Anesthesiology is a medical specialty encompassing a broad range of medical and scientific activities. The clinical practice of anesthesiology includes:

1. assessment of, consultation for and preparation of patients for anesthesia and surgery;
2. provision of insensibility to pain during surgical, obstetric, therapeutic and diagnostic procedures;
3. monitoring and restoration of physiologic homeostasis during the perioperative period, as well as homeostasis in the critically ill or seriously injured patient;
4. diagnosis and treatment of painful syndromes; and
5. clinical management and teaching of cardiopulmonary resuscitation (CPR).

The realm of scientific investigation in anesthesiology also spans a broad range. Scientific efforts at the cellular and molecular levels are directed to understanding the molecular mechanisms of anesthesia and analgesia. Clinical research in anesthesiology includes broad epidemiological approaches to identifying indicators of outcome as well as prospective clinical studies examining new technologies, anesthetic agents and methods.

The Department of Anesthesiology (http://anest.wustl.edu) presents the student with the opportunity to:

1. acquire and apply pharmacologic knowledge related to anesthetic, narcotic, paralytic and sedative drugs and to drugs affecting the autonomic nervous system;
2. understand and apply the basic principles of airway management and mechanical ventilation;
3. understand and apply the principles of cardiopulmonary resuscitation;
4. understand and apply the technical skills and anatomic and pharmacologic knowledge used in performing regional nerve blocks;
5. learn and apply the fundamental principles of acute and chronic pain management; and
6. learn and apply the basic principles of critical care medicine.

Anesthesiology bridges the gap between basic science and clinical medicine. It provides experience in the clinical evaluation and management of patients, and in applied physiology and pharmacology. The Department of Anesthesiology offers student experiences in the operating room, the intensive care unit, the pain clinic and the laboratory.

Website: http://anest.wustl.edu

Degrees & Requirements

While the Department of Anesthesiology does not offer its own degree, some of the department's courses are open to students in the MD and MSTP (MD/PhD) programs. Further information about the MD and MSTP degrees can be found in the Degrees & Programs Offered (http://bulletin.wustl.edu/medicine/degrees) section of this Bulletin.

Research

Research Electives in Anesthesiology

Special electives in basic science research as it applies to anesthesiology can be arranged with the principal investigators in the Department of Anesthesiology (http://anest.wustl.edu), in the Anesthesiology Research Unit and the Washington University Pain Center under the direction of Rob Gereau, PhD, or the Division of Clinical and Translational Research under the direction of Michael Avidan, MBCh.

These laboratories focus on various aspects of molecular neurobiology, including ion channel structure and function; G-protein molecular biology; molecular mechanisms of anesthetic action; genetics of anesthetic responsiveness; and the molecular, cellular and genetic basis of acute and chronic pain and itch. Arrangements for these special electives are made through the specific investigators: Walter A. Boyle III, MD; Zhou-Feng Chen, PhD; Alex S. Evers, MD; Narasimhan Gautam, PhD; Richard S. Hotchkiss, MD; Christopher J. Lingle, PhD; Gustav Akk, PhD; Michael Bruchas, PhD; Yu-Qing Cao, PhD; Robert W. Gereau, PhD; DP Mohapatra, PhD; or Jose Moron-Concepcion, PhD. In addition, opportunities exist for clinical research under the direction of Michael Avidan, MBCh; Evan Kharasch, MD, PhD; Peter Nagele, MD; or Ben Palanca, MD, PhD.

Faculty

Department Chair
Alex S. Evers, MD

Department Vice Chair
Ellen M. Lockhart, MD

Visit our website for more information about our faculty (http://anest.wustl.edu/about/faculty) and their appointments.

A

Enyo Ama Ablordeppey, M PH, MD
Assistant Professor of Anesthesiology (primary appointment)
Assistant Professor of Emergency Medicine in Medicine
M PH University of Pittsburgh 2007
MD University of Pittsburgh 2007

Sirajuddin Agha, MBBS
Assistant Professor of Anesthesiology (primary appointment)
MBBS Liaquat Medical College 1969
Gustav Akk, PHD
Associate Professor of Anesthesiology (primary appointment)
BS Moscow State University 1991
PHD State Univ of NY Buffalo 1997

Ream Al-Hasani, PHD
Adjunct Assistant Professor of Anesthesiology (primary appointment)
PHD University of Surrey 2009

Amrita Aranake - Chrisinger, MD, BS1
Instructor in Anesthesiology (Pending Dean’s Approval) (primary appointment)
BS Rutgers University 2008
MD Washington Univ in St. Louis 2013
BS1 Rutgers University 2008

Umeshkumar Athiraman, MD
Assistant Professor of Anesthesiology (primary appointment)
MD M.G.R. Medical University 2013

Jacob D AuBuchon, MD
Assistant Professor of Anesthesiology (primary appointment)
BA University of MO Kansas City 2005
MD University of MO Kansas City 2008

Michael Simon Avidan, MBBCH
Professor of Anesthesiology (primary appointment)
Professor of Surgery (Cardiothoracic Surgery)
MBBCH University of the Witwatersra 1991

Devin M Barry, PHD
Instructor in Anesthesiology (Pending Dean’s Approval) (primary appointment)
PHD University of MO St Louis 2012

Holger Matthias Baumann, MD
Assistant Professor of Anesthesiology (primary appointment)
MD Free University of Berlin 1988

Arbi Ben Abdallah, PHD
Assistant Professor of Anesthesiology (primary appointment)
PHD Washington Univ in St. Louis 2011

George Richard Benzinger III, MD, PHD
Associate Professor of Anesthesiology (primary appointment)
BS California Institute Technolo 1993
MD University of Chicago 2000
PHD University of Chicago 1998

Laila M Bottros, MD
Assistant Professor of Anesthesiology (primary appointment)
MD Ain Shams University 1977

Michael M Bottros, MD
Assistant Professor of Anesthesiology (primary appointment)
MD Washington Univ in St. Louis 2006

Walter A Boyle III, MD
Professor of Anesthesiology (primary appointment)
Assistant Professor of Developmental Biology
Professor of Surgery (General Surgery)
BS University of CA San Francisco 1974
MD University of CA San Francisco 1977

Michael Raymond Bruchas, PHD
Henry Eliot Mallinckrodt Professor of Anesthesiology (primary appointment)
Associate Professor of Neuroscience
PHD Creighton University 2004

Yuqing Cao, PHD
Associate Professor of Anesthesiology (primary appointment)
PHD University of CA San Francisco 1999
BS Fudan University 1989

Laura Francesca Cavallone, MD
Assoc Professor of Anesthesiology (primary appointment)
MD University of Milan 1993

Zhouteng Chen, PHD, MS
Russell D and Mary B Shelden Professor of Anesthesiology (primary appointment)
Professor of Developmental Biology
Professor of Psychiatry
BS Wuhan University 1983
PHD University of Texas Austin 1994
MS School Not Listed 1987

Ziwei Chen, PHD, MS, MBBS
Assistant Professor of Anesthesiology (primary appointment)
PHD Peking University 2001
MS Dalian Medical University 1998
MBBS Dalian Medical University 1995

Wayland W. Cheng, MD, PHD
Instructor in Anesthesiology (primary appointment)
BS Wheaton College 2005
MD Washington Univ in St. Louis 2012
PHD Washington Univ in St. Louis 2012

Kelly Lynne Chilson, MD
Associate Professor of Anesthesiology (primary appointment)
MD University of MO St Louis 1999

Albert Murray Cohen, MD
Assistant Professor of Anesthesiology (primary appointment)
MD Baylor University 1977

Bryan A Copits, PHD
Instructor in Anesthesiology (primary appointment)
PHD Northwestern University 2012

Thomas E Cox, MD
Professor of Anesthesiology (primary appointment)
BA Johns Hopkins University 1981
MD University of Virginia 1985
Bakul Dave, MD, MD1
Assistant Professor of Anesthesiology (primary appointment)
MD BJ Medical College 1984
MD1 University of Toledo 1997

Thomas Allen Davis, MD
Assistant Professor of Anesthesiology (Pending Executive Faculty Approval) (primary appointment)
MD University of Tenn Memphis 1969

Charl Johan De Wet, MBCHB
Associate Professor of Anesthesiology (primary appointment)
Associate Professor of Surgery (Cardiothoracic Surgery)
MBCHB University of Pretoria 1990

Julianne Elizabeth Donnelly, MD
Assistant Professor of Anesthesiology (primary appointment)
Assistant Professor of Surgery (Cardiothoracic Surgery)
MD University of Kansas 2009

Anne Meredith Drewry, MD
Assistant Professor of Anesthesiology (primary appointment)
MD Washington Univ in St. Louis 2006

Julie Kosto Drobish, MD
Assistant Professor of Anesthesiology (primary appointment)
BS Pennsylvania State University 2006
MD Washington Univ in St. Louis 2009

Nicole Marie Durko, DOST
Assistant Professor of Anesthesiology (primary appointment)
DOST Midwestern University 2001
BS St Xavier University 1995

Daniel Emmert, MD
Assistant Professor of Anesthesiology (primary appointment)
Assistant Professor of Surgery (Cardiothoracic Surgery)
MD Saint Louis University 2005

Alex S Evers, MD
Henry E Mallinckrodt Professor of Anesthesiology (primary appointment)
Head of the Department of Anesthesiology
Professor of Developmental Biology
Professor of Medicine
MD New York University 1978
BS Yale University 1974

James J Fehr III, MD
Professor of Anesthesiology (primary appointment)
Professor of Pediatrics
BA Davenport University 1984
MD Davenport University 1988

Steven Edward Feit, MD
Assistant Professor of Anesthesiology (primary appointment)
MD University of MO Columbia 1982
BA Indiana State University 1978

Mitchell Evan Fingerman, MD
Associate Professor of Anesthesiology (primary appointment)
MD University of Connecticut 2004

Rosemary Foster, MD
Instructor in Anesthesiology (primary appointment)
MD Saint Louis University 2013

David Alan Friedman, MD
Assistant Professor of Anesthesiology (primary appointment)
BS University of Kansas 1981
MD University of Kansas 1985

Narasimhan Gautam, MS, PHD
Professor of Anesthesiology (primary appointment)
Professor of Genetics
BS School Not Listed 1977
MS School Not Listed 1979
PHD University of Bombay 1985

Preeta George, MBBS
Assistant Professor of Anesthesiology (primary appointment)
MBBS Bangalore University 1998

Robert W Gereau, PHD
Dr Seymour and Rose T Brown Professor of Anesthesiology (primary appointment)
Professor of Neuroscience
BS Southwest Missouri St Universi 1991
PHD Emory University 1995

Erin A Gibbons, MD
Assistant Professor of Anesthesiology (primary appointment)
MD University of North Carolina 2008
BS University of North Carolina 2003

Jason R Gillihan, MD
Assistant Professor of Anesthesiology (primary appointment)
MD Southern Illinois University 2006
BS University of Southern Indiana 2002

Yehuda Ginosar, MD
Professor of Anesthesiology (primary appointment)
MD University of London 1986

Thomas James Goblirsch, MD
Assistant Professor of Anesthesiology (primary appointment)
MD Loyola University Chicago 1985
BS University of Notre Dame 1980

Judith P Golden, PHD, MA
Assistant Professor of Anesthesiology (primary appointment)
BS Hofstra University 1984
PHD Saint Louis University 1994
MA Hofstra University 1986

Vivian Maria Gonzalez-Perez, PHD
Instructor in Anesthesiology (primary appointment)
PHD University of Valparaiso 2009

Thomas J Graetz, MD
Associate Professor of Anesthesiology (primary appointment)
Associate Professor of Surgery (Cardiothoracic Surgery)
MD Saint Louis University 2005

Stephen H Gregory, MD
Instructor in Anesthesiology (Pending Dean’s Approval) (primary appointment)
MD Saint Louis University 2012

Russell J.I. Groener, MBCHB
Associate Professor of Anesthesiology (primary appointment)
MBCHB University of Cape Town 1983

Anthony Herbert Guarino, MD, MA
Associate Professor of Anesthesiology (primary appointment)
BA Yale University 1986
MD University of Maryland 1992
MA Yale University 1988

Ryan C Guffey, MD
Assistant Professor of Anesthesiology (primary appointment)
MD Wayne State University 2007

Charles B Hantler, MA, MD
Professor of Anesthesiology (primary appointment)
MA Davenport University 1973
MD Davenport University 1977
BS Davenport University 1971

Courtney Alan Hardy, MD
Associate Professor of Anesthesiology (Pending Executive Faculty Approval) (primary appointment)
MD Loyola University Chicago 2000

Simon Haroutounian, MA, PHD
Assistant Professor of Anesthesiology (primary appointment)
MA Hebrew University 2005
PHD Hebrew University 2011

Daniel Luke Helsten, MD
Associate Professor of Anesthesiology (primary appointment)
MD University of Kentucky 2001
BS University of Kentucky 1997

Mohammad Anas Helwani, MD
Assistant Professor of Anesthesiology (primary appointment)
Assistant Professor of Surgery (Cardiothoracic Surgery)
MD Damascus University 1998

Robert E Herold, MD
Assistant Professor of Anesthesiology (primary appointment)
MD Washington Univ in St. Louis 1974

BA Wabash College 1970

Omokhaye M Higo, MBBS
Associate Professor of Anesthesiology (Pending Executive Faculty Approval) (primary appointment)
MBBS University of Ilorin 1990
BS University of Ibadan 1984

Gary E Hirschberg, MD
Professor Emeritus of Anesthesiology (primary appointment)
MD Hahnemann University 1972
BA Princeton University 1968

Richard S Hotchkiss, MD
Professor of Anesthesiology (primary appointment)
Professor of Developmental Biology
Professor of Medicine
Professor of Surgery (General Surgery)
MD University of Virginia 1976

Hawpeng Stephen Hsu, MD, MS
Assistant Professor of Anesthesiology (primary appointment)
BA Georgia St University 1991
MD Taipei Medical University 1983
MS Emory University 1993

Hongzhen Hu, PHD
Associate Professor of Anesthesiology (primary appointment)
PHD Ohio State University 2004

Rocco Hueneke, MD
Assistant Professor of Anesthesiology (primary appointment)
MD Martin-Luther-University 1996

Catherine Ifune, PHD, MD
Associate Professor of Anesthesiology (primary appointment)
BS California Institute Technolo 1985
PHD Washington Univ in St. Louis 1990
MD Washington Univ in St. Louis 1997

Selma E.h.o. Ishag, MD, PHD
Assistant Professor of Anesthesiology (primary appointment)
MD University of Khartoum 1987
PHD University of Khartoum 1996

Daniel Thomas Kane, MD
Assistant Professor of Anesthesiology (primary appointment)
MD Washington Univ in St. Louis 1989

Ivan M Kangrga, MD, PHD
Professor of Anesthesiology (primary appointment)
MD University of Belgrade 1982
PHD Iowa State University 1991

Menelaos Karanikolas, MD, MD1
Associate Professor of Anesthesiology (primary appointment)
MD Athens University Med School 1988
MD1 School Not Listed 1998

Jacob Brian Keeperman, MD
Assistant Professor of Anesthesiology (primary appointment)
Assistant Professor of Emergency Medicine in Medicine
MD Loyola University Chicago 2006

Rainer Kentner, MD
Assistant Professor of Anesthesiology (primary appointment)
MD University of Tuebingen 1987

Paul William Kerby, MBBS
Assistant Professor of Anesthesiology (primary appointment)
BS King's College London 2001
MBBS King's College London 2004

Evan David Kharasch, PhD, MD
Russell and Mary Sheelden Professor of Anesthesiology (primary appointment)
Professor of Biochemistry and Molecular Biophysics
PHD Northwestern University Med 1983
MD Northwestern University Med 1984

Shahrdad Khodamoradi, MD
Assistant Professor of Anesthesiology (primary appointment)
BA Vanderbilt University 1985
MD Washington Univ in St. Louis 1990

Tessa Marie King, MD1, MD
Assistant Professor of Anesthesiology (primary appointment)
BA School Not Listed 1993
MD University of Kansas 1997
MD University of Kansas 1997

Justin Knittel, MD
Assistant Professor of Anesthesiology (primary appointment)
MD Case Western Reserve Univ 2009

Helga Komen, MD
Instructor in Anesthesiology (primary appointment)
MD University of Zagreb 1996

Joseph F Kras, DDENT, MD
Associate Professor of Anesthesiology (primary appointment)
DDENT Loyola University Chicago 1982
MD Hahnemann University 1991
BS Loyola University Chicago 1977

Catherine P Krucylak, MD
Assistant Professor of Anesthesiology (primary appointment)
BA Rutgers University 1982
MD U Medical-Dental Of New Jersey 1986

Anand Lakshminarasimhachar, MBBS
Associate Professor of Anesthesiology (primary appointment)
MBBS Bangalore University 1994

Chakrapol Lattanand, MD
Assistant Professor of Anesthesiology (primary appointment)

MD Hahnemann University 2000

Chris Cheng-Fu Lee, MD, PHD
Associate Professor of Anesthesiology (primary appointment)
MD Hubel Medical University 1985
PHD Beijing Medical University 1991

Christopher J Lingle, PHD
Professor of Anesthesiology (primary appointment)
Professor of Neuroscience
PHD University of Oregon 1979
BS University of Oregon 1972

Qianjin Liu, PHD, MD
Assistant Professor of Anesthesiology (primary appointment)
PHD Saint Louis University 1997
MD Nanjing Medical University 1983

Qin Liu, PHD
Assistant Professor of Anesthesiology (primary appointment)
Assistant Professor of Ophthalmology and Visual Sciences
BS Wuhan University 1998
PHD Chinese Academy of Sciences 2004

Ellen M Lockhart, MD
Professor of Anesthesiology (primary appointment)
Vice Chairman of Anesthesiology
MD University of Texas Southwest 1993

Nicolas Massaly, PHD
Instructor in Anesthesiology (Pending Dean's Approval) (primary appointment)
PHD Universite Paul Sabatier 2012

John D McAllister, MD
Professor of Anesthesiology (primary appointment)
Professor of Pediatrics
MD University of Manitoba 1980
BS University of Manitoba 1982

Jordan Gary McCall, PHD
Assistant Professor of Anesthesiology (Pending Executive Faculty Approval) (primary appointment)
PHD Washington Univ in St. Louis 2014

Molly Ann McCormick, MD
Assistant Professor of Anesthesiology (primary appointment)
MD University of MO Columbia 1987

Heather McKenzie, MD
Assistant Professor of Anesthesiology (primary appointment)
MD University of MO Columbia 1987

Konrad Meissner, MBBS
Adjunct Instructor in Anesthesiology (primary appointment)
MBBS University of Leipzig 1998

Allison Denise Mitchell, MD
Instructor in Anesthesiology (primary appointment)
Durga Prasanna Mohapatra, PHD
Associate Professor of Anesthesiology (primary appointment)
PHD University of Erlangen 2011

Michael C. Montana, MD
Instructor in Anesthesiology (Pending Dean's Approval) (primary appointment)
MD Washington Univ in St. Louis 2012
BA University of Virginia 2003

Robert Paul Moore, MD
Assistant Professor of Anesthesiology (primary appointment)
MD Washington Univ in St. Louis 2004

Jose Moron-Concepcion, PHD
Associate Professor of Anesthesiology (primary appointment)
Associate Professor of Neuroscience
PHD University of Barcelona 1998

Jeremiah J Morrissey, PHD
Professor of Anesthesiology (primary appointment)
BA Macmurray College 1969
PHD Saint Louis University 1974

David J Murray, MD
Carol B. and Jerome T. Loeb Professor of Anesthesiology (primary appointment)
BA University of Saskatchewan 1973
MD University of Saskatchewan 1978

Guido Musch, MD
Professor of Anesthesiology (primary appointment)
MD University of Milan 1993

Peter Nagele, MD
Associate Professor of Anesthesiology (primary appointment)
Associate Professor of Genetics
MD Univ. of Innsbruck - Medical 1995

Joan M Niehoff, MD
Associate Professor of Anesthesiology (primary appointment)
BA University of MO Kansas City 1982
MD University of MO Columbia 1982

Daniel C Nieva, MD
Associate Professor of Anesthesiology (primary appointment)
MD University of Iowa 2003
BS University of Iowa 1998

Aaron John Norris, PHD, MD
Instructor in Anesthesiology (Pending Dean's Approval) (primary appointment)
PHD Washington Univ in St. Louis 2012
MD Washington Univ in St. Louis 2012
BS Colorado St University 2001

Sydney Marie Nykiel-Bailey, MD
Assistant Professor of Anesthesiology (primary appointment)
MD University of MO Kansas City 2005
BS Saint Louis University 2001

Patrick Ross O'Neill, PHD
Instructor in Anesthesiology (primary appointment)
BS University of California 2004
PHD University of California 2010

Folasade Oladapo, MD
Assistant Professor of Anesthesiology (primary appointment)
MD U Medical-Dental Of New Jersey 2008

Ben Julian Palanca, MD
Assistant Professor of Anesthesiology (primary appointment)
MD Washington Univ in St. Louis 2005
BS University of Washington 1997

Arvind Palanisamy, PHD, MD
Assistant Professor of Anesthesiology (primary appointment)
PHD All-India Inst of Medical Sci 2003
MD Tamilnadu Medical University 2000

Chris M Palmer, MD
Assistant Professor of Anesthesiology (primary appointment)
Assistant Professor of Emergency Medicine in Medicine
MD SUNY - Empire State College 2008
BS Virginia Tech 2004

Patricia A. Penkoske, MD
Instructor in Anesthesiology (primary appointment)
BS Lindenwood University 1969
MD Washington Univ in St. Louis 1974

Mitchell R Platin, MD
Assistant Professor of Anesthesiology (primary appointment)
MD Kent St University 1987

Adrienne Rae Poe, PHD
Instructor in Anesthesiology (primary appointment)
PHD Washington St University 2011

Debra D Pulley, MME, MD
Associate Professor of Anesthesiology (primary appointment)
BS Vanderbilt University 1978
MME University of MO Columbia 1982
MD Saint Louis University 1987

Carlos Angel Puyo, MD
Assistant Professor of Anesthesiology (primary appointment)
MD Juan N Corpus School of Medici 1989

Lesley Kathryn Rao, MD
Assistant Professor of Anesthesiology (primary appointment)
Rashmi R Rathor, MD  
Assistant Professor of Anesthesiology (primary appointment)  
MD University of Illinois 2007

Jebadurai Ratnaraj, MD1, MD  
Assistant Professor of Anesthesiology (primary appointment)  
MD1 Northrhein Westfalen Medical 1985  
MD Madurai Kamaraj University 1979

Eduardo Reina, MD  
Instructor in Anesthesiology (primary appointment)  
MD University of Illinois Chicago 2011

Michaol Todd Rice, MD  
Assistant Professor of Anesthesiology (primary appointment)  
MD Univ of Texas San Antonio 2002

Clare H Ridley, MD  
Assistant Professor of Anesthesiology (primary appointment)  
Assistant Professor of Surgery (Cardiothoracic Surgery)  
BA Columbia College of Phy & Surg 2002  
MD Washington Univ in St. Louis 2008

Stephen L. Ristvedt, MA, PHD  
Associate Professor of Anesthesiology  
Associate Professor of Psychiatry  
MA University of Pennsylvania 1983  
BA University of Minnesota 1981  
PHD University of Pennsylvania 1989

Evan Ward Roller, MD  
Assistant Professor of Anesthesiology (primary appointment)  
MD University of Cincinnati 2010

Adnan Sadiq, MD  
Assistant Professor of Anesthesiology (primary appointment)  
Assistant Professor of Surgery (Cardiothoracic Surgery)  
MD Royal College of Surgeons 2001  
BS State Univ of NY Buffalo 1996

Angela K Saettele, MD  
Assistant Professor of Anesthesiology (primary appointment)  
MD University of MO Columbia 2008  
BS Simpson College 2004

Charles R Schrock, MD  
Associate Professor of Anesthesiology (primary appointment)  
MD University of MO Columbia 1991  
BS University of Notre Dame 1986

Karen Seibert, MA, PHD  
Professor of Anesthesiology (primary appointment)  
Professor of Genetics  
Professor of Pathology and Immunology  
MA University of Toledo 1983  
BS Northwestern University 1981

James Serot, MD  
Assistant Professor of Anesthesiology (primary appointment)  
MD Loyola University Chicago 2006

Rajiv K Shah, MD  
Assistant Professor of Anesthesiology (Pending Executive Faculty Approval) (primary appointment)  
MD University of Rochester 2010

Sonia Malhotra Shahrawat, MD  
Instructor in Anesthesiology (primary appointment)  
BS Tufts University 2001  
MD Bharati Vidyapeeth Med College 2000

Anshuman Sharma, MD  
Associate Professor of Anesthesiology (primary appointment)  
BA Government Medical College 1987  
MD Institute of Medical Science 1990

Andrew John Shepherd, PHD  
Instructor in Anesthesiology (primary appointment)  
PHD University of Manchester 2006

John Charles Spitter, MD  
Assistant Professor of Anesthesiology (primary appointment)  
MD University of MO Columbia 2003  
BS University of MO Columbia 1998

Tracey Wagner Stevens, MD  
Assistant Professor of Anesthesiology (primary appointment)  
MD Washington Univ in St. Louis 2008

Sanjay Subramanian, MD  
Associate Professor of Anesthesiology (Pending Executive Faculty Approval) (primary appointment)  
MD Christian Medical College 1994

Robert A Swarm, MD  
Professor of Anesthesiology (primary appointment)  
MD Washington Univ in St. Louis 1983  
BA Oberlin College 1978

Martha Zorko Szabo, MD  
Assistant Professor of Anesthesiology (primary appointment)  
MD Medical College of Ohio 1990

Rene Tempelhoff, MD  
Professor of Anesthesiology (primary appointment)  
Professor of Neurological Surgery  
MD University of Lyon 1974

Raghu P Terkonda, MD  
Assistant Professor of Anesthesiology (primary appointment)  
BS University of MO Columbia 1983  
MD University of MO Columbia 1987

Douglas Royce Thompson, MD
### M10 Anesth 805 Anesthesiology

This clinical elective is designed to familiarize the student with basic aspects of anesthesiology practice. The primary teaching method is patient care in a clinical setting (one-on-one). The student will learn the basics of preoperative evaluation of surgical patients, the use of intraoperative monitoring in patient management and postoperative care. During the four-week rotation, the student will learn airway management skills, practical perioperative fluid and electrolyte therapy, along with general and regional anesthetic techniques. As an integral part of the anesthesia care team, the student will participate actively in the anesthetic management of surgical patients. The student's specific requests to be assigned to certain types of cases will be honored as time and availability dictate. The rotation will include three clinical simulator sessions using a simulator mannequin for practical management of airway problems, resuscitation and trauma emergencies. By the end of the rotation, the student should be able to independently (under supervision) provide anesthesia for uncomplicated surgical procedures. Note: Presence and participation in the three Friday Simulator Sessions and the Presentation on the last day of the rotation are required to receive a grade. If there is a conflict with attendance, prior arrangements can be made to accommodate the student.
M10 Anesth 611 Cardiothoracic Anesthesiology
This clinical elective offers practical experience in the perioperative assessment and management of surgical patients undergoing cardiothoracic procedures. The student, as an integral part of the cardiothoracic anesthesia team that is composed of faculty members, fellows and residents, will learn basic principles of airway management and lung ventilation, essential aspects of pharmacologic treatment of hemodynamic abnormalities and cardiac dysrhythmias, and management of intraoperative coagulation disturbances. Emphasis will be placed on the interpretation of intraoperative hemodynamic data, echocardiographic finding (TEE), and laboratory results. During this rotation, the student will also gain practical experience in endotracheal intubation as well as the placement of intravenous lines and invasive monitoring lines, including radial artery and pulmonary artery catheters. Students will learn how to use these parameters in clinical decision making during anesthesia. At the conclusion of the rotation, the student will have a better understanding of invasive monitoring and data interpretation, as well as a more systematic approach to the management of intra- and postoperative hemodynamic, pulmonary and coagulation abnormalities. The students are expected to attend the didactic sessions of CTA and the Department of Anesthesiology. A presentation will be assigned.

M10 Anesth 812 Pediatric Anesthesia
This clinical elective is designed to teach the theory and practice of pediatric anesthesiology and pain management. It features individualized instruction with faculty who specialize in the perioperative care of pediatric patients. The elective consists of four weeks of active participation with pediatric anesthesiologists at St. Louis Children’s Hospital and St. Louis Shriners Hospital learning preanesthetic assessment, the performance of routine anesthesics (which includes instruction and practice in pediatric airway skills), learning other technical skills such as intravenous line placement and the management of post-anesthesia care and pain therapies. The final week may be tailored to meet the student’s individual interests, needs and career goals. Possibilities include exposure to sedation and anesthesia for procedures outside of the operating rooms, and to subspecialties including cardiovascular anesthesia, neurosurgical anesthesia, and acute and chronic pediatric pain management. Students also will have an opportunity to learn the management of some common medical emergencies in the Clinical Simulation Center.

M10 Anesth 819 Cardiothoracic Critical Care
This clinical elective offers practical experience in the postoperative management of cardiothoracic patients. The student will be fully integrated into the intensive care team and have the opportunity to contribute to the management of critically ill patients. Students will be afforded the opportunity to follow specific patients over the course of their stay on the ICU, during which time they will gain insight into holistic management of patients with multi-organ dysfunction. The CTICU environment is both challenging and exciting. Cardiorespiratory physiology and pharmacology will be demonstrated at the patients’ bedside, an invaluable and unforgettable learning experience. Students will have numerous opportunities to learn and sometimes assist with procedures, such as central lines, chest tubes, bronchoscopy and pulmonary artery catheter insertion. Principles of management and resuscitation of hemodynamically unstable patients following surgery will be emphasized. Students will also see and help manage patients on ventilator assist devices, ECMO, and following heart and lung transplantation. At the conclusion of the rotation, the student will have a better understanding of shock, sepsis, multi-organ failure, organ system support and compassionate withdrawal of life support. In addition to bedside teaching, there will be informal teaching sessions on a wide variety of topics as well as teaching on interpreting cardiac echo exams. Students will be encouraged to present on their patient at morning ward rounds, during which constructive feedback and interactive teaching will occur. Students will present on a topic related to one of their patients at the end of the block.

M10 Anesth 820 Critical Care
Students on this rotation are integral members of the multidisciplinary intensivist-led critical care team in the Surgical Intensive Care Unit (SICU). Students learn an organ systems-based approach for evaluation and management of critically ill and injured patients, and application of evidence-based principles in delivery of state-of-the-art critical care. Emphasis is placed on critical care knowledge and techniques used at the bedside in the clinical management of serious traumatic and surgical conditions. Students become familiar with resuscitation and cardiopulmonary support, including methods for noninvasive and invasive hemodynamic monitoring, and techniques for airway management and pulmonary support in respiratory failure. Basic knowledge and skills in the management of neurologic injuries, liver and renal failure, and life-threatening infections in the surgical patient are also taught, as is the importance of treatments to alleviate anxiety and pain, maintain fluid and electrolyte balance, and provide adequate nutrition. Practical experience is gained in placement of vascular access devices, interpretation of laboratory data, and use of guidelines, protocols and quality assurance tools in the management of critically ill patients.

M10 Anesth 821 Pain Management
Acute pain is the most common symptom of medical illness and is ubiquitous after major surgery. Chronic pain is the leading cause of worker disability. Severe pain afflicts most people with advanced cancer. Learning the fundamentals of pharmacologic, interventional, and multidisciplinary pain management is important for all areas of clinical medicine. Rotation is based at Barnes-Jewish Hospital with focus adjusted to meet student’s interest and career plans.

M10 Anesth 821B Pain Management - Missouri Baptist Medical Center
Acute pain is the most common symptom of medical illness and is ubiquitous after major surgery. Chronic pain is the leading cause of worker disability. Severe pain afflicts most people with advanced cancer. Learning the fundamentals of pharmacologic, interventional, and multidisciplinary pain management is important for all areas of clinical medicine. Rotation is based at Missouri Baptist Medical Center with focus adjusted to meet student’s interest and career plans.

M10 Anesth 822 Anesthesia for Neurosurgery
Students will help care for patients having challenging neurosurgical procedures. Students will become familiar with complex procedures, brain monitoring, cardiovascular support and airway management and will be exposed to all kinds of neurosurgical pathology. Student must be prepared to participate in the intricate anesthetic management of patients undergoing surgery in our novel intraoperative MRI rooms. For those interested, clinical research projects are ongoing and student participation is encouraged.
**M10 Anesth 823 Obstetrical Anesthesia**
The medical students will learn the different analgesia/anesthetic options for the labor patient. They will also learn how the physiological adaptations of pregnancy influence anesthetic management. They will be actively involved in the parturient's management, i.e., starting an IV, placement of spinal, epidural or CSE (combined spinal epidural) anesthetics. They will also attend the OB anesthesia conferences and interview patients in labor (with an OB anesthesia attending).

**M10 Anesth 900 Research Elective - Anesthesiology**
Research opportunities may be available. If interested, please contact the Department of Anesthesiology.