Department of Anesthesiology

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

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 toward 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 do the following:

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 with the clinical evaluation and management of patients as well as with 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; and in 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
Michael Avidan, MBCh, FCA SA

Department Vice Chair
Ellen M. Lockhart, MD

Department Associate Vice Chair
Courtney Hardy, MD

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

A

Joanna Abraham, PHD
Assistant Professor of Anesthesiology (primary appointment)
Assistant Professor of Medicine
BS SRM Easwari Engineering Colleg 2001
PHD Pennsylvania State University 2010
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

Zekeriyya Alanoglu, MED, MD  
Instructor in Anesthesiology (primary appointment)  
MED Ankara University 2000  
MD Ankara University 1993

Michael Simon Avidan, MBBCH  
Dr. Seymour and Rose T Brown Professor of Anesthesiology (primary appointment)  
Head of the Department of Anesthesiology  
Professor of Surgery (Cardiothoracic Surgery)  
MBBCH University of the Witwatersra 1991

Sennaraj Balasubramanian, MD  
Instructor in Anesthesiology (primary appointment)  
MD All-India Inst of Medical Sci 1998  
BS Tirunelveli Medical College 1992

Amber Christine Benhardt, MD  
Instructor in Anesthesiology (Pending Dean's Approval) (primary appointment)  
MD Texas A&M University 2013  
BA Texas A&M University 2009

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

Adithya Devadas Bhat, MD  
Instructor in Anesthesiology (primary appointment)  
BS Washington Univ in St. Louis 2010  
MD Case Western Reserve Univ 2014

Anna Maria Bombardieri, PHD, MD  
Instructor in Anesthesiology (primary appointment)  
PHD University of Florence 2013  
MD La Sapienza University 2005

Anuradha Purushottam Borle, MD, MBBS  
Instructor in Anesthesiology (primary appointment)  
MD All-India Inst of Medical Sci 2012  
MBBS GMC Miraj 2007

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  
BS University of CA San Francisco 1974

Jamie Cao Brown-Shpigel, MD1, BS1  
Instructor in Anesthesiology (Pending Dean's Approval) (primary appointment)  
MD1 Univ Texas Health Science Ctr 2014  
BS1 University of Houston 2009

Sarah Buday, PHD  
Assistant Professor of Anesthesiology (primary appointment)  
PHD University of MO St Louis 2013  
BS Washington Univ in St. Louis 2002

Broc Allen Burke, MD, PHD  
Instructor in Anesthesiology (primary appointment)  
MD Dartmouth College 2013  
PHD Dartmouth College 2011

Thomas Patrick Burris, BAS, PHD1  
Adjunct Professor of Anesthesiology (primary appointment)  
Adjunct Professor of Genetics  
BAS Southern Illinois University 1989  
PHD1 Florida State University 1993

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

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

Yunwei Chen, MD  
Instructor in Anesthesiology (Pending Dean's Approval) (primary appointment)  
MD Case Western Reserve Univ 2014  
BS Northwestern University 2008

Zhongfeng Chen, PHD, MS  
Russell D and Mary B Shelden Professor of Anesthesiology (primary appointment)  
Professor of Developmental Biology  
Professor of Psychiatry  
PHD University of Texas Austin 1994  
MS School Not Listed 1987
Wayland W. Cheng, MD, PHD
Assistant Professor of Anesthesiology (primary appointment)
MD Washington Univ in St. Louis 2012
BS Wheaton College 2005
PHD Washington Univ in St. Louis 2012

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

James Close, MD
Associate Professor of Anesthesiology (primary appointment)
Associate Professor of Medicine
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 (primary appointment)
BA New York University 2008
MD New York Medical College 2012

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

Meaghan Claire Creed, PHD
Assistant Professor of Anesthesiology (primary appointment)
Assistant Professor of Neuroscience
Assistant Professor of Psychiatry
PHD University of Toronto 2012
BS University of Toronto 2008

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

D

Aaron Benjamin Dahl, MD
Instructor in Clinical Anesthesiology (primary appointment)
MD University of Washington 2012

Thomas Allen Davis, MD
Assistant Professor of Anesthesiology (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

David Brenden DeCresce, MD
Assistant Professor of Anesthesiology (primary appointment)
MD Rush University 2012
BS Carleton College 2007

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

Bahaa Eldien Elgendy, PHD, MS
Adjunct Assistant Professor of Anesthesiology (primary appointment)
BS Benha University 1999
PHD University of Florida 2010
MS Benha University 2003

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 Elliot Mallinckrodt Professor of Anesthesiology (primary appointment)
Professor of Developmental Biology
Professor of Medicine
MD New York University 1978
BS Yale University 1974

F

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

Jing Feng, PHD
Instructor in Anesthesiology (primary appointment)
PHD Wuhan University 2014

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)
MD University of Kansas 1985
BS University of Kansas 1981

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 Neurosciences
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)
BS University of Southern Indiana 2002
MD Southern Illinois University 2006

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)
PHD Saint Louis University 1994
BS Hofstra University 1984
MA Hofstra University 1986

Vivian Maria Gonzalez-Perez, PHD
Instructor in Anesthesiology (primary appointment)
PHD University of Valparaíso 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
Assistant Professor of Anesthesiology (primary appointment)
MD Saint Louis University 2012

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

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

Katharine Nicole Gurba, PHD
Instructor in Anesthesiology (primary appointment)
PHD Vanderbilt University 2013

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

Courtney Alan Hardy, MD
Assistant Professor of Anesthesiology (primary appointment)
MD Loyola University Chicago 2000

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

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

Alexander Michael Hincker, MD
Associate Professor of Anesthesiology (Pending Executive
Faculty Approval (primary appointment)
MD Columbia University 2013

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

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

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)
PHD Washington Univ in St. Louis 1990
BS California Institute Technolo 1985
MD Washington Univ in St. Louis 1997

Zahid Iqbal, MD
Assistant Professor of Anesthesiology (primary appointment)
BS University of Miami 2009
MD University of Florida 2013

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

York Jiao, MD
Instructor in Anesthesiology (primary appointment)
MD University of Connecticut 2013
BS Washington Univ in St. Louis 2009

Jessica Justmann, MD
Instructor in Anesthesiology (primary appointment)
MD American Univ of the Caribbean 2012
BS University of CA Davis 2005

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

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

Thomas George Kannampallli, PHD
Assistant Professor of Anesthesiology (primary appointment)
Assistant Professor of Medicine
BS University of Kerala 1999
PHD University of Illinois 2018

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

Jan Kasal, MD
Associate Professor of Anesthesiology (primary appointment)
Associate Professor of Medicine
MD Charles University 1993

Monica Marie Keeline, MD
Assistant Professor of Anesthesiology (Pending Executive Faculty Approval) (primary appointment)
BA Tulane University 2006
MD Saint Louis University 2010

Jacob Brian Keeperman, MD
Associate Professor of Anesthesiology (primary appointment)
Associate 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

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
MD1 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)
BS Loyola University Chicago 1977
DDENT Loyola University Chicago 1982
MD Hahnemann University 1991

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

Qin Liu, PHD  
Associate Professor of Anesthesiology (primary appointment)  
Associate Professor of Neuroscience  
Associate 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

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

Thomas Lynch V, MD  
Assistant Professor of Anesthesiology (primary appointment)  
Assistant Professor of Emergency Medicine in Medicine  
MD St. George's University 2011

Susruta Majumdar, PHD, MS  
Adjunct Associate Professor of Anesthesiology (primary appointment)  
PHD University of Florida 2006  
MS Delhi University 2000  
BS Delhi University 1998

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

BA Howard University 1976

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

Anita Mathew, MD  
Instructor in Anesthesiology (Pending Dean's Approval) (primary appointment)  
MD University of Illinois Chicago 2014  
BS University of Illinois Chicago 2010

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

Maura Livengood McKinney, MD  
Instructor in Anesthesiology (primary appointment)  
MD Univ of Texas Med Sch Houston 2014  
BS Rhodes College 2010

Kathleen Williams Meacham, MD, PHD  
Assistant Professor of Anesthesiology (primary appointment)  
BS Carnegie Mellon University 2001  
MD Emory University 2008  
PHD Georgia Tech 2008

Jesse L Mecham, MD  
Assistant Professor of Anesthesiology (PEFA) (primary appointment)  
Assistant Professor of Emergency Medicine in Medicine (PEFA)  
MD University of Cincinnati 2010

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

David Thomas Monks, MD  
Assistant Professor of Anesthesiology (primary appointment)  
MD Birmingham Medical School 2018

Michael C. Montana, MD  
Assistant Professor of Anesthesiology (primary appointment)  
BA University of Virginia 2003  
MD Washington Univ in St. Louis 2012

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

Jose Moron-Concepcion, PHD
Professor of Anesthesiology (primary appointment)
Professor of Neuroscience
Professor of Psychiatry
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

Amjad Issam Musleh, MD
Assistant Professor of Anesthesiology (Pending Executive Faculty Approval) (primary appointment)
MD University of New Mexico 2013
BS University of New Mexico 2008

N

Jessica Lauren Nelson, MD
Assistant Professor of Anesthesiology (primary appointment)
MD University of Michigan 2012
BS University of Wisconsin 2018

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)
BS University of Iowa 1998
MD University of Iowa 2003

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

O

Uchenna Ofoma, MD, MS
Assistant Professor of Anesthesiology (Pending Executive Faculty Approval) (primary appointment)
MD University of Nigeria 1998
MS Pennsylvania State University 2010

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

Lawrence Osei, MS, MD
Instructor in Clinical Anesthesiology (primary appointment)
MD1 Northrhein Westfalen Medical 1985

Andrea Bulkley Reidy, MD
Assistant Professor of Anesthesiology (primary appointment)
MD Illinois Wesleyan University 2010
BS Illinois Wesleyan University 2005

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

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

Isabella T Rossi, MD
Instructor in Anesthesiology (Pending Dean's Approval) (primary appointment)
MD Loyola University Chicago 2014

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)
Instructor in Cell Biology and Physiology
PHD University of Barcelona 2003
BS University of Barcelona 1997

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

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

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

Ravitha Sheolal, MD
Instructor in Anesthesiology (primary appointment)
MD Natal Medical School 1997

Preet Mohinder Singh, MBBS, MD
Assistant Professor of Anesthesiology (primary appointment)
MBBS Dayanand Medical College 2007
MD All-India Inst of Medical Sci 2010

Sarah Kendall Smith, PHD, MD
Assistant Professor of Anesthesiology (primary appointment)
BS University of Kansas 2004
PHD University of Kansas Medical 2013

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

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

Sanjay Subramanian, MD
Associate Professor of Anesthesiology (primary appointment)
Associate Professor of Medicine
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

T

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

Christina Sarah Thomas
Assistant Professor of Anesthesiology (Pending Executive Faculty Approval) (primary appointment)

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

Marko Slobodan Todorovic, MD
Instructor in Anesthesiology (Pending Dean’s Approval) (primary appointment)
MD University of Virginia 2015

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

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

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

Coridalia Wald Chen, MD
Instructor in Anesthesiology (primary appointment)
MD University of Panama 2006

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

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

Mark D. Willingham
Instructor in Anesthesiology (Pending Dean’s Approval) (primary appointment)

Brett D Wolff, MD
Associate Professor of Anesthesiology (primary appointment)
BA Indiana University Bloomington 1981
MD Indiana University Bloomington 1985

Xiaoming Xia, PHD, MS
Assistant Professor of Anesthesiology (primary appointment)
PHD Vollum Institute OHSU 1998
MS Shanghai Jiao Tong University 1987
BS Fudan University 1984

Branden Edward Yee, MD
Assistant Professor of Anesthesiology (primary appointment)
MD Tufts University 2008
BS Tufts University 2004

Xiaobin Yi, MD
Associate Professor of Anesthesiology (primary appointment)
MD Hunan Medical University 1985

Alexander H Young, MD
Assistant Professor of Anesthesiology (primary appointment)
MD University of Arkansas 1990
BA University of Mississippi 1986

Anna Rebecca Young, MD
Assistant Professor of Anesthesiology (primary appointment)
BS Asbury College 2004
MD University of Kentucky 2008

Yu Zhou, MS, PHD
Instructor in Anesthesiology (primary appointment)
MS Zhejiang Medical University 1999
BS Wuhan University 1996
PHD State Univ of NY Buffalo 2005

Jonathan Kramer Zoller, MD
Assistant Professor of Anesthesiology (primary appointment)
MD Tulane University 2009

Courses

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 the preoperative evaluation of surgical patients, the use of intraoperative monitoring in patient management, and postoperative care. In addition to perioperative care, the student will be exposed to other clinical areas, which include our pain management clinic, regional anesthesia/acute pain management, cardiothoracic intensive care unit, labor and delivery, pediatric anesthesia, and the Center for Preoperative Assessment and Planning. 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 the 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.

M10 Anesth 811 Cardiothoracic Anesthesiology Subinternship
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 Anesthesiology**

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 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 Subinternship**

This clinical elective offers practical experience in the postoperative management of cardiothoracic patients. The student will be fully integrated into one of the intensive care teams 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 in the ICU, during which time they will gain insight into the 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 will ventilator management. Students will also see and help manage patients with unique physiology, such as patients on ventilator assist devices and patients on ECMO. We also have a very busy and heart and lung transplantation program at the hospital, and 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 the 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. Medical students will be asked to present a short discussion on a topic of their choice. This should be a 20- to 30-minute presentation followed by a discussion of the topic, which will be moderated by the attending. The time and topic of choice will be discussed with the attending of service.

**M10 Anesth 820 Critical Care Subinternship**

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 advancing 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 822 Anesthesiology for Neurosurgery Subinternship**

Students will help care for patients having challenging neurosurgical procedures. Students become familiar with complex procedures, brain monitoring, cardiovascular support and airway management and will be exposed to all kinds of neurological pathology. Students 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 Anesthesiology Subinternship**

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.