Department of Anesthesiology

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

Sirajuddin Agha, MBBS
Assistant Professor of Anesthesiology (primary appointment)
MBBS Liaquat Medical College 1969
B

B

Sennaraj Balasubramanian, MD, PHD
Instructor in Anesthesiology (Pending Dean’s Approval) (primary appointment)
MD All-India Inst of Medical Sci 1998
PHD College of Anesthesiology 2008
BS Tirunelveli Medical College 1992

Devin M Barry, PhD
Instructor in Anesthesiology (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

Michael M Bottros, MD
Associate 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)
MD University of CA San Francisco 1977

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

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

Samuel Chandra, MD
Instructor in Clinical Anesthesiology (primary appointment)
MD Patna Medical College 1990

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

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

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

James Close, MD
Associate Professor of Anesthesiology (Pending Executive Faculty Approval) (primary appointment)
MD Washington Univ in St. Louis 1984
BA Washington Univ in St. Louis 1980
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

Susan Carlin Cosgrove, MD  
Instructor in Anesthesiology (Pending Dean's Approval) (primary appointment)  
MD New York Medical College 2012  
BA New York University 2008

Thomas E Cox, MD  
Professor of Anesthesiology (primary appointment)  
BA Johns Hopkins University 1981  
MD University of Virginia 1985

Michael John Cuipa, MD  
Instructor in Clinical Anesthesiology (primary appointment)  
MD University of Massachusetts 1994  
BS Tufts University 1988

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  
Professor of Anesthesiology (primary appointment)  
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  
Associate Professor of Anesthesiology (primary appointment)  
MD Washington Univ in St. Louis 2006

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

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

Pablo Michael Echeverria, MD  
Instructor in Clinical Anesthesiology (primary appointment)  
MD Universidad Central del Ecuado 2002

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  
BS Yale University 1974  
MD New York University 1978

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

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

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
PHD Emory University 1995
BS Southwest Missouri St Universi 1991

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)
BS University of Notre Dame 1980
MD Loyola University Chicago 1985

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

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)
BS University of Notre Dame 1980
MD Loyola University Chicago 1985

Stephen H Gregory, MD
Instructor in Anesthesiology (primary appointment)
MD Saint Louis University 2005

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)
BS 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

H

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 (primary appointment)
MD Loyola University Chicago 2000

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

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

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)
BA Wabash College 1970
MD Washington Univ in St. Louis 1974

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

Jiggar Rashmikant Hindia, MD
Instructor in Clinical Anesthesiology (primary appointment)
MD A T Still University 2007
BS Truman State University 2004

Gary E Hirshberg, 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, MS, MD
Assistant Professor of Anesthesiology (primary appointment)
MS Emory University 1993
BA Georgia St University 1991
MD Taipei Medical University 1983

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

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

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

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

Muthuraj Kanakaraj, MD
Instructor in Anesthesiology (primary appointment)
BS Tirunelveli Medical College 1995
MD Madras Medical College 2005

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

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

Jan Kasal, MD
Associate Professor of Anesthesiology (Pending Executive Faculty Approval) (primary appointment)
MD Charles University 1993

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, MD, PHD
Adjunct Professor of Anesthesiology (primary appointment)
MD Northwestern University Med 1984
PHD Northwestern University Med 1983

Shahrad Khodamoradi, MD
Assistant Professor of Anesthesiology (primary appointment)

BA Vanderbilt University 1985
MD Washington Univ in St. Louis 1990

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

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

Andreas Stefan Kokoefer, PHD, MD
Instructor in Anesthesiology (Pending Executive Faculty Approval) (primary appointment)
PHD Paracelsus Medical University 2015
MD Medical University Graz 2008

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
BS Loyola University Chicago 1977
MD Hahnemann University 1991

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

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, PHD, MD
Associate Professor of Anesthesiology (primary appointment)
PHD Beijing Medical University 1991
MD Hubel Medical University 1985

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

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  
PHD Chinese Academy of Sciences 2004  
BS Wuhan University 1998  
**Salvador Lo Bianco, MD**  
Instructor in Clinical Anesthesiology (primary appointment)  
MD Univ Autonoma de Guadalajara 1987

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

**George Alan Lodoly, MD**  
Instructor in Clinical Anesthesiology (primary appointment)  
BS Saint Louis University 1980  
MD Saint Louis University 1984

**Jackie Lee Martin, MBA, MD, MA**  
Adjunct Professor of Anesthesiology (primary appointment)  
BA Howard University 1976  
MBA John Hopkins University 2010  
MD Meharry Med College 1984  
MA Meharry Med College 1980

**Paolo Masetti, MD**  
Instructor in Clinical Anesthesiology (primary appointment)  
MD University of Bologna 1985

**Nicolas Massaly, PHD**  
Instructor in Anesthesiology (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 (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

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

**Allison Denise Mitchell, MD**  
Instructor in Anesthesiology (primary appointment)  
MD Univ Texas Health Sci San Anto 2012  
BS Howard University 2008

**Durga Prasanna Mohapatra, PHD**  
Associate Professor of Anesthesiology (primary appointment)  
PHD University of Erlangen 2011

**David Thomas Monks, MD**  
Assistant Professor of Anesthesiology (Pending Executive Faculty Approval) (primary appointment)  
MD Birmingham Medical School 2018

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

**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)  
PHD Saint Louis University 1974  
BA Macmurray College 1969

**Jimmy Lewis Moss, MD**  
Instructor in Clinical Anesthesiology (primary appointment)  
BS Florida State University 2010  
MD Florida State University 2015

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

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

**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, MD, PHD**  
Instructor in Anesthesiology (primary appointment)  
MD Washington Univ in St. Louis 2012  
BS Colorado St University 2001  
PHD Washington Univ in St. Louis 2012

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

O

Patrick Ross O’Neill, PHD
Assistant Professor of 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

Lawrence Osei
Instructor in Clinical Anesthesiology (primary appointment)

P

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

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

Pooja Patil, MD
Instructor in Clinical Anesthesiology (primary appointment)
MD Shai Medical College 2006

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

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

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

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

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

R

Lesley Kathryn Rao, MD
Assistant Professor of Anesthesiology (primary appointment)
MD Saint Louis University 2006

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

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

Eduardo Reina, MD
Assistant Professor of Anesthesiology (primary appointment)
MD University of Illinois Chicago 2011

Micheal 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

Pedro Rios-Morales, MD
Instructor of Anesthesiology (primary appointment)
MD University of Puerto Rico 2010
BS University of Puerto Rico 2005

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

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

S

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

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

Monica Sala-Rabanal, PHD
Instructor in Anesthesiology (primary appointment)
Vijaya K Samineni, PHD
Instructor in Anesthesiology (primary appointment)
PHD Southern Illinois University 2013

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

Anne Stella Sebastiani, MD
Instructor in Anesthesiology (primary appointment)
MD Johannes Gutenberg University 2008

Karen Seibert, PHD, MA
Professor of Anesthesiology (primary appointment)
Professor of Genetics
Professor of Pathology and Immunology
BS Northwestern University 1981
PHD Vanderbilt University 1987
MA University of Toledo 1983

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

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

Anshuman Sharma, MD
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)
BA Oberlin College 1978
MD Washington Univ in St. Louis 1983

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
Associate Professor of Anesthesiology (primary appointment)
BS University of CA San Diego 1998
MD University of CA San Diego 2003

Swarup Varaday, MBBS
Assistant Professor of Anesthesiology (primary appointment)
MBBS Andhra University 1989

Anandhalakshmi Varadharajan, MBBS, MD
Instructor in Clinical Anesthesiology (primary appointment)
MBBS Sirramachandra Medical College 2000
MD St. Lukes 2007

Molly Rose Vila, MD
Assistant Professor of Anesthesiology (primary appointment)
MD U Medical-Dental Of New Jersey 2011

Gershon Ram Volotzky, MD
Assistant Professor of Anesthesiology (primary appointment)
MD Tel-Aviv University 1979

Ashley Brooke Weinhold, MD
Assistant Professor of Anesthesiology (primary appointment)
MD University of Arkansas 2011

Timothy P Welch, MD
Assistant Professor of Anesthesiology (primary appointment)
Assistant Professor of Pediatrics
MD University of Cincinnati 2004

Brian T Wessman, MD
Associate Professor of Anesthesiology (primary appointment)
Associate Professor of Emergency Medicine in Medicine
MD Commonwealth College 2005
BS College of William and Mary 2000

Troy S Wildes, MD
Associate Professor of Anesthesiology (primary appointment)
MD Washington Univ in St. Louis 2002
BS Illinois Wesleyan University 1998

Brett D Wolff, MD
The student will learn the basics of preoperative evaluation teaching method is patient care in a clinical setting (one-on-one). The student will learn how to assess and manage the patient's condition before surgery, including basic aspects of pre-anesthetic assessment, the performance of routine procedures outside of the operating rooms, and to subspecialties including cardiovascular anesthesia, neurosurgical anesthesia, and acute and chronic pediatric pain management. By the end of the rotation, the student should be able to independently (under supervision) provide anesthesia for uncomplicated surgical procedures. During the 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 811 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 anesthesia 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 pre-anesthetic assessment, the performance of routine anesthetics (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 have 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. Students will gain unique insight into cardiorespiratory physiology and pharmacology which will be demonstrated at the patients' bedside, an invaluable and unforgettable learning experience. Students will have opportunities to learn and sometimes assist with procedures, such as central lines, chest tubes, bronchoscopy and pulmonary artery catheter insertion as well as bedside ultrasound including TTE and TEE. Principles of management and resuscitation of hemodynamically unstable patients following surgery will be emphasized as well as ventilator management. Students will also see and help manage patients with unique physiology such as those patients on ventricular assist devices, and on ECMO. We also have a very busy heart and lung transplantation program at the hospital — all of these patients are cared for in the CTICU. 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 hemodynamic data and waveforms, and cardiac echo exams. Students will be encouraged to present on their patient at morning rounds, during which constructive feedback and interactive teaching will occur. Students will be required to present on any topic of their choice relevant to the cardiothoracic ICU during 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 non-invasive and invasive hemodynamic monitoring, and techniques for airway management and pulmonary support in respiratory failure. Basic knowledge and skills in the management of blunt and penetrating trauma, neurologic injuries, multi-system organ 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 providing adequate nutrition. Practical experience is gained in placement of vascular access devices, airway equipment, ultrasonography and its applications, interpretation of imaging and 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.