

3/3/12

CURRICULUM VITAE

NAME Robert Hawes Bartlett

BORN May 8, 1939, Ann Arbor, Michigan

ADDRESS University of Michigan Medical Center
General Surgery
200 Zina Pitcher Place, 7679 Kresge I
Ann Arbor, MI 48109-0331
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PRESENT POSITION

Emeritus Professor of Surgery, Sections of General and Thoracic Surgery, University of Michigan, Ann Arbor

PRIOR POSITIONS

Director, Critical Care, Section of General Surgery
Director, Surgical Intensive Care Unit
Program Director, Surgical Critical Care Fellowship
Program Director, Extracorporeal Life Support Program
Section Head, Section of General Surgery

MAJOR FIELD OF INTEREST

Applied Physiology in Surgery

ACADEMIC DEGREES

B.A. Albion College, Albion, Michigan, June 1960
M.D. University of Michigan Medical School, cum laude, June 1963

RESIDENCY

July 1963 – June 1967 Intern—Senior Resident in Surgery, Peter Bent Brigham and Children's Hospital, Boston, Massachusetts
July 1967 – June 1968 Chief Resident in Thoracic Surgery, Peter Bent Brigham Hospital
July 1968 – June 1969 Chief Resident Surgeon, Peter Bent Brigham Hospital

FELLOWSHIP

July 1966 – June 1970 NIH Trainee in Academic Surgery, Harvard Medical School

TEACHING AND RESEARCH APPOINTMENTS

July 1968 – June 1969 Research Fellow in Surgery, Harvard Medical School
July 1969 – June 1969 Arthur Tracy Cabot Teaching Fellow in Surgery, Harvard Medical School
July 1969 – June 1970 Harvey Cushing Fellow, Peter Bent Brigham Hospital
Research Fellow in Surgery, Harvard Medical School
July 1970 – June 1973 Assistant Professor of Surgery, University of California, Irvine
July 1973 – June 1977 Associate Professor of Surgery, University of California, Irvine

July 1977 – June 1980 Professor of Surgery, University of California, Irvine
 July 1980 – Dec 2005 Professor of Surgery, University of Michigan, Ann Arbor
 Jan 2006 – Present Professor Emeritus of Surgery, University of Michigan, Ann Arbor

LICENSURE

Diplomate, National Board of Medical Examiners
 State Licensure: Michigan, 1963-66; 1980- (# 4301026234)
 Massachusetts & California licenses expired

BOARD CERTIFICATION

American Board of Surgery, October 20, 1969
 American Board of Thoracic Surgery, April 4, 1970
 American Board of Surgery, Critical Care, April 9, 1987
 American Board of Surgery, Critical Care Re-certification, October, 1996

HOSPITAL APPOINTMENTS

July 1969 – June 1970 Peter Bent Brigham Hospital, Assistant in Surgery

July 1970 – June 1980 University of California, Irvine (Orange County Medical Center)
 Attending Staff
 Assistant Director of Surgical Services, 1970-80
 Director, Burn Center, 1971-80

July 1970 – June 1980 St. Joseph Hospital (Orange, California), Attending Staff
 Children's Hospital of Orange County, Attending Staff
 Veterans' Hospital, Long Beach, Attending Staff

July 1980 – June 1985 Wayne County General Hospital and Westland Medical Center, Attending Staff

July 1980 – June 2005 Veterans Hospital, Ann Arbor, Attending Staff

July 1980 – University of Michigan Medical Center
 Attending Staff, July 1980-
 Director, Surgical Intensive Care Unit, July 1980 – June 2005
 General Surgery Section Head, July 1981 – June 1987
 Director, Graduate Education, July 1980 – June 1991
 Trauma/Critical Care Division Chief, July 1980 – June 1991
 Critical Care Division Chief, July 1991 – June 2002
 Program Director, Surgical Critical Care Fellowship, July 1991 – June 2005
 Director, Extracorporeal Life Support Program, July 1980 – June 2005
 Critical Care Committee Co-Chair, July 1995 – June 2005
 Executive Committee on Clinical Affairs 1981-1985, 2003-2005
 Institutional Review Board, 2006 -

SOCIETIES

Beta Beta Beta, Biology Honor Society
 Galens Honorary Medical Society, University of Michigan
 Alpha Omega Alpha, Medical Honor Society

Surgical Societies

American Association for Surgery of Trauma
 American Association for Thoracic Surgery
 American College of Surgeons
 American Pediatric Surgical Association
 American Surgical Association
 Central Surgical Society
 Coller Surgical Society
 General Thoracic Surgery Club
 John Alexander Surgical Society
 Michigan Chapter of American College of Surgeons
 Michigan Society of Thoracic & Cardiovascular Surgeons
 Society of Brigham Surgical Alumni
 Society of University Surgeons
 Surgical Biology Club II
 Surgical Infection Society
 Western Thoracic Surgical Association

Other Societies

American Association for the History of Medicine
 American Burn Association
 American College of Chest Physicians
 American Medical Association
 American Physiological Society
 American Society for Artificial Internal Organs
 American Thoracic Society
 American Trauma Society
 European Intensive Care Society
 Extracorporeal Life Support Organization
 International Society for Artificial Organs
 Society of Critical Care Medicine
 American Institute for Medical & Biological Engineering (Charter Member)

PROFESSIONAL ACTIVITIES AND APPOINTMENTS

Chairman, Program Committee, University Surgical Residents Meeting (1969)
 Chairman, NHLI Workshop on Hematology and Extracorporeal Circulation (1974)
 Chairman, Research Committee, Orange County Heart Association (1974-77)
 Council, Society of University Surgeons (1975-78)
 Education Committee, American Burn Association (1975-78)
 Research Committee, California Heart Association (1974-75)
 Chairman, Local Arrangements, American Burn Association (1977)
 Co-Chairman, Postgraduate Course on Fluids and Electrolytes, American College of Surgeons (1977)
 Program Committee, Michigan Chapter, American College of Surgeons (1981-1986)
 Central Surgical Society, Membership Advisory Committee (1985-88)
 American College of Chest Physicians, Council on Critical Care (1983)
 American College of Surgeons, Pre and Postoperative Care Committee (1985-95);
 CME Strategic Planning Committee 2001
 American Board of Surgery, Examination Consultant, 1989-90
 American Society for Artificial Internal Organs (ASAIO)
 Committee on Standards and Specifications for Gas Exchange Devices (1970-80)

Program Committee (1974-78)
 Executive Council (1977, 1978, 1981, 1982)
 Councilman at Large (1979)
 Chairman, Program Committee (1981, 1982, 1983)
 President Elect, 1983
 Publications Task Force, 1984
 President, 1984
 Executive Committee, 1985
 Board of Trustees, 1986-87
 Regulatory Affairs Committee, 1985-
 Senior Advisory Committee, 1999 –
 Project Bionics Co-Chair, 1999 –
 International Society for Artificial Organs
 President 2002-2003
 Extracorporeal Life Support Organization (ELSO), Chairman, Steering Committee 1989-94
 The University of Michigan:
 The Faculty Senate Committee on the Future of the University, 1996
 Chairman, Planning Committee of the University of Michigan Medical School Sesquicentennial
 Celebration, 1997-2001
 Medical School representative on the Senate Assembly, 1996-1999
 Member, Center for Biomedical Engineering Research, 1997-2000
 Coulter Foundation Project Oversight Committee, 2005 –
 Galens Medical Society Lifetime Honorary Member, 2005
 Victor Vaughan Society Faculty Advisory, 1980 -

HONORS AND AWARDS

University of California, Irvine, Student Teaching Award, 1978, 1979, 1980
 University of California, Irvine, AOA Faculty Advisor, 1976-79
 University of Michigan, AOA Faculty Advisor, 1982-85, 92-95
 University of Michigan, The Victor C. Vaughan Society Faculty Advisor, 1984-
 University of Michigan, Galens Medical Society Silver Shovel Award for Outstanding Clinical Teacher, 1989
 Gibbon Award, American Society of Extra-Corporeal Technology, Inc., 1992
 Dwight E. Harken Award, Temple University, Philadelphia, 1992
 Medal of Special Recognition, Swedish Medical Society, 1993
 University of Michigan Kaiser Permanente Excellence in Teaching Award, 1993
 Luther Longino Lecturer, University of Alabama, March 1994
 American College of Surgeons Sheen Award for Research, 1996
 Robert E. Gross Lecturer, American Pediatric Surgical Association, May 1996
 University of Michigan, Galens Medical Society Faculty Advisor, 1997-99
 Barney Clark Award from ASAIO, 1997
 Medal of Special Recognition from the National Academy of Surgery of France, 1999
 McGraw Medal of the Detroit Surgical Association, 1999
 Robert E. Gross Memorial Lecturer, Boston Children's Hospital and Harvard Medical School, 1999
 Robert Zollinger Lecturer, Ohio State University, 1999
 Thomas Fogarty Lecturer, Stanford University, 2000
 I.S. Ravdin Lecturer, American College of Surgeons, 2001
 James "Red" Duke Lecturer, University of Texas, Houston, 2002
 Hightower Lecture, Bowman Gray Surgical Society, 2002
 Medallion for Scientific Achievement, American Surgical Association, April, 2002
 Ladd Medal of American Academy of Pediatrics, 2003
 NIH – Great Clinical Teachers Series, 2003
 American College of Surgeons Jacobson Award, June 2003
 Institute of Medicine of the National Academy of Science, 2003
 Ben Cohen Award for Laboratory Animal Medicine, University of Michigan, 2006
 James B. Winkler Lecture, St. Joseph Hospital, Ann Arbor, 2006

Bennett J. Cohen Education Leadership Award, Michigan Society for Medical Research, Ann Arbor, 2006

EDITORIAL

Editorial Board: Perfusion, 1985-
Critical Care, 1985-
ASAIO Journal, 1986-
Int. J. Biomaterials, Artificial Cells & Artificial Organs, 1987
Journal of Critical Care, 1988-1995
The Journal of Thoracic and Cardiovascular Surgery, 1992-1998
SESATS, Surgical Critical Care Subcommittee, 1990-1995
Artificial Organs, 1998-
Journal of Congestive Heart Failure & Circulatory Support, 2000-
Journal of Artificial Organs, 2003

Reviewer for: Science, 1974; Chest, 1974 - 1979, 1983-
Journal of Applied Physiology, 1977 -
Heart and Lung, 1977-79
ASAIO Journal, 1978-
New England Journal of Medicine, 1981 -
Annals of Thoracic Surgery, 1981 -
Surgery, 1984 -
American Review of Respiratory Disease, 1985 -
The Journal of Thoracic and Cardiovascular Surgery, 1987 -
Artificial Organs, 1987 -
Intensive Care Medicine, 1987 -
Pediatrics, 1987 -
The Journal of Parenteral and Enteral Nutrition, 1988 -
Archives of Surgery, 1989 -
The Journal of the American Medical Association, 1993 -
American Journal of Respiratory and Critical Care Medicine, 1993 -

RESEARCH CONSULTANT/GRANT REVIEW

Utah Biomedical Test Laboratory, 1974, 1975
 University of Michigan: Burn Treatment Study Project, 1979
 Technical Consulting Panel, Relative Value Study, School of Public Health, Harvard University, 1986.
 National March of Dimes Foundation, 1974
 California Heart Association, 1975
 UK National Health Service: Critical Care Research, 2003-
 National Institutes of Health:
 NHLI ARDS Planning committee, 1974, 1975
 NHLI Workshop on Hematology and Extracorporeal Circulation (chair) 1974
 NHLI - Workshop on Mechanisms of Acute Lung Damage, 1977
 NIGMS - Consensus Program on Burn Care, 1978, 1980
 Site Visit, Clinical Cancer Program, NCI, 1980
 Study Section Consultant, Surgery A and B, NIGMS, 1984, 1999, 2001
 Special Emphasis Panel, Medical College of Virginia, Site Visit, 1986
 Study Section on Cardiopulmonary Bypass, NHLBI, 1990
 NHLBI, ARDSnet Steering Committee, 1994-2006
 Study Section on Innovative Research Grants, SBIR, 1995-98
 Study Section on Muscle Diseases, 2001
 Study Section on Treatment of Shock, NIGMS, 2003
 Study Section on Pediatric Life Support, NICHD, 2003
 Special Emphasis Panel, Pediatric Critical Care, NICHD, 2004

Special Emphasis Panel, Trauma Research Centers, NIGMS, 2004
 Study Section NICHD, Pediatrics, CHHD-A, 2005-

United States Army:

Consultant in Emergency Care, 1996-97

INVITED LECTURESHIPS

1970-79

International Conference on Membrane Lung Technology, Invited Speaker, 1975

Japanese Association for Thoracic Surgery, Honored Guest, 1977

Midwest Surgical Society, Harridge Memorial Lecture, 1978

1980-89

Oregon Thoracic Society, Conklin Lecturer, 1982

McGill University, Visiting Professor, Royal Victoria Hospital, 1982

Emory University, Atlanta, Visiting Professor, 1983

German Heart Center, Munich, Germany, Invited Speaker, 1984

Cleveland Clinic, Cleveland, Ohio, Visiting Professor, 1984

Symposium on CAVH, New York, Invited Speaker, 1984

American College of Surgeons, San Francisco, California, Invited Speaker, 1984

Aachen, Germany, Symposium on CAVH and Renal Failure, Invited Speaker, 1984

Hammersmith Hospital, London, England, Visiting Professor, 1984

Cleveland Clinic Foundation, Visiting Professor, 1984

Long Island College Hospital and the National Kidney Foundation, Invited speaker, 1984

MIEMSS Clinical Center, Baltimore, Visiting Professor 1985

Washington DC Children's Hospital National Medical Center, Visiting Professor, 1985

Cleveland Clinic, Invited Speaker 1985

2nd World Congress of Pediatric, Invited Speaker 1985

University of Minnesota, Visiting Professor, 1985

Orange County Surgical Society, Invited Speaker, 1985

Boston Children's Hospital, Harvard Medical School, Visiting Professor, 1985

Columbia Presbyterian Hospital, Visiting Professor, 1985

International Biomedical Engineering Symposium, Invited Speaker, 1986

Brigham and Women's Hospital Postgraduate Course, Invited Speaker, 1986

International Symposium on Continuous AV Hemofiltration, Vicenza, Italy, Invited Speaker, 1986

American College of Surgeons Spring Postgraduate Course, Invited Speaker, 1986

Japanese Artificial Organs Symposium, Tokyo, Japan, Invited Speaker, 1986

Perinatal Research Society, Phoenix, Arizona, Invited Speaker, 1986

American Academy of Pediatrics, Washington, DC, Invited Speaker, 1986

American Society of Parenteral and Enteral Nutrition, New Orleans, Invited Speaker, 1987

Third International Symposium on Acute Continuous Renal Replacement Therapy, Ft. Lauderdale, Invited Speaker, 1987

Episcopal Hospital & Temple University Medical School, Philadelphia, Visiting Professor, 1987

International Symposium on Cardiac Surgery, Rome Italy, Invited Speaker, 1987

International Congress on Intra-abdominal Infections, Hamburg, Germany, Invited Speaker, 1987

International Symposium on Extracorporeal CO₂ Removal in Patients with Severe ARDS, Invited Speaker, 1987

March of Dimes Medical Symposium, New York, Invited Speaker, 1987

California Thoracic Society, Yosemite, California, Invited Speaker, 1988

University of Rochester Medical Center, Rochester, NY, Visiting Professor, 1988

Cardiothoracic Surgery Symposium, San Diego, Invited Speaker, 1988

Scandinavian Association for Neonatal ECMO, Stockholm, Robert H. Bartlett Lectureship, 1988

4th European Congress on Intensive Care Medicine, Milan Italy, Invited Speaker, 1988

Japanese College of Surgeons, Tokyo, Invited Speaker, 1988

Children's Hospital of Pittsburgh, Visiting Professor, July 1988

University of Colorado, Visiting Professor, July 1988

Orange County Parent Care Conference, California, Invited Speaker, September, 1988
 Akron City Hospital, Visiting Professor, October 1988
 American College of Surgeons Annual Meeting, Invited Speaker, 1988
 McGill University, Visiting Professor, January 1989
 Keesler Air Force Base, Visiting Professor, March 1989
 Michigan State University, Visiting Professor, May, 1989
 Detroit Medical Center, Visiting Professor, June 1989
 American College of Surgeons Annual Meeting, Invited Speaker, 1989
 Third International Steglitz Symposium, Berlin, Invited Speaker, October 1989
 Orange County Surgical Congress, Invited Speaker, November 1989
 University of Minnesota, Visiting Professor, November 1989
 Ohio State University, Visiting Professor, December 1989
 American Association for Respiratory Care, Invited Speaker, December 1989

1990-1999

Rush Presbyterian-St. Lukes Hospital, Regnery Visiting Professor, February 1990
 Creighton University, Visiting Professor, March 1990
 Japanese Society of Artificial Organs, Invited Speaker, September 1990
 University of California, San Diego, Visiting Professor, March 1991
 Dartmouth Medical School, Curts Visiting Professor, March 1991
 Duke University, Visiting Professor, April 1991
 European Extracorporeal Life Support Meeting, Paris, France, Invited Speaker, May 1991
 Fourth European Congress on Extracorporeal Circulation, Amsterdam, Invited Speaker, June 1991
 Hershey Medical Center, Visiting Professor, October 1991
 San Francisco Trauma Conference, Invited Speaker, January 1992
 University of Pittsburgh, Visiting Professor, January 1992
 Pan Pacific Surgical Association, Hawaii, January 1992
 European Intensive Care Meeting, Milan Italy, Invited Speaker, May 1992
 CECEC Meeting, Paris, France Invited Speaker, June 1992
 Scandinavian Association of Thoracic & Cardiovascular Surgery, Oslo Norway, Invited Speaker, August 1992
 Swedish Medical Society, Stockholm, Invited Speaker, 1992
 Royal London Hospital, Mechanical Circulatory Support Meeting, Invited Speaker, March 1993
 Pediatric Intensive Care Meeting, Padua, Italy, Invited Speaker, June 1993
 International Society of Artificial Organs, Amsterdam, Invited Participant, July 1993
 Intensive Care Society, London, Invited Participant, October 1993
 University of Alabama, Visiting Professor, 1994
 Italian Intensive Care Society, Milan, Italy, Invited Speaker, June 1994
 European Intensive Care Congress, Brussels, Invited Speaker, March 1995
 Mexican Society of Cardiopulmonary Bypass, Mexico City, Invited Speaker, July 1995
 Ehrenhaft Lecturer, University of Iowa, October 1995
 Italian Intensive Care Symposium, Ancona, Italy, Invited Speaker, March 1996
 European Society of Anesthesiologists, London, Invited Speaker, June 1996
 Far-Forward, Resuscitative Surgery Meeting, Washington, DC, Invited Participant by the Joint Staff, January 1997
 University of Hawaii, Honolulu, Visiting Professor, March 1997
 University of Texas, San Antonio, Visiting Professor, January 1998
 Los Angeles Children's Hospital, Los Angeles, Visiting Professor, January 1998
 Annual Scientific Meeting of the Scottish Intensive Care Society, Sterling, Scotland, Invited Speaker, January 1998
 Pontificia Universita Urbaniana ECMO Symposium, Rome, Invited Speaker, February 1998
 General Thoracic Surgery Club, Invited Speaker, San Diego, 1998
 Southeastern ECMO Meeting (SEECMO) Keynote Speaker, Charleston, SC 1998
 International Congress on Pediatric Pulmonology, Invited Speaker, June 1998
 University of Pittsburgh, Invited Speaker, October 1998
 Tiny Baby Conference, Orlando, Florida, February 1999
 Society for Neonatology and Pediatric Intensive Medicine, Munich, Invited Speaker, May 1999
 Ohio State University, Visiting Professor, September 1999
 University of Toronto, Critical Care Medicine Symposium, Invited Speaker, October 1999

University of Florida, Invited Speaker, November 1999

2000-Present

UCLA, Visiting Professor, 2000
 University of Maryland, Shock Trauma Institute, Visiting Professor, 2000
 Oregon Trauma Symposium, 2000
 Leicester Conference on Extracorporeal Life Support, 2000
 Denver Surgical Association, 2000
 Brooke Army Hospital Trauma Symposium, 2000
 Rostock University, Artificial Liver Symposium, 2000
 American College of Surgeons Young Surgeons Program, 2000
 University of Pennsylvania, Visiting Professor, 2000
 Stanford University, Visiting Professor, 2000
 Boston University, Visiting Professor, 2001
 Orange County Surgical Symposium, Keynote Speaker, 2001
 Jersey City Medical Center, Visiting Professor, 2001
 Leicester Conference on Extracorporeal Life Support, 2001
 American Academy of Pediatrics, Surgical Section, Residents' Conference Speaker, 2001
 University of Texas, Houston, Visiting Professor, 2002
 American College of Surgeons, Young Investigators Conference, Keynote Speaker, 2002
 Pennsylvania State University, Ballantine Centre, 2002
 Bowman Gray Surgical Society, Hightower Lecture, 2002
 Southeast ECMO Symposium, Keynote Lecture, 2002
 SMART Italian Intensive Care Symposium, 2002
 University of Calgary Surgeon's Day Lecturer, 2002
 International College of Surgeons, Guest Lecturer, Taipei, Taiwan, 2002
 British Pediatric Cardiology Conference, Guest Lecturer, Leicester, England, 2002
 University of Wisconsin, Visiting Professor, 2002
 Academy of Cardiovascular Perfusion, Guest Lecturer, 2003
 Dialysis Association of Argentina, Guest Lecturer, Mendoza, Argentina, 2003
 Japanese ECMO Symposium, Keynote Speaker, Tokyo and Okayama, Japan, 2003
 University of Florida, Visiting Professor, 2004
 University of North Carolina – Chapel Hill, Visiting Professor, 2004
 St. Joseph Mercy Health System Grand Rounds – Ann Arbor, MI, Guest Lecturer, 2005
 Society of Critical Care Medicine – Phoenix, AZ, Guest Speaker, 2005
 St. Joseph Mercy Health System Trauma Symposium – Ann Arbor, MI, Guest Speaker, 2005
 Penn State Children's Hospital Pediatric Cardiopulmonary Perfusion Conference – Hershey, PA, Guest Lecturer, 2005
 Cardiothoracic Surgical Critical Care Conference – Washington, DC, Moderator, 2005
 ELSO Conference – Houston, TX, Guest Speaker, 2005
 Albion College Alumni Science Symposium – Albion, MI, Guest Speaker, 2005
 Japanese Assoc. for Thoracic Surgery Annual Meeting – Okayama, Japan, Invited Lecturer, 2005
 Johns Hopkins University Visiting Professor, 2006
 Medicine From Art to Science Symposium, Stockholm, Sweden, 2006
 Congenital Diaphragmatic Hernia Symposium, Heidelberg University, 2006
 Perfluorocarbon Research Symposium, University of Milan, 2006
 Washington University Visiting Professor in Pediatrics, 2006
 University of Missouri Visiting Professor, 2006
 Miami Valley Hospital TraumaUpdate, Keynote, 2007
 Shock Society Keynote Address. Baltimore, 2007

PhD GRADUATE STUDENTS

University of Michigan:
 Kenneth Drake, Bioengineering, 1987
 Arthur Oram, Bioengineering, 1988
 Michael Morykwas, Bioengineering, 1988

J. Patrick Montoya, Mechanical Engineering, 1990
 Scott Merz, Bioengineering, 1993
 Nitin Kulkarni, Physiology, 1994
 Sean Chambers, Bioengineering, 1998

University of Groningen, Franz Platz, 1992
 University of Gothenberg, Karen Mellgren, 1998
 Chiba University, Kenichi Matsuda, Medical Science, 2003

UNITED STATES PATENT

Autotransfusion System, Patent #4,547,186, October 15, 1985
 Self Regulating Blood Pump, #5,222,880, June 29, 1993
 Self Regulating Blood Pump Controlled Suction, #5,281,112, January 25, 1994
 Self Regulating Blood Pump Controlled Suction, #5,342,182, August 30, 1994
 Photo bioreactors and Closed Ecological Life Support Systems and Artificial Lungs Containing the Same, #08/412,598, March 25, 1997

RESEARCH GRANTS

Principal Investigator	Prolonged Extracorporeal Cardiopulmonary Support Orange County Heart Association, 1971 (\$2,433)
Principal Investigator	Membrane Oxygenator Development Project Donald E. Baxter Foundation, 1970-71 (\$37,000)
Principal Investigator	Prolonged Extracorporeal Respiratory Support. California TB and Respiratory Disease Association, 1971-72 (\$7,500)
Principal Investigator	Prolonged Extracorporeal Circulation. National Institutes of Health, NHLI, 1972-75 (\$286,868)
Principal Investigator	Clinical Prolonged Extracorporeal Circulation (contract) National Institutes of Health, NHLBI, 1974-77 (\$417,310)
Principal Investigator	Burns: Surface Management. Donald E. Baxter Foundation, 1974-75 (\$24,350)
Principal Investigator	Prolonged Extracorporeal Cardiopulmonary Support National Institutes of Health, NHLBI, 1976-79 (\$241,724)
Principal Investigator	Burns: Surface Management. Hearst Foundation, 1976-78 (\$29,000)
Principal Investigator	Extracorporeal Circulation for Neonatal Respiratory Failure National Institutes of Health, NICHD, 1978-80 (\$345,000)
Principal Investigator	Burns: Surface Management Hearst Foundation, 1979-80 (\$20,000)
Principal Investigator	Extracorporeal Circulation for Neonatal Respiratory Failure National Institutes of Health, NICHD, 1981-84 (\$559,295)
Principal Investigator	Autotransfusion System Evaluation Thoratec, Inc., 1983 (\$20,000)

Principal Investigator	Nutrition in Trauma Mead-Johnson, 1983 (\$15,000)
Consultant	Postdoctoral Training: Emergency and General Trauma Surgery, General Motors Corporation, 1984-85 (\$55,000)
Participant	NIRA: Accelerated Synthesis and Testing Living Skin Equivalent National Institutes of Health, 1984-85 (\$36,650)
Principal Investigator	Extracorporeal Circulation for Neonatal Respiratory Failure National Institutes of Health, NICHD, 1984-85 (\$231,980)
Principal Investigator	Extracorporeal Circulation for Newborn Respiratory Failure National Institutes of Health, NICHD, 1985-90 (\$1,200,000)
Principal Investigator	Extracorporeal Circulation in Pediatric Respiratory Failure National Institutes of Health, NICHD, 1990-92 (\$1,094,115)
Principal Investigator	A Registry of Extracorporeal Life Support William Randolph Hearst Foundation, 1989-93 (\$120,000)
Principal Investigator	Extracorporeal Membrane Oxygenation in Respiratory Failure, National Institute of Health, 1993-1997 (\$1,165,839)
Co-Investigator	Clinical Centers for a Clinical Network for the Treatment of Adult Respiratory Distress Syndrome (ARDS) National Institute of Health, 1994-2006 (\$1,166,665)
Principal Investigator	Extracorporeal Life Support in Military Casualties, Department of Defense, 12/1/96-12/30/99 (\$1,470,195)
Principal Investigator	Extracorporeal Life Support in Multiple Organ Failure, National Institutes of Health, 1998-2003 (\$1,919,988)
Principal Investigator	A Phase II Study to Determine the Efficacy and Safety of LY315920 in Patients with Severe Sepsis PPD Pharmaco 12/15/98-12/15/00 (\$321,933)
Co-Investigator	Total Liquid Ventilation: A Bioengineering Partnership National Institutes of Health, 12/1/99-11/30/04 (approx. \$4,000,000)
Principal Investigator	Development of a Total Artificial Lung, National Institutes of Health, 1R01 HL69420-01 2/1/2002-12/31/2006 (\$4,964,682)
Principal Investigator	Extracorporeal Circulation without Anticoagulation, National Institutes of Health, RO1 HD015434-22 7/1/2004-6/30/2007 (approx. \$1,600,000)
Principal Investigator	Development of a Total Artificial Lung, National Institutes of Health, 1R01 HL69420-06 8/13/07-6/30/2012 (\$4,751,458)

BUSINESS/CONSULTING

Active (2003):

Michigan Critical Care Consultants, Inc., Ann Arbor, Michigan

A bioengineering/critical care R&D company

Accumed Systems, Inc., Ann Arbor, Michigan

Invasive cardiology devices

Co-founder

Scientific Advisory Board

Sensors for Medicine and Science, Germantown, Maryland Implantable chemical sensors	Scientific Advisory Board
Therox, Inc., Costa Mesa, California Supersaturated oxygen	Scientific Advisory Board
Teraklin, Inc., Rostock, Germany	Ad Hoc Consulting
Alliance Pharmaceutical Inc., San Diego, California	Ad Hoc Consulting
Food and Drug Administration, Washington, DC	Scientific Advisory Board
MedaSorb Technologies, Inc., Monmouth Junction, New Jersey Extracorporeal Treatment of Sepsis	Ad Hoc Consulting
Hemolife, Inc., San Diego, California Extracorporeal Treatment of Liver Failure	

Inactive:

Abbott Critical Care Systems, Mountain View, California Management of critically ill patients	Critical Care Advisory Board
Baxter (Bentley Labs), Irvine, California	Consulting Agreement
Mallinckrodt, St. Louis, Missouri	Ad Hoc Consulting
Avecor Cardiovascular, Minneapolis, Minnesota	Ad Hoc Consulting
Medical Device Consultants, Inc., North Attleboro, Massachusetts	Ad Hoc Consulting
ICOR, Stockholm, Sweden	Ad Hoc Consulting
Ortho Biotech, Inc., Raritan, New Jersey	Consulting Agreement
Instrumentation Labs, Lexington, Massachusetts	Scientific Advisory Board