emergency Medicine, Sao Paulo, Brazil.
- 06-11 *The effect of race, sex, and insurance status on time-to-listing decisions for liver transplantation.* Speaker, 6th International Symposium on Intensive Care and Emergency Medicine, Sao Paulo, Brazil.
- 07-11 *Sepsis in 2011: Challenges and opportunities.* Speaker, The 14th Annual Roger C. Bone, MD Memorial Pulmonary and Critical Care Medicine Lecture, Rush University Medical Center, Chicago, IL.
- 10-11 *The burden of ICU acquired infections and impact on patient's safety.* Speaker, 24th Annual Congress of the European Society of Intensive Care Medicine 2011, Berlin, Germany.
- 10-11 *Methodologic challenges in the study and eradication of hospital-acquired infection.* Speaker, 24th Annual Congress of the European Society of Intensive Care Medicine 2011, Berlin, Germany.

- 10-11 *Ethical issues raised by RCTs in critically ill patients.* Speaker, 24th Annual Congress of the European Society of Intensive Care Medicine 2011, Berlin, Germany.
- 10-11 *The burden of sepsis in the developed world.* Speaker, Chinese Society of Critical Care Medicine 2011 Annual Scientific Congress, Beijing, China.
- 10-11 *Early goal directed therapy.* Speaker, Chinese Society of Critical Care Medicine 2011 Annual Scientific Congress, Beijing, China.
- 10-11 *Early goal directed therapy: ProCESS ARISE AND ProMISE.* Speaker, Chinese Society of Critical Care Medicine 2011 Annual Scientific Congress, Beijing, China.
- 12-11 *ICU Freakonomics.* Speaker, Intensive Care Society State of the Art Meeting 2011, London, England.
- 12-11 *Do we need to revisit early goal directed therapy?* Speaker, Intensive Care Society State of the Art Meeting 2011, London, England.
- 12-11 *Long term outcomes from critical care.* Speaker, Intensive Care Society State of the Art Meeting 2011, London, England.
- 12-11 *Sepsis: Challenges and opportunities.* Speaker, Intensive Care Society State of the Art Meeting 2011, London, England.
- 12-11 *Early goal directed therapy.* Speaker, Intensive Care Society State of the Art Meeting 2011, London, England.
- 03-12 *Long-term outcomes in Sepsis.* Speaker, 32nd International Symposium on Intensive Care and Emergency Medicine, Brussels, Belgium.
- 03-12 *We need more trials.* Speaker, 32nd International Symposium on Intensive Care and Emergency Medicine, Brussels, Belgium.
- 03-12 *How to run a critical care program.* Speaker, 32nd International Symposium on Intensive Care and Emergency Medicine, Brussels, Belgium.
- 03-12 *Why is PROWESS Shock negative?* Speaker, 32nd International Symposium on Intensive Care and Emergency Medicine, Brussels, Belgium.
- 03-12 *How do we make decisions?* Speaker, 32nd International Symposium on Intensive Care and Emergency Medicine, Brussels, Belgium.
- 03-12 *How to interpret clinical studies.* Speaker, 32nd International Symposium on Intensive Care and Emergency Medicine, Brussels, Belgium.
- 03-12 *Only mortality as an end point?* Speaker, 32nd International Symposium on Intensive Care and Emergency Medicine, Brussels, Belgium.
- 03-12 *What we learned from H1N1.* Moderator, 32nd International Symposium on Intensive Care and Emergency Medicine, Brussels, Belgium.
- 03-12 *Clinical Trials: Maybe we are expecting too much?* Moderator, 32nd International Symposium on Intensive Care and Emergency Medicine, Brussels, Belgium.
- 04-12 *Future of clinical trials in sepsis.* Speaker, IX International Sepsis Forum, Sao Paulo, Brazil.
- 04-12 *Protein C: the saga and failure of phase III trials in sepsis.* Speaker, IX International Sepsis Forum, Sao Paulo, Brazil.
- 04-12 *Sepsis around the world.* Speaker, IX International Sepsis Forum, Sao Paulo, Brazil.
- 04-12 *How to guide therapy: Svo2, lactate or routine care?* Speaker, IX International Sepsis Forum, Sao Paulo, Brazil.
- 10-12 *The type of hemodynamic monitoring matters: Con.* Speaker, 25th Annual Congress of the European Society of Intensive Care Medicine 2012, Lisbon, Portugal.
- 10-12 *Was there sufficient clinical evidence for the initial Xigris hype?* Speaker, 25th Annual Congress of the European Society of Intensive Care Medicine 2012, Lisbon, Portugal.

- 10-12 *Sepsis, Epidemiology and Outcome*. Chair, 25th Annual Congress of the European Society of Intensive Care Medicine 2012, Lisbon, Portugal.
- 10-12 *The clinician's mandate: Implementing evidence into clinical practice*. Speaker, 25th Annual Congress of the European Society of Intensive Care Medicine 2012, Lisbon, Portugal.
- 10-12 *What does long-term survival mean after sepsis?* Speaker, 25th Annual Congress of the European Society of Intensive Care Medicine 2012, Lisbon, Portugal.
- 10-12 *Reinventing clinical trials*. Speaker, 25th Annual Congress of the European Society of Intensive Care Medicine 2012, Lisbon, Portugal.
- 10-12 *Making inroads in sepsis*. Sixth Annual Ri.MED Scientific Symposium, Palermo, Italy.
- 10-12 *Making inroads in sepsis*. American Hospital Conference, Koc University, Istanbul, Turkey.
- 11-12 *Should we protocolize resuscitation?* Speaker, International Sepsis Forum 2012, Paris France.
- 01-13 *Multicenter/multinational collaborative research*. Speaker, 42nd Annual Scientific Congress, Society of Critical Care Medicine, San Juan, Puerto Rico.
- 01-13 *What do we know and how can we use it today?* Speaker, 42nd Annual Scientific Congress, Society of Critical Care Medicine, San Juan, Puerto Rico.
- 01-13 *Epidemiology/Outcomes 2*. Moderator, 42nd Annual Scientific Congress, Society of Critical Care Medicine, San Juan, Puerto Rico.
- 01-13 *Resuscitative Endocrinology*. Moderator, 42nd Annual Scientific Congress, Society of Critical Care Medicine, San Juan, Puerto Rico.
- 01-13 *Gender and outcome differences in resuscitation*. Speaker, 42nd Annual Scientific Congress, Society of Critical Care Medicine, San Juan, Puerto Rico.
- 01-13 *Conflict of interest in medical research*. Moderator, 42nd Annual Scientific Congress, Society of Critical Care Medicine, San Juan, Puerto Rico.
- 02-13 *Making better decisions: ICU Freakonomics*. Speaker, 2013 Canadian Critical Care Conference, Whistler, BC.
- 02-13 *Long-term outcomes after critical illness Part 2: Life is an inflammatory event*. Speaker, 2013 Canadian Critical Care Conference, Whistler, BC.
- 02-13 *New horizons for sepsis trials?* Speaker, 2013 Canadian Critical Care Conference, Whistler, BC.
- 02-13 *Making inroads in sepsis care*. Speaker, Thomas Iberti Memorial Grand Rounds Lecture, Mount Sinai School of Medicine, New York, NY.
- 03-13 *My ICU/ER is overcrowded!* Moderator, 33rd International Symposium on Intensive Care and Emergency Medicine, Brussels, Belgium.
- 03-13 *Clinical trial design in sepsis*. Speaker, 33rd International Symposium on Intensive Care and Emergency Medicine, Brussels, Belgium.
- 03-13 *Behavioral economics of intensive care – Patients and families*. Speaker, 33rd International Symposium on Intensive Care and Emergency Medicine, Brussels, Belgium.
- 03-13 *How we react to tissue injury*. Moderator, 33rd International Symposium on Intensive Care and Emergency Medicine, Brussels, Belgium.
- 03-13 *Should we use the SSC guidelines for hemodynamic resuscitation in septic shock?* Speaker, 33rd International Symposium on Intensive Care and Emergency Medicine, Brussels, Belgium.
- 03-13 *Neurocognitive outcomes are important – Long-term outcomes*. Speaker, 33rd International Symposium on Intensive Care and Emergency Medicine, Brussels, Belgium.
- 03-13 *Bundle, checklist and guideline implementation in critical care*. Speaker, 33rd International Symposium on Intensive Care and Emergency Medicine, Brussels, Belgium.

- 04-13 *Making inroads in sepsis.* Speaker, Northwestern University Hicks Memorial Grand Rounds, Chicago IL.
- 05-13 *Outcome Measures in Critical Illness: Special Considerations, Generic or disease-specific?* Speaker, InFACT(International Forum for Acute Care Trialists) Outcome Measures Working Group, Amsterdam, Netherlands.
- 05-13 *Outcome Measures in Critical Illness: Special Considerations, Quality of life and long term outcomes.* Speaker, InFACT (International Forum for Acute Care Trialists) Outcome Measures Working Group, Amsterdam, Netherlands.
- 05-13 *Early goal directed therapy in sepsis.* Speaker, 19th International Intensive Care Symposium, Istanbul, Turkey.
- 05-13 *The acute respiratory distress syndrome: what's in a name?* Speaker, 19th International Intensive Care Symposium, Istanbul, Turkey.
- 05-13 *Sepsis Therapeutics and Clinical Trials: What went wrong?* Speaker, American Thoracic Society International Conference, Philadelphia, PA.
- 05-13 *Sepsis Clinical Trials: Can we improve?* Speaker, American Thoracic Society International Conference, Philadelphia, PA.
- 05-13 *Proposed STOIC trial of SARI using Bayesian adaptive design.* Speaker, ANZICS Clinical Trials Design Workshop, Wellington, New Zealand.
- 05-13 *Thirty years of failed sepsis trials: are we stupid or what?* Speaker, College of Intensive Care Medicine 2013 Annual Scientific Meeting, Wellington, New Zealand.
- 06-13 *Bundles of care – treatment option or reflection of local logistic failure?* Speaker, College of Intensive Care Medicine 2013 Annual Scientific Meeting, Wellington, New Zealand.
- 06-13 *Regionalization, telemedicine and community outreach.* Speaker, College of Intensive Care Medicine 2013 Annual Scientific Meeting, Wellington, New Zealand.
- 07-13 *Long-term outcomes.* Speaker, European Society of Critical Care Medicine Regional Conference, Sepsis from bench to bedside, Montreux, Switzerland.
- 07-13 *New sepsis guidelines: What about nutrition?* Speaker, European Society of Critical Care Medicine Regional Conference, Sepsis from bench to bedside, Montreux, Switzerland.
- 07-13 *Attractive targets.* Speaker, European Society of Critical Care Medicine Regional Conference, Sepsis from bench to bedside, Montreux, Switzerland.
- 09-13 *Beyond the bundle.* Speaker, Partnership for Quality Care Sepsis Webinar on-line.
- 10-13 *Sepsis care should be bundled: Pro.* Speaker, 26th Annual Congress of the European Society of Intensive Care Medicine, Paris, France.
- 10-13 *Looking behind the bundles: Deep diving in the controversial aspects.* Speaker, 26th Annual Congress of the European Society of Intensive Care Medicine, Paris, France.
- 10-13 *Delirium: Just another feature of critical illness.* Speaker, 26th Annual Congress of the European Society of Intensive Care Medicine, Paris, France.
- 10-13 *The role of general medical journals.* Speaker, 26th Annual Congress of the European Society of Intensive Care Medicine, Paris, France.
- 10-13 *Accept, reject, adopt, forget. . . Good reasons for (ir)rational behaviours, Guidelines.* Speaker, 26th Annual Congress of the European Society of Intensive Care Medicine, Paris, France.
- 11-13 *Improving the process of care.* Speaker, International Sepsis Forum 2013, Rio de Janeiro, Brazil.
- 11-13 *Plenary Session, The great fluid dilemmas.* Moderator, International Sepsis Forum 2013, Rio de Janeiro, Brazil.
- 11-13 *Should we use adaptive designs?* Speaker, International Sepsis Forum 2013, Rio de Janeiro, Brazil.
- 11-13 *Pro-Con – Challenging the guidelines.* Moderator, International Sepsis Forum 2013, Rio de Janeiro, Brazil.
- 11-13 *The early goal directed therapy trials.* Speaker, International Sepsis Forum 2013, Rio de Janeiro, Brazil.

- 11-13 *Making inroads in sepsis research.* Speaker, Brazilian Congress of Intensive Care Medicine, Rio de Janeiro, Brazil.
- 11-13 *Insights from JAMA.* Speaker, Brazilian Congress of Intensive Care Medicine, Rio de Janeiro, Brazil.
- 02-14 *The truth behind the surviving sepsis bundles.* Speaker, 2014 Canadian Critical Care Conference, Whistler, BC.
- 02-14 *Delivering care in the future: Can we afford it?* Speaker, 2014 Canadian Critical Care Conference, Whistler, BC.
- 03-14 *Multiple concomitant small size trials and prospective meta-analysis: Drug performance in ideal circumstances.* Speaker, Round Table Conference “Evidence-based care: New directions,” Brussels, Belgium.
- 03-14 *What are the practical challenges to managing pneumonia in the mechanically ventilated patient in the ICU?* Speaker, Bayer HealthCare Symposium, Brussels, Belgium.
- 03-14 *EGDT ProCESS.* Speaker, 34th Annual International Symposium on Intensive Care and Emergency Medicine, Brussels, Belgium.
- 03-14 *New study designs in sepsis – New approaches to clinical trials.* Speaker, 34th Annual International Symposium on Intensive Care and Emergency Medicine, Brussels, Belgium.
- 03-14 *Public Awareness.* Moderator, 34th Annual International Symposium on Intensive Care and Emergency Medicine, Brussels, Belgium.
- 03-14 *Guidelines and Bundles.* Moderator, 34th Annual International Symposium on Intensive Care and Emergency Medicine, Brussels, Belgium.
- 03-14 *Long term sequelae of sepsis – After the ICU.* Speaker, 34th Annual International Symposium on Intensive Care and Emergency Medicine, Brussels, Belgium.
- 03-14 *Only large scale RCTs can tell what treatments work? – Pro-con debate.* Moderator, 34th Annual International Symposium on Intensive Care and Emergency Medicine, Brussels, Belgium.
- 03-14 *Impact of ICU staffing and organization on outcomes – ICU staffing.* Speaker, 34th Annual International Symposium on Intensive Care and Emergency Medicine, Brussels, Belgium.
- 03-14 *A tale of 7 cities – Intensive care around the globe.* Speaker, 34th Annual International Symposium on Intensive Care and Emergency Medicine, Brussels, Belgium.
- 04-14 *Beyond the bundle: A randomized clinical trial of protocol-based care for early septic shock,* Speaker, Partnership for Quality Care Sepsis Webinar on-line.
- 05-14 *Identifying and functioning within your collaborative multidisciplinary research team,* Speaker, Postgraduate Course “PGII-Ttranslational research training for the early investigator: A practical skills workshop,” American Thoracic Society International Conference, San Diego, CA.
- 05-14 *Protocolized care for early septic shock (ProCESS) trial,* Speaker, “JAMA/NEJM Session: Discussion on the edge: Reports of recently published critical care research,” American Thoracic Society International Conference, San Diego, CA.
- 05-14 *Protocolized care for early septic shock (ProCESS) trial,* Speaker, “Time 0 to 5 hours: Revisiting the golden hours,” American Thoracic Society International Conference, San Diego, CA.
- 07-14 *A randomized clinical trial of protocol-based care for early septic shock,* Speaker, STOP Sepsis Collaborative Conference, New York City, NY.
- 09-14 *Clinical trials in the ICU: The next generation.* Keynote Speaker, Opening Session, 27th Annual Congress of the European Society of Intensive Care Medicine, Barcelona, Spain.
- 09-14 *In-house intensivists: Pro and con,* Speaker, 27th Annual Congress of the European Society of Intensive Care Medicine, Barcelona, Spain.
- 09-14 *Three papers that changed my practice,* Co-chair, 27th Annual Congress of the European Society of Intensive Care Medicine, Barcelona, Spain.
- 09-14 *RCT’s: The shorter path from study to bedside to community,* Speaker, 27th Annual Congress of the European Society of Intensive Care Medicine, Barcelona, Spain.

- 09-14 *Sepsis 2014: Are we ready for the battle?* Co-chair, Speaker, 27th Annual Congress of the European Society of Intensive Care Medicine, Barcelona, Spain.
- 09-14 *Early goal directed therapy in sepsis – What remains*, Speaker, Speaker, 27th Annual Congress of the European Society of Intensive Care Medicine, Barcelona, Spain.
- 09-14 *Clinical trials in the ICU – Sepsis and acute lung injury*, Co-chair, Speaker, 27th Annual Congress of the European Society of Intensive Care Medicine, Barcelona, Spain.
- 10-14 *The future of trials for the acutely ill: Trying to be smarter for our patients*, Distinguished Visiting Professor, University of Michigan Department of Internal Medicine, Ann Arbor, MI.
- 11-14 *Perimeter*, Speaker, Leadership Pittsburgh UnBoxed, Farmington, PA.
- 12-14 *ProCESS (Protocolized Care for Early Septic Shock)*, Speaker, International Sepsis Forum 2014, Paris, France.
- 12-14 *The ProACT study*, Speaker, International Sepsis Forum 2014, Paris, France.
- 12-14 *Definitions and stratification: Are we making progress?* Speaker, International Sepsis Forum 2014, Paris, France.
- 01-15 *Designing a successful trial: Adaptive clinical trial design*, Speaker, Therapies in sepsis: How to design successful trials? Paris, France.
- 01-15 *What are the main messages?* Speaker, Therapies in sepsis: How to design successful trials? Paris, France.
- 01-15 *Fluids as part of early goal-directed therapy in sepsis*, Speaker, 44th Annual Scientific Congress, Society of Critical Care Medicine, Phoenix, AZ.
- 01-15 *Mortality is the best outcome for clinical trials*, Speaker, 44th Annual Scientific Congress, Society of Critical Care Medicine, Phoenix, AZ.
- 01-15 *Adaptive trials as platforms for large scale collaboration*, Speaker, InFACT (International Forum for Acute Care Trialists), Lake Louise, Alberta, Canada.
- 01-15 *Mapping global acute care capacity*, Speaker, InFACT (International Forum for Acute Care Trialists), Lake Louise, Alberta, Canada.
- 01-15 *Mapping global capacity for acute care research*, Speaker, InFACT (International Forum for Acute Care Trialists), Lake Louise, Alberta, Canada.
- 02-15 *Critical illness and long-term neurocognitive impairment*, Speaker, 2015 Canadian Critical CareConference, Whistler, BC.
- 02-15 *Fusing care with research: the perpetual clinical trial?* Speaker, 2015 Canadian Critical CareConference, Whistler, BC.
- 03-15 *Beyond hospital discharge*, Speaker, Round Table Conference “Reducing the Global Burden of Sepsis – Developing a Roadmap,” Brussels, Belgium.
- 03-15 *Where is the biggest bang for our buck?* Speaker, Round Table Conference “Reducing the Global Burden of Sepsis – Developing a Roadmap,” Brussels, Belgium.
- 03-15 *Should we centralize ICU care?* Speaker, 35th Annual International Symposium on Intensive Care and Emergency Medicine, Brussels, Belgium.
- 03-15 *ARDS and sepsis: Incidence and outcomes*, Speaker, 35th Annual International Symposium on Intensive Care and Emergency Medicine, Brussels, Belgium.
- 03-15 *ICU organization*, Speaker, 35th Annual International Symposium on Intensive Care and Emergency Medicine, Brussels, Belgium.
- 03-15 *What is left from EGDT*, Speaker, 35th Annual International Symposium on Intensive Care and Emergency Medicine, Brussels, Belgium.
- 03-15 *New approaches to clinical trials*, Speaker, 35th Annual International Symposium on Intensive Care and Emergency Medicine, Brussels, Belgium.

- 04-15 *Making in-roads in sepsis*, Speaker, Johns Hopkins Anesthesiology Critical Care Medicine Grand Rounds, Baltimore, MD.
- 05-15 *The future of phenotyping: Selecting the right targets*, Speaker, American Thoracic Society International Conference, Denver, CO.
- 10-15 PREPARE Investigators Meeting, Chair, Berlin, Germany.
- 10-15 *Adaptive trial platform for AD-SCAP*, Speaker, PREPARE Investigators Meeting, Berlin, Germany.
- 10-15 *Corticosteroid use in patients with CAP needing ICU-admission*, Speaker, PREPARE Investigators Meeting, Berlin, Germany.
- 10-15 *Long term effects of remote ischemic preconditioning in high-risk patients undergoing cardiac surgery: Follow-up of a randomized clinical trial*, Speaker, 28th Annual Congress of the European Society of Intensive Care Medicine, Berlin, Germany.
- 10-15 *What did we learn from early goal-directed trials*, Speaker 28th Annual Congress of the European Society of Intensive Care Medicine, Berlin, Germany.
- 10-15 *Safety, quality and organization of the ICU 2*, Chair, 28th Annual Congress of the European Society of Intensive Care Medicine, Berlin, Germany.
- 10-15 *Sepsis beyond hospital discharge*, Speaker, 28th Annual Congress of the European Society of Intensive Care Medicine, Berlin, Germany.
- 10-15 *Observationalists or trialists: Big data raising*, Speaker, 28th Annual Congress of the European Society of Intensive Care Medicine, Berlin, Germany.
- 10-15 *Infrastructure and related challenges to integrating data streams for medical product development*, Speaker, Institute of Medicine Workshop on Advancing the Discipline of Regulatory Science for Medical Product Development: an Update on Progress and a Forward-Looking Agenda, Washington, DC.
- 10-15 *Precision medicine – what does it mean for sepsis?* Speaker, International Sepsis Forum 2015 Stephen F Lowry Colloquium on Precision Medicine in Sepsis: Rapid Diagnosis and Targeted Therapy, Toronto, Canada.
- 10-15 *What critical care needs most – “We need more large trials!”* Speaker, Critical Care Canada Forum, Critical Care Fellows’ Day, Toronto, Canada.
- 10-15 *How to personalize sepsis management: Theranostics and titrating therapy*, Speaker, Critical Care Canada Forum, Toronto, Canada.
- 10-15 *Unthinkable? Fusing RCTs with big data*, Speaker, Critical Care Canada Forum, Toronto, Canada.
- 10-15 *EGDT after 3 large trials*, Speaker, Critical Care Canada Forum, Toronto, Canada.
- 11-15 *Fusing clinical care with clinical research: The future of the randomized control trial in a self-learning healthcare system*, Speaker, Society of Critical Care Medicine, Podcast.
- 12-15 *Delivering care in the future – can we afford it and is it cost effective?* Speaker, 55th Royal College of Physicians of Edinburgh St. Andrew’s Day Festival Symposium: Updates on Acute Medicine, Edinburgh, UK.
- 12-15 *Mission accomplished in sepsis?* Speaker, International Sepsis Forum Round Table, London, UK.
- 12-15 *Chronic critical illness: prevalent and under-recognized?* Speaker, Intensive Care Society, The State of the Art Meeting 2015, London, UK.
- 12-15 *RCTS and big data – future fusion?* Speaker, Intensive Care Society, The State of the Art Meeting 2015, London, UK.
- 12-15 *Tales of a wandering Scot: Lessons learned (and not learned) for a career in intensive care*, Speaker, Intensive Care Society, The State of the Art Meeting 2015, London, UK.
- 01-16 *Overview of trial design and primary endpoint*, Speaker, SEPSIS-ACT Investigator Meeting, Orlando, FL.
- 01-16 *Mechanical Ventilation Weaning Guide*, Speaker, SEPSIS-ACT Investigator meeting, Orlando, FL.

- 01-16 *Outcome improvement in sepsis/Critical Care*, Speaker, 32nd Annual Academic Congress of the College of Anesthesiologists and Intensivists of Sri Lanka, Colombo, Sri Lanka.
- 01-16 *New ARDSnet*, Speaker, 32nd Annual Academic Congress of the College of Anesthesiologists and Intensivists of Sri Lanka, Colombo, Sri Lanka.
- 01-16 *Advancing care in sepsis*, Speaker, 32nd Annual Academic Congress of the College of Anesthesiologists and Intensivists of Sri Lanka, Colombo, Sri Lanka.
- 01-16 *A panel discussion on acute lung injury*, Panelist, 32nd Annual Academic Congress of the College of Anesthesiologists and Intensivists of Sri Lanka, Colombo, Sri Lanka.
- 02-16 *Global epidemiology of sepsis*, Plenary Speaker, CRITICARE 2016, Agra, India.
- 02-16 *Quality improvement in resource limited setting*, Speaker, CRITICARE 2016, Agra, India.
- 02-16 *ARDS research – What’s new in 2016?* Plenary Speaker, CRITICARE 2016, Agra, India.
- 02-16 *New sepsis therapies*, Speaker, CRITICARE 2016, Agra, India.
- 02-16 *Trials in sepsis, novel trial design*, Speaker, CRITICARE 2016, Agra, India.
- 02-16 *Developing a new definition and assessing new clinical criteria for septic shock*, Speaker, JAMA Podcast.
- 02-16 *ICU trials in the digital age: Fusing care and research*, Speaker, 45th Annual Scientific Congress, Society of Critical Care Medicine, Orlando, FL.
- 02-16 *The REMAP model*, Speaker, InFACT (International Forum for Acute Care Trialists) Colloquium on Building Global Clinical Research Collaboration, Whistler, BC.
- 03-16 *Surviving intensive care: Summary of 2002 RT*, Speaker, Round Table Conference “Recovery after critical illness: Putting the puzzle together,” Brussels, Belgium.
- 03-16 *Non-neuromuscular sequelae (residual organ dysfunction/persistent inflammatory state)*, Speaker, Round Table Conference “Recovery after critical illness: Putting the puzzle together,” Brussels, Belgium.
- 03-16 *International perspectives*, Moderator, 36th International Symposium on Intensive Care and Emergency Medicine, Brussels, Belgium.
- 03-16 *qSOFA as an alarm signal*, Speaker, 36th International Symposium on Intensive Care and Emergency Medicine, Brussels, Belgium.
- 03-16 *Precision medicine in clinical trials*, Speaker, 36th International Symposium on Intensive Care and Emergency Medicine, Brussels, Belgium.
- 03-16 *We could fuse RCTs with big data*, Speaker, 36th International Symposium on Intensive Care and Emergency Medicine, Brussels, Belgium.
- 03-16 *Are adaptive designs really better?* Speaker, 36th International Symposium on Intensive Care and Emergency Medicine, Brussels, Belgium.
- 03-16 *Towards ideal ICU organization*, Moderator, 36th International Symposium on Intensive Care and Emergency Medicine, Brussels, Belgium.
- 03-16 *The qSOFA to identify the septic patient*, Speaker, 36th International Symposium on Intensive Care and Emergency Medicine, Brussels, Belgium.
- 04-16 *Overall study design*, Speaker, PREPARE AD-SCAP, Webinar on-line.
- 04-16 *Antibiotics & steroids domains*, Speaker, PREPARE AD-SCAP, Webinar on-line.
- 05-16 *Fusing RCTs with big data in critical care illness*, Speaker, American Thoracic Society International Conference, San Francisco, CA.
- 05-16 *Identifying sepsis outside the ICU: SIRS or qSOFA?* Speaker, American Thoracic Society International Conference, San Francisco, CA.

- 06-16 *Change is Not Necessarily Progress: Revision of the Sepsis Definition should be based on new Scientific Insights*, Speaker, American Journal of Respiratory and Critical Care Medicine Podcast.
- 09-16 *Epidemiology and Long-Term Consequences of Sepsis, Keynote: Epidemiology of Sepsis*, Speaker, 1st World Sepsis Congress, Global Sepsis Alliance, Webinar on-line.
- 10-16 *Intensive care – is there actually a point? Life in an era of negative trials*, Debate speaker, 29th Annual Congress of the European Society of Intensive Care Medicine, Milan, Italy.
- 10-16 *The end of EGDT era? The current evidence, pro or con?* Speaker, 29th Annual Congress of the European Society of Intensive Care Medicine, Milan, Italy.
- 10-16 *Challenges for the identification of septic shock*, Speaker, 29th Annual Congress of the European Society of Intensive Care Medicine, Milan, Italy.
- 10-16 *Should we use protocols to manage sepsis?* Debate speaker, 29th Annual Congress of the European Society of Intensive Care Medicine, Milan, Italy.
- 10-16 *Sepsis – The true burden remains to be assessed*, Speaker, 29th Annual Congress of the European Society of Intensive Care Medicine, Milan, Italy.
- 10-16 *From SIRS to sepsis-3, the clinical syndrome*, Speaker, 29th Annual Congress of the European Society of Intensive Care Medicine, Milan, Italy.
- 10-16 *Sepsis: What is it? Why does it matter?* Speaker, Stopping Sepsis – Saving Lives in Pennsylvania, Harrisburg, PA.
- 11-16 *Fusing randomized trials with big data: the key to self-learning healthcare systems?* Speaker, 5th Annual National Health and Medical Research Council Symposium on Research Translation, Melbourne, Australia (presented via webinar).
- 12-16 *Understanding the global burden of antimicrobial resistance*, Co-chair, International Sepsis Forum 2016, Paris, France.
- 12-16 *Platform trials*, Speaker, International Sepsis Forum 2016, Paris, France.
- 12-16 *REMAP*, Speaker, International Sepsis Forum 2016, Paris, France.
- 12-16 *Biomarker-enriched trials in sepsis*, Speaker, International Sepsis Forum 2016, Paris, France.
- 03-17 *How big data should, and shouldn't, change sepsis*, Speaker, 2017 Canadian Critical Care Conference, Whistler, BC.
- 03-17 *Big data versus conventional wisdom*, Speaker, 2017 Canadian Critical Care Conference, Whistler, BC.
- 04-17 *Sepsis 2017*, Speaker, Medicine Grand Rounds, Columbia University, New York, NY.
- 09-17 *Big data versus the RCT*, Speaker, Torsten Gordh State of the Art Lecture 2017, 34th Congress of the Scandinavian Society of Anesthesiology and Intensive Care Medicine, Lund, Sweden.
- 09-17 *Does clinical research help me take care of my patient?* Speaker, 34th Congress of the Scandinavian Society of Anesthesiology and Intensive Care Medicine, Lund, Sweden.
- 09-17 *Challenging clinical trials: Why doesn't early goal-directed therapy work?* Speaker, 34th Congress of the Scandinavian Society of Anesthesiology and Intensive Care Medicine, Lund, Sweden.
- 09-17 *Towards more "precise" sepsis trials*, Speaker, European Shock Society, Paris, France.
- 09-17 *The future is Big Data*, Speaker, 30th Annual Congress of the European Society of Intensive Care Medicine, Vienna, Austria.
- 09-17 *Understanding the evidence*, Speaker, 30th Annual Congress of the European Society of Intensive Care Medicine, Vienna, Austria.
- 09-17 *Initial resuscitation*, Speaker, 30th Annual Congress of the European Society of Intensive Care Medicine, Vienna, Austria.
- 09-17 *EGDT, take it or leave it?* Speaker, 30th Annual Congress of the European Society of Intensive Care Medicine, Vienna, Austria.

- 09-17 *Biomarker-driven adaptive and smart clinical trials*, Speaker, 30th Annual Congress of the European Society of Intensive Care Medicine, Vienna, Austria.
- 09-17 *REMAPing healthcare: Smarter, safer learning*, Speaker, 10th Anniversary Conference Transformational Technologies, American Middle East Institute, Pittsburgh, PA.
- 10-17 *The RCT vs. big data: Measuring what works in the digital age*. Speaker, Medicine Grand Rounds, The Metrohealth System, Case Western Reserve University, Cleveland, OH.
- 10-17 *Sepsis 2017*, Speaker, Pulmonary Grand Rounds, The Metrohealth System, Case Western Reserve University, Cleveland, OH.
- 11-17 *Early goal-directed resuscitation for septic shock: Con*, Speaker, XIII World Congress of Intensive and Critical Care Medicine and XXII Brazilian Congress of Intensive Care Medicine, Rio de Janeiro, Brazil.
- 11-17 *Designing the ideal study: Adaptive designs?* Speaker, XIII World Congress of Intensive and Critical Care Medicine and XXII Brazilian Congress of Intensive Care Medicine, Rio de Janeiro, Brazil.
- 11-17 *The Good and the bad use of qSOFA: A strategy to better define sepsis*, Speaker, XIII World Congress of Intensive and Critical Care Medicine and XXII Brazilian Congress of Intensive Care Medicine, Rio de Janeiro, Brazil.
- 11-17 *Promoting the best practices for the ICU patient: Guideline development work: key points*, Speaker, XIII World Congress of Intensive and Critical Care Medicine and XXII Brazilian Congress of Intensive Care Medicine, Rio de Janeiro, Brazil.
- 11-17 *Big data vs. the RCT*, Speaker, XIII World Congress of Intensive and Critical Care Medicine and XXII Brazilian Congress of Intensive Care Medicine, Rio de Janeiro, Brazil.

International Expert Panels and Consensus Conferences

- 11-90 *New techniques for disaster research* Pittsburgh, PA
US-Soviet Interdisciplinary Workshop
- 04-97 *Observational outcomes research in critical care (co-chair)* Toronto, Canada
1st American Thoracic Society Critical Care Assembly Workshop on Outcomes Research
- 08-97 *Resuscitation of patients in septic shock* Jakarta, Indonesia
1st Asia-Pacific Consensus Conference in Critical Care Medicine
- 11-97 *Clinical trial design for studies of mechanical ventilation* Toronto, Canada
The 1997 Toronto Critical Care Medicine Symposium
- 05-98 *Understanding costs and cost-effectiveness in critical care (co-chair)* San Diego, CA
2nd American Thoracic Society Critical Care Assembly Workshop on Outcomes Research
- 08-98 *Radiographic definition of acute lung injury* Seattle, WA
American Thoracic Society
- 10-99 *Sepsis trial design (co-chair)* Toronto, Canada
The 1998 Toronto Critical Care Symposium
- 02-00 *Improving sepsis trial design* London, UK
Medical Research Council of Great Britain
- 03-00 *Evaluating critical care: Using health services research to improve quality* Brussels, Belgium
The 20th International Symposium on Intensive Care and Emergency Medicine
- 04-00 *Noninvasive positive pressure ventilation (NPPV) in acute respiratory failure* Paris, France
The 3rd International Consensus Conference on Intensive Care. American Thoracic Society, European Respiratory Society, Société National Réanimation Française, and European Society of Intensive Care Medicine.

08-00	<i>Continuous renal replacement therapy</i> First Consensus Conference of the Acute Dialysis Quality Initiative. Society of Critical Care Medicine and the American Society of Nephrology.	New York, NY
09-00 & 05-01	<i>Acute lung injury and the acute respiratory distress syndrome</i> 3rd European-North American Experts Conference on ARDS. American Thoracic Society, European Society of Intensive Care Medicine, and European Respiratory Society.	Barcelona, Spain & San Francisco, CA
12-01	<i>International sepsis definitions conference</i> American College of Chest Physicians, Society of Critical Care Medicine, and the European Society of Intensive Care Medicine.	Washington, DC
03-02	<i>Surviving intensive care (co-chair)</i> The 22 nd International Symposium on Intensive Care and Emergency Medicine	Brussels, Belgium
11-02	<i>4th Margaux Conference on Critical Illness</i>	Margaux, Portugal
06-03	<i>Catalyzing team science</i> The Bioengineering Consortium (BECON), NIGMS, NCI, NSF, and NIGMS, NIH	Bethesda, MD
06-03	<i>2003 Cambridge Colloquium on Outcome Measures in Sepsis</i> International Sepsis Forum	Cambridge, UK
11-03	<i>Ethical conduct of clinical research involving critically ill patients</i> American Thoracic Society and the Association of American Medical Colleges.	Washington, DC
03-05	<i>Roundtable conference: My intensive care unit in 2015.</i> The 25 th International Symposium on Intensive Care and Emergency Medicine	Brussels, Belgium
01-06 & 03- 07	<i>Surviving Sepsis Campaign Guidelines</i> 35 th Society of Critical Care Medicine and 27 th International Symposium on Intensive Care and Emergency Medicine.	San Francisco, CA & Brussels, Belgium
06-06	<i>The host-pathogen response in sepsis</i> International Sepsis Forum	Toledo, Spain
06-06	<i>Enabling Therapeutic Trials and Translational Research (co-chair)</i> National Heart, Lung, and Blood Institute Strategic Plan – Division of Lung Diseases	Bethesda, MD
09-06	<i>Prioritizing the Organization and Management of Intensive Care Services (PrOMIS)</i> Consensus panel, National Stakeholder Group, Joint US Critical Care Societies	Bethesda, MD
10-06	<i>Barriers and solutions for ICU-based clinical trials</i> International Sepsis Forum	Park City, UT
10-06	<i>Strategic Plan for the Next Ten Years</i> National Heart, Lung, and Blood Institute, NIH	Bethesda, MD
06-07	<i>The sepsis aftermath: Repair, Recovery, and Rehabilitation (co-chair)</i> International Sepsis Forum	Annapolis, MD
09-07	<i>Critical Illness in the Elderly (chair)</i> National Institute of Aging, NIH	Bethesda, MD
11-07	<i>A translational research paradigm for critical care (speaker)</i> Fifth Symposium on the Functional Genomics of Critical Illness and Injury	Bethesda, MD
03-08	<i>Improving Clinical Trials in the Critically Ill (co-chair)</i> Roundtable, The 28 th International Symposium on Intensive Care and Emergency Medicine	Brussels, Belgium
05-10	<i>National research priorities for ICU Telemedicine</i> Expert panel, AHRQ and joint US critical care societies	Chicago, IL
05-12	<i>The sepsis research platform: Back to the Drawing Board (program co-chair)</i> Expert panel, International Sepsis Forum and NIH Critical Care Department	Bethesda, MD

12-14	<i>The global epidemiology of sepsis</i> (co-chair) International Sepsis Forum	Paris, France
10-16	<i>Scientific panel on “big data”</i> Expert Panel, FAER (Foundation for Anesthesia Education and Research)	Chicago, IL
10-16	<i>Innovative strategies to optimize success</i> Expert Panel, Stopping sepsis – saving lives in Pennsylvania	Harrisburg, PA
12-16	<i>New sepsis definitions</i> Panel discussion (International Sepsis Forum 2016)	Paris, France

Research

Grants received (expired)

Federal

1991	Co- Principal Investigator, Natural Hazards Research and Applications Information Center Quick Response Award (supported by the National Science Foundation), "Scout survey to assess immediate medical response to the 1991 Costa Rica earthquake." [\$4,000]
1994 - 1998	Site Principal Investigator, AHCPR R01 HS006594. "A randomized trial of computerized ICU protocols." (PI: East TD) [Overall: \$882,981; Site: \$146,759]
1996 - 1997	Consultant, DHHS/CDC, RPA # 913. "Grants for injury control research centers and injury control research program project grants." [\$1,050,000]
1996 - 2007	Principal Trainer, NHLBI T32 HL007820-07. "Experimental therapeutics in critical illness." (PI: Pinsky MR) [\$1,071,895]
1997 - 2000	Co-Investigator, NICHD R01 HD036075. "Supporting traumatic brain injury caregivers." (PI: Rotondi AJ) [\$585,983]
1997 - 2001	Co- Principal Investigator, AHRQ R01 HS009694. "Optimal timing of liver transplantation." (PI: Roberts MS)[\$1,160,000]
1998 – 2001	Co-Investigator, AHRQ R25 HS009784. "Program in clinical effectiveness/evaluation sciences" (PI: Roberts MS) [\$280,902]
1998 – 2008	Collaborator, NIAID R01 AI042310, "MIF and the host response to infection." (PI: Bucala RJ) [\$940,000]
2000 - 2006	Co-mentor, NIDDK K25 DK002903-06. "End-stage liver disease/prevalence and treatment variation." (PI: Bryce CL). [\$506,836]
2000 – 2011	Principal Trainer, NICHD T32 HD040686. "Pediatric neurointensive care and resuscitation research." (PI: Kochanek PM) [\$1,021,698]
2001 – 2002	Co-Investigator, NIH Clinical Center. "An epidemiological study of the use of critical care by the uninsured." (PI: Danis M) [\$16,000]
2001 - 2006	Principal Investigator, NIGMS R01 GM061992-05. "Genetic and inflammatory markers of sepsis (GenIMS)." [\$5,968,337]
2001 - 2006	Principal Investigator, AHRQ/NHLBI R01 HS/HL011620-05 "Economic analysis of the pulmonary artery catheter use (EA-PAC)." [\$1,796,112]
2002 - 2007	Principal Investigator, NHLBI R01 HL069991-04 "Prolonged outcomes after nitric oxide for ventilated premature newborns." [\$2,286,182]
2003 - 2005	Mentor, NIGMS K23 GM068085. "Microarray determinants in community-acquired pneumonia." (PI: Wood KA) [\$714,514]

- 2003 - 2008 Mentor, NIA K08 AG021921. "Hospital-level variation in treatment intensity at the end of life." (PI: Barnato AE) [\$545,500]
- 2003 - 2008 Trainer, NIA T32 AG021885, "Pittsburgh clinical research grant in geriatrics/gerontology research training grant for medical students and fellows." (PI: Studenski S) [\$297,387]
- 2004 - 2007 Co-Investigator, NLM R01 LM008374-01, "Learning patient-specific models from clinical data." (PI: Cooper GC) [\$607,500]
- 2004 - 2007 Co-Chair, NIGMS R13 GM072437-01. "International conference on complexity in acute illness." (PI: Clermont G) [\$26,087]
- 2004 - 2009 Trainer, NICHD K12 HD049109. "Multidisciplinary clinical research career development program." (PI: Kapoor WN) [\$14,253,119]
- 2004 - 2010 Mentor, NICHD K23 HD046489, "Consequences of surviving critical illness in childhood." (PI: Watson RS) [\$702,081]
- 2005 - 2007 Clinical Advisor, NLM R21LM008273-01A1, "Using MDPs to optimize living donor liver transplants." (PI: Roberts MS) [\$275,000]
- 2005 - 2009 Mentor, NICHD K12 HD049109. "Calcium supplementation in critical illness." (PI: Rosengart MR) [\$426,717]
- 2005 - 2008 Co-Investigator, R01 LM008374. "Learning patient-specific models from clinical data." (PI: Cooper G) [\$287,376]
- 2005 - 2008 Co-Investigator, NIA R21 AG025191-01A1. "Assessing individual preferences for end-of-life care." (PI: Bryce CL) [\$220,000]
- 2005 - 2010 Mentor, NHLBI K23 HL078760. "Mechanical ventilation and delirium." (PI: Milbrandt EB) [\$676,608]
- 2005 - 2010 Clinical Mentor, NIGMS T32 GM074927. "Predoctoral research training grant in biostatistics." (PI: Rockette HE) [\$970,660]
- 2006 - 2012 Co-Investigator, NIDDK R01 DK070910. "Biological markers of recovery for the kidney." (PI: Kellum JA) [\$2,488,193]
- 2006 - 2013 Principal Investigator, NIGMS P50 GM076659. "Protocolized care of early septic shock (ProCESS)." [\$8,435,143]
- 2008 - 2010 Advisory Board, NINR. "Social norms governing ICU triage for critically ill elders with terminal cancer." (PI: Barnato AE) [\$95,217].
- 2008 - 2013 Advisory Committee Member, NHLBI R01 HL091760. "Patient outcomes 6 and 12 months after ALTA, EDEN and OMEGA ARDS network trials." (PIs: Needham D and Hopkins R) [\$1,130,556]
- 2008 - 2013 Co-Investigator, NHLBI R01 HL091757. "Endothelial cell signaling and microcirculation in sepsis." (PI: Shapiro N) [\$1,000,000]
- 2008 - 2013 Faculty Mentor, AHRQ/T32HS017587, "The University of Pittsburgh Postdoctoral Program in Health Sciences Research." (PI: Kraemer KL) [\$235,484]
- 2008 - 2014 Primary Mentor (Sponsor), NIH/NIGMS K23GM083215. "Predicting risk of pneumonia in the general population." (PI: Yende S) [\$603,885]
- 2008 - 2014 Co-Investigator, NHLBI UR01HL086622. "Sedation management in patients with acute respiratory failure." (PI: Curley M) [\$10,021,624]
- 2009 - 2011 Co-Investigator, NCI. R21CA141093-02 "Isolating mechanisms underlying hospital variation in end-of-life ICU use." (PI: Barnato AE) [\$435,438]
- 2009 - 2012 Principal Investigator, NIGMS P50 GM076659-04S1. "Protocolized care of early septic shock (ProCESS) ARRA. Admin [\$2,314,994]

- 2009 – 2013 Co-Investigator, NIA/AHRQ R01AG035112 “Developing a robust measure of hospital end-of-life intensity.” (PI: Barnato AE) [\$400,000]
- 2009 – 2014 Collaborator, NIH/AHRQ 5K08HS018406, Beeson Career Development Award. “Measuring and mitigating patient safety threats due to strains on ICU capacity.” (PI: Halpern S) [\$179,758].
- 2010 Co-Investigator, ULI RR024153. Clinical and Translational Science Institute (CTSI) Basic to Clinical Collaborative Research Pilot Program (BaCCoR) “Cardiovascular Consequences of Infection and Sepsis.” (PIs: Kaynar M, Yende S) [\$25,000]
- 2010 – 2012 Mentor, NIH KL2RR024154 “Modifying physician decision making in trauma triage.” (PI: Mohan D) [\$304,066]
- 2012 – 2013 Principal Investigator, NIGMS 3P50GM07665905S1 “Protocolized Care for Early Septic Shock (ProCESS) Coordinating Center “Administrative Supplement.” [\$313,964]
- 2012 – 2013 Principal Investigator, NIH/NIGMS, 3P50GM07665905S2, “Protocolized Care for Early Septic Shock (ProCESS) “Coordination Center Supplement II.” [\$399,071]
- 2012 – 2014 Mentor, NHLBI K12HL109068, “Research Career Development Program in Emergency Medicine.” (PI: Wallace D) [\$1,365,796]
- 2012 – 2014 Co-Investigator, Swiss National Science Foundation NFP-67, “Multimorbidity and pathways of inpatient care at the end-of-life: a national study in Switzerland.” (PI: Kaplan V) [\$305,954]
- 2013 – 2014 Co- Investigator, NIH/1R34GM102696, “Procalcitonin antibiotic consensus planning grant (ProACT).” (PI: Huang D) [\$152,500]
- 2009 – 2014 Co-Investigator, NIH/NHLBI R01 HL096651 “The role of long-term acute care hospitals in prolonged mechanical ventilation.” (PI: Kahn JM) [\$1,788,423]
- 2012 – 2016 Primary mentor, NIGMS K23GM101292, “Time-pressured decision making in trauma triage. (PI: Mohan D) [\$560,525]
- 2010 – 2016 Co-Investigator, NIH/NIDDK R01DK083961 “Protocolized goal directed resuscitation of septic shock to prevent AKI.” (PI: Kellum J) [\$2,734,334]
- 2015 – 2016 Co-Investigator, Harvard Pilgrim Health Care/CDC U54CK000172, “Estimating the national burden of sepsis using electronic health record data” (PI: Seymour CW) [\$61,919]
- 2012 – 2016 Mentor, NIH KL2TR000146, Multidisciplinary clinical research scholars program. “Genetic Variants in Zinc Proteins and Racial Differences in Infectious Diseases” (PI: Palmer) [\$72,586]
- 2006 – 2016 Advisory Committee, UL1RR024153, “University of Pittsburgh Clinical and Translational Science Institute, Core C.” (PI: Reis S) [\$990,643]
- 2006 – 2016 Clinical Mentor, KL2 RR024154 “Mentored Career Development Award.” (PI: Reis S) [\$4,194,126]
- 2015 – 2016 Co-Investigator, NIH/NIGMS R01GM108025, “Novel diagnostic and stratification tools for septic shock.” (PI: Wong H) [\$300,695]
- 2012 – 2017 Co-Investigator, NIH/NIGMS R01GM097471, “Late cardiovascular consequences of septic shock.” (ConsequencesS) (PI: Yende S) [\$2,528,274]
- 2014 – 2017 Co-Investigator, NIH/NIGMS R01GM097471-03S1, “Late cardiovascular consequences of septic shock- Administrative Supplement.” (PI: Yende S) [\$244,802]

Non-federal competitive

- 1991 Co-Investigator, Baxter-Edwards, "Oxygen consumption and oxygen delivery in sepsis." [\$28,000]
- 1991 - 1994 Co- Principal Investigator, University of Pittsburgh, Department of Anesthesiology Research Award, "A prospective randomized, double blind trial comparing selective decontamination of the digestive tract against placebo in the prevention of post-operative infection, morbidity and mortality in adult orthotopic liver transplant (OLTx) candidates and recipients." [\$8,000]

- 1993 - 1994 Co-Investigator, University of Pittsburgh Medical Center, Department of Anesthesiology/Critical Care Medicine Research Seed Grant Proposal, "Oxygen delivery, oxygen consumption, and regional tissue oxygenation in patients with sepsis and cirrhosis."[\$8,000]
- 1994 - 1996 PI, Health Services Institute. "Cost-effectiveness of inhaled nitric oxide therapy in the treatment of the adult respiratory distress syndrome: analysis of the Phase II study, INO-04/05."[\$250,000]
- 1996 Principal Investigator, Ohmeda, Inc, "Analysis of the Incidence of ARDS." [\$22,000]
- 1996 - 1997 Co-Principal Investigator, Nellcor, Inc. "Using non-invasive monitoring to optimize the through-put of care". [\$68,047]
- 1996 - 1999 Principal Investigator, Health Services Institute, "Cost-effectiveness of inhaled nitric oxide therapy in the treatment of the adult respiratory distress syndrome: Analysis of the Phase III study, NO-06." [\$300,000]
- 1996 - 1998 Co- Principal Investigator and Mentor, The Laerdal Foundation for Acute Medicine. "The Cost-effectiveness of Cardio-Pulmonary Resuscitation." [\$15,070]
- 1996 - 1999 PI, Ohmeda PPD, Inc. "Cost-effectiveness Analysis of ECMO and Inhaled NO in the Treatment of Respiratory Distress of the Newborn." [\$387,000]
- 1996 - 1999 Principal Investigator, Amgen, Inc. "Analysis of the Cost and Outcome of Severe Community Acquired Pneumonia." [\$720,000]
- 1997 - 2001 Principal Investigator, Eli Lilly and Company. "Cost-effectiveness of recombinant human activated protein C in the treatment of severe sepsis." [Overall: \$3.4 million; Site: \$1,201,997]
- 1998 - 1999 Co- Principal Investigator and mentor, Department of Anesthesiology and Critical Care Medicine Seed Grant. "Evaluating Serum Cytokine Patterns in Community-Acquired Pneumonia and Exploring Their Relationship to Outcome." [\$11,500]
- 2000 - 2001 Co-Investigator, Society of Critical Care Medicine Founders Grant. "The impact of ICU physician staffing patterns on outcome and resource use." [\$30,000]
- 2000 - 2001 Co-Investigator, Laerdal Foundation. "Development of Outcome Parameters for Large Clinical Trials: The Time Constant of Death." [\$50,000]
- 2001 - 2002 Co-Investigator, Robert Wood Johnson Foundation. "End of life care for critically ill patients: A national survey of intensive care unit directors." [\$209,671]
- 2001 - 2002 Co- Principal Investigator, University of Pittsburgh, Department of Anesthesiology Research Award, "Gene expression in children with severe sepsis." (PI: Watson RS) [\$7,780]
- 2001 - 2002 Mentor, University of Pittsburgh, Department of Anesthesiology Research Award, "Gene expression in patients with severe sepsis – A pilot study." (PI: Wood K) [\$8,000]
- 2001 - 2003 Principal Investigator, ICOS Corp. "Cost-effectiveness of recombinant platelet-activating factor acetylhydrolase in the treatment of severe sepsis." [\$1.3 million]
- 2001 - 2003 Principal Investigator, Robert Wood Johnson Foundation. "An epidemiological assessment of the use of intensive care at the end of life in the US." [\$93,887]
- 2004 - 2006 Mentor, University of Pittsburgh, Department of Critical Care Medicine Research Seed Award, "Safety attitudes, culture, and perception in a national sample of ICU staff." (PI: Huang DT) [\$10,000]
- 2005 - 2006 Mentor, University of Pittsburgh, Department of Critical Care Medicine Research Seed Award, "Potential anti-inflammatory mechanisms of antipsychotics." (PI: Milbrandt E) [\$10,000]
- 2006 - 2007 Mentor, University of Pittsburgh, Department of Critical Care Medicine Research Seed Award, "PAI-1 genotype-related immune response in healthy controls." (PI: Yende S) [\$10,000]

- 2006 – 2009 Mentor and Co-Investigator, Claude D. Pepper Older Americans Independence Center, University of Pittsburgh, “Age-related changes in strength, mobility, and balance after critical illness.” (PI: Milbrandt EB) [\$100,000]
- 2007 – 2008 Co-Investigator, Emma Winter Research in Medical Simulation Research Seed Grant, “Qualitative analysis of physician decision-making and communication regarding ICU admission decisions from simulation study.” (PI: Barnato AE) [\$10,000]
- 2007 – 2008 Co-Investigator – outside mentor, Foundation for Anesthesia Education and Research, “Evaluation of long-term outcomes for intensive care patients.” (PI: Wunsch H) [\$50,000]
- 2007 – 2008 Co-Investigator, European Society of Critical Care Medicine, CUB-REA [Étude de la relation entre le volume d’actes]
- 2009 – 2012 Co-Investigator, Robert Wood Johnson Foundation, Interdisciplinary Nursing Quality Research Initiative (INQRI) #66633, “SPEACS -2: Improving patient communication and quality outcomes in the ICU.” (PI: Happ ME) [\$297,083]
- 2007 – 2013 Principal Investigator, Eisai Medical Research, Inc. “Cost-effectiveness and long-term follow-up substudy to ACCESS: A controlled comparison of Eritoran Tetrasodium and placebo in patients with severe sepsis.” [\$1,176,557]

Non-federal non-competitive

- 1991 Co-Investigator, International Resuscitation Research Center Grant, "Principal survey of early medical response to the 1991 Costa Rica earthquake to assess life saving potentials." [\$10,000]
- 1991 - 1995 Co- Principal Investigator, Pfizer, Inc., "Comparison of fungal colonization rates between nystatin and fluconazole prophylaxis in adult patients with end-stage liver disease." [\$29,000]
- 1991 - 1995 Co- Principal Investigator, Bristol-Myers Squibb, Inc., "Comparison of fungal colonization rates between nystatin and fluconazole prophylaxis in adult patients with end-stage liver disease." [\$5,000]
- 1992 Principal Investigator, Department of Health Services Administration, Graduate School of Public Health, University of Pittsburgh, "Retrospective analysis of medical response to the earthquake of March 13, 1992, Erzincan, Turkey."[\$3,500]
- 1993 - 1995 Co-Investigator, University of Pittsburgh Medical Center. "Defining appropriate care for the critically ill-APACHE III Benchmark Study."[\$15,000]
- 1993 - 1997 Site PI, Pfizer, Inc., "Randomized, placebo controlled trial of E5 anti-endotoxin monoclonal antibody in patients with severe sepsis." [Site: \$180,000]
- 1994 Principal Investigator, Ohmeda Pharmaceuticals, Inc. “A feasibility study: health economics of inhaled nitric oxide therapy in the treatment of the adult respiratory distress syndrome and primary pulmonary hypertension of the newborn.” [\$25,000]
- 1994 - 1996 Site Co-Investigator, Miles Inc. "Prospective, double blind, placebo-controlled, randomized, multi-center North American study of the safety and efficacy of murine monoclonal antibody to tumor necrosis factor (TNF MAb) for the treatment of patients with septic shock." [Site: \$122,580]
- 1994 - 1996 Co-Investigator, Concord-Portex, Inc. “Prospective comparison of non-bronchoscopic bronchoalveolar lavage with conventional bronchoscopic bronchoalveolar lavage for the diagnosis of pneumonia.” [\$10,000]
- 1996 - 1997 Site Principal Investigator, Wallace Laboratories, “Double-blind, randomized, placebo-controlled, parallel-group, multicenter study of the safety and efficacy of intravenous Taurolidine in septic patients.” [Site: \$151,510]
- 1996 - 1997 Site Principal Investigator, Lilly Research Laboratories. “A Phase II Study to Determine the Safety, Pharmacokinetics, and Effective Dose Range and Dosing Duration for Recombinant Activated Protein C in Sepsis.”[Site: \$53,440]

- 2001 – 2002 Co- Principal Investigator, GlaxoSmithKline. “Epidemiology, healthcare resource use, and cost of illness of infection, sepsis, and acute organ dysfunction in a tertiary medical center.” [\$183,477]
- 2001 - 2003 Site Investigator, ICOS Corp. “A Phase 3 study to demonstrate the safety and efficacy of recombinant platelet-activating factor acetylhydrolase (rPAF-AH, Pafase®) for reducing 28 day all cause mortality in patients with severe sepsis.” [Site: \$201,195]
- 2001 - 2005 Principal Investigator, GlaxoSmithKline. “Genetic and inflammatory markers of sepsis.” [\$2,000,000]
- 2002 - 2008 Principal Investigator, Ortho-Biotech. “Anemia and transfusion practices in hospitalized and community-acquired pneumonia: Analysis of incidence and outcome in a large US cohort.” [\$100,800]
- 2002 - 2010 Principal Investigator, INO Therapeutics. “Prolonged outcomes after nitric oxide for ventilated premature newborns.” [\$650,000]
- 2004 – 2005 Principal Investigator, Amgen. “Management of anemia in critical care.” [\$79,063]
- 2009 - 2010 Co-Investigator, Greenwall Foundation, “The Influence of default options in advance directives for older patients: A pilot randomized trial. (PI: Halpern S) [\$107,797]
- 2013 - 2015 Co-Investigator, The Moore Foundation, “Improving Seriously Ill Patients’ End-of-Life Care by changing the Default Option in Advance Directives.” (PI: Bryce) [\$68,535]
- 2015 – 2016 Co-Investigator, Bristol Myers Squibb Company, “Anti-PD-1 BMS-936559 dosing studies in sepsis patients.” (PI: Yende) [\$34,675]

Grants received (current)

Federal

- 2012 – 2017 Training Faculty, NIGMS T32GM075770, “Research Training in Anesthesiology and Pain Medicine.” (PI: Xu, Y) [\$216,097]
- 2013 – 2017 Primary mentor, NIH K23 GM104022, “Pre-hospital Identification of High-Risk Sepsis.” (PI: Seymour CW) [\$935,120]
- 2015 – 2017 Co-Principal Investigator, NIH/NIGMS, R34GM107650, “Immunotherapy of sepsis using anti-PDL1 antibody.” (Co-PI: Angus/Hotchkiss/Yende) [\$158,389]
- 1996 – 2018 Principal Trainer, NIH NHLBI T32 HL007820 (National Research Service Award). “Experimental therapeutics in critical illness.” (PI: Pinsky MR) [Total Award \$1,580,999]
- 2011 – 2018 Mentor, NIH T32MH019986, “Clinical and translational research training in late-life mood disorders” (PI: Reynolds C) [\$241,625]
- 2013 – 2018 Co- Investigator, NIH/R01GM101197, “Procalcitonin antibiotic consensus trial (ProACT).” (PI: Huang DT) [\$4,975,533]
- 2013 – 2018 Co-Investigator, NIH/NIA, 1R01AG045176, “A Trial to Improve Surrogate Decision-Making for Critically Ill Older Adults” (PI: White DB) [\$2,965,038]
- 2013 – 2018 Co-Investigator, NIH/NICHD/NHLBI R01HD074757, “Sedation strategy and cognitive outcome after critical illness in early childhood (RESTORE-cognition).” (PI: Watson RS/Curley M) [\$3,077,191]
- 2014 – 2018 Co-Investigator, NIH/1R01GM105728, “Model-based decisions in Sepsis” (PI: Clermont) [\$1,118,043]
- 2014 – 2018 Co-Investigator, NIH/NHLBI R01HL120980, “Organizational Determinants of ICU Telemedicine Effectiveness.” (PI: Kahn JM) [\$2,272,813]
- 2014 – 2018 Co-Investigator, NIH R01HL096651, “Identifying optimal care structures and processes in long term acute care hospitals.” (PI: Kahn JM) [\$1,837,737]

- 2014 – 2018 Primary mentor, NIH Ko8HL122478, “Understanding regional critical care delivery in acute respiratory failure.” (PI: Wallace DJ) [\$509,942]
- 2015 – 2018 Co-Investigator, NIH/NHLBI, R01HL114945, “Novel Approaches to profiling hospitals on critical illness mortality.” (PI: Kahn JM) [\$1,129,964]
- 2014 – 2019 Co-Investigator, NIH R01NR014663, “A stepped wedge trial of an intervention to support family members in ICU’s” (PI: White DB) [\$2,585,438]
- 2014 – 2019 Co-Investigator, European Union FP7 Program 602525, “Platform for European Preparedness Against (Re-) emerging Epidemics (PREPARE) (PI: Goossens H) [\$32.5M / 24 million Euros]
- 2014 – 2021 PI (Pitt), NIH U01HL123020, “Preventive and early treatment of acute lung injury clinical trials network (PETAL).” (Site PI: Angus DC/Yealy DM) [\$1,445,915]
- 2015 – 2019 Co-Principal Investigator, NIH/NHLBI, U01HL123009, “Re-evaluation of Systemic Early Neuromuscular (ROSE) Blockade trial” PETAL Network (Co-PI: Moss M, U Colorado) [~\$14 million]
- 2015 – 2020 Co-Investigator, NIH, DP2LM102339, “A novel intervention to make heuristics a source of power for physicians.” (PI: Mohan D) [\$2,310,000]
- 2016 – 2021 Co-Investigator, NIH/NIGMS, R35GM119519, “Sepsis endotyping using clinical and biological data.” (PI: Seymour) [\$1,939,237]

Non-federal non-competitive

- 2016 - Co-Investigator, Bristol Myers Squibb, “A Phase 1b/2a, Randomized, Double-Blinded, Placebo-Controlled, Multicenter Study to Evaluate the Safety, Tolerability, Pharmacokinetics and Pharmacodynamics of BMS-936559 in Subjects with Severe Sepsis.” (PI: Mayr) [\$338,235]

Other research related activities

Journal Editorships and Editorial Boards

- 1991 - 1995 Editorial Board: ACP Journal Club, *Ann Intern Med*
- 1997 - Editorial Board: *Critical Care and Shock*
- 1998 - 1999 Section Advisor, Adult Critical Care: *BMJ & ACP Clinical Effectiveness Directory*
- 1998 - 2002 Editorial Board: *Sepsis*
- 1999 - 2000 Editor, American Thoracic Society Journal Club: *Critical Care Outcomes*
- 2000 - Editorial Board: *Curr Opin Crit Care*
- 2000 - Editorial Board: *Critical Care Practice*
- 2000 - 2006 Editorial Board: *Advances in Sepsis*
- 2001 - 2006 Editorial Board, Theme Editor: *J Crit Care*
- 2001 - Editorial Board: *Crit Care*
- 2001 - 2005 Section Editor, Critical Care Outcomes: *Curr Opin Crit Care*
- 2004 - 2006 Associate Editor, *Am J Respir Crit Care Med*
- 2004 - 2008 Editorial Board, *Ann Am Thoracic Society*
- 2005 - Editorial Board, *Crit Care Med*
- 2006 - Section Editor (Caring for the Critically Ill), *JAMA*
- 2011 - Editorial Board: *Annals of Intensive Care*
- 2011 - 2017 Editorial Board: *Shock*

Journal refereeing

- Am J Manag Care*
- Am J Respir Crit Care Med*
- Ann Thorac Surg*
- Arch Pediatrics & Adolescent Med*
- Chest*
- Circulation*
- Clin Infect Dis*

Crit Care
 Crit Care Med
 Critical Care and Shock
 Eur J Intern Med
 Eur Respir J
 Exp Biol Med
 Health Affairs
 Intensive Care Med
 J Crit Care
 J Gen Intern Med
 J Immunol
 J Intensive Care Med
 J Leukoc Biol
 J Racial Ethn Health Disparities
 JAMA
 Lancet
 Med Care
 Med Dec Making
 N Engl J Med
 Natl Med J India
 Nature Reviews Nephrology
 Pathways in Crit Care
 Ped Critical Care Medicine
 Pediatrics
 PeerJ
 PharmacoEconomics
 PLoS Medicine
 PLoS ONE
 Prehospital and Disaster Med
 South Med J
 Value in Health

Research and Post-Doc Preceptorships

1995 - Gilles Clermont, MD (recipient, SCCM Founders' Grant; recipient, NIGMS K-08GM63052; pending, NSF 0714556, multiple R01s)
 1997 – 1998 Nagarajan Ramakrishnan, MD
 1998 – 1999 Amjad Musthafa, MD
 1999 – 2000 Randy Wax, MD (recipient, Schertz fellowship)
 1999 – 2014 Cindy Bryce, PhD (recipient, NIDDK K-25DK02903; recipient, NIA R21AG025191-01A1)
 2000 – 2002 Vladimir Kaplan, MD (funded by University of Zurich & Swiss Government Federal Training Grant; recipient, Swiss National Science Foundation NFP67 grant)
 2000 – 2001 Jan Kasal, MD
 2000 – 2014 R. Scott Watson, MD, MPH (recipient, NICHD K23HD046489, NICHD R01)
 2001 – 2005 Kelly Wood, MD, MHS (recipient, NIGMS K23GM068085)
 2001 – 2014 Amber Barnato, MD, MPH (recipient, NIA K08AG021921, recipient, multiple R awards)
 2002 – 2006 Mary Hartman, MD (funded, NICHD T32HD40686)
 2002 – 2004 David Huang, MD (funded, NRSA 5T32HL07820-06), 07; recipient, CCM Department Seed Grant: Intensive Care Unit Teamwork, Error, and Attitudes About Management and Safety in the United States (ICUTEAMS - USA); (funded, NIH R01GM101197, 2013)
 2003 – 2005 Olivier Collange, MD (funded by The French Society of Intensive Care, The French Society of Anesthesia and Intensive Care, Strasbourg University Hospital, and The Association of Anesthesiologists in Alsace)
 2003 – 2004 Alexander Kersten, MD (supported by German government career development grant)
 2003 – 2006 Nan Garber, MD
 2003 – 2010 Eric Milbrandt, MD (recipient, NHLBI K23HL078760)

2004 – 2007	Carlos Aitor Macias, MD
2004 – 2008	Matthew Rosengart, MD (recipient, K12HD049109; NIGMS R01)
2005 – 2007	Lillian Emlet, MD
2005 – 2007	Heather Schlott, MD
2006 – 2007	Michael Reade, MD, PhD (recipient, Endowed Research Professorship in Military Medicine, Australian Armed Forces)
2007 – 2014	Sachin Yende, MD (recipient, K23GM083215; R01GM097471)
2007 – 2010	Florian Mayr, MD, MPH, PhD (funded, NRSA T32HL07820-06, 07)
2008 – 2009	Yen-Lan Nguyen, MD (funded, French Government, recipient, ESICM Female Career Development Award)
2008 -	Deepika Mohan, MD, MPH (funded, KL2RR024154) (recipient, K23GM101292); (NIH DP2LM102339, 2015)
2009 -	Octavia Peck-Palmer, MD (funded, KL2TR000146)
2009 – 2010	Ricardo Castro, MD (funded, Chilean government grant)
2009 – 2010	Sachin Kale, MD (funded, NIA T32AG021885 [program PI: Studenski SA])
2010 – 2012	David Wallace, MD (funded, 5T32HL007820) (recipient, K12HL109068, NIGMS Ko8) (funded, NIH/NHLBI R03HL10202)
2010 – 2011	Joseph McLaughlin, PhD, (funded, Physician Scientist Training Program and the Mitchell P. Fink Endowed Chair; Vascular Medicine Institute Seed grant)
2010 – 2011	Wan Chan Lim, MD (funded, IMPACCT Fellowship Training Program)
2011 -	Christopher W. Seymour, MD, MSc (recipient, K23GM104022); (funded, NIH/NIGMS R35GM119519, 2016)
2011 – 2014	Judith Tate, MSN, PhD (funded T32MH19986)
2014 - 2015	Olufunmilayo Falade, MD
2014 -	Florian Mayr, MD, MPH, PhD
2014 -	Sherry Hsiang-Yi Chou, MD (funded K23NS073806)

Service

Federal and other government research committees/activities

1988 - 1989	Coordinator, Vietnamese Refugee Health Care and Prevention Program, United Nations High Commission for Refugees and Medecins sans Frontieres, Hong Kong
1991	Reviewer, "Management of the Medical Response to Mass Casualties in a Catastrophic Disaster" for the Office of Emergency Preparedness, Health Resources and Services Administration, United States Public Health Service; and The Federal Emergency Management Agency
1991 - 1995	Member, Specialized Medical Teams Section, Steering Committee, US National Disaster Medical Systems (NDMS), Department of Health and Human Services and Federal Emergency Management Agency, US Government
1993 - 1996	Member, Brain Resuscitation Clinical Trial Steering Committee (NIH R01HD3607501).
1997	Consultant, Development of Hantavirus Pulmonary System Clinical Guidelines, Special Pathogens Branch, Centers for Disease Control, Atlanta, GA
1997	Technical Reviewer, Medicare Centers for Medical Excellence, Health Care Financing Administration, US Government
1997 - 2000	Member, National Clinical Oversight Committee, Optimal Timing of Liver Transplantation (NIH R01 HS09694-03)
1998 - 2000	Member, Research Subcommittee, Pulmonary Artery Catheterization and Clinical Outcomes (PACCO) Committee, National Heart Lung and Blood Institute (NHLBI)
2000	Ad hoc reviewer, Israel National Institutes of Health
2001 - 2002	Ad hoc reviewer, Alberta Medical Research Foundation, Canada
2001 - 2002	Ad hoc reviewer, Research Grants Council of Hong Kong
2002	Ad hoc reviewer, National Lung Foundation, Canada
2003	Member, Study Section, Special Emphasis Panel for ARDS SCCOR awards, NHLBI, National Institutes of Health

2003	Ad hoc reviewer, Randomized Controlled Trials Committee, Canadian Institutes of Health Research
2003	Consultant, BECON 2003 Symposium, “Catalyzing Team Science”, National Institutes of Health, Department of Health and Human Services
2004	Member, Special Emphasis Panel for Research Centers in Trauma, Burn and Perioperative Injury, NIGMS, National Institutes of Health (PAR-02-092)
2005	Member, NHLBI Strategic Plan Executive Planning Committee, National Institutes of Health
2006	Member, Special Emphasis Panel for Research Centers in Trauma, Burn and Perioperative Injury, NIGMS, National Institutes of Health (PAR-02-092)
2009	Member, Planning Committee, Department of Veterans’ Affairs, VA Cooperative Study No. 574, The ESCAPE (Extended Steroid (in) CAP (e))
2009 – 2011	Member, Advisory Committee, CTSI Comparative Effectiveness Supplement
2010	Member, DSMB, Thiamine as a metabolic Resuscitator in Septic Shock, National Institutes of Health (NCT01070810)
2010	Member, Study Section, RC4 application for ZRG1 IDM-C (55), Center for Scientific Research, National Institutes of Health
2011 – 2012	Member, Ventilator-Associated Pneumonia (VAP) Prevention Committee, National Institutes of Health, National Heart, Lung and Blood Institute
2011	Peer Reviewer for Comparative Effectiveness Review entitled “Procalcitonin-Guided Antibiotic Therapy,” Agency for Healthcare Research and Quality (AHRQ)
2012	Member, External Review Panel, Intramural Critical Care Program, NIH
2014	Reviewer, Health Researcher of the Year, Canadian Institute of Health Research (CIHR), Canada
2015	Ad hoc reviewer, Health Services Organization and Delivery Study Section, NIH
2013-2018	Chair, DSMB, SPICE (Sedation Practice in Intensive Care Evaluation) multicenter randomized clinical trial, National Health and Medical Research Council (NHMRC), Australia

Professional society and non-governmental organization activities

American College of Chest Physicians

1998 -	Member, Steering Committee, Critical Care NetWork
2002	Reviewer, Distinguished Scholar Program
2001 -	Abstract Reviewer, Annual International Scientific Assembly

American College of Critical Care Medicine

1998 - 1999	Member, Distinguished Investigator Awards Committee
1999 - 2002	Member, Task Force on Critical Care Training Guidelines
2009 - 2012	Member, Guidelines Utilization Committee

American Thoracic Society

1996 - 1997	Co-chair, Critical Care Assembly Workshop on Outcomes Research
1997 - 1998	Co-chair, Critical Care Assembly Workshop on Cost and Cost-Effectiveness
2001 -	Abstract Reviewer, Annual International Conference
2001	Member, Health Policy Committee
2002 - 2004	Member, Government Relations Committee
2002 - 2005	Chair, Health Policy Committee
2003 - 2005	Member, Critical Care Program Committee, Annual International Conference
2005 -	Member, Transitional Interface Strategy Group
2015 – 2017	Member, Awards Committee

European Society of Intensive Care Medicine (ESICM)

2000 - 2001	Member, Working Group on Cost-Effectiveness
1996 -	Member, Health Services Research and Outcomes Section
1996 - 1999	Member, European Nitric Oxide Working Group
2001 -	Abstract Reviewer, Annual International Symposium
2014 - 2015	Reviewer, ESICM Research Grants

InFACT (International Forum of Acute Care Trialists)

2010 - Treasurer, Executive Committee

International Sepsis Forum

2005 - Member, Council
 2006 Co-chair, Program Committee, Colloquium on Sepsis Recovery, Annapolis, MD
 2009 Co-chair, Program Committee, Sepsis 2009, Amsterdam, Netherlands
 2013 Co-chair, Program Committee, Sepsis 2013, Rio de Janeiro, Brazil
 2013 - 2014 Treasurer
 2015 - 2016 Chair
 2017 – 2019 Secretary

ISARIC (International Severe Acute Respiratory Infection Consortium)

2012 - Chair, Working Group on Randomized Clinical Trials
 2012 - Member, Council
 2012 - Member, Executive Committee

Joint US Critical Care Societies

1996 - 1999 Scientific Advisor, Commission on Manpower for Pulmonary and Critical Care Services (COMPACCS) Advisory Panel
 1999 - 2000 Co-chair, Global ICU Database program
 2000 - 2002 Member, Joint Workforce Coordinating Committee
 2000 - 2006 Chair, Publication Sub-Committee, Joint Workforce Coordinating Committee
 2006 - 2007 Co-chair, PROMIS (Prioritizing the Organization and Management of Intensive Care Services)

Joint ESICM/SCCM initiatives

2001 – 2002 Member, 2002 Sepsis Consensus Definitions Task Force
 2007 – 2008 Member, 2008 Surviving Sepsis Guidelines committee
 2011 – 2012 Member, 2012 Surviving Sepsis Guidelines committee
 2014 – 2016 Member, 2016 Sepsis Consensus Definitions Task Force (Sepsis-3)
 2015 – 2016 Member, 2016 Surviving Sepsis Guidelines committee

Pan American and Iberic Federation of National Societies of Intensive care and Critical Care Medicine

1998 - 1999 Member, Scientific Committee, 6th Pan American Iberian Congress, Quito, Ecuador
 1999 - 2003 US delegate, Council

Society of Critical Care Medicine

1989 - 1992 Member, Disaster Response Task Force
 1990 - 1991 Member, American Red Cross-SCCM Civilian Volunteer Critical Care Team, (on call for dispatch to Germany during Desert Storm)
 1991 - 1992 Co-organizer, Critical Care Disaster Response Exercise, Annual Scientific Symposium
 1992 - 1996 Co-chair, Critical Care Preparedness Committee
 1994 - Member, Internal Medicine Section
 1994 - 1995 Member, Outcomes Evaluation Task Force, Project IMPACT
 1995 - 2001 Member, International Liaison Subcommittee, Interorganizational Committee
 1997 - 2000 Member, Electronic Communications Committee
 1998 - 2000 Member, Research Committee
 1998 - 2001 Member, Quality Indicators Committee
 1999 - 2004 Member, Research Committee, Project IMPACT
 2001 – Abstract Reviewer, Annual International Educational & Scientific Symposium
 2001 Vice Chair, Research Committee
 2001 Member, ICU Verification Taskforce
 2002 Chair, Research Committee
 2002 - Member, Joint Taskforce on Workforce/Manpower Issues (The FOCCUS Group)

- 2005 – 2008 Member, Critical Care Outcomes Task Force
- 2006 – 2010 Member, ICU Design Book Task Force
- 2006 - 2008 SCCM representative, Critical Care/Pulmonary Stakeholders Task Force
- 2006 - 2008 Member, Future of Research in Critical Care Task Force
- 2009 - 2012 Member, Strategic Planning Committee
- 2010 - 2013 Member, Conduct in Research Task Force
- 2011 - 2014 SCCM representative, Surviving Sepsis Campaign
- 2013 Member, Research Summit Steering Committee
- 2013 – 2014 Member, Editor-in-Chief Search Task Force
- 2015 Member, Research Section Subcommittee Task Force
- 2015 – 2016 Member, Precision Medicine Task Force
- 2016 - Member, Academic Leaders in Critical Care Medicine (ALCCM) Task Force

Other

- 1986 - 1988 Coordinator, Clinical Sections, MRCP UK examinations, Southern General Hospital, Royal College of Physicians and Surgeons of Glasgow, Glasgow, UK.
- 1990 - 1993 Member, Life Supporting First Aid Task Force, World Association for Emergency and Disaster Medicine
- 1991 - 1994 Member, Disaster Management Committee, International Trauma Anesthesia and Critical Care Society
- 1992 - 1994 Member, Disaster Task Group, Wilderness Emergency Medicine Curriculum Development Project, Center for Emergency Medicine of Western Pennsylvania and Appalachian Search and Rescue Conference
- 1999 - 2002 Scientific Advisor, Program Committee, Toronto Critical Care Symposium
- 1999 - Member, Core Group, End-of-Life Care for the Critically Ill, Robert Wood Johnson Foundation.
- 2002 - 2003 Co-Chair, New York Academy of Science Symposium on Management
- 2002 – 2004 Member, Scientific Program Committee, 6th World Congress on Trauma, Shock, Inflammation and Sepsis, Munich, Germany
- 2003 - Core Council Member, Ethics, Rationing & ICU Alliance
- 2011 – Member, Scientific Committee, Annual International Symposium of Intensive Care and Emergency Medicine, Brussels, Belgium

Industry-related activities

- 1995 - 2005 Consultant, Health Process Management, Inc.
- 1996 Consultant, Strategic Planning Group, Ohmeda, Inc. (a division of the BOC group).
- 1996 Advisor, Propharma, Inc., Clinical Research Program Redesign. University of Southern California/Los Angeles County Hospital.
- 1996 - 1998 Member, Clinical Evaluation Committee, Wallace Laboratories, Inc.
- 1996 - 1998 Consultant, Clinical and Outcomes Research Trial Design for Anti-Infectives, Pfizer, Inc.
- 1997 - 1999 Member, Health Economics Advisory Board, rhAPC in Sepsis, Eli Lilly and Company
- 1997 - 1999 Member, Senior Scientific Advisory Board, rhAPC in Sepsis, Eli Lilly and Company
- 1999 - 2008 Member, Scientific Advisory Board, VIS-ICU, Inc.
- 2000 - 2002 Advisor, The Leapfrog Group
- 2000 - 2001 Member, Scientific Advisory Board, Knoll Laboratories, Inc.
- 2001 - 2002 Consultant, Pharmacia and Upjohn Company
- 2001 Consultant, ICOS Corporation
- 2001 Consultant, Immunex Corporation
- 2002 Member, International Strategic Scientific Advisory Board, AMPharma, Inc.
- 2002 – 2003 Member, Advisory Board, Oxford BioSignals
- 2002 Member, International Advisory Board, the PROGRESS study, Eli Lilly and Company
- 2002 Member, ADDRESS (Administration of Drotrecogin alfa (activated) in Early Stage Severe Sepsis), Eli Lilly and Company
- 2003 Member, Sepsis Global Advisory Board, GlaxoSmithKline
- 2003 Member, Anemia Advisory Board, Ortho Biotech
- 2003 Consultant, IntensiCare

2003	Member, Critical Care Advisory Board, Amgen
2003 - 2008	Member, Steering Committee, LIPOS trial, GlaxoSmithKline
2003 - 2004	Member, Cerner Critical Care Transformation Council, Cerner Corporation
2004	Member, Medical Advisory Board, A-Lung Technologies
2005	Consultant, MedImmune
2005 - 2008	Consultant, ZD Associates, Inc.
2005 - 2012	Member, Advisory Board, anti-TLR4 strategies in sepsis, Eisai, Inc.
2005 - 2007	Member, Advisory Board, anti-TLR4 strategies in sepsis, Takeda, Inc.
2006	Member, Advisory Board, sepsis product development, Wyeth-Ayerst
2006	Consultant, sepsis product development, AstraZeneca
2006	Consultant, BRAHMS Diagnostica
2006	Member, Critical Care Advisory Board, Radiometer, Inc.
2007 - 2012	Member, DSMB, PROWESS Shock multicenter clinical trial, Eli Lilly and Company
2007	Consultant, Novartis
2010 - 2011	Consultant, Idaho Technologies
2011 - 2012	Consultant, Pfizer Inc.
2012 - 2013	Member, Advisory Board, Roche Diagnostics International Ltd
2012 - 2013	Consultant, MedImmune
2013 - 2016	Consultant, Ferring Pharmaceuticals
2013 - 2014	Consultant, BioAegis
2013	Consultant, Nestle Health Science
2013 - 2014	Consultant, Bristol-Myers Squibb Company
2014 - 2015	Consultant, Bayer HealthCare
2014	Member, Advisory Board, GlaxoSmithKline
2014 - 2015	Consultant, Beckman Coulter, Inc.
2015 - 2016	Member, Advisory Board, GenMark Diagnostics, Inc.
2015 - 2016	Member, Advisory Board, Ibis Biosciences, Inc.
2016	Consultant, Biocartis

University research committees/activities

University of Glasgow and associated teaching hospitals

1981 - 1984	Member, Staff-Student Liaison Committee, School of Medicine
1982 - 1984	Student representative, Medical School Steering Committee
1980 - 1984	Member, Executive Committee, Medical School charity fund-raising society
1985 - 1988	Junior staff representative, hospital Joint Medical Staff Committee (responsible for junior staff interests in hospital administration and affairs), Southern General Hospital

University of Pittsburgh

1990 - 1997	Member, Disaster Reanimatology Study Group
1993 - 1996	Member, Bylaws and Procedures Committee, University Senate
1996 - 1997	Pro Tem Member, Bylaws and Procedures Committee, University Senate
1996 -	Core Faculty, Center for Research on Health Care
1996 - 2005	Member, Executive Committee, Center for Research on Health Care
1996 - 1998	Co-coordinator, Large Database & Pattern Analysis Group, Center for Research on Health Care

University of Pittsburgh School of Medicine

1991 - 1994	Member, Curriculum Development Committee, Disaster Reanimatology Fellowship, International Resuscitation Research Center
1994 - 1996	Reviewer, Internal Peer Review process, Western Psychiatric Institute and Clinic
1994 - 1997	Member, Acute Care Workgroup, Center for Injury Research and Control (CIRCL)
1995 - 1997	Associate Faculty Member, CIRCL
1997	Reviewer, Central Research Development Fund Small Grants Program
1998	Reviewer, Department of Medicine Internal Peer Review Process
2003 - 2005	Member, Clinical Research Steering Committee

2003 - 2006 Affiliate Faculty Member, Center for Bioethics and Health Law, School of Medicine
 2005 - Affiliate Faculty Member, Center for Inflammation and Regenerative Modeling (CIRM)
 2005 - Affiliate Faculty Member, McGowan Institute for Regenerative Medicine
 2008 - Member, Executive Committee
 2008 - Member, Dean's Veterans' Administration and School of Medicine Liaison Committee
 2009 Member, Radiology Chair Search Committee
 2009-2010 Member, Plastic Surgery Department Appraisal Committee
 2010 Member, Neurosurgery Chair Search Committee
 2010-2011 Chair, Medicine Chair Search Committee
 2012 Member, Organizing Committee, 2012 Pittsburgh International Lung Conference
 2013-2014 Member, Anesthesiology Chair Search Committee
 2014 - Member, Advisory Board, Center for Critical Care Nephrology
 2015 - 2017 Member, Academic Foundation Review Committee
 2015 Member, Pediatric Chair Search Committee
 2016 - 2017 Chair, Biostatistics Chair Search Committee
 2016 - Member, Dickson Prize Committee
 2017 - Chair, Anesthesiology Chair Search Committee

UPMC

1991 - 1993 Member, Ethics and Human Rights Committee
 1993 - 1994 Member, EMTEK Critical Care Information Systems Committee
 1994 Member, Clinical Pathway for Adult Orthotopic Liver Transplantation
 2008 - 2009 Member, Pharmacy and Therapeutics Committee
 2008 - Member, Medical Executive Committee, Presby/Shadyside
 2008 - Member, Total Quality and Patient Safety Council
 2008 - Member, Board of Directors, University of Pittsburgh Physicians
 2008 - Member, Council of Clinical Chairs
 2013 - 2014 Member, Executive Committee, University of Pittsburgh Physicians
 2015 - Co-Director, ICU Service Center

Division of Critical Care Medicine, Department of Anesthesiology and Critical Care Medicine

1990 - 2001 Member, Education Committee
 1991 - 1994 Member, Critical Care Medicine Management and Cost-Effectiveness Study Group
 1991 - 1995 Member, Liver Transplant Critical Care Clinical Study Group
 1992 - 1993 Chair, Biomedical Informatics Committee
 1994 Member, Outreach Committee
 1994 - 1999 Member, Health Delivery and Systems Evaluation Team (HeDSET)
 1995 - 1997 Medical Director, Critical Care Medicine Clinical Trials Program
 1996 Teaching Regulations Faculty Facilitator
 1999 - 2001 Member, Departmental Fundraising Committee
 1999 - 2001 Member, Strategic Advisory Committee

Department of Critical Care Medicine

2001 - Director, CRISMA (Clinical Research, Investigation and Systems Modeling of Acute Illness) Center
 2002 - Member, Education Committee
 2002 - Member, Research Committee
 2002 - Member, Promotions & Reappointments Committee
 2002 - 2005 Member, Departmental Fundraising Committee
 2002 - 2008 Member, Executive Steering Committee
 2008 - Chair, Executive Steering Committee