

CURRICULUM VITAE

Charles W. Otto, M.D., F.C.C.M.

Professor, Anesthesiology

The University of Arizona College of Medicine

Tucson, AZ

Education:

- 1959 Lincoln-Way Community High School, New Lenox, IL
- 1963 B.A., Swarthmore College, Swarthmore, PA
- 1968 M.D., University of Missouri-Columbia School of Medicine, Columbia, MO
- 1965-1966 Post-Sophomore Fellow in Pathology, University of Missouri-Columbia School of Medicine, Columbia, MO
- 1968-1970 Resident in Medicine, University of Kentucky Medical Center, Lexington, KY
- 1972-1973 Clinical Fellow in Anesthesia, Respiratory Intensive Care Unit, Massachusetts General Hospital, Harvard Medical School, Boston, MA
- 1973-1975 Resident in Anesthesia, Massachusetts General Hospital, Harvard Medical School, Boston, MA

Board Certification:

- 1973 Diplomat, American Board of Internal Medicine
- 1975 Diplomat, American Board of Anesthesiology
- 1986 Subspecialty Certification in Critical Care Medicine, American Board of Anesthesiology
- 1987-1997 Subspecialty Certification in Critical Care Medicine, American Board of Internal Medicine
- 2002-2012 Recertification, American Board of Anesthesiology
- 2013-2022 Recertification, American Board of Anesthesiology

Licensure:

1968	Missouri
1969	National Board of Medical Examiners
1969	Kentucky
1975	Arizona
1982	Oregon

Military Service:

1970-1972	Staff Physician in Anesthesiology and Medicine, U.S. Army, DeWitt Army Hospital, Ft. Belvoir, Virginia and 3rd Field Hospital, Saigon, Vietnam
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Employment:

1975-1982	Assistant Professor of Anesthesiology and Medicine, University of Arizona College of Medicine, Tucson, AZ
1975-Present	Director of Critical Care Medicine, University of Arizona Health Sciences, Tucson, AZ
1975-1990	Medical Director of Respiratory Therapy, University of Arizona Health Sciences, Tucson, AZ
1975-2001	Consultant in Anesthesiology, Tucson Veteran's Administration Hospital, Tucson, AZ
1975-1990	Medical Director, School of Respiratory Therapy, Pima Community College, Tucson, AZ
1982-1988	Associate Professor of Anesthesiology (Tenured), Assistant Professor of Medicine, University of Arizona College of Medicine, Tucson, AZ
1985 (Feb-June)	Acting Head, Department of Anesthesiology, University of Arizona College of Medicine, Tucson, AZ
1985 (July-Dec)	Visiting Worker, Division of Anaesthesia, Clinical Research Center, Northwick Park Hospital, Harrow, Middlesex, Great Britain

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Curriculum Vitae
Revised 1/2016

1988-Present Professor of Anesthesiology (Tenured), Associate Professor of Medicine,
University of Arizona College of Medicine, Tucson, AZ

1994-1995 Acting Head, Department of Anesthesiology, University of Arizona
College of Medicine, Tucson, AZ

Major Fields:

Critical care medicine with research emphasis on cardiopulmonary resuscitation and respiratory intensive care.

Visiting Professorships:

1978 Washington University, St. Louis, Missouri

1980 University of Missouri-Columbia, Columbia, Missouri

1981 Medical University of South Carolina, Charleston, South Carolina

1982 University of Florida, Gainesville, Florida

1984 Texas Tech University at El Paso, El Paso, Texas

1985 Clinical Research Center, Northwick Park Hospital, Harrow, Great Britain

1985 Klinikum Grosshadern, Munich, Germany

1985 Stadt Krankenhaus Schwabing, Munich Germany

1985 Zagazig University, Zagazig, Egypt

1986 Northwestern University, Chicago, Illinois

1989 University of Arkansas, Little Rock, Arkansas

1990 The Johns Hopkins University, Baltimore, Maryland

1990 University of New Mexico, Albuquerque, New Mexico

1990 University of Illinois, Chicago, Illinois

1990 Rush-Presbyterian-St.Luke's Hospital, Chicago, Illinois

1995 St. Raphael Hospital, New Haven, Connecticut

1995 Cornell University/Memorial Sloan Kettering, New York, New York

1995 Hartford Hospital, Hartford, Connecticut

1996 St. Raphael Hospital, New Haven, Connecticut

1996 Texas A&M University/Scott and White Clinic, Temple, Texas

1996 Universität Bern, Bern, Switzerland

1996 Rush-Presbyterian-St. Luke's Hospital, Chicago, Illinois

1997 Universität Zurich, Zurich, Switzerland

1997 Universität Bern, Bern, Switzerland

2000 University of Wisconsin, Madison Wisconsin

2000 University of Texas, San Antonio, San Antonio, Texas

2001 Hospital for Special Surgery/Cornell University, New York

2003 New York University, New York

2003 University of Toronto, Toronto

2005 SUNY Downstate, Brooklyn, New York

2005 University of New Mexico, Albuquerque, New Mexico

2007 Oregon Health Sciences University, Portland, Oregon

Honors and Awards:

1968 Alpha Omega Alpha

1975 Fellow, American College of Anesthesiologists

1986 Distinguished Young Physician Award - University of Missouri Medical Alumni Association

1989 Fellow, American College of Critical Care Medicine

1992-Present Best Doctors in America

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| 2001 | Duke Award for Excellence and Innovation in Anesthesia Education, Society for Education in Anesthesia |
| 2007 | Asmund S. Laerdal Memorial Lecture Award, Society of Critical Care Medicine |
| 2008 | Distinguished Service Award, Arizona Society of Anesthesiologists |
| 2014 | Citation of Merit, Academy of Anesthesiology |

Professional Memberships and Societies:

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| 1975-Present | American Society of Anesthesiologists |
| 1975-Present | Arizona Society of Anesthesiologists |
| 1975-Present | Society of Critical Care Medicine |
| 1975-Present | International Anesthesia Research Society |
| 1975-Present | American Medical Association |
| 1975-Present | Arizona Medical Association |
| 1975-Present | Pima County Medical Society |
| 1987-Present | Association of University Anesthesiologists |
| 1989-Present | American College of Critical Care Medicine |
| 1990-Present | Society of Critical Care Anesthesiologists (Founding Member) |
| 1990-Present | Academy of Anesthesiology |
| 2010-Present | American Heart Association |

Service and Outreach:

Extramural:

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| 1980-1983 | Sec.-Treas.
Arizona Society of Anesthesiologists |
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1982-1983	Vice President Arizona Society of Anesthesiologists
1983, 1989-1993	Alt. delegate Arizona Medical Association
1983-1986	Alternate Delegate American Society of Anesthesiologists
1983-1984	Pres.-elect Arizona Society of Anesthesiologists
1984	Delegate Arizona Medical Association
1984-1985	President Arizona Society of Anesthesiologists
1985-1989	Director Arizona Society of Anesthesiologists
1986-2004, 2010-Present	Delegate American Society of Anesthesiologists
1989-1993	Alternate Director Pima County Medical Society
1989-2004	Alternate Director American Society of Anesthesiologists
1990-1991	Director Society of Critical Care Medicine
1991-1996	Member, Anesthesiology Advisory Board Society of Critical Care Medicine
1997	Chair-elect, Anesthesiology Advisory Board Society of Critical Care Medicine
1997-2000	Recording Secretary, Western Caucus American Society of Anesthesiologists

1998 Chair, Anesthesiology Advisory Board
Society of Critical Care Medicine

1998-2005 Executive Committee
Academy of Anesthesiology

2000-2004 Chair, Western Caucus
American Society of Anesthesiologists

2002 Vice President
Academy of Anesthesiology

2003 Pres.-elect
Academy of Anesthesiology

2004 President
Academy of Anesthesiology

2004-2009 Vice President for Scientific Affairs
American Society of Anesthesiologists

Intramural:

1975-1990, Education Committee (Chairman, 1983-90)
1993-1996 Department of Anesthesiology
University of Arizona College of Medicine

1975-1990 Resident Evaluation Committee (Chairman 1983-90)
Department of Anesthesiology
University of Arizona College of Medicine

1975-Present Resident Coordinator, Critical Care Medicine Rotation
Department of Anesthesiology
University of Arizona College of Medicine

1976-2002 ICU Committee (Chair 1976-86)
University of Arizona College of Medicine

1979-Present CPR (Code Blue) Committee
University of Arizona College of Medicine

1982-Present Promotions and Tenure Committee (Chairman 1983-2013)
Department of Anesthesiology
University of Arizona College of Medicine

1983-1990	Housestaff Committee University of Arizona College of Medicine
1983-1990	Coordinator, Resident Recruitment Department of Anesthesiology University of Arizona College of Medicine
1983-1990	Anesthesiology Residency Program Director Department of Anesthesiology University of Arizona College of Medicine
1983-1990	Coordinator, Medical Student Electives Department of Anesthesiology University of Arizona College of Medicine
1985-Present	Peer Review Committee (Chairman, 1985-2013) Department of Anesthesiology University of Arizona College of Medicine
1986-1989	Continuing Medical Education Committee University of Arizona College of Medicine
1987-1990	Trauma Committee University of Arizona College of Medicine
1988-2012	Executive Committee Department of Anesthesiology University of Arizona College of Medicine
1991-Present	Clinical Competence Committee Department of Anesthesiology University of Arizona College of Medicine
1991-1996	OR-PACU Equipment Coordinator Department of Anesthesiology University of Arizona College of Medicine
1991-2007	Program Director, Critical Care Fellowship Department of Anesthesiology University of Arizona College of Medicine
1991-1997	Standardization Committee University of Arizona College of Medicine
1991-1995	Credentials Committee University of Arizona College of Medicine

1991-1993	Case Review Committee, Alternate University of Arizona College of Medicine
1993-1994	Academic Assessment Team, Program for Assessment of Institutional Priorities University of Arizona College of Medicine
1994-1997	University Physician Health Board of Directors
1994-1997	Executive Committee, University Physician Health Board
1994-2010	University Physician Health Finance Committee
1996-2011	Finance Committee Department of Anesthesiology University of Arizona College of Medicine
1996	Committee on Administrative Review of Department of Surgery University of Arizona College of Medicine
1996-1998	University Physician Health Committee on Group Practice Restructuring
1997-2002	College of Medicine Nominations Committee University of Arizona College of Medicine
1999-2002	College of Medicine Promotions and Tenure Committee University of Arizona College of Medicine
2000-Present	Co-Medical Director, Surgical Intensive Care Unit
2003-2009	COM Post-Tenure Review Committee, (Chair)
2005-2007	Medical Executive Committee University Medical Center
2006-2008	University Physician Health Faculty Advisory Council
2013-Present	College of Medicine Committee of Ten University of Arizona College of Medicine

Local, State and Regional Agencies

1975-1990	Respiratory Care Advisory Committee Pima Community College
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1979-2008	Annual Meeting Program Committee (Chair 1980, 1985, 1987-05) Arizona Society of Anesthesiologists
1979-1987	Annual Meeting Organizing Committee (Chair 1980, 1985) Arizona Society of Anesthesiologists
1984-Present	Bylaws Committee (Chair 1984-2002) Arizona Society of Anesthesiologists
1984-Present	Committee on Governmental Affairs Arizona Society of Anesthesiologists
1988-1993	Committee on Medical Education Arizona Medical Association

National and International Agencies

1982-1998	DATTA Panel, Council on Scientific Affairs American Medical Association
1984-1995	Organizing Committee (Chairman 1984-1995) Wolf Creek Conference on CPR
1985	3rd Conference Meeting Chairman Wolf Creek Conference on CPR
1985-Present	Abstract Reviewer Society of Critical Care Medicine
1986-1994	Associate Examiner American Board of Anesthesiology
1986-1988	Consultant, Anesthesiology and Respiratory Devices Panel, Center for Devices and Radiologic Health Food and Drug Administration
1991	Consultant, Cardiovascular Study Section National Institutes of Health
1991-1999	Committee on Refresher Courses (Chair 1999) American Society of Anesthesiologists
1991-1994	Committee on Acute Medicine American Society of Anesthesiologists

1991-1994	Task Force on Research Needs in Critical Care American College of Critical Care Medicine
1991-1994	Task Force on Manpower Needs for Critical Care American College of Critical Care Medicine
1991-1994	Task Force on Administration and Organization American College of Critical Care Medicine
1992-1999	Liaison with American Society of Anesthesiologists Society of Critical Care Medicine
1992-1993	Committee on Manpower American Society of Anesthesiologists
1992-1993	Special Site Reviewer, National Institute of Neurological Disorders and Stroke National Institutes of Health
1993-1996	Committee on Publications Society of Critical Care Anesthesiologists
1993-1994	Special Review Panel, National Institute of Neurological Disorders and Stroke National Institutes of Health
1993-1994	Panel Judge for Anesthesiology Specialty Award Society of Critical Care Medicine
1994	Cardiovascular Study Section, Ad hoc Review Group (Chair) National Institutes of Health
1994-2005, 2009-Present	Committee on Bylaws American Society of Anesthesiologists
1994,1996, 2000,2004	Reference Committee, House of Delegates (Chair 2004) American Society of Anesthesiologists
1995-2010	ACLS Subcommittee, Committee on Cardiopulmonary Resuscitation and Emergency Cardiac Care American Heart Association
1995-2006	Senior Associate Examiner American Board of Anesthesiology

1995-2004	Liaison, American Heart Association Emergency Cardiac Care Committee American Society of Anesthesiologists
1995, 1998	Special Site Visitor, Anesthesiology RRC Accreditation Council for Graduate Medical Education
1995-1996, 1999-2003	Committee on Annual Meeting Review, (Chair 2003) American Society of Anesthesiologists
1996-Present	Delegate, World Federation of Societies of Anesthesiology American Society of Anesthesiologists
1996-2009	Board of Directors Foundation for Anesthesia Education and Research
1996-2005	Committee on Critical Care Medicine & Trauma American Society of Anesthesiologists
1996-2004	Committee on Resuscitation World Federation of Societies of Anesthesiologists
1996-2003	Committee on Research American Society of Anesthesiologists
1996-1999	Development Committee Foundation for Anesthesia Education and Research
1996-1997	Task Force on PCD's (Chair) American Society of Anesthesiologists
1999-2007	Joint ABA-ASA In-Training Council American Board of Anesthesiology
1999-2007	Joint ABA-ASA In-Training Council World Federation of Societies of Anesthesiologists
1999-2007	Joint ABA-ASA In-Training Council American Society of Anesthesiologists
1999-2002	Strategic Planning Committee Society of Critical Care Medicine
1999-2000	Committee on Scientific Papers (Chair 2000) American Society of Anesthesiologists

2000-2009	Annual Meeting Resident Scholars Program Foundation for Anesthesia Education and Research
2000-2006	Task Force on ASA's 100 th Anniversary American Society of Anesthesiologists
2000-2003	Section on Education and Research (Vice Chair) American Society of Anesthesiologists
2000-2003	Ad Hoc Exhibitors Advisory Committee American Society of Anesthesiologists
2000-2001	Section on Annual Meeting (Vice Chair) American Society of Anesthesiologists
2001-2005	Education Committee Foundation for Anesthesia Education and Research
2001-2003	Committee on CME Strategic Planning American Society of Anesthesiologists
2001-2002	Section on Annual Meeting (Chair) American Society of Anesthesiologists
2002-2005	Task Force on Annual Meeting Opportunities American Society of Anesthesiologists
2003-2009	Committee on Professional Education Oversight(Chair 2004-09) American Society of Anesthesiologists
2003-2004	Section on Society Subspecialties (Chair) American Society of Anesthesiologists
2004-2009	Board of Trustees Wood Library Museum
2004-2005	Task Force on Annual Meeting Honoraria (Chair) American Society of Anesthesiologists
2005-2009	Committee on Annual Meeting Oversight (Exec. Comm. 2005-09) American Society of Anesthesiologists
2005-2006	Task Force on Katrina Disaster Relief (Chair) American Society of Anesthesiologists

2006-2007	Ad Hoc Committee on CME Approval Process American Society of Anesthesiologists
2007-Present	Board of Trustees Anesthesia Foundation
2008-2009	Ad Hoc Committee on Droperidol American Society of Anesthesiologists
2009-2012	WFSA Advisory Group World Federation of Societies of Anesthesiologists
2010-2014	Secretary Anesthesia Foundation
2010	Ad Hoc Committee on Future Land Use American Society of Anesthesiologists
2010	CPR Guidelines Writing Group American Heart Association
2010	Consensus on Science Writing Group International Liaison Committee on Resuscitation
2011-Present	Annual Meeting Site Selection Committee Academy of Anesthesiology
2012-Present	Constitution Committee World Federation of Societies of Anesthesiologists
2013-2014	Ad Hoc Committee on Related Organizations American Society of Anesthesiologists
2014-Present	Committee on Governance Effectiveness and Efficiencies American Society of Anesthesiologists
2014-Present	President Anesthesia Foundation
2014-2015	CPR Guidelines Writing Group American Heart Association

Resident Lectures

- 8/2014 Ventilation Strategies for Restrictive Lung Disease (Including ARDS)
Department of Anesthesiology
University of Arizona College of Medicine
Tucson, AZ
- 2/2015 The Importance of Uninterrupted Chest Compressions During CPR
Department of Anesthesiology Grand Rounds
University of Arizona College of Medicine
Tucson, AZ
- 8/2015 Respiratory Physiology: Dead Space, Shunt, and VQ Mismatch
Department of Anesthesiology
Tucson, AZ

Invited Scientific and Clinical Presentations (1996 to date)

- 6/1996 Regional Refresher Course
America Society of Anesthesiologists
San Francisco, CA
- 11/1996 Swiss Society of Anesthesiologists
Interlaken, Switzerland
- 2/1997 Moderator, CPR Papers,
Society of Critical Care Medicine Annual Meeting
San Diego, CA
- 2/1997 Panel Lecture: Vital Issues in CPR Today
Society of Critical Care Medicine Annual Meeting
San Diego, CA
- 9/1997 Texas Society of Anesthesiologist Annual Meeting
Dallas, TX
- 10/1997 Refresher Course Lecture
American Society Anesthesiology Annual Meeting
San Diego, CA
- 10/1997 Vienna International Congress on Anesthesiology & Intensive Care
Medicine
Vienna, Austria

- 6/1998 Lecture, DNR Orders in the OR, Loss Prevention Education Program
Daughters of Charity National Health System
Tucson, AZ
- 9/1998 V Simposia Internacional Bianual de Anesthesiologia
Monterrey, N.L., Mexico
- 10/1998 Refresher Course Lecture
American Society of Anesthesiologists
Orlando, FL
- 1/1999 Regional Refresher Course
American Society of Anesthesiologists
Phoenix, AZ
- 1/1999 Moderator, Panel on Perioperative Critical Care
Society of Critical Care Medicine
San Francisco, CA
- 9/1999 Presenter/Panelist on 1) Airway adjuncts during CPR, 2) Vasopressor
therapy during CPR and 3) Post-resuscitation therapy
Evidence Evaluation Conference, CPR Guideline Revisions, American
Heart Association
Dallas TX
- 10/1999 Refresher Course Lecture
American Society of Anesthesiologists
Dallas, TX
- 1/2000 Regional Refresher Course
American Society of Anesthesiologists
San Diego, CA
- 2/2000 Presenter/Panelist
International Guidelines 2000 Conference on ECC and CPR, American
Heart Association
Dallas, TX
- 10/2000 Minnesota Society of Anesthesiologists Annual Spring Meeting
Minneapolis, MN
- 10/2000 Refresher Course Lecture
American Society of Anesthesiologists
San Francisco, CA

- 10/2000 Panel Lecture: Vasopressor Therapy
American Society of Anesthesiologists
San Francisco, CA
- 4/2001 Lecturer, Postgraduate Symposium
University of Kansas
Kansas City, MO
- 6/2001 Panel Moderator,
Wolf Creek VI Conference on CPR
Palm Springs, CA
- 10/2001 Refresher Course Lecture
American Society of Anesthesiologists
New Orleans, LA
- 2/2002 Alabama Society of Anesthesiologists/University of Alabama Meeting
Birmingham, AL
- 10/2002 Refresher Course Lecture
American Society of Anesthesiologists
Orlando, FL
- 6/2003 Panel Moderator
Wolf Creek VII Conference on CPR
Palm Springs, CA
- 10/2003 Refresher Course Lecture
American Society of Anesthesiologists
San Francisco, CA
- 10/2003 ACLS Workshop Lecture: Pharmacologic Management
American Society of Anesthesiologists
San Francisco, CA
- 11/2003 Mendelson Lecture: The Scientific Basis of Reanimation
University of Toronto
Toronto, Ontario
- 11/2003 Lecturer
University of Toronto Continuing Education Meeting
Toronto, Ontario

- 3/2004 Lecturer
Whistler Winter Anesthesia Conference
Whistler, British Columbia
- 10/2004 Refresher Course Lecture
American Society of Anesthesiologists
Las Vegas, NV
- 10/2004 ACLS Workshop Lecture: Pharmacologic Management
American Society of Anesthesiologists
Las Vegas, NV
- 1/2005 Airway Management: ETT vs. LMA: International Consensus Conference
on Science/International Liaison Committee on Resuscitation
Dallas, TX
- 6/2005 Tucson Initiative in Cardiocerebral Resuscitation
Arizona Society of Respiratory Care Annual Meeting
Tucson, AZ
- 10/2005 Refresher Course Lecture
American Society of Anesthesiologists
Atlanta, GA
- 10/2005 ACLS Workshop Lecture: Pharmacologic Management
American Society of Anesthesiologists
Atlanta, GA
- 9/2006 ASA Update Lecture
New England Society of Anesthesiologists
Lennox, MA
- 10/2006 Refresher Course Lecture
American Society of Anesthesiologists
Chicago, IL
- 2/2007 Asmund S. Laerdal Memorial Lecture
Society of Critical Care Medicine
Orlando, FL
- 2/2007 Lecturer
Whistler Winter Anesthesia Symposium
Whistler, British Columbia

- 5/2007 Lecturer
Oregon Society of Anesthesiologists Spring Meeting
Gleneden Beach, Oregon
- 10/2007 Refresher Course Lecture
American Society of Anesthesiologists
Chicago, IL
- 12/2007 Lecturer
New York Society of Anesthesiologists Post Graduate Assembly
New York, NY
- 2/2008 Lecturer
Arizona Society of Anesthesiologists Annual Meeting
Scottsdale, AZ
- 4/2008 Lecturer
Iowa Society of Anesthesiologists Annual Meeting
Des Moines, Iowa
- 5/2008 Panelist
Association of University Anesthesiologists Annual Meeting
Durham, NC
- 6/2008 J. Gerard Converse, M.D. Memorial Lecturer
Florida Society of Anesthesiologists Annual Meeting
Palm Beach, FL
- 10/2008 Lecturer
Central Line Sepsis Summit
Washington, DC
- 10/2008 Refresher Course Lecture
American Society of Anesthesiologists
Orlando, FL
- 1/2009 Panelist
American Society of Anesthesiologists Practice Management Conference
Phoenix, AZ
- 2/2009 Lecturer
Indiana Society of Anesthesiologists Annual Meeting
Indianapolis, IN

- 2/2009 Lecturer
University of Alabama at Birmingham Anesthesiology Review Course
Birmingham, AL
- 2/2009 Lecturer
St. Raphael Hospital Department of Anesthesiology Continuing Education
Series
New Haven, CT
- 3/2009 Panelist
International Liaison Committee on Resuscitation Conference
Osaka, Japan
- 4/2009 Lecturer
Colorado Society of Anesthesiologists Annual Spring Meeting
Colorado Springs, CO
- 2/2010 Presenter and Panelist
C2010 Conference on Consensus on CPR & ECC Science with Treatment
Recommendations
Dallas, TX
- 3/2011 Lecturer
Columbia Society of Anesthesiologists Biannual Meeting
Medellin, Columbia
- 2/2012 Lecturer
Pinnacle Partners in Medicine
Dallas, TX
- 11/2014 Lecturer
Minnesota Society of Anesthesiologists
Minneapolis, MN

Research Grants (Principle or Co-investigator)

- 1976 Influence of preoperative medication on arrhythmias during the induction of anesthesia. *McNeil Laboratories*. \$7,500 (with RW Yakaitis, M.D., and CD Blitt, M.D.)
- 1979 Comparison of the effects of dopamine, dobutamine, and epinephrine during cardiopulmonary resuscitation. *Arnar-Stone Laboratories*. \$6,750 (with RW Yakaitis, M.D.)
- 1980 Ischemic spontaneous ventricular fibrillation: a new model for the study of cardiopulmonary resuscitation. *American Society of Anesthesiologists Research Fund and Parker B. Francis Foundation*. \$4,400.

- 1981 Clinical evaluation of a new disposable pressure transducer. *Cobe Laboratories*. \$6,985 (with E.Furst, Ph.D.)
- 1981 Evaluation of high frequency jet ventilation for application in the operating room. *Healthdyne, Inc*. \$27,500 (with JM Calkins, M.D., Ph.D.)
- 1981 Incidence of peri-induction arrhythmias with and without laryngotracheal etidocaine. *Astra Pharmaceuticals*. \$13,700 (with CD Blitt, M.D.)
- 1981 High frequency jet ventilation in idiopathic respiratory distress syndrome. *Air Shields*. \$15,000 (with JM Calkins, M.D., Ph.D.)
- 1981 Evaluation of disposable pressure transducer. *Sorenson Research Company*. \$5,555 (with E. Furst, Ph.D.)
- 1984 Effects on gas exchange of high frequency jet ventilation in acute unilateral lung injury. *Arizona Lung Association*. \$6497 (with SF Quan, M.D.)
- 1986 Cardiopulmonary Resuscitation Research Center establishment grant. *Flinn Foundation*. \$368,281 (with GA Ewy, M.D.)
- 1987 CO2 Production and CNS Acidosis During Cardiac Arrest. *American Heart Association, Arizona Affiliate*, \$25,000. (with AB Sanders, M.D.)
- 1991 Comparison of High and Standard Dose Epinephrine in Swine Cardiac Arrest: 24 Hour Survival and Neurological Outcome. *American Heart Association, Arizona Affiliate*, \$22,000 (with Robert A. Berg, M.D.)
- 1993 Standard versus High Dose Epinephrine in Asphyxial Swine Cardiac Arrest: Survival and Neurological Outcome. *American Heart Association, Arizona Affiliate*, \$25,000 (with Robert A. Berg, M.D.)
- 1994 Phase II, Double-blind, Randomized, Placebo-controlled Study to Evaluate the Safety and Efficacy of 3 Different Single Doses of Ro 45-2081 in the Treatment of Severe Sepsis/Septic Shock. *F. Hoffmann-LaRoche, Ltd.*, \$205,200
- 1996 Phase III, Double-blind, Randomized, Place-controlled Study to Evaluate the Efficacy and Safety of a Single Dose of Ro 45-2081 in the Treatment of Severe Sepsis and Early Septic Shock. *F. Hoffman-LaRoche, Ltd.*, \$132,120
- 1999 Phase II Study to Determine the Efficacy and Safety of LY315920 in Patients with Severe Sepsis. *Eli Lilly and Company*, \$66,300

Editorial Activities

Associate Editor, *Survey of Anesthesiology* (1985-97)

Editorial Board, *Literature Scan: Anesthesiology* (1986-92)

Consulting Reviewer for *Critical Care Medicine, Heart and Lung, Anesthesiology, Annals of Emergency Medicine, Anesthesia and Analgesia, Chest, Archives of Internal Medicine, New England Journal of Medicine, Journal of the American Medical Association, Medical Letter, Journal of Cardiothoracic and Vascular Anesthesia*

Guest Co-Editor for Symposium Issue of *Critical Care Medicine* on 3rd Wolf Creek Conference on CPR, Vol. 13, No 11, November 1985

Consultant, AMA Department of Drugs for *AMA Drug Evaluations*

Editorial Board, *Journal of Cardiothoracic and Vascular Anesthesia* (1995-06)

Associate Editor, *ASA Refresher Courses in Anesthesiology* (1997-2003)

Publications

Chapters and Reviews

1. Otto CW: Respiratory Intensive Care in *Clinical Anesthesia Procedures of the Massachusetts General Hospital*, Lebowitz, PW, (ed). Little, Brown and Company, Boston, 1978. pp 384-414
2. Otto CW: Newer Drugs in the Therapy of Bronchospasm. *Weekly Anesthesiology Update*, Vol. 2, Lesson 8, Princeton, NJ, 1978, pp 1-8
3. Otto CW: Respiratory Morbidity and Mortality. In *Anesthetic Side Effects and Complications*, Owens, WD (ed). *International Anesthesiology Clinics* 18:85-106, 1980
4. Otto CW: The Experts Opine: High Frequency Ventilation. *Survey of Anesthesiology* 25:127-128, 1981
5. Otto CW: Postoperative Intensive Care in *Cardiac Anesthesia*, Conahan TJ (ed). Addison-Wesley, Menlo Park, CA, 1981, pp 304-327
6. Quan SF, Calkins JM, Waterson CK, Otto CW: High Frequency Ventilation--Current Concepts. *Arizona Medicine* 40:319-324, 1983
7. Otto CW: Anesthesia Ventilators: Special Requirements in Contemporary Anesthesia Practice Vol VIII; *Future Anesthesia Delivery Systems*. Brown BR, Calkins JM, Saunders RJ (eds). F.A. Davis Company, Philadelphia, PA. 1984. pp 165-173
8. Otto CW: Central Venous Pressure Monitoring. in *Monitoring Anesthesia and Critical Care Medicine*. Blitt CD (ed). Churchill-Livingstone, New York. 1985, pp 121-165
9. Otto CW: Blood Gas and pH Abnormalities. In *Surgical Decision Making*, 2nd Ed. Norton LW, Eiseman B (eds). W.B.Saunders Company, Philadelphia. 1986. pp 2-3
10. Otto CW: Ventilatory Management in the Critically Ill. in *Emergency Department Management of Critical Illness*, Abraham E (ed). *Emergency Medicine Clinics* 4:635-654, 1986
11. Otto CW: Update on Cardiopulmonary Resuscitation. in *ASA Regional Refresher Courses*. American Society of Anesthesiologists, Chicago. 1988, pp. 109-1 - 109-8
12. Otto CW: Assessment and Treatment of Postoperative Pulmonary Complications. In *ASA Regional Refresher Courses*. American Society of Anesthesiologists, Chicago. 1988, pp. 204-1 - 204-8

13. Otto CW: Tracheal Intubation. in *General Anaesthesia*, 5th edn. Nunn JF, Utting JE, Brown BR, (eds). Butterworth, London 1989, pp. 512 - 539
14. Otto CW: Cardiopulmonary Resuscitation of the Adult. in *General Anaesthesia*, 5th edn. Nunn JF, Utting JE, Brown BR, (eds). Butterworth, London. 1989 pp. 1331 - 1348
15. Otto CW: Central Venous Pressure Monitoring. in *Monitoring in Anesthesia and Critical Care Medicine*, 2nd edn. Blitt CD (ed). Churchill-Livingstone, New York. 1989, pp. 169-210.
16. Otto CW: Current Concepts in Cardiopulmonary Resuscitation. *Seminars in Anesthesia* 9:169-181,1990
17. Otto CW: Cardiopulmonary Resuscitation in *Critical Care Practice*. Hoyt JW, Tonneson AS, Allen J, (eds). W. B. Saunders, Philadelphia. 1991, pp. 427 - 438
18. Otto CW: Cardiopulmonary Resuscitation. in *Current Practice in Anesthesiology*. Rogers MC (ed). Mosby-Year Book, St. Louis. 1990, pp.510-515
19. Otto CW: Basic and Advanced Life Support. *Current Opinion in Anaesthesiology*. 5:245-249, 1992
20. Otto CW: Current Concepts in Cardiopulmonary Resuscitation in *1993 Annual Refresher Course Lectures*. American Society of Anesthesiologists, Chicago. 1993, pp. 124-1 - 124-7
21. Otto CW: Current Concepts in Cardiopulmonary Resuscitation. in *ASA Regional Refresher Courses*. American Society of Anesthesiologists, Chicago. 1994, pp. 109-1 - 109-7
22. Otto CW: Postoperative Pulmonary Complications. in *ASA Regional Refresher Courses*. American Society of Anesthesiologists, Chicago. 1994, pp 204-1 - 204-7
23. Otto CW: Current Concepts in Cardiopulmonary Resuscitation in *1994 Annual Refresher Course Lectures*. American Society of Anesthesiologists, Chicago. 1994, pp 261-1 - 261-7
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9/2016	World Anesthesia Conference Hong Kong, China
10/2016	American Society of Anesthesiologists Annual Meeting Chicago, IL