

CURRICULUM VITAE

Steven J. Barker, PhD, MD

Personal Data

Date of Birth: February 5, 1945

Diplomate of the National Board of Medical Examiners, 1982

Diplomate of the American Board of Anesthesiology, 1985

Fellow in Anesthesiology, American College of Anesthesiologists, 1985

Education

- 1962-1967 Harvey Mudd College, Claremont, CA.
B.S. 1967, major in Physics.
Graduated with Honors.
- 1967-1971 California Institute of Technology, Pasadena, CA.
M.S. 1968, Ph.D. 1971, major in Engineering Science.
Ph.D. thesis research in fluid mechanics: "The Effect of Dilute Polymer Solutions on Radiated Noise from Turbulent Boundary Layers." Thesis advisor: Donald Coles, Ph.D.
- 1979-1981 University of Miami School of Medicine, Miami, FL.
M.D. 1981, Ph.D. - M.D. Program.
- 1981-1982 University of California, San Diego.
Internship in General Surgery.
- 1982-1984 University of California, San Diego.
Residency in Anesthesiology.
Chief Resident, 1984.

Professional Experience

- 1995-Present Professor and Head, Department of Anesthesiology, University of Arizona College of Medicine.
Professor, Aerospace and Mechanical Engineering.
- 1996-Present Director, Perioperative Services, University Medical Center
- 1992-1995 Professor and Chairman, Department of Anesthesiology, University of California, Irvine.
- 1991-1992 Associate Professor and Acting Chairman, Department of Anesthesiology, University of California, Irvine.
- 1986-1991 Associate Professor and Vice-Chairman, Department of Anesthesiology, University of California, Irvine.
- 1984-1986 Assistant Professor, Department of Anesthesiology, University of California, Irvine.
- 1974-1979 University of California, Los Angeles.
Assistant Professor 1974; Associate Professor (tenured) 1978.

1971-1974 California Institute of Technology.
Research Fellow 1971; Senior Research Fellow 1973.

1962-1970 U. S. Navy Undersea Center.
Research Scientist

TEACHING

Dr. Barker spends approximately one day a week training anesthesiology residents in the operating rooms. He gives formal lectures to both residents and faculty covering basic and advanced topics in the field of clinical anesthesiology. He also gives research seminars to the department on a regular basis. Dr. Barker gives lectures to the medical students pharmacology course each year on the subject of anesthesiology and its close relationship to pharmacology. In collaboration with the Anesthesiology Program Director, Dr. Barker plans and revises the didactic curriculum for the anesthesiology residency each year.

RESEARCH

Dr. Barker's current research areas include the following:

- The accuracy and interpretation of pulse oximetry in the operating room.
- Continuous intraarterial fiberoptic blood gas monitoring.
- Monitoring of brain function during neurosurgical operations.
- Noninvasive measurement of cardiac output and blood flow.
- Transcutaneous measurement of oxygen and carbon dioxide.
- Pressure-flow relationships in anesthesia breathing systems.
- The fluid mechanics of airway obstruction and the effects of helium-oxygen mixtures.
- Capnography and the relationship of arterial and end-tidal carbon dioxide.

UNIVERSITY SERVICE

The University of Arizona College of Medicine Service:

- Nominating Committee, 1998-present.
- Heads Up Coordinating Committee, 1997-present.
- Department Heads Council, 1996-present.
- Interview Committee, 1996-1997.
- Comprehensive Curriculum Analysis and Planning Project (CCAPP), 1996-present.
- VA Deans Committee, 1995-present.
- Dean's Cabinet, Member, 2004-present.
- Phoenix Campus Initiative Task Force, Chairman, 2004.
- Phoenix Campus Steering Committee, Member, 2004-2005.

The University Medical Center Service:

- Medical Executive Committee, 1995-present.
- Operating Room Committee, 1996-present.
- Operating Room Reengineering Design Team, Team Leader, 1996.

The University Physicians, Inc. Service:

- UPI Member Compensation Committee, 1996.
- UPI Board of Directors, 1996-present.
- Operations Committee, 1997-present.
- Operations Committee, Chair, 2000-2003.

UCI College of Medicine Committee Service:

School of Medicine Interview Committee, 1985, 1987, 1988.
Search Committee: Chair of Family Medicine, 1987-1988.
MD/PhD Steering Committee, 1988.
Animal Users Advisory Committee, 1988-1995.
Human Subjects Review Committee, 1988-1991.
Committee of Postgraduate Medical Education Programs, 1988-1995; Chair 1990-1995.
Faculty Compensation Plan Advisory Committee, 1988-1990.
Committee of Rules, Jurisdiction, and Organization, 1990-1993.
Medical Group Executive Committee, 1990-1995.
Representative Assembly, Irvine Division, Academic Senate, 1990-1995.
Search Committee: Chair of Surgery, 1991-1992.
Blue Ribbon Committee, 1991-1995.
Infrastructure Subcommittee, Chair 1992-1994.
Executive Committee of the Faculty, 1991-1995.
Affiliations Committee, Chair 1990-1992.
Search Committee: Chair of Orthopedics, 1992.
Deans Advisory Board, 1990-1995.
Council of Clinical Chairs, 1990-1995.
COM Faculty Compensation Plan Committee, Chair 1993-1995.

Long Beach Veterans Administration Committee Service:

LBVA/UCI Affiliation Committee, 1990-1991.
Dean's Committee, 1990-1995.

UCI Medical Center Committee Service:

Tissue and Transfusion Committee, 1985.
Critical Care Committee, 1985-1991.
Operating Room Committee, 1985-1992; Chair 1992-1995.
Trauma Committee, 1987-1991.
Faculty Practice Advisory Committee, 1988.
Credentials Committee, 1988-1992.
Cardiac Transplant Team, 1988-1995.
Airway Management Committee, 1988.
Hospital Disaster Committee, 1989.
Risk Management - Alternate Member, 1988-1995.
Executive Committee, 1990-1995.
Clinical Practice Policy Board, 1991-1995.
Finance Committee, 1991-1995; Chair 1993-1995.
Clinical Practice Group Human Resources Committee, Chair 1992-1995.
Joint Quality Resource Management Committee, 1994-1995.
Medical Staff, Vice President 1994-1995.
Medical Staff, President-Elect 1994.

DEPARTMENT SERVICE; ADMINISTRATIVE SERVICE

Director of UCIMC consulting anesthesia services for Kaiser Canyon General Medical Center, 1985-1988.
JCAHO coordinator for Anesthesiology Department, 1985-1995.
Director of Post-Anesthesia Recovery Room and Preop Holding, 1985-1990.
Director of Research, Department of Anesthesiology, 1985-1990.
Department coordinator for Western Anesthesia Residents Conference, 1984-1995.
UCIMC coordinator for integrated Anesthesia Residency program with San Bernardino County Hospital, 1985.

Chairman, Resident Selection Committee, 1985-1990.
Vice Chairman, Department of Anesthesiology, 1985-1990.
Chairman, Credentials Committee, 1989.
Clinical Competency Committee, 1988-1990.
Education Committee, 1987-1995.
Chair, Departmental Equipment Committee, 1988-1995.
Chair, Departmental Quality Assurance Committee, 1987-1990.
Acting Chairman, Department of Anesthesiology, 1991-1992.
Chairman, Department of Anesthesiology, 1992-1995.

PROFESSIONAL SOCIETIES

The American Board of Anesthesiology, Senior Examiner, April 2007-present.
The American Board of Anesthesiology, Associate Examiner, 1998-April 2007.
American Board of Anesthesiologists, Board Examiner, 1996-1998.
Arizona State Society of Anesthesiologists, 1996-present.
Pima County Medical Society, 1996-present.
American Medical Association.
Association of University Anesthesiologists, elected to membership 1990.
Association of University Anesthesiologists, Secretary 1999-2005.
California Medical Association.
CMA's Advisory Panel on Anesthesiology, 1991-1995.
American Society of Anesthesiologists.
International Anesthesia Research Society.
Orange County Anesthesia Society.
President, Orange County Anesthesia Society, 1990-1991.
Orange County Medical Association.
Society of Cardiovascular Anesthesiologists.
Society for Technology in Anesthesia.
Society for Technology in Anesthesia, President, 1998.
Society for Technology in Anesthesia, Board of Directors, 1992-present.
Society for Technology in Anesthesia, Conference Chairman, 1994-1995.
Western Anesthesia Chairman's Organization, 1991-present.
Society of Academic Anesthesia Chairmen, Inc., 1991-present.
California Society of Anesthesiologists.
District #13 alternate delegate, 1988-1990.
District #13 delegate, 1990-1996.
Educational Program Division, 1990-1995.
1990 Annual Meeting, Session Chairman.
1992 Annual Winter Meeting, Program Chairman.
1993 Annual Winter Meeting, Program Chairman.
1994 Annual Meeting, Program Chairman.
Liaison Committee to Residents= Section, 1994-1995.
Association of Anesthesiology Program Directors Council, 1994-1997.
Association of Anesthesiology Program Directors, President Elect, 2000-2001.
Association of Anesthesiology Program Directors, President, 2001-2002.
American Society of Anesthesiologists Committee on Patient Safety & Risk Management, Chair 2003-2004.
Society of Academic Anesthesia Chairs, Alternate Director, 2003-2006.
X American Society of Anesthesiologists Director, Academic Anesthesiology, 2006.
X American Society of Anesthesiologists Committee on Economics 2006-present.
X American Society of Anesthesiologists Committee on OR Fires Task Force 2006-present.

OTHER ACTIVITIES; COMMUNITY SERVICE

- X Short course provider for Western Podiatry Congress, 1985.
- X Reviewer for: Critical Care Medicine, 1985.
Journal of Clinical Engineering, 1985.
Anesthesiology, 1986-present.
Chest, 1989-present.
Journal of Clinical Monitoring, 1988-1999.
American Journal of Obstetrics and Gynecology.
- X Interviewer for University of Miami Ph.D. to M.D. Program, 1987-1988.
- X Harvey Mudd College Distinguished Alumni Lecture, 1993.
- X Anesthesia & Analgesia, Section Editor for Technology, Computing, Simulation, 2002-2006.

Grants; Contracts; Research Support

- 1970-1972 U.S. Navy Undersea R & D Center: Research grant in support of "Turbulent Boundary Layer Radiated Noise.@ \$25,000.
- 1972-1974 Office of Naval Research: Research grant for "Radiated Noise from Hydrofoils in a Water Tunnel.@ \$30,000 per year for two years.
- 1975-1977 National Science Foundation: Research grant for "Trailing Vortex Wakes in Stratified Fluid.@ \$40,000 for two year program.
- 1976-1979 Defense Advanced Research Projects Agency: Principal Investigator for "Effects of Wall Heating on Laminar Turbulent Boundary Layer Transition in Water.@ \$1,000,000 (approximately) for three year program.
- 1976 UCLA School of Engineering: Academic research support grant for new laboratory equipment. \$35,000.
- 1978 Defense Advanced Research Projects Agency: Research grant for "Trailing Vortex Wakes--Wind Tunnel Simulation.@ \$80,000.
- 1984 UCI Department of Anesthesiology: Starter grant for clinical research projects. \$30,000.
- 1985-1986 Baxter Edwards Co.: Research support for "Intraarterial Blood-Gas Monitoring@ studies in animals and patients. \$30,000 for two year program.
- 1986-1989 Novametrics, Inc.: Contract support for "Accuracy and Reliability of Pulse Oximeters during Hypoxemia.@ \$45,000 for three years.
- 1987-1990 3M/Cardiovascular Devices, Inc.: Research contract support for "Clinical Studies of three-component fiberoptic intraarterial blood-gas monitoring system.@ \$38,000 (in addition to supplies) for three year program.
- 1987-1988 Sentinel Monitoring, Inc.: Research grant for "Accuracy, Reliability, and Time-Response of Reflectance Pulse Oximetry.@ \$25,000.
- 1990-1993 Scarce Medical Specialist Services: Principal investigator to provide anesthesia services to the Long Beach Veterans Administration Medical Center. \$3,733,661

1999-2006	Masimo, Inc.: Research grant for "Pulse Oximetry." \$69,124
2003-2006	Masimo, Inc.: Research grant for "Evaluation of Masimo SET with other Pulse Oximeter Technologies during Motion Artifact." \$7,950
2004-2006	Masimo, Inc.: Research grant for "The Evaluation of SpMet and SpO ₂ Accuracy during Normoxia and Hypoxic Conditions." \$95,380
2005-2006	Masimo, Inc.: Research grant for "SpCO and SpO ₂ Accuracy during Normoxia and Hypoxia." \$27,463

BIBLIOGRAPHY

JOURNAL ARTICLES

1. Barker SJ: Radiated Noise from Turbulent Boundary Layers in Dilute Polymer Solutions. *Physics of Fluids* 16(9):1387-94, 1973.
2. Barker SJ: Laser-Doppler Measurements on a Round Turbulent Jet in Dilute Polymer Solutions. *Journal of Fluid Mechanics* 60(4):721-31, 1973.
3. Barker SJ, Baker GR, Bofah KK, Saffman PG: Laser Anemometer Measurements of Trailing Vortices in Water. *Journal of Fluid Mechanics* 65(2): 325-36, 1974.
4. Barker SJ, Liepmann HW: Laser Anemometer Measurements of Surface Pressure Distributions. *AIAA Journal* 12:1758-59, 1974.
5. Barker SJ, Crow SC: The Motion of Two-Dimensional Vortex Pairs in Ground Effect. *Journal of Fluid Mechanics* 82(4):659-71, 1976.
6. Barker SJ: Measurements of Hydrodynamic Noise from Submerged Hydrofoils. *Journal of the Acoustical Society of America* 59(5):1095-103, 1976.
7. Barker SJ: Turbulence Management in a High-Speed Water Flow Facility. *ASME Fluids Eng., Division paper #79-FE-7*, 1979.
8. Barker SJ: The Effect of Wall Heating upon Transition in Water Boundary Layers. *Journal of Fluid Mechanics* 95:2, 1980.
9. Barker SJ, Tremper KK: Transcutaneous Oxygen Tension: A Physiological Variable for Monitoring Oxygenation. *Journal of Clinical Monitoring* 1(2):130-4, 1985.
10. Barker SJ, Karagianes T: Gastric Barotrauma: A Case Report and Theoretical Considerations. *Anesthesia and Analgesia* 64(10):1026-8, 1985.
11. Barker SJ, Tremper KK: Pressure Losses of Endotracheal Tubes: Preformed versus Straight Tubes. *Journal of Clinical Engineering* 11(5):371-6, 1986.
12. Tremper KK, Hufstedler SM, Barker SJ, et al: Continuous Noninvasive Estimation of Cardiac Output by Electrical Bioimpedance: an Experimental Study in Dogs. *Critical Care Medicine* 14(3):231-3, 1986.
13. Barker SJ, Tremper KK, Gamel DM: A Clinical Comparison of Transcutaneous P02 and Pulse Oximetry in the Operating Room. *Anesthesia and Analgesia* 65:805-8, 1986.
14. Tremper KK, Anderson ST, Barker SJ: Relationship of Transcutaneous P02 to Arterial P02.

Canadian Anaesth Society Journal 33(1):108-9, 1986.

15. Tremper KK, Barker SJ, Blatt D, Wender R: Effects of Anesthetic Agents on the Drift of a Transcutaneous P02 Sensor. *Journal of Clinical Monitoring* 2(4): 234-6, 1986.
16. Tremper KK, Barker SJ: Basic Physics and Measurement in Anesthesia. *Anesthesia and Analgesia* 65:1372, 1986.
17. Barker SJ, Tremper KK: The Effect of Carbon Monoxide Inhalation on Pulse Oximetry and Transcutaneous P02. *Anesthesiology* 66:677-79, 1987.
18. Barker SJ, Tremper KK, Hyatt J, Zaccari J, et al: Continuous Fiber-Optic Arterial P02 Measurements in Dogs. *Journal of Clinical Monitoring* 3: 48-52, 1987.
19. Phan CQ, Tremper KK, Lee SE, Barker SJ: Noninvasive Monitoring of Carbon Dioxide: A Comparison of the Partial Pressure of Transcutaneous and End-Tidal Carbon Dioxide with the Partial Pressure of Arterial Carbon Dioxide. *Journal of Clinical Monitoring* 3:149-154, 1987.
20. Barker SJ, Tremper KK, Hyatt J, Zaccari J, et al: Continuous Fiberoptic Arterial Oxygen Tension Measurements in Dogs. *Literature Scan: Anesthesiology* 1(1):11, June 1987.
21. Barker SJ, Tremper KK: Detection of Endobronchial Intubation by Noninvasive Monitoring. *Journal of Clinical Monitoring* 3:293-4, 1987.
22. Tremper KK, Barker SJ: Using Pulse Oximetry when Dyshemoglobin Levels are High. *Journal of Critical Illness* 3(11):103-107, 1988.
23. Anderson ST, Hajduczek J, Barker SJ: Benzocaine-Induced Methemoglobinemia in an Adult: Accuracy of Pulse Oximetry with Methemoglobinemia. *Anesthesia and Analgesia* 67:1099-101, 1988.
24. Wink J, Vaziri S, Barker SJ, Hyatt J, Ritchie C: The Effect of Hemodialysis on Whole Blood, Plasma and Erythrocyte Viscosity. *The International Journal of Artificial Organs* 11(5):340-2, 1988.
25. Barker SJ: Worsening of Hemodynamics Related to Use of an Intraaortic Balloon Pump: Detection by Oximetry. *Journal of Cardiothoracic Anesthesia* 2(5):693-700, 1988.
26. Barker SJ, Tremper KK, Heitzmann H: Comparison of Three Oxygen Monitors in Detecting Endobronchial Intubation. *Journal of Clinical Monitoring* 4:240-3, 1988.
27. Tremper KK, Barker SJ: The Optode: The Next Generation in Blood Gas Measurement. *Critical Care Medicine* 17:481-2, 1989.
28. Tremper KK, Barker SJ: Pulse Oximetry. *Anesthesiology* 70:98-108, 1989.
29. Tremper KK, Barker SJ, Hufstedler SM, Weiss, M: Transcutaneous and Liver surface P02 during Hemorrhagic Hypotension and Treatment with Phenylephrine. *Critical Care Medicine* 17:537-40, 1989.
30. Barker SJ, Tremper KK, Hyatt J: Effects of Methemoglobinemia on Pulse Oximetry and Mixed Venous Oximetry. *Anesthesiology* 70:112-7, 1989.
31. Greenblott G, Barker SJ, Tremper KK, Gerschultz S, Gehrich JL: Detection of Venous Air Embolism by Continuous Intraarterial Oxygen Monitoring. *Journal of Clinical Monitoring* 6:53-6, 1990.
32. Tromberg BJ, Kimel S, Orenstein A, Barker SJ, Hyatt J, Nelson JS, Roberts WG, Berns MW: Tumor

- Oxygen Tension During Photodynamic Therapy. *Journal of Photochemistry and Photobiology, B: Biology* 5:121-6, 1990.
33. Tromberg BJ, Orenstein A, Kimel S, Barker SJ, Hyatt J, Nelson S, Berns MW: *In vivo* Tumor Oxygen Tension Measurements for the Evaluation of the Efficiency of Photodynamic Therapy. *Photochemistry and Photobiology* 52(2): 375-85, 1990.
 34. Barker SJ, Hyatt J: Continuous Measurement of Intraarterial pHa, PaCO₂, and PaO₂ in the Operating Room. *Anesthesia and Analgesia* 73:43-8, 1991.
 35. Lee S, Tremper KK, Barker SJ: Effects of Anemia on Pulse Oximetry and Continuous Mixed Venous Hemoglobin Saturation Monitoring in Dogs. *Anesthesiology* 75:118-22, 1991.
 36. Barker SJ, Hyatt J, Clarke C: Hyperventilation Reduces Transcutaneous Oxygen Tension and Skin Blood Flow. *Anesthesiology* 75:619-24, 1991.
 37. Greenblott GB, Tremper KK, Barker SJ, Gerschultz S, Gehrich JL: Continuous Blood Gas Monitoring with an Intraarterial Optode during One-Lung Anesthesia. *Journal of Cardiothoracic and Vascular Anesthesia* 5:365-7, 1991.
 38. Wakabayashi A, Brenner M, Kayaleh RA, Berns MW, Barker SJ, Rice SJ, Tadir Y, Della Bella L, Wilson AF: Thoracoscopic Carbon Dioxide Laser Treatment of Bullous Emphysema. *The Lancet* 337:881-3, 1991.
 39. Hasnain JU, Krasna MJ, Barker SJ, Weimann DS, Whitman GJR: Anesthetic Considerations for Thoracoscopic Procedures. *Journal of Cardiothoracic and Vascular Anesthesia* 6(5):624-7, 1992.
 40. Barker SJ, Tremper KK: Respiratory Monitoring, Blood-gas Measurement, Oximetry, and Pulse Oximetry. *Current Opinion in Anaesthesiology* 5:816-25, 1992.
 41. Thomas AN, Hyatt J, Chen JL, Barker SJ: The Laerdal Pocket Mask: Effects of Increasing Supplementary Oxygen Flow. *Anaesthesia* 47:967-971, 1992.
 42. Thomas AN, O'Sullivan K, Hyatt J, Barker SJ: A Comparison of Bag Mask and Mouth Mask Ventilation in Anaesthetised Patients. *Resuscitation* 26:13-21, 1993.
 43. Barker SJ, Clarke C, Trivedi N, Hyatt J, Fynes M, Roessler P: Anesthesia for Thoracoscopic Laser Ablation of Bullous Emphysema. *Anesthesiology* 78:44-50, 1993.
 44. Scannell G, Waxman K, Tominaga G, Barker SJ, Annas C: Oral-Tracheal Intubation in Trauma Patients with Cervical Fractures. *Archives of Surgery* 128:903-06, 1993.
 45. Wong DH, Weir P, Mahutte CK, Onishi R, Daves S, Foran W, Ferraro L, Barker SJ: Experimental and Predicted Dual Oximetry Variability. *Journal of Clinical Monitoring* 9:268-74, 1993.
 46. Barker SJ, Hyatt J, Shah NK, Kao YJ: The Effect of Sensor Malpositioning on Pulse Oximeter Accuracy during Hypoxemia. *Anesthesiology* 79(2):248-54, 1993.
 47. Wong DH, Weber EC, Schell MJ, Wong AB, Anderson CT, Barker SJ: Factors Associated with Postoperative Pulmonary Complications in Patients with Severe Chronic Obstructive Pulmonary Disease. *Anesthesia and Analgesia* 80:275-284, 1995.
 48. Alkire MT, Haier RJ, Barker SJ, Shah NK, Wu JC, Kao YJ: Cerebral Metabolism during Propofol Anesthesia in Humans Studied with Positron Emission Tomography. *Anesthesiology* 82:393-403, 1995. Published with accompanying editorial written by Michael M. Todd, M.D.
 49. Jackson SH, Barker SJ: Methemoglobinemia in a Patient Receiving Flutamide. *Anesthesiology*

82:1065-67, 1995.

50. Breen PH, Serina ER, Barker SJ: Exhaled Flow can Detect Bronchial Flap-Valve Obstruction in a Mechanical Lung Model. *Anesthesia and Analgesia* 81:292-96, 1995.
51. Breen PH, Serina ER, Barker SJ: Measurement of Pulmonary CO₂ Elimination Must Exclude Inspired CO₂ Measured at the Capnometer Sampling Site. *J Clin Monit* 12(4):231-36, 1996.
52. Alkire MT, Haier RJ, Fallon JH, Barker SJ: PET Imaging of Conscious and Unconscious Verbal Memory. *J Consciousness Studies* 3(5-6):448-462, 1996.
53. Wong DH, Hagar JM, Mootz J, Christiano M, Vora SH, Miller JB, Barker SJ: Incidence of Perioperative Myocardial Ischemia in TURP Patients. *J Clin Anesth* 8:627-29, 1996.
54. Barker SJ, Shah NK: The Effects of Motion on the Performance of Pulse Oximeters in Volunteers. *Anesthesiology* 86:101-108, 1997.
55. Trivedi NS, Ghouri AF, Shah NK, Lai E, Barker SJ: Effects of Motion, Ambient Light, and Hypoperfusion on Pulse Oximeter Function. *J Clin Anesth*, Vol. 9, May, 1997.
56. Trivedi NS, Ghouri AF, Lai E, Shah NK, Barker SJ: Pulse Oximeter Performance during Desaturation and Resaturation: A Comparison of Seven Models. *J Clin Anesth*, Vol. 9, May, 1997.
57. Shah N, Trivedi NK, Clack SL, Shah M, Shah PP, Barker SJ: Impact of Hypoxemia on the Performance of Cerebral Oximeter in Volunteer Subjects. *J Neurosurgical Anesth*, 12(3):201-209, 2000.
58. Goldman JM, Petterson MT, Kopotic RJ, Barker SJ: Masimo Signal Extraction Pulse Oximetry. *J Clin Monit*: 7:476-483, 2000.
59. Barker SJ: Lord or Vassal? Academic Anesthesiology Finances in 2000. *Anesth Analg* 93:294-300, 2001.
60. Barker SJ, Polson JS: Fire in the Operating Room: A Case Report and Laboratory Study. *Anesth Analg* 93:960-965;2001.
61. Barker SJ: "Motion-Resistant" Pulse Oximetry: A Comparison of New and Old Models. *Anesth Analg* 95:967-72, 2002.
62. Barker SJ: Standardization of the Testing of Pulse Oximeter Performance. *Anesth Analg* 94:S17-S20; 2002.
63. Tremper KK, Barker SJ, Gelman S, Reves JG, et al: A Demographic Service, and Financial Survey of Anesthesia Training Programs in the United States. *Anesth Analg* 96:1432-46; 2003.
64. Abouleish AE, Prough DS, Barker SJ, Whitten CW, Uchida T, Apfelbaum JL: Organizational Factors Affect Comparisons of the Clinical Productivity of Academic Anesthesiology Departments. *Anesth Analg* 96:802-812; 2003.
65. Tremper KK, Shanks A, Sliwinski M, Barker SJ, Hines R, Tait A: Faculty and Finances of United States Anesthesiology Training Programs: 2002-2003. *Anesth Analg* 94:1185-1192; 2004.
66. Barker SJ, Curry J, Redford D, Morgan S: Measurement of COHb and MetHb by Pulse Oximetry: A Human Volunteer Study. *Anesthesiology* 5:892-897; 2006.
67. Barker SJ, Badal JJ: The Measurement of Dyshemoglobins and Total Hemoglobin by Pulse Oximetry. *Current Opinion in Anesthesiology* 21(6):805-810; 2008.

BOOK CHAPTERS

1. Tremper KK, Barker SJ: "Transcutaneous P02 Measurement," book chapter in Diagnostic Methods in Critical Care, Marcel Dekker, Inc., WC Shoemaker and E Abraham, eds., New York, November 1986, pp. 187-208.
2. Tremper KK, Barker SJ: "Pulse Oximetry and Oxygen Transport," book chapter in Pulse Oximetry, Springer-Verlag, JP Payne and JW Severinghaus, eds., Berlin Heidelberg New York London Paris Tokyo, 1986, pp. 19-30.
3. Barker SJ, Gamel DM, Tremper KK: "Cardiovascular Effects of Anesthesia and Operation," book chapter in Critical Care Clinics, W. B. Saunders Company, WC Shoemaker, S Ayres, A Grenvik, PR Holbrook, WL Thompson, eds., Philadelphia, Pennsylvania, April 1987, pp. 251-268.
4. Tremper KK, Barker SJ, Waxman KS: "Oxygen Transporting Stroma-Free Hemoglobin and Perfluorochemical Emulsions," book chapter in Text Book of Critical Care, WC Shoemaker, WL Thompson, P Holbrook, eds., W.B. Saunders, Philadelphia, 1987.
5. Barker SJ, Tremper KK, "Intra-Arterial P02 Monitoring," Chapter 10 in International Anesthesia Clinics, Little, Brown and Company, KK Tremper and SJ Barker, eds., Fall 1987, volume 25, no. 3, p. 199.
6. Barker SJ, Tremper KK: "Pulse Oximetry: Applications and Limitations," Chapter 8 in International Anesthesia Clinics, Little, Brown and Company, KK Tremper and SJ Barker, eds., Fall 1987, volume 25, no. 3, p. 155.
7. Tremper KK, Barker SJ: "Transcutaneous P02: Experimental Studies and Adult Applications," Chapter in International Anesthesia Clinics, Little, Brown and Company, KK Tremper and SJ Barker, eds., Fall 1987, volume 25, no. 3, p. 67.
8. Barker SJ, Tremper KK: "Physics Applied to Anesthesia," Chapter in Clinical Anesthesia, J. B. Lippincott Company, PG Barash, BF Cullen, and RK Stoelting, eds., Philadelphia, Pennsylvania, pp. 91-133, 1989.
9. Tremper KK, Barker SJ: "Oxygen Monitors," Chapter in Advances in Anesthesia, Year Book Medical Publishers, RK Stoelting, PG Barash, and TJ Gallagher, eds., Chicago, Illinois, Volume 6, pp. 97-125, 1989.
10. Tremper KK, Barker SJ: "Fundamental Principles of Monitoring Instrumentation," Chapter in Anesthesia, Third Edition, Churchill Livingstone, Inc., RD Miller, ed., New York, New York, pp. 957-999, 1989.
11. Tremper KK, Barker SJ: "Monitoring of Oxygen," Chapter in Clinical Monitoring, W. B. Saunders Company, CL Lake, ed., Philadelphia, Pennsylvania, pp. 283-313, 1990.
12. Tremper KK, Barker S.J: "Monitoring of Oxygenation and Ventilation," Chapter in Thoracic Anesthesia, Churchill Livingstone, Second Edition, JA Kaplan, ed., New York, New York, pp. 285-320, 1991.
13. Barker SJ, Tremper KK: "Physics Applied to Anesthesia," Chapter in Clinical Anesthesia, J.B. Lippincott Company, Second Edition, PG Barash, BF Cullen, and RK Stoelting, eds, Philadelphia, Pennsylvania, pp.141-81,1992.
14. Barker SJ, Tremper KK: "Blood Gas Analysis,@ Chapter in Principles of Critical Care Medicine, McGraw Hill, JB Hall, GA Schmidt, and LDH Wood, eds., New York, New York, pp. 181-96, 1992.

15. Barker SJ, Tremper KK: "Pulse Oximetry," Chapter in Anesthesia Equipment: Principles and Applications, Mosby-Year Book, J Ehrenwerth and JB Eisenkraft, eds., St. Louis, Missouri, pp. 249-63, 1993.
16. Tremper KK, Barker SJ: "Oxygenation and Blood Gases,@ Chapter in Monitoring in Anesthesia, Butterworth Heinemann, Third Edition, LJ Saidman, N Ty Smith, eds, Stoneham, Massachusetts, pp. 1-25, 1993.
17. Tremper KK, Barker SJ: "Monitoring of Oxygen,@ Chapter in Clinical Monitoring for Anesthesia and Critical Care, W.B. Saunders Company, Second Edition, CL Lake, ed., Orlando, Florida, pp. 196-212, 1994.
18. Tremper KK, Barker SJ: "Fundamental Principles of Monitoring Instrumentation,@ Chapter in Anesthesia, Churchill Livingstone International, Fourth Edition, RDMiller, ed., New York, New York, pp. 1095-1126, 1994.
19. Barker SJ: "Anesthesia in the High Risk Patient,@ Chapter in Textbook of Critical Care, Third Edition, W.B. Saunders Company, SM Ayres, A Grenvik, PR Holbrook, WC Shoemaker, eds., Philadelphia, Pennsylvania, pp. 1402-1415, 1995.
20. Barker SJ, Tremper KK: ΔIntraoperative Monitoring,@ Chapter in The Practice of Thoracic Anesthesia, J.B. Lippincott Company, E Cohen, ed., Philadelphia, Pennsylvania, pp.207-234, 1995.
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ABSTRACTS

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LETTERS TO EDITOR/EDITORIALS

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PROCEEDINGS

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the Society of Cardiovascular Anesthesiologists, Palm Desert, California, May 12, 1987.

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14. Barker SJ: Oxygenation Monitors and their use in the Detection of Endobronchial Intubation. Tenth Annual International Conference, IEEE - Engineering in Medicine and Biology Society, New Orleans, Louisiana, November 4, 1988.
15. Barker SJ: The Effect of Hyperventilation on Transcutaneous Oxygen. American Academy of Pediatrics Section on Anesthesiology 1989 Spring Session, Orlando, Florida, March 11-16, 1989.
16. Barker SJ: Continuous Fiberoptic Intraarterial Monitoring of pHa, PaCO₂, and PaO₂. 11th Annual International Conference IEEE Engineering in Medicine and Biology Society, Seattle, Washington, November 9-12, 1989.
17. Barker SJ: Recent Advances in Monitoring Oxygenation. 43rd Postgraduate Assembly, The New York State Society of Anesthesiologists, Inc., New York, New York, December 8-13, 1989.
18. Barker SJ, Tremper KK: "Questions and Answers" in The Monitor, Vol. 2, Number 1, March, 1990.
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22. Barker SJ: Advances in Oxygen Monitoring. New York State Society of Anesthesiologists, Inc. 45th Postgraduate Assembly in Anesthesiology, New York, New York, December 9, 1991.
23. Barker SJ: Anesthesia for Thoracoscopic Laser Ablation of Bullous Emphysema. 10th World Congress of Anaesthesiologists, The Hague, The Netherlands, June 12-19, 1992.
24. Barker SJ: A Comparison of Forehead and Earlobe Pulse Oximeter Sensors in the Operating Room. New York State Society of Anesthesiologists, Inc. 57th Postgraduate Assembly in Anesthesiology, New York, New York, December 13, 2003.
25. Barker SJ: A Laboratory Comparison of the Newest "Motion Resistant" Pulse Oximeters During Motion and Hypoxemia. Society for Technology in Anesthesia and International Meeting on Medical Simulation, Santa Fe, New Mexico, January 15-17, 2004.

INVITED LECTURES/VISITING PROFESSOR

1. Barker SJ: Measurements of Radiated Noise and Wall Pressure in Turbulent Boundary Layers in Dilute Polymer Solutions. Ship Acoustics Seminar presented at U.S. Naval Ship Research and Development Center, Bethesda, Md., August 1972.
2. Barker SJ: Polymer Additives in Turbulent Flow. Presented at the Industrial Associates Conference on Problems and Progress in Turbulence, California Institute of Technology, February 1973.

3. Barker SJ: The Effects of Wall Heating on Transition in Water Boundary Layers. UCLA Mechanics and Structures Department Seminar, October 28, 1976.
4. Barker SJ: Effect of Wall Heating on Transition in Water Boundary Layers. University of Southern California Applied Mechanics Seminar, December 1, 1976.
5. Barker SJ: Engineering Problems in Critical Care Medicine. San Diego State University, Mechanical Engineering Colloquium, April 4, 1984.
6. Barker SJ: Anesthesia for Podiatry. Eight hour short course presented at the Western Podiatry Conference, California Podiatric Medical Association, Anaheim, May 24, 1985.
7. Tremper KK, Barker SJ: New High-Technology for Patient Monitoring: Invasive Pressure Measurement Today and Tomorrow. Presented at the Sixth Annual High-Risk Patient Symposium, Anaheim, California, August 1985.
8. Barker SJ: Pressure, Flow, and Anesthesia and Complications of Airway Management. Visiting professor lectureship at University of Oregon School of Medicine, Department of Anesthesiology, Portland, Oregon, December 1985.
9. Barker SJ: Mechanics and Critical Care Medicine: Strange Bedfellows. Fluid Mechanics Seminar, Graduate Aeronautical Laboratories, California Institute of Technology, Pasadena, California, April 25, 1986.
10. Barker SJ: Recent Engineering Developments in Critical Care. Department of Mechanical, Nuclear, and Aerospace Engineering, University of California, Los Angeles, California, May 22, 1986.
11. Barker SJ: Interpretation of Arterial Pressure Measurements. Kaiser Permanente Annual Anesthesiology Symposium, Newport Beach, California, December 6, 1986.
12. Barker SJ: Problems with Pulse Oximetry. Act VIII - Part I (Anesthesia Care Team) Symposium on Anesthesiology, Brooklyn, New York, March 28, 1987.
13. Barker SJ: Problems with Noninvasive Cardiorespiratory Monitoring: Transcutaneous O₂ and CO₂. Act VIII - Part I (Anesthesia Care Team) Symposium on Anesthesiology, Brooklyn, New York, March 28, 1987.
14. Barker SJ: Anesthesiology Update: Current Medications and Monitoring Techniques. Brea Community Hospital, Brea, California, May 14, 1987.
15. Barker SJ: Moderator for the 1987 Burroughs Wellcome Co. Symposium Series, Anaheim, California, June 3, 1987.
16. Barker SJ: Anesthesia & Analgesia in the O.R. and NICU - A Review. Current Concepts in Neonatal Intensive Care Third Annual Catalina Island Conference, Catalina Island, California, June 24, 1987.
17. Barker SJ: Indications for Pulse Oximetry. Current Concepts in Neonatal Intensive Care Third Annual Catalina Island Conference, Catalina Island, California, June 24, 1987.
18. Barker SJ: Transcutaneous P_{O2}. Orange Coast College, Respiratory Therapy students, Costa Mesa, California, September 2, 1987.
19. Barker SJ: O₂ Transport and Monitors. Anesthesiology Review Course, San Francisco, California, April 12, 1988.
20. Barker SJ: Case 3: Recurrent Ventricular Fibrillation in the PACU. Case Conference in Anesthesia, California Society of Anesthesiologists, Lake Tahoe, Nevada, September 10, 1988.

21. Barker SJ: Case 9: Pulmonary Edema in the Recovery Room. Case Conference in Anesthesia, California Society of Anesthesiologists, Lake Tahoe, Nevada, September 10, 1988.
22. Barker SJ: Pitfalls of Pulse Oximetry. Visiting Professor, University of Southern California, December 2-3, 1988.
23. Barker SJ: Interpreting End-Tidal CO₂ Measurements. Visiting Professor, University of Southern California, December 2-3, 1988.
24. Barker SJ: Anesthetic Drugs/Drug Therapy as it Relates to the PACU. Post Anesthesia Nurses Association of California - District 13 Meeting, University of California, Irvine Medical Center, Orange, California, March 14, 1989.
25. Barker SJ: Critical Care Monitoring of the Cardiac Patient: Current Concepts and Future Directions. American College of Cardiology Annual Scientific Sessions, Anaheim, California, March 18, 1989.
26. Barker SJ: Pitfalls of Noninvasive Oximetry. Anesthesia Update 1989 Meeting, Copper Mountain, Colorado, January 21-27, 1989.
27. Barker SJ: Evaluating New Equipment: Monitoring Versus Measuring. Anesthesia Update 1989 Meeting, Copper Mountain, Colorado, January 21-27, 1989.
28. Barker SJ: Understanding the Capnogram. Anesthesia Update 1989 Meeting, Copper Mountain, Colorado, January 21-27, 1989.
29. Barker SJ: Invasive and Noninvasive Blood Gas Monitoring: Current Methods and Techniques. Critical Care Monitoring of the Cardiac Patient, Institute for Medical Studies, Garden Grove, California, March 18, 1989.
30. Barker SJ: Acid Base Physiology. St. Joseph's Hospital, Orange, California, June 7, 1989.
31. Barker SJ: Noninvasive Gas Monitoring. New Trends in Cardiopulmonary Medicine, Akron City Hospital, Akron, Ohio, October 4, 1989.
32. Barker SJ: Preoperative Assessment for Anesthesia. General & Thoracic Surgery Grand Rounds, Department of Surgery, University of California, Irvine, November 4, 1989.
33. Barker SJ: Assessment of Oxygenation: Noninvasive Techniques. Seventh Annual Winter Seminar, California Society of Anesthesiologists, Steamboat Springs, Colorado, February 17-24, 1990.
34. Barker SJ: Expired Gas Monitoring: What's Worth Buying. Seventh Annual Winter Seminar, California Society of Anesthesiologists, Steamboat Springs, Colorado, February 17-24, 1990.
35. Barker SJ: Assessment of Oxygenation: Invasive Techniques. Seventh Annual Winter Seminar, California Society of Anesthesiologists, Steamboat Springs, Colorado, February 17-24, 1990.
36. Barker SJ: Monitoring of Oxygenation and Ventilation. California Society of Anesthesiologists Annual Meeting, San Francisco, California, May 17-20, 1990.
37. Barker SJ: Session Moderator: Neurological Diseases, California Society of Anesthesiologists, San Francisco, California, May 17-20, 1990.
38. Barker SJ: Factors Affecting the Use and Accuracy of Pulse Oximetry in the OR and PACU. Association for the Advancement of Medical Instrumentation, Portland, Oregon, August 23-25, 1990.

39. Barker SJ: Pitfalls of Noninvasive Oximetry. Southern California Permanente Medical Group's Annual Anesthesiology Symposium, Irvine, California, September 8, 1990.
40. Barker SJ: Oxygen Transport Monitoring and Pulmonary Artery Oximetry. Southern California Permanente Medical Group's Annual Anesthesiology Symposium, Irvine, California, September 8, 1990.
41. Barker SJ: Gas Monitoring. The Osler Institute Anesthesiology Review Course, Palm Desert, California, October 1-6, 1990.
42. Barker SJ: Recovery Room. The Osler Institute Anesthesiology Review Course, Palm Desert, California, October 1-6, 1990.
43. Barker SJ: Anesthesia for Trauma. The Osler Institute Anesthesiology Review Course, Palm Desert, California, October 1-6, 1990.
44. Barker SJ: Clinical Applications of Pulmonary Artery Oximetry. Biomedical Optics '91, Los Angeles, California, January 20-25, 1991.
45. Barker SJ: Anesthesia for the Burn Injured Patient. 29th Clinical Conference in Pediatric Anesthesiology, Los Angeles, California, January 25-27, 1991.
46. Barker SJ: Oxygen Monitoring in the Pediatric Patient. 29th Clinical Conference in Pediatric Anesthesiology, Los Angeles, California, January 25-27, 1991.
47. Barker SJ: Pulse Oximetry. Orange Coast College Respiratory Care Program Spring Semester Physician Lecture Series, Orange, California, February 20, 1991.
48. Barker SJ: Theoretical and Practical Applications of Pulse Oximetry. American Thoracic Society 1991 International Conference, Anaheim, California, May 12-15, 1991.
49. Barker SJ: Monitoring of Oxygenation and Ventilation. CSA Annual Scientific Meeting, Anaheim Marriott Hotel, Anaheim, California, May 16-19, 1991.
50. Barker SJ: Advances in Oxygen Monitoring. Associated Alumni University of California, Irvine, College of Medicine, Homecoming Scientific Sessions, June 15, 1991.
51. Barker SJ: Monitoring of Oxygenation and Ventilation. Saint Joseph Hospital Anesthesia Conference, Orange, California, July 10, 1991.
52. Barker SJ: Pulse Oximetry. Saddleback Memorial Medical Center CME Lecture Series, Laguna Hills, California, July 17, 1991.
53. Barker SJ: SvO₂ Monitoring in the Critically Ill Patient. Long Beach Memorial Hospital, Long Beach, California, November 18, 1991.
54. Barker SJ: The New Technology--Understanding Anesthesia Equipment. Panel member at the New York State Society of Anesthesiologists, Inc. 45th Postgraduate Assembly in Anesthesiology, New York, New York, December 9, 1991.
55. Barker SJ: Malignant Hyperthermia--The Latest News. 30th Clinical Conference in Pediatric Anesthesiology, Los Angeles, California, January 24-26, 1992.
56. Barker SJ: Fluid Therapy in Pediatric Trauma Patients. 30th Clinical Conference in Pediatric Anesthesiology, Los Angeles, California, January 24-26, 1992.

57. Barker SJ: Monitoring the Pediatric Patient--Current Regulations and Standards: What is Required and How to do It? 30th Clinical Conference in Pediatric Anesthesiology, Los Angeles, California, January 24-26, 1992.
58. Barker SJ: Oxygen and Carbon Dioxide Transport. The Society for Technology in Anesthesia 2nd Annual Meeting, San Diego, California, January 30-February 1, 1992.
59. Barker SJ: Pulse Oximetry. Orange Coast College Respiratory Care Program 1992 Spring Semester Physician Lecture Series, University of California, Irvine Medical Center, Orange, California, February 11, 1992.
60. Barker SJ: Malignant Hyperthermia. California Society of Anesthesiologists Ninth Annual Winter Seminar, Whistler Resort, British Columbia, Canada, February 15-22, 1992.
61. Barker SJ: Acid-Base Balance: The Bitter Pill? California Society of Anesthesiologists Ninth Annual Winter Seminar, Whistler Resort, British Columbia, Canada, February 15-22, 1992.
62. Barker SJ: Monitoring of Oxygenation. California Society of Anesthesiologists Ninth Annual Winter Seminar, Whistler Resort, British Columbia, Canada, February 15-22, 1992.
63. Barker SJ: Physics for the Anesthesiologist. California Society of Anesthesiologists Ninth Annual Winter Seminar, Whistler Resort, British Columbia, Canada, February 15-22, 1992.
64. Barker SJ: Oxygen Monitoring and Transport. The Osler Institute Anesthesiology Boards Review Course, San Francisco, California, March 30-April 4, 1992.
65. Barker SJ: Anesthesia for Trauma. The Osler Institute Anesthesiology Boards Review Course, San Francisco, California, March 30-April 4, 1992.
66. Barker SJ: Physics for Anesthesiologists. The Osler Institute Anesthesiology Boards Review Course, San Francisco, California, March 30-April 4, 1992.
67. Barker SJ: Malignant Hyperthermia. The Osler Institute Anesthesiology Boards Review Course, San Francisco, California, March 30-April 4, 1992.
68. Barker SJ: Physics Applied to Anesthesia. Visiting Professor Program, The University of Michigan Medical School, Department of Anesthesiology, Ann Arbor, Michigan, May 20, 1992.
69. Barker SJ: Pulse Oximetry: Uses and Limitations. International Symposium on Monitoring and Patient Safety in Anesthesia, Mexican Society of Anesthesiologists, Mexico City, Mexico, January 15-16, 1993.
70. Barker SJ: The Measurement and Maintenance of Oxygen Transport. International Symposium on Monitoring and Patient Safety in Anesthesia, Mexican Society of Anesthesiologists, Mexico City, Mexico, January 15-16, 1993.
71. Barker SJ: Acid-Base Balance. UCLA Visiting Professor Lecture to Nurse Anesthetists, Los Angeles, California, February 8, 1993.
72. Barker SJ: Clinical Capnography: Why PETCO₂ is Different from PACO₂? California Society of Anesthesiologists Tenth Annual Winter Seminar, Snowmass, Colorado, February 13-19, 1993.
73. Barker SJ: Other Recent Developments in Oxygen Monitoring. California Society of Anesthesiologists Tenth Annual Winter Seminar, Snowmass, Colorado, February 13-19, 1993.
74. Barker SJ: Anesthesia for Trauma. California Society of Anesthesiologists Tenth Annual Winter Seminar, Snowmass, Colorado, February 13-19, 1993.

75. Barker SJ: Anesthesia for Thoracoscopic Laser Ablation of Bullous Emphysema. Society of Cardiovascular Anesthesiologists 1993 Annual Meeting, San Diego, California, April 24-28, 1993.
76. Barker SJ: Anesthesia for Thoracoscopic Resection of Emphysematous Bullae. Saint Joseph Hospital Anesthesia Conference, Orange, California, April 28, 1993.
77. Barker SJ: Preanesthetic Evaluation of Patients and Anesthesia Considerations of the Surgical Patient. UCI Urology Educational Program Meeting, Orange, California, May 10, 1993.
78. Barker SJ: Monitoring of Oxygen and Carbon Dioxide. California Society of Anesthesiologists Annual Meeting, Monterey, California, May 20-23, 1993.
79. Barker SJ: Oxygen Monitoring and Transport. University of Southern California Grand Rounds, Los Angeles, California, June 4, 1993.
80. Barker SJ: Oxygen Monitoring. Loma Linda University Departmental Grand Rounds, Loma Linda, California, June 23, 1993.
81. Barker SJ: Monitoring during Airway Management. First International Symposium on the Difficult Airway, Newport Beach, California, September 17-19, 1993.
82. Barker SJ: Oxygen--The Wonder Drug. Harvey Mudd College, Claremont, California, September 29, 1993.
83. Barker SJ: Neurophysiological Monitoring. Society for Technology in Anesthesia, 1993 American Society of Anesthesiologists Annual Meeting, Washington, D.C., October 9-13, 1993.
84. Barker SJ: Monitoring during Airway Management. Saddleback Memorial Hospital Lecture, October 21, 1993.
85. Barker SJ: Recent Developments in Oxygen Monitoring. New York State Society of Anesthesiologists, Inc., 47th Postgraduate Assembly, New York, New York, December 11-15, 1993.
86. Barker SJ: Pulse Oximetry. Visiting Professor at Thomas Jefferson University, Philadelphia, Pennsylvania, January 19-21, 1994.
87. Barker SJ: Oxygen Transport. Visiting Professor at Thomas Jefferson University, Philadelphia, Pennsylvania, January 19-21, 1994.
88. Barker SJ: Anesthesia for Trauma. University of California, Irvine Surgery Grand Rounds Conference, Orange, California, March 5, 1994.
89. Barker SJ: Anesthesia for Laser Thoracoscopy. The Los Angeles County Society of Anesthesiologists 39th Postgraduate Assembly, Los Angeles, California, April 9, 1994.
90. Barker SJ: Monitoring of Oxygenation and Ventilation in the Trauma Patient. The International Trauma Anesthesia and Critical Care Society, Dana Point, California, May 15, 1994.
91. Barker SJ: Recent Developments in Oxygen Monitoring. University of California, San Diego Anesthesiology Review Course, San Diego, California, May 25, 1994.
92. Barker SJ: Monitoring Ventilation -- The Relationship of End Tidal and Arterial CO₂. University of California, San Diego Anesthesiology Review Course, San Diego, California, May 25, 1994.
93. Barker SJ: Malignant Hyperthermia. Harbor/UC Los Angeles Morning Conference, Los Angeles, California, August 24, 1994.

94. Barker SJ: Monitoring of Ventilation. Second International Symposium on the Difficult Airway, Newport Beach, California, September 16-18, 1994.
95. Barker SJ: Capnography. Nevada State Society of Anesthesiologists, Las Vegas, Nevada, December 2, 1994.
96. Barker SJ: Oxygen Saturation. Nevada State Society of Anesthesiologists, Las Vegas, Nevada, December 2, 1994.
97. Barker SJ: Pulse Oximetry: What=s New, Better, and in the Future? California Society of Anesthesiologists, Kaanapali Beach, Maui, January 17, 1995.
98. Barker SJ: New Thoughts on Neurophysiologic Monitoring. California Society of Anesthesiologists, Kaanapali Beach, Maui, January 18, 1995.
99. Barker, SJ: Essential New Knowledge on Malignant Hyperthermia. California Society of Anesthesiologists, Kaanapali Beach, Maui, January 19, 1995.
100. Barker SJ: Anesthesia for Trauma - New Thoughts. California Society of Anesthesiologists, Kaanapali Beach, Maui, January 20, 1995.
101. Barker SJ: Anesthesia for Trauma. Refresher Course in Anesthesiology, Texas Tech University Health Sciences Center, Lubbock, Texas, February 18, 1995.
102. Barker SJ: Pulse Oximetry. Refresher Course in Anesthesiology, Texas Tech University Health Sciences Center, Lubbock, Texas, February 18, 1995.
103. Barker SJ: Pulse Oximetry. Orange Coast College-Respiratory Care Program, Physician Lecture Series, University of California, Irvine, Orange, California, March 8, 1995.
104. Barker, SJ: Monitoring of Respiration. Society of Cardiovascular Anesthesiologists 17th Annual Meeting, Philadelphia, Pennsylvania, May 6-9, 1995.
105. Barker SJ: The Difficult Airway Workshop Lecture. The California Society of Anesthesiologists Annual Meeting, Monterey, California, May 18-21, 1995.
106. Barker SJ: Recent Developments in Oxygen Monitoring. University of California, San Diego Anesthesiology Review Course, San Diego, California, May 21-26, 1995.
107. Barker SJ: Carbon Dioxide Transport and Monitoring. University of California, San Diego Anesthesiology Review Course, San Diego, California, May 21-26, 1995.
108. Barker SJ: Acid-Base Balance: Clinical Correlates. University of California, San Diego Anesthesiology Review Course, San Diego, California, May 21-26, 1995.
109. Barker SJ: Physics for the Anesthesiologist. University of California, San Diego Anesthesiology Review Course, San Diego, California, May 21-26, 1995.
110. Barker SJ: The Role of the Clinical Engineer in the Selection and Usage of Medical Equipment. Clinical Engineering Symposium II, Sao Paulo, Brazil, August 25-29, 1995.
111. Barker SJ: Pulse Oximetry. University of Southern California, Anesthesiology Grand Rounds, Los Angeles, California, September 1, 1995.
112. Barker SJ: Monitoring. Third International Symposium on the Difficult Airway. Newport Beach, California, September 15-17, 1995.

113. Barker SJ: New Developments in Neurophysiologic Monitoring. Aspen Anesthesia 1996: New Developments and Controversies, Snowmass, Colorado, February 3-10, 1996.
114. Barker SJ: Anesthesia for Trauma. Aspen Anesthesia 1996: New Developments and Controversies, Snowmass, Colorado, February 3-10, 1996.
115. Barker SJ: Clinical Use of Mixed Venous Oximetry. Aspen Anesthesia 1996: New Developments and controversies, Snowmass, Colorado, February 3-10, 1996.
116. Barker SJ: Pulse Oximetry and Capnography. Emergency Medicine Grand Rounds, The University of Arizona College of Medicine, Tucson, Arizona, February 20, 1996.
117. Barker SJ: Recent Developments in Oxygen Transport and Monitoring. Aerospace and Mechanical Engineering, The University of Arizona, Tucson, Arizona, February 22, 1996.
118. Barker SJ: Monitoring Oxygen and Carbon Dioxide. Review Course Lecture for the IARS 78th Clinical & Scientific Congress, Washington, D.C., March 8-12, 1996.
119. Barker SJ: Anesthesia for Trauma. Review Course Lecture for the IARS 78th Clinical & Scientific Congress, Washington, D.C., March 8-12, 1996.
120. Barker SJ: Capnography and Mixed Venous Oximetry: What Good are They? Management of the Difficult Airway, La Posada Resort, Scottsdale, Arizona, March 25-27, 1996.
121. Barker SJ: Anesthesia for Major Trauma. Management of the Difficult Airway, La Posada Resort, Scottsdale, Arizona, March 25-27, 1996.
122. Barker SJ: Pulse Oximetry and Capnography: What Good are They? ASA Regional Refresher Course, Washington, D.C., April 13-14, 1996.
123. Barker SJ: Anesthesia for Trauma. ASA Regional Refresher Course, Washington, D.C., April 13-14, 1996.
124. Barker SJ: Technology of Measuring Oxygenation. Engineering Department, Arizona State University, Phoenix, Arizona, April 23, 1996.
125. Barker SJ: How do we Fulfill our Patient Care Obligation in Today=s Environment? AUA 43rd Annual Meeting, Boston, Massachusetts, May 16-19, 1996.
126. Barker SJ: Sedation and Analgesia. Department of Surgery Intern Conference, The University of Arizona, Tucson, Arizona, September 6, 1996.
127. Barker SJ: Oximetry: Principles and Applications. ITACCS CME Seminar, Marco Island, Florida, December 4-7, 1996.
128. Barker SJ: Acid Base Physiology. ITACCS CME Seminar, Marco Island, Florida, December 4-7, 1996.
129. Barker SJ: Capnography in Trauma. ITACCS CME Seminar, Marco Island, Florida, December 4-7, 1996.
130. Barker SJ: What=s New in Monitoring of the Central Nervous System? ITACCS CME Seminar, Marco Island, Florida, December 4-7, 1996.
131. Barker SJ: Anesthesia for Trauma. Visiting Professor, Department of Anesthesiology, University of California, Los Angeles, February 4, 1997.

132. Barker SJ: New Developments in Oxygen Transport and Monitoring. Grand Rounds, Department of Anesthesiology, University of California, Los Angeles, February 5, 1997.
133. Barker SJ: Malignant Hyperthermia Update. Arizona Society of Anesthesiologists 23rd Annual Scientific Meeting, Scottsdale, Arizona, February 14-16, 1997.
134. Barker SJ: Pulse Oximetry: Progress and Limitations. Arizona Society of Anesthesiologists 23rd Annual Scientific Meeting, Scottsdale, Arizona, February 14-16, 1997.
135. Barker SJ: New Developments in Oxygen Transport and Monitoring. California Society of Anesthesiologists 14th Annual Winter Seminar, Breckenridge, Colorado, February 15-21, 1997.
136. Barker SJ: What=s New in Neurophysiological Monitoring? California Society of Anesthesiologists 14th Annual Winter Seminar, Breckenridge, Colorado, February 15-21, 1997.
137. Barker SJ: Anesthesia for Trauma. California Society of Anesthesiologists 14th Annual Winter Seminar, Breckenridge, Colorado, February 15-21, 1997.
138. Barker SJ: Anesthesia for Laser Thoracoscopy. California Society of Anesthesiologists 14th Annual Winter Seminar, Breckenridge, Colorado, February 15-21, 1997.
139. Barker SJ: Anesthesia for Trauma. Management of the Difficult Airway, Hands-on Workshops. University of Michigan Medical School, Maricopa County Medical Center, Scottsdale, Arizona, March 10-12, 1997.
140. Barker SJ: Oxygen Transport. Management of the Difficult Airway, Hands-on Workshops. University of Michigan Medical School, Maricopa County Medical Center, Scottsdale, Arizona, March 10-12, 1997.
141. Barker SJ: Anesthesia Case Conference, A Week with Steven J. Barker, Ph.D., M.D. Holiday Seminars, Cancun, Mexico, March 29 - April 5, 1997.
142. Barker SJ: Monitoring of Ventilation. Anesthesiology Grand Rounds, Loma Linda University Medical Center, Loma Linda, California, May 21, 1997.
143. Barker SJ: Progress in Pulse Oximetry. University of California, San Diego Anesthesiology Review Course, San Diego, California, June 1-6, 1997.
144. Barker SJ: Monitoring of Ventilation. University of California, San Diego Anesthesiology Review Course, San Diego, California, June 1-6, 1997.
145. Barker SJ: Acid Base: The Bitter Pill. University of California, San Diego Anesthesiology Review Course, San Diego, California, June 1-6, 1997.
146. Barker SJ: Anesthesia for Trauma. University of California, San Diego Anesthesiology Review Course, San Diego, California, June 1-6, 1997.
147. Barker SJ: Pulse Oximetry. University of Utah, Grand Rounds, Salt Lake City, Utah, July 22, 1997.
148. Barker SJ: Capnography. University of Utah, Grand Rounds, Salt Lake City, Utah, July 23, 1997.
149. Barker SJ: Monitoring of Oxygenation. University of New Mexico, Grand Rounds, Albuquerque, New Mexico, October 9, 1997.
150. Barker SJ: Monitoring of Ventilation. University of New Mexico, Grand Rounds, Albuquerque, New Mexico, October 10, 1997.

151. Barker SJ: Trauma: Anesthetic Issues. ASA Refresher Course Lecture, San Diego, California, October 18-22, 1997.
152. Barker SJ: Recent Developments in Oxygen Monitoring. International Trauma Anesthesia and Critical Care Society, St. Thomas, US Virgin Islands, December 7-11, 1997.
153. Barker SJ: Capnography: What Good Is It? International Trauma Anesthesia and Critical Care Society, St. Thomas, US Virgin Islands, December 7-11, 1997.
154. Barker SJ: Complications in Trauma Anesthesia. International Trauma Anesthesia and Critical Care Society, St. Thomas, US Virgin Islands, December 7-11, 1997.
155. Barker SJ: Acid Base Balance: Clinical Correlates. International Trauma Anesthesia and Critical Care Society, St. Thomas, US Virgin Islands, December 7-11, 1997.
156. Barker SJ: Advances in Oxygen Monitoring. The New York State Society of Anesthesiologists, Inc. 51st Postgraduate Assembly, New York, New York, December 13-17, 1997.
157. Barker, SJ: Monitoring Ventilation in the Trauma Patient. Anesthesiology and Pain Management Visiting Professor Program, UT Southwestern Medical Center, Dallas, Texas, February 7, 1998.
158. Barker, SJ: Anesthesia for the Trauma Patient. Anesthesiology and Pain Management Visiting Professor Program, UT Southwestern Medical Center, Dallas, Texas, February 7, 1998.
159. Barker, SJ: Monitoring Oxygenation in the Trauma Patient. Anesthesiology and Pain Management Visiting Professor Program, UT Southwestern Medical Center, Dallas, Texas, February 7, 1998.
160. Barker, SJ: Anesthesia for Trauma. Management of the Difficult Airway Conference, The University of Michigan Medical School, Scottsdale, Arizona, April 6-7, 1998.
161. Barker, SJ: Monitoring of Ventilation. Management of the Difficult Airway Conference, The University of Michigan Medical School, Scottsdale, Arizona, April 6-7, 1998.
162. Barker, SJ: Anesthesia for Trauma. Swedish Society of Anaesthesiology and Intensive Care - Annual Meeting 1998, Malmo, Sweden, May 7-9, 1998.
163. Barker, SJ: Progress in Pulse Oximetry. UCSD Anesthesiology Review Course, San Diego, California, May 17-22, 1998.
164. Barker, SJ: Monitoring of Ventilation. UCSD Anesthesiology Review Course, San Diego, California, May 17-22, 1998.
165. Barker, SJ: Acid Base: The Bitter Pill. UCSD Anesthesiology Review Course, San Diego, California, May 17-22, 1998.
166. Barker, SJ: Anesthesia for Trauma. UCSD Anesthesiology Review Course, San Diego, California, May 17-22, 1998.
167. Barker, SJ: What=s New, What=s on the Horizon in Oxygen Monitoring? The California Society of Anesthesiologists Annual Meeting and Postgraduate Seminar, San Francisco, California, June 5-7, 1998.
168. Barker, SJ: New Developments in Oxygen Transport and Monitoring. Visiting Professor Oregon Health Sciences University School of Medicine, Portland, Oregon, June 18-19, 1998.
169. Barker, SJ: What=s New in Neurophysiological Monitoring. Visiting Professor Oregon Health

Sciences University School of Medicine, Portland, Oregon, June 18-19, 1998.

170. Barker, SJ: Pulse Oximetry with Capnography. AOCA 1998 Program, Dana Point, California, October 4-7, 1998.
171. Barker, SJ: Trauma: Anesthetic Issues. American Society of Anesthesiologists Annual Meeting, Refresher Course/Clinical Update Program, Orlando, Florida, October 17-21, 1998.
172. Barker, SJ: Anesthesia for Trauma. Advances in Anesthetic Practice, Loma Linda University, Department of Anesthesiology, Palm Springs, California, February 13-16, 1999.
173. Barker, SJ: Update on Oxygen Monitoring. Advances in Anesthetic Practice, Loma Linda University, Department of Anesthesiology, Palm Springs, California, February 13-16, 1999.
174. Barker, SJ: Monitoring of Ventilation. Thomas Jefferson Anesthesia Conference for Cross-Country and Downhill Skiers, jacXCs >99, Big Sky, Montana, February 20-26, 1999.
175. Barker, SJ: Anesthesia for Trauma. Thomas Jefferson Anesthesia Conference for Cross-Country and Downhill Skiers, jacXCs >99, Big Sky, Montana, February 20-26, 1999.
176. Barker, SJ: Pulse Oximetry: Progress and Limitations. Thomas Jefferson Anesthesia Conference for Cross-Country and Downhill Skiers, jacXCs >99, Big Sky, Montana, February 20-26, 1999.
177. Barker, SJ: New Developments in Oxygen Transport and Monitoring. Review course lecture for the IARS 73rd Clinical and Scientific Congress, Los Angeles, California, March 12-16, 1999.
178. Barker, SJ: What=s New in Neurophysiologic Monitoring? Tutorial for the IARS 73rd Clinical and Scientific Congress, Los Angeles, California, March 12-16, 1999.
179. Barker, SJ: Malignant Hyperthermia Update. University of California, San Diego Anesthesiology Review Course, San Diego, California, May 23-27, 1999.
180. Barker, SJ: Neurophysiological Monitoring. University of California, San Diego Anesthesiology Review Course, San Diego, California, May 23-27, 1999.
181. Barker, SJ: New Developments in Oxygen Transport and Monitoring. University of California, San Diego Anesthesiology Review Course, San Diego, California, May 23-27, 1999.
182. Barker, SJ: Anesthesia for Trauma. University of California, San Diego Anesthesiology Review Course, San Diego, California, May 23-27, 1999.
183. Barker, SJ: Anesthesia for Trauma. Southern Arizona Trauma Network, The University of Arizona Department of Surgery, Trauma Division, Tucson, Arizona, August 5-6, 1999.
184. Barker, SJ: Anesthetic Perspective of Trauma Management. The University of Arizona, Department of Medicine, Med/Surg 896Kx, Tucson, Arizona, September 20, 1999.
185. Barker, SJ: Anesthesia for Trauma: A Fresh Look. American Society of Anesthesiologists Annual Meeting/1999 Refresher Course and Clinical Update Program, Dallas, Texas, October 9-13, 1999.
186. Barker, SJ: Recent Developments in Oxygen Transport and Monitoring. Arizona State University, Seminar Series Department of Mechanical and Aerospace Engineering, Tempe, Arizona, October 29, 1999.
187. Barker, SJ: New Pulse Oximeters: More Reliable? More Information? The New York State Society of Anesthesiologists, Inc., Postgraduate Assembly in Anesthesiology 53, New York, New York, December 11-15, 1999.

188. Barker, SJ: Preoperative and Intraoperative Complication in the Trauma Patient. The International Trauma Anesthesia and Critical Care Society, Trauma: A Team Approach to the Clinical Challenge, Park City, Utah, December 27-31, 1999.
189. Barker, SJ: Physics, Anesthesiology, and Trauma: How are They Related? The International Trauma Anesthesia and Critical Care Society, Trauma: A Team Approach to the Clinical Challenge, Park City, Utah, December 27-31, 1999.
190. Barker, SJ: Acid Base Balance: The Bitter Pill. The International Trauma Anesthesia and Critical Care Society, Trauma: A Team Approach to the Clinical Challenge, Park City, Utah, December 27-31, 1999.
191. Barker, SJ: Monitoring Ventilation in the Trauma Patient. The International Trauma Anesthesia and Critical Care Society, Trauma: A Team Approach to the Clinical Challenge, Park City, Utah, December 27-31, 1999.
192. Barker, SJ: Effects of Motion on the Performance of Sixteen Pulse Oximeters. Society for Technology in Anesthesia 2000, Orlando, Florida, January 12-15, 2000.
193. Barker, SJ: Anesthesia for Trauma. The University of Michigan Anesthesia: Focus 2000, Copper Mountain, Colorado, February 21-26, 2000.
194. Barker, SJ: Pulse Oximetry. The University of Michigan Anesthesia: Focus 2000, Copper Mountain, Colorado, February 21-26, 2000.
195. Barker, SJ: Monitoring of Ventilation. The University of Michigan Anesthesia: Focus 2000, Copper Mountain, Colorado, February 21-26, 2000.
196. Barker, SJ: Clinical Acid/Base Physiology. The University of Michigan Anesthesia: Focus 2000, Copper Mountain, Colorado, February 21-26, 2000.
197. Barker, SJ: New Developments on Oxygen Monitoring and Transport. The University of Arizona, Department of Aerospace and Engineering, April 13, 2000.
198. Barker SJ: Oxygen. University of San Diego Anesthesiology Review Course 2000, San Diego, California, May 21-25, 2000.
199. Barker SJ: Carbon Dioxide. University of San Diego Anesthesiology Review Course 2000, San Diego, California, May 21-25, 2000.
200. Barker SJ: Anesthesia for Trauma. University of San Diego Anesthesiology Review Course 2000, San Diego, California, May 21-25, 2000.
201. Barker SJ: Malignant Hyperthermia. University of San Diego Anesthesiology Review Course 2000, San Diego, California, May 21-25, 2000.
202. Barker SJ: Recent Developments in Oxygen Monitoring. American Society of Anesthesiologists Annual Meeting, 2000 Refresher Course Lectures/Clinical Update Program, San Francisco, California, October 14-18, 2000.
203. Barker SJ: Malignant Hyperthermia. California Society of Anesthesiologists Hawaiian Seminar, Kaanapali Beach, Maui, January 21-26, 2001.
204. Barker SJ: Acid-Base Balance (for the non-chemist). California Society of Anesthesiologists Hawaiian Seminar, Kaanapali Beach, Maui, January 21-26, 2001.

205. Barker SJ: Pulse Oximetry- Progress and Limitations. California Society of Anesthesiologists Hawaiian Seminar, Kaanapali Beach, Maui, January 21-26, 2001.
206. Barker SJ: Capnography: What Good is It? California Society of Anesthesiologists Hawaiian Seminar, Kaanapali Beach, Maui, January 21-26, 2001.
207. Barker, SJ: Recent Developments in Oxygen Monitoring. Holiday Seminars, Aspen Anesthesia 2002, Aspen Colorado, February 10-15, 2002.
208. Barker, SJ: Anesthesia for the Trauma Patient. Holiday Seminars, Aspen Anesthesia 2002, Aspen Colorado, February 10-15, 2002.
209. Barker, SJ: Acid-Base Balance-The Bitter Pill. Holiday Seminars, Aspen Anesthesia 2002, Aspen Colorado, February 10-15, 2002.
210. Barker SJ: Acid-Base Balance. Advances in Anesthetic Practice, Loma Linda University School of Medicine, Rancho Mirage, California, February 16-19, 2002.
211. Barker, SJ: Capnography: What Good is It? Advances in Anesthetic Practice, Loma Linda University School of Medicine, Rancho Mirage, California, February 16-19, 2002.
212. Barker, SJ: Recent Developments in Oxygen Monitoring. The University of Alabama at Birmingham, 30th Annual Anesthesiology Review Course, Birmingham, Alabama, February 22-24, 2002.
213. Barker, SJ: Standardization of the Testing of Pulse Oximeter Performance. International Symposium on Innovations and Applications of Pulse Oximetry, Lubeck, Germany, March 8-9, 2002.
214. Barker, SJ: Anesthesia for Trauma. International Anesthesia Research Society, Refresher Course Lecture, San Diego, California, March 16-20, 2002.
215. Barker, SJ: Patient Monitoring in the 21st Century. I Congreso Cientifico de la Facultad de Medicina VIII Congreso de Estudiantes de Medicina, Universidad de Panama La Medicina en el Siglo XXI, Centro de Convenciones ATLAPA, Panama City, Panama, April 3-6, 2002.
216. Barker, SJ: Monitoring of Oxygenation. California Society of Anesthesiologists/University of California, San Diego Annual Meeting & Anesthesiology Review Course 2002, Palm Springs, California, May 29-June 2, 2002.
217. Barker, SJ: Monitoring of Ventilation. California Society of Anesthesiologists/University of California, San Diego Annual Meeting & Anesthesiology Review Course 2002, Palm Springs, California, May 29-June 2, 2002.
218. Barker, SJ: Acid-Base Balance. California Society of Anesthesiologists/University of California, San Diego Annual Meeting & Anesthesiology Review Course 2002, Palm Springs, California, May 29-June 2, 2002.
219. Barker, SJ: Anesthesia for Trauma. California Society of Anesthesiologists/University of California, San Diego Annual Meeting & Anesthesiology Review Course 2002, Palm Springs, California, May 29-June 2, 2002.
220. Barker, SJ: Recent Developments in Oxygen Monitoring. American Society of Anesthesiologists Annual Meeting, Orlando, Florida, October 12-16, 2002.
221. Barker, SJ: Update on Oxygen Monitoring and Pulse Oximetry. California Society of Anesthesiologists Hawaiian Seminar, Kohala Coast, Hawaii, October 20-25, 2002.

222. Barker, SJ: Monitoring of Ventilation. California Society of Anesthesiologists Hawaiian Seminar, Kohala Coast, Hawaii, October 20-25, 2002.
223. Barker, SJ: Acid-Base Balance for the Anesthesiologist. California Society of Anesthesiologists Hawaiian Seminar, Kohala Coast, Hawaii, October 20-25, 2002.
224. Barker, SJ: Update on Malignant Hyperthermia. California Society of Anesthesiologists Hawaiian Seminar, Kohala Coast, Hawaii, October 20-25, 2002.
225. Barker, SJ: Pulse Oximetry: The Parachute of Monitoring? New York Post Graduate Assembly 56, New York, New York, December 6-10, 2002.
226. Barker, SJ: Anesthesia for Trauma. IARS 77th Clinical and Scientific Congress, New Orleans, Louisiana, March 21-25, 2003.
227. Barker, SJ: New Developments in Pulse Oximetry. UCLA Grand Rounds, Los Angeles, California, May 7, 2003.
228. Barker, SJ: What's New in Oximetry and Capnography. TraumaCare 2003, 16th ATACCS, Dallas, Texas, May 15-17, 2003.
229. Barker, SJ: Anesthesia for Trauma. Grand Rounds, Texas Tech University, El Paso, Texas, July 17, 2003.
230. Barker, SJ: Acid Base Imbalance. Grand Rounds, Texas Tech University, El Paso, Texas, September 25, 2003.
231. Barker, SJ: Recent Developments in Oxygen Monitoring. Refresher Course Lecture, American Society of Anesthesiologists, San Francisco, California, October 11-15, 2003.
232. Barker, SJ: Pulse Oximetry: Progress and Limitations. The Queen's Medical Center Anesthesia Symposium, The Queen's Medical Center, Honolulu, Hawaii, November 21-24, 2003.
233. Barker, SJ: Capnography: What Good is It? The Queen's Medical Center Anesthesia Symposium, The Queen's Medical Center, Honolulu, Hawaii, November 21-24, 2003.
234. Barker SJ: A Comparison of Forehead and Earlobe Pulse Oximeter Sensors in the Operating Room. 57th Postgraduate Assembly, The New York State Society of Anesthesiologists, Inc., New York, December 12-16, 2003.
235. Barker SJ: Anesthesia for Trauma. College of Physicians & Surgeons of Columbia University Grand Rounds, New York, New York, December 11, 2003.
236. Barker SJ: Malignant Hyperthermia. 49th Annual Utah Postgraduate Course in Anesthesiology, Park City, Utah, February 8-13, 2004.
237. Barker SJ: Acid Base Balance. 49th Annual Utah Postgraduate Course in Anesthesiology, Park City, Utah, February 8-13, 2004.
238. Barker SJ: Pulse Oximetry – Progress and Limitations. 49th Annual Utah Postgraduate Course in Anesthesiology, Park City, Utah, February 8-13, 2004.
239. Barker SJ: Capnography. 49th Annual Utah Postgraduate Course in Anesthesiology, Park City, Utah, February 8-13, 2004.
240. Barker SJ: Technology: Saving Lives in the Operating Room. The Foothills Forum, St. Philips Plaza, Tucson, Arizona, February 24, 2004.

241. Barker SJ: What is Anesthesia: Monitoring. Medical Student Enrichment Elective, University of Arizona, Tucson, Arizona, March 24, 2004.
242. Barker SJ: Anesthesia for Trauma. IARS 78th Clinical and Scientific Congress Refresher Course Lecture, Tampa, Florida, March 27-31, 2004.
243. Barker SJ: Neurophysiological Monitoring. Anesthesia Case Conference, Holiday Seminars, Cancun, Mexico, March 27-April 4, 2004.
244. Barker SJ: Oxygen Monitoring. Anesthesia Case Conference, Holiday Seminars, Cancun, Mexico, March 27-April 4, 2004.
245. Barker SJ: Pulse Oximetry. Anesthesia Case Conference, Holiday Seminars, Cancun, Mexico, March 27-April 4, 2004.
246. Barker SJ: Anesthesia for Trauma. Anesthesia Case Conference, Holiday Seminars, Cancun, Mexico, March 27-April 4, 2004.
247. Barker SJ: Recent Developments in Oxygen Monitoring. Dallas County Anesthesiology Society, Dallas, Texas, April 6, 2004.
248. Barker SJ: AME466/566 lecture to Aerospace & Mechanical Engineering Department, University of Arizona, Tucson, Arizona, April 27, 2004.
249. Barker SJ: Keeping Our Patients Safe: When Should You Call for an Anesthesiologist? Association of University Anesthesiologists 51st Annual Meeting, Sacramento, California, May 13-15, 2004.
250. Barker SJ: Pulse Oximetry: Progress and Limitations. Sundarum Lecture, Department of Anesthesia and Critical Care Grand Rounds, Massachusetts General Hospital, Boston, Massachusetts, July 15, 2004.
251. Barker SJ: Pulse Oximetry. Texas Tech University Health Sciences Center Grand Rounds, El Paso, Texas, August 12, 2004.
252. Barker SJ: Oxygen Monitoring. Texas Society of Anesthesiologists 2004 Annual Meeting, Austin, Texas, September 9-12, 2004.
253. Barker SJ: Anesthesia for Trauma. Robert B. Sweet, MD Memorial Conference, University of Michigan Department of Anesthesiology, Ann Arbor, Michigan, September 25, 2004.
254. Barker SJ: Recent Developments in Oxygen Monitoring. American Society of Anesthesiologists 2004 Annual Meeting Refresher Course Lecture, Las Vegas, Nevada, October 23-27, 2004.
255. Barker SJ: Pulse Oximetry: Progress and Limitations. Department of Anesthesiology and Critical Care Medicine Visiting Professor Educational Lecture Series, University of New Mexico Health Sciences Center, Albuquerque, New Mexico, November 18-19, 2004.
256. Barker SJ: Malignant Hyperthermia. Department of Anesthesiology and Critical Care Medicine Visiting Professor Educational Lecture Series, University of New Mexico Health Sciences Center, Albuquerque, New Mexico, November 18-19, 2004.
257. Barker SJ: Getting the Most out of Your Capnograph. California Society of Anesthesiologists Hawaiian Seminar, Kaanapali Beach, Maui, January 17-21, 2005.
258. Barker SJ: Pulse Oximetry- Progress and Limitations. California Society of Anesthesiologists Hawaiian Seminar, Kaanapali Beach, Maui, January 17-21, 2005.

259. Barker SJ: Acid-Base Physiology: An Anesthesiologists' Eye View. California Society of Anesthesiologists Hawaiian Seminar, Kaanapali Beach, Maui, January 17-21, 2005.
260. Barker SJ: Diagnosis and Treatment of Malignant Hyperthermia. California Society of Anesthesiologists Hawaiian Seminar, Kaanapali Beach, Maui, January 17-21, 2005.
261. Barker SJ: Monitoring of Ventilation. 43rd Annual Symposium on Critical Care, Trauma and Emergency Medicine, Las Vegas, Nevada, February 7-11, 2005.
262. Barker SJ: New Developments in Oxygen Monitoring. 43rd Annual Symposium on Critical Care, Trauma and Emergency Medicine, Las Vegas, Nevada, February 7-11, 2005.
263. Barker SJ: Malignant Hyperthermia. 43rd Annual Symposium on Critical Care, Trauma and Emergency Medicine, Las Vegas, Nevada, February 7-11, 2005.
264. Barker SJ: What's New in Neurological Monitoring. 43rd Annual Symposium on Critical Care, Trauma and Emergency Medicine, Las Vegas, Nevada, February 7-11, 2005.
265. Barker SJ: Monitoring of Oxygenation. California Society of Anesthesiologists /University of California San Diego Annual Meeting and Anesthesiology Review Course, San Francisco, California, May 12-15, 2005.
266. Barker SJ: Monitoring of Ventilation. California Society of Anesthesiologists /University of California San Diego Annual Meeting and Anesthesiology Review Course, San Francisco, California, May 12-15, 2005.
267. Barker SJ: Anesthesia for Trauma. Mexican College of Anesthesiology, 31st Refresher Course, Mexico City, Mexico, June 8-11, 2005.
268. Barker SJ: Recent Developments in Oxygen Monitoring. Mexican College of Anesthesiology, 31st Refresher Course, Mexico City, Mexico, June 8-11, 2005.
269. Barker SJ: Pulse Oximetry: Principles, Pitfalls, and New Developments. Japan Society of Respiratory Care Medicine, Tokyo, Japan, June 27-July 2, 2005.
270. Barker SJ: Recent Developments in Oxygen Monitoring. 2005 American Society of Anesthesiologists Annual Meeting, Atlanta, Georgia, October 22-26, 2005.
271. Barker SJ: Oxygen Transport and Monitoring. New York University School of Medicine Visiting Professor & Guest Lecture Series-Anesthesiology, New York, New York, December 14, 2005.
272. Barker SJ: Methemoglobin. Masimo Global Advisory Meeting, Palm Springs, California, February 18-19, 2006.
273. Barker SJ: Pulse Oximetry – New Technologies and New Opportunities. Eponymous Lecture at the Joint Royal College of Anesthetists /British Journal of Anesthesia Symposium on Clinical Monitoring and the Institution of Electrical Engineers, London, England, March 15-16, 2006.
274. Barker SJ: Oxygen Monitoring, Part I. Third Annual Arizona Anesthesia Adventure, Phoenix, Arizona, March 26-30, 2006.
275. Barker SJ: Oxygen Monitoring, Part II. Third Annual Arizona Anesthesia Adventure, Phoenix, Arizona, March 26-30, 2006.
276. Barker SJ: Monitoring of Ventilation. Third Annual Arizona Anesthesia Adventure, Phoenix, Arizona, March 26-30, 2006.

277. Barker SJ: Neurological Monitoring. Third Annual Arizona Anesthesia Adventure, Phoenix, Arizona, March 26-30, 2006.
278. Barker SJ: New Developments in Oxygen Monitoring. International Anesthesia Research Society 80th Clinical and Scientific Congress, San Francisco, California, March 24-28, 2006.
279. Barker SJ: Brain Monitoring and Awareness Panel. International Anesthesia Research Society 80th Clinical and Scientific Congress, San Francisco, California, March 24-28, 2006.
280. Barker SJ: Anesthesia for Trauma. Winning Topics in Anesthesia – Anesthesia Update Northwest Anesthesia Seminars, Las Vegas, Nevada, April 11-14, 2006.
281. Barker SJ: Malignant Hyperthermia. Winning Topics in Anesthesia – Anesthesia Update Northwest Anesthesia Seminars, Las Vegas, Nevada, April 11-14, 2006.
282. Barker SJ: Monitoring of Ventilation. Winning Topics in Anesthesia – Anesthesia Update Northwest Anesthesia Seminars, Las Vegas, Nevada, April 11-14, 2006.
283. Barker SJ: What's New in Neurophysiological Monitoring? Winning Topics in Anesthesia – Anesthesia Update Northwest Anesthesia Seminars, Las Vegas, Nevada, April 11-14, 2006.
284. Barker SJ: "Pulse Oximetry: Progress and Limitations." Anesthesia Update Northwest Anesthesia Seminars, Inc., Alaska Explorer Cruise, July 10-15, 2006.
285. Barker SJ: "New Developments in Oxygen Transport and Monitoring." Anesthesia Update Northwest Anesthesia Seminars, Inc., Alaska Explorer Cruise, July 10-15, 2006.
286. Barker SJ: "Capnography: What Good is It?." Anesthesia Update Northwest Anesthesia Seminars, Inc., Alaska Explorer Cruise, July 10-15, 2006.
287. Barker SJ: "Anesthesia for Trauma." Anesthesia Update Northwest Anesthesia Seminars, Inc., Alaska Explorer Cruise, July 10-15, 2006.
288. Barker SJ: "Malignant Hyperthermia." Anesthesia Update Northwest Anesthesia Seminars, Inc., Alaska Explorer Cruise, July 10-15, 2006.
289. Barker SJ: "Acid Base Balance." Anesthesia Update Northwest Anesthesia Seminars, Inc., Alaska Explorer Cruise, July 10-15, 2006.
290. Barker SJ: "What's New in Neurophysiological Monitoring." Anesthesia Update Northwest Anesthesia Seminars, Inc., Alaska Explorer Cruise, July 10-15, 2006.
291. Barker SJ: "Pulse Oximetry – Progress and Limitations." Texas Society of Anesthesiologists, San Antonio, Texas, September 8, 2006.
292. Barker SJ: "Recent Developments in Oxygen Monitoring." American Society of Anesthesiologists Annual Meeting Refresher Course Lecture, Chicago, Illinois, October 14-16, 2006.
293. Barker SJ: "Pulse Oximetry: Progress and Limitations." Anesthesia Update Northwest Anesthesia Seminars, Inc., Eastern Caribbean Cruise, December 10-14, 2006.
294. Barker SJ: "New Developments in Oxygen Transport and Monitoring." Anesthesia Update Northwest Anesthesia Seminars, Inc., Eastern Caribbean Cruise, December 10-14, 2006.
295. Barker SJ: "Capnography: What Good is It?." Anesthesia Update Northwest Anesthesia Seminars, Inc., Eastern Caribbean Cruise, December 10-14, 2006.

296. Barker SJ: "Malignant Hyperthermia." Anesthesia Update Northwest Anesthesia Seminars, Inc., Eastern Caribbean Cruise, December 10-14, 2006.
297. Barker SJ: "Anesthesia for Trauma." Anesthesia Update Northwest Anesthesia Seminars, Inc., Eastern Caribbean Cruise, December 10-14, 2006.
298. Barker SJ: "Acid-Base Balance for the Anesthesia Provider." Anesthesia Update Northwest Anesthesia Seminars, Inc., Eastern Caribbean Cruise, December 10-14, 2006.
299. Barker SJ: "The Consultants are Coming! How to Deal with Operating Room Consultants." Anesthesia Update Northwest Anesthesia Seminars, Inc., Eastern Caribbean Cruise, December 10-14, 2006.
300. Barker SJ: "Recent Developments in Oxygen Monitoring." Arizona Society of Anesthesiologists 33rd Annual Scientific Meeting, Scottsdale, Arizona, January 26-28, 2007.
301. Barker SJ: "Pulse Oximetry: Progress and Limitations." Anesthesia Update Northwest Anesthesia Seminars, Inc., Western Caribbean Cruise, February 6-10, 2007.
302. Barker SJ: "New Developments in Oxygen Transport and Monitoring." Anesthesia Update Northwest Anesthesia Seminars, Inc., Western Caribbean Cruise, February 6-10, 2007.
303. Barker SJ: "Capnography: What Good is It?" Anesthesia Update Northwest Anesthesia Seminars, Inc., Western Caribbean Cruise, February 6-10, 2007.
304. Barker SJ: "What's New in Neurophysiological Monitoring?" Anesthesia Update Northwest Anesthesia Seminars, Inc., Western Caribbean Cruise, February 6-10, 2007.
305. Barker SJ: "Malignant Hyperthermia." Anesthesia Update Northwest Anesthesia Seminars, Inc., Western Caribbean Cruise, February 6-10, 2007.
306. Barker SJ: "Anesthesia for Trauma." Anesthesia Update Northwest Anesthesia Seminars, Inc., Western Caribbean Cruise, February 6-10, 2007.
307. Barker SJ: "Acid Base Balance." Anesthesia Update Northwest Anesthesia Seminars, Inc., Western Caribbean Cruise, February 6-10, 2007.
308. Barker SJ: "Alpha-Stat or pH Stat: What's the Difference and Why Do I Care?" Anesthesia Update Northwest Anesthesia Seminars, Inc., Western Caribbean Cruise, February 6-10, 2007.
309. Barker SJ: "Detecting dyshemoglobins by pulse oximetry: methodology, uses, utility and validation." International Symposium Innovations and Applications of Monitoring Oxygenation and Ventilation, Duke University, Durham, North Carolina, March 15-17, 2007.
310. Barker SJ: "Brain Monitoring During Anesthesia." International Anesthesia Research Society 81st Congress, Orlando, Florida, March 23-27, 2007.
311. Barker SJ: "The Disruptive Resident: Experience from a Program." Associate of University Anesthesiologists 54th Annual Meeting, Chicago Hotel and Towers, April 26-29, 2007.
312. Barker SJ: "Anesthesia for Trauma." Northwest Anesthesia Seminar Update, Yosemite National Park, California, June 4-8, 2007.
313. Barker SJ: "What's New in Neurophysiological Monitoring?" Northwest Anesthesia Seminar Update, Yosemite National Park, California, June 4-8, 2007.

314. Barker SJ: "Capnography: What Good is It?" Northwest Anesthesia Seminar Update, Yosemite National Park, California, June 4-8, 2007.
315. Barker SJ: "New Developments in Oxygen Transport and Monitoring." Northwest Anesthesia Seminar Update, Yosemite National Park, California, June 4-8, 2007.
316. Barker SJ: "Pulse Oximetry: Progress and Limitations." Northwest Anesthesia Seminar Update, Yosemite National Park, California, June 4-8, 2007.
317. Barker SJ: "Acid-Base Balance for the Anesthesia Provider." Northwest Anesthesia Seminar Update, Yosemite National Park, California, June 4-8, 2007.
318. Barker SJ: "Malignant Hyperthermia." Northwest Anesthesia Seminar Update, Yosemite National Park, California, June 4-8, 2007.
319. Barker SJ: "Alpha-STAT or pH STAT: What's the Difference and Why Do I Care?" Northwest Anesthesia Seminar Update, Yosemite National Park, California, June 4-8, 2007.
320. Barker SJ: "New Developments in Oxygen transport and Monitoring." Texas Tech University Health Sciences Center Grand Rounds, El Paso, Texas, June 28, 2007.
321. Barker SJ: "New Developments in Pulse Oximetry." University of Texas Health Science Center Houston Grand Rounds, Houston, Texas, July 19, 2007.
322. Barker SJ: "Recent Developments in Oxygen Monitoring." 23rd Annual Gillespie Family Lectureship, Scott & White Hospital, Temple, Texas, September 13, 2007.
323. Barker SJ: "The Impact of Technology on Anesthesiology." 23rd Annual Gillespie Family Lectureship, Scott & White Hospital, Temple, Texas, September 13, 2007.
324. Barker SJ: "Acid-Base Balance for the Anesthesia Provider." Northwest Anesthesia Seminar Update, Hilton Head, South Carolina, September 20-23, 2007.
325. Barker SJ: "What's New in Neurophysiological Monitoring?" Northwest Anesthesia Seminar Update, Hilton Head, South Carolina, September 20-23, 2007.
326. Barker SJ: "Pulse Oximetry: Progress and Limitations." Northwest Anesthesia Seminar Update, Hilton Head, South Carolina, September 20-23, 2007.
327. Barker SJ: "Monitoring of Ventilation." Northwest Anesthesia Seminar Update, Hilton Head, South Carolina, September 20-23, 2007.
328. Barker SJ: "Anesthesia for Trauma." Northwest Anesthesia Seminar Update, Hilton Head, South Carolina, September 20-23, 2007.
329. Barker SJ: "Recent Developments and Comparisons of Brain Function Monitors." Hospira CME Breakfast Symposium, PGA New York, New York, December 10, 2007.
330. Barker SJ: "Lessons Learned from Dealing with Deans." ASA 2008 Conference on Practice Management, Tampa, Florida, January 25-27, 2008.
331. Barker SJ: "Acid-Base Balance: How to do it at 3:00 AM." Northwest Anesthesia Seminars Clinical Concerns in Anesthesia, Tucson, Arizona, March 13-15, 2008.
332. Barker SJ: "Anesthesia for the Elderly." Northwest Anesthesia Seminars Clinical Concerns in Anesthesia, Tucson, Arizona, March 13-15, 2008.

333. Barker SJ: "New Developments in Pulse Oximetry." Northwest Anesthesia Seminars Clinical Concerns in Anesthesia, Tucson, Arizona, March 13-15, 2008.
334. Barker SJ: "Monitoring of Ventilation." Northwest Anesthesia Seminars Clinical Concerns in Anesthesia, Tucson, Arizona, March 13-15, 2008.
335. Barker SJ: "Recent Developments in Oxygen Monitoring." Valley Anesthesia Special Education Dinner Symposium, Scottsdale, Arizona, May 12, 2008.
336. Barker SJ: "Anesthesia for Trauma." Northwest Anesthesia Seminars Anesthesia Practices, 2008, Jackson Hole, Wyoming, June 2-6, 2008.
337. Barker SJ: "The Disruptive Colleague." Society of Cardiovascular Anesthesiologists 30th Annual Meeting, Vancouver, BC, Canada, June 18-22, 2008.
338. Barker SJ: "Recent Developments and Comparisons of Brain Function Monitors." Texas Society of Anesthesiologists Annual Meeting, Lost Pines, Texas, September 4-7, 2008.
339. Barker SJ: "Acid-Base Balance for the Anesthesiologist." Northwest Anesthesia Seminars Clinical Anesthesia Pharmacology, Portland, Oregon, September 11-14, 2008.
340. Barker SJ: "Alpha-Stat or pH-Stat: What's the Difference and Why Do I Care." Northwest Anesthesia Seminars Clinical Anesthesia Pharmacology, Portland, Oregon, September 11-14, 2008.
341. Barker SJ: "Anesthesia for the Elderly." Northwest Anesthesia Seminars Clinical Anesthesia Pharmacology, Portland, Oregon, September 11-14, 2008.
342. Barker SJ: "Malignant Hyperthermia." Northwest Anesthesia Seminars Clinical Anesthesia Pharmacology, Portland, Oregon, September 11-14, 2008.
343. Barker SJ: "Anesthesia for Trauma." Northwest Anesthesia Seminars Clinical Anesthesia Pharmacology, Portland, Oregon, September 11-14, 2008.
344. Barker SJ: "Anesthesia for the Elderly." Northwest Anesthesia Seminars Anesthesia Update, Curacao, Dutch Antilles, November 29-December 5, 2008.
345. Barker SJ: "What's New in Neurophysiological Monitoring?" Northwest Anesthesia Seminars Anesthesia Update, Curacao, Dutch Antilles, November 29-December 5, 2008.
346. Barker SJ: "Pulse Oximetry: Progress and Limitations." Northwest Anesthesia Seminars Anesthesia Update, Curacao, Dutch Antilles, November 29-December 5, 2008.
347. Barker SJ: "Acid-Base Balance for the Anesthesia Provider." Northwest Anesthesia Seminars Anesthesia Update, Curacao, Dutch Antilles, November 29-December 5, 2008.
348. Barker SJ: "Capnography: What Good is It?" Northwest Anesthesia Seminars Anesthesia Update, Curacao, Dutch Antilles, November 29-December 5, 2008.
349. Barker SJ: "Malignant Hyperthermia." Northwest Anesthesia Seminars Anesthesia Update, Curacao, Dutch Antilles, November 29-December 5, 2008.