Department News | Spring 2018

Anesthesia Monitor

Message from the Chair



After what seemed like a long winter, Spring has finally arrived. Spring is the season of growth, and the Department of Anesthesiology has been experiencing its own growth. From new leadership to directorships to major study contributions, the department is always blossoming with new achievements.

First, congratulations to Eric Delpire, PhD, for being appointed the first B.H. Robbins Director in Anesthesiology Research. He is one of the most influential research scientists in the field and deserves the recognition.

Speaking of research, kudos to our VAPIR team for handling the large data set needed to contribute to the study published in the New England Journal of Medicine on saline versus balanced crystalloids for intravenous fluid administration. Their reputation for quality work precedes them, and it is great to see the benefits of their work.

At the beginning of the year we welcomed Jeanette Bauchat, MD, as chief of the Obstetric Anesthesiology Division. We are fortunate to have recruited her here to Vanderbilt.

With Spring also comes the announcement of our new PGY-1 class of residents and chief residents for 2018-2019. We look forward to working with them and seeing what they can achieve.

On the clinical faculty front, we have also welcomed several new members, and the clinical vice chairs and division chiefs are working hard to consolidate OR schedules every day. This growth in both faculty numbers and influence over the use of our personnel should help ease the staffing crunch we have experienced over the past year. I am very thankful to all of the faculty for their flexibility and grace under pressure, as we have met every clinical need and served all of our patients extraordinarily well.

Finally, for each of the accomplishments mentioned above, there are dozens more that are improving the department and the service we provide our patients, and, again, I am personally grateful (and proud!). I am excited to see what else our department can accomplish as the days get warmer and longer. Don't forget to enjoy the nice weather.

Debbie Nelson retires | 4 In this issue: Delpire receives directorship | 1 Brian Allen joins MOCA | 5 Billings receives Biomedical Award | 5 VAPIR contributes to study 1 The 9th annual Bradley Smith Lectureship | 2 Department Achievements | 6 Ehrenfeld recaps time with Sur-geon General | 3 New Department Members | 8 New Residents and Chief Resi-CRNA Week | 4 dents | 10 Physician Anesthesiologists Week | 4 Department Publication s | 11

Delpire appointed the B.H. Robbins Directorship



(Pictured from left to right: Laura Wayman, MD, Eric Delpire, PhD, Ashish Shah, MD, Richard Miller, MD, Wonder Puryear Drake, MD, Madan Jagasia, MBBS, Jennifer Pientenpol, PhD, and Stephen Heckers, MD, MSc.) Holders of the new directorships lined up for a photo during the first Directorship Celebration. Photo by Anne Rayner. Originally published in the Jan. 25 issue of The Reporter.

Eric Delpire, PhD, director of Basic Science Research in the Department of Anesthesiology, has been appointed the first B.H. Robbins Director in Anesthesiology Research,

one of the newly formed endowed directorships at Vanderbilt University Medical Center. His endowment was celebrated on Monday, Jan. 22, 2018.

He explained the appointment means the Anesthesiology Department and the Medical Center acknowledge his success and want

Continued on page 3

VAPIR contributes to major VUMC study

On Feb. 27, 2018, the New England Journal of Medicine published a research study conducted by a team at Vanderbilt University Medical Center which found that patients who receive a balanced fluid that closely resembles the liquid part of the blood have better outcomes than patients who receive a saline solution

containing only sodium chloride. The team examined more than 15,000 intensive care patients and more than 13,000 emergency department patients who were assigned to receive saline or balanced fluids if they required intravenous fluids.

Continued on page 2



The Vanderbilt Anesthesiology & Perioperative Informatics Research (VAPIR) Division is a multi-disciplinary group of physicians, biomedical engineers, software developers, database analysts and research staff who focus on understanding how the utilization of information technology can improve perioperative, anesthetic and surgical outcomes.

Photo by Jenelle Grewell

Department hosts 9th annual Dr. Bradley E. Smith Endowed Lectureship on Medical Professionalism



Adam Levine, MD, was the featured guest speaker of the 2018 Dr. Bradley E. Smith Endowed Lectureship on Medical Professionalism. His topic was "Ethical and Professional Issues of Anesthesiology ReEntry." Levine is professor of anesthesiology, perioperative and pain medicine, otolaryngology and pharmacological sciences for Icahn School of Medicine at Mount Sinai and serves as the executive vice chair for the Department of Anesthesiology of the Mount Sinai Health System. Throughout his academic career, Levine has developed innovative programs of simulation-based education and assessment. **Photo by Jenelle Grewell**



(Pictured left to right: Michael Pilla, MD, Brain Gelfand, MD, Matthew McEvoy, MD, Adam Levine, MD, Bradley Smith, MD, and Warren Sandberg, MD, PhD.) Levine was presented this plaque after speaking at the 2018 Dr. Bradley E. Smith Endowed Lectureship on Medical Professionalism by various members of our department and Smith, a former chair of the Department of Anesthesiology. **Photo by Jenelle Grewell**

VAPIR Continued from front page

If that sounds to you like it would be a lot of data to analyze, you would be correct. Thankfully, the Vanderbilt Anesthesiology & Perioperative Informatics Research (VA-PIR) Division were a part of this study. Led by Jonathan Wanderer, MD, MPhil, the team took on the task of writing the code that extracted the data needed for the study.

According to Wanderer, the code generated a massive data set on a weekly basis and it required a lot of work to make sure the output was correct, comprehensive and formatted in a way that would allow for statistical analysis in an easy way.

Senior Database Administrator Karen McCarthy explained that the unique challenge of this project was the amount of time it spanned. The project started in 2015 and grew, requiring multiple code revisions. "Even though we keep all our code and documentation with it, when somebody leaves, some knowledge leaves as well. When somebody new picks it up, it takes some time for them to get into the project," she said. Other challenges included pulling information from multiple sources and reaching out to different areas for information. Business Intelligence Analyst Frank Aline revealed that the team collaborated to check the integrity of the data upon export. His role specifically was to review the revision needs, make changes to the code accordingly and ensure the data were exported correctly.

The team had to perform a lot of data analysis and understand where data are missing or potentially erroneous and, according to Wanderer, the team needed to have confidence in the data that were collected.

As for why VAPIR was picked for this project, Wanderer explained that while there are many teams across the organization that work with large data sets, VAPIR has a particular expertise in acute care, as well as perioperative areas, and the team was familiar with these types of data. "I think we have a good reputation for doing this sort of detailed, high quality work that you need to do to get a data set of this size together," he said.

The project has received a lot of attention, from being published in the *New England Journal of Medicine* to being featured on National Public Radio. As a result, VUMC encouraged its medical providers to stop using saline as intravenous fluid therapy for most patients. Aline explained that the work done on a daily basis by the VAPIR team, whether big or small, is pleasing and satisfying when they can see improvements to patient care.

"It's really cool to see a project that has taken the number of years it has taken to have that outcome at the end where you are seeing the benefits of it or reading about the benefits of it," McCarthy said.

Wanderer further expressed that it's great to see what VUMC can do as a community. This project required different skill sets from a lot of different people across the whole organization. "We can really accomplish a lot working together, and it's exciting that the trajectory in the future is really embracing this approach to pragmatic clinical trials and helping to fulfill the vision in becoming a learning healthcare system," he elaborates.

As for the future of VAPIR and how it relates to this project, Wanderer said the team is in the process of trying to take some of the new things developed for this group of patients and generalize them to ICU patients at large for future retrospective work.

Wanderer revealed that VAPIR has already started on another project and is in the grant proposal period. It will also use large data sets. "We are already plugged into what might be the next big thing," he explains.

Ehrenfeld recaps special assignment with U.S. Surgeon General

In January and February, Jesse Ehrenfeld, MD, MPH, professor of Anesthesiology, was on special assignment where he was appointed temporary special advisor to the U.S. Surgeon General and his team. The top priority of his assignment was to work on the development and execution of our national opioid strategy.

"A lot of what the Surgeon General's office does is think about the best ways to communicate messages related to the health of the American people," Ehrenfeld said.

Ehrenfeld mentioned that it has recently been reported that less than 50 percent of Americans think there is a cure and treatment for opioid addiction. "A key priority for the White House and the Surgeon General is to educate the American people to let people know that there is hope and there is evidence based treatment available for opioid addiction," he said. Ehrenfeld was on orders with the U.S. Navy as a reserve officer. His background in healthcare policy, work in anesthesiology and pain management and experience in healthcare strategy led to his receiving this opportunity. Ehrenfeld explains, "I was delighted to receive this cross agency opportunity, which allowed me to use my unique skill set to advance the work of the Surgeon General and the Department of Health and Human Services."

Specifically, Ehrenfeld helped develop pieces that will be published in peer-reviewed literature and rolled out strategies for messaging.

According to Ehrenfeld, some of the communications tools he helped develop are already being used in the field today, but there are some pieces still undergoing the approval process. "Getting these messages out across our nation requires a long term approach and the partnership with a variety of



Jesse Ehrenfeld, MD, MPH, (left) was appointed to work with U.S. Surgeon General Jerome M. Adams, MD, MPH, (right) where the top priority of his assignment was to work on the development and execution of the national opioid crisis strategy. **Photo submitted by Jesse Ehrehenfeld, MD, MPH**

stakeholders across the nation, too in healthcare and beyond. Ul- for

timately, all of this work is about trying to keep our communities healthy," he states.

Ehrenfeld said he learned a lot during his assignment and

took away a great deal of information that will be helpful as research is continued at VUMC and throughout the region about how to effectively help patients avoid opioid addiction and help them recover when it does occur.

Delpire

Continued from front page

to give recognition. He described the endowment, in its own way, as a promotion.

"Endowed directorship is basically the highest academic honor that VUMC has to bestow upon an accomplished member of the faculty," said Warren Sandberg, MD, PhD, chair of the Department of the Anesthesiology.

The endowment gives extra money for Delpire's research, which allows him flexibility to do different things that might not otherwise be done with grant money. This might include hiring a new person, creating novel models or helping fill gaps between grants. "It is a relief to have additional money like the endowment," Delpire said.

He said he believes he got this endowment because he has been successful in the past 20 years at VUMC pursuing independent research and fulfilling his other academic duties.

Delpire has been studying the transport of inorganic ions across cell membranes for the past 30 years. He explained that ions need specialized proteins to move through cell membranes and he studies those transporter proteins.

One of his research projects involves the nervous system and inhibitory signals. Delpire explained that neurons communicate using electric signals which are generated from the movements of ions across neuronal membranes. In the nervous system, there is constant balance between excitation and inhibition. Excitatory signals lead the brain to do things while inhibitory signals tend to stop them.

"I am interested in the inhibition part. When you increase too much the inhibitory part, you get sedation or even anesthesia," he said.

His other research project relates to the kidney and the regulation of blood pressure. Delpire explained the kidney filters salt from the blood into the urine and then reclaims it. When too much salt is reclaimed, the result is high blood pressure. There are specialized transporters that take the salt back into the blood.

In particular, Delpire said he studies how these transporters are regulated and how too little function leads to salt wasting while too much of it leads to high blood pressure. "If transporters are not there or not functioning, people will pee their salt - but if they function too well, blood pressure suffers" he said.

Delpire explained these two research projects are related because the same family of transporters that filters salt in the kidneys also modulates inhibitory synaptic transmission in the nervous system.

"Delpire is one the most influential and dynamic scientists in his field," Sandberg said. "He works at a foundational level that creates systems allowing other investigators to advance science using tools that Delpire developed, certainly for his own use, but also for others."

"The generosity of Delpire's research is a big part of why we as a department thought it was really important to recognize him with this honor. He got the first endowed directorship this department has ever created and one of the first ever created by VUMC, and I think he is highly deserving of that special recognition."

CRNAs enjoy activities in honor of National CRNA Week



CRNAs Elizabeth Stephan (left) and Heather Frankenfield (right) participate in CRNA Week Celebration photo booth. **Photo by Jenelle Grewell**



Pictured from left to right: Jacobo Marrujo, Nathan McMasters, Brooke Jayram, Alan Hendon and Shijuana Obi. This year's CRNA Week took place from Sunday, Jan. 21 to Saturday, Jan. 27, and many of the department's CRNAs got together to celebrate. **Photo by Jenelle Grewell**



Left: SRNAs and CRNAs alike gather around a cake during CRNA week. Right: CRNAs Andy Phillips (left) and Leah Bergman (right) eat ice cream while goofing off at the photo booth. **Photo by Jenelle Grewell**

Physicians celebrate Physician Anesthesiologists Week with ice cream sundaes



Above: Matthew McEvoy, MD, (left) and Jane Easdown, MD, (right) enjoyed ice cream on Friday, Feb. 2, 2018, in celebration of Physician Anesthesiologists Week. Physician Anesthesiologists Week was from Sunday, Jan. 28 through Saturday, Feb. 3, 2018. **Photo by Jenelle Grewell**

Department hosts retirement celebration for beloved Education Office staff member



On Thursday, Jan. 18, 2018, the Department of Anesthesiology celebrated the retirement of Debbie Nelson. She was with the department for 30 years. Top Left: Matt McEvoy, MD, (left) presents Debbie Nelson (right) with her retirement gift. Bottom left: The department celebrated with a big cake at the reception. Right: Nelson talks with Liza Weavind, MBBCh, FCCM, MMHC, (right) during her reception. **Photos by Jenelle Grewell**

Allen gets appointed to MOCA committee

Staying up to date on certifications and what is going on in the field of anesthesiology has gotten much easier with the Maintenance of Certification in Anesthesia (MOCA) through The American Board of Anesthesiology (ABA). Brian Allen, MD, assistant professor in Anesthesiology, has been appointed to the MOCA Minute committee effective January 2018.

Allen explained that writers submit questions, which are then edited and reviewed by more senior people. His role will be to put the finishing touches on questions and mentor question writers.

"I'm excited about the opportunity to meet and interact more with people who are leaders in the field," he said. He mentioned the benefits of the new MOCA process versus the old way of getting recertified. In the past, people would get board certified and be certified for life. In more recent years, it was a 10 year cycle.

Now in the past two or three years, MOCA has been the standard, and anesthesiologists answer 30 questions quarterly through either an app or online. This gives the ABA the ability to touch base with providers every quarter instead of every 10 years.



Brian Allen, MD

Working at Vanderbilt University Medical Center has been a benefit to Allen when writing questions. "There are so many creative people with a lot of intellectual curiosity, and they really are leaders in their own parts of anesthesiology," he explained.

In terms of the future of MOCA he said, "I hope the questions for MOCA Minute will stimulate conversation and changes in practice or reinforcement of good practice nationwide."

"It's an important task and one that requires a lot of behind the scenes commitment in a role that is kind of thankless but really important," said Department Chair Warren Sandberg, MD, PhD.

"Personally, I am grateful for faculty that will take these lower profile but really important educational and academic roles. It is an honor to the department that Brian was selected."



Billings receives newly initiated Biomedical Science Impact Award

At the end of 2017, Josh Billings IV, MD, was awarded the 2016 Biomedical Science Impact Award by Jeffrey Balser, MD, PhD, and Jennifer Pientenpol, PhD, for his publication entitled "High-Dose Perioperative Atorvastatin and Acute Kidney Injury Following Cardiac Surgery: A Randomized Clinical Trial," which was published in the March 2016 issue of the Journal of the American Medical Association.

According to Megan Smallwood, Program Manager at the Office of Research, the Biomedical Science Impact Awards are a newly initiated recognition. The award is given to VUMC investigators who have been a first, last or corresponding author for a publication in one of the "big six" journals, which include: Science, Cell, Nature, JAMA, Lancet, and NEIM.

Smallwood also explained that it took a whole year to examine studies from 2016, which is why Billings didn't receive the award until the end of 2017.



Josh Billings IV, MD



Josh Billings IV, MD, received the 2016 Biomedical Science Impact Award for his publication "High-Dose Perioperative Atorvastatin and Acute Kidney Injury Following Cardiac Surgery: A Randomized Clinical Trial."

Photo submitted by Fredrick Billings IV, MD

"I felt honored and surprised to receive the award. The research and manuscript that led to the award required steady work and commitment by a large group," Billings said.

Billings attributes this award to the fact that this research addressed an important question in acutely ill surgical patients that has broad applicability. It also used a methodology that was refined and appropriate to test the hypothesis, and the data were precise.

Atorvastatin did not reduce kidney injury. In fact, among patients with chronic kidney disease who were naïve to statin use, atorvastatin increased kidney injury.

As for the impact of the research, Billings said he hopes the research has improved the understanding of the effect of perioperative statin administration on postoperative kidney injury and has provided data to help healthcare providers provide better care for their patients. Statin should not be started prior to cardiac surgery but rather at the time of hospital discharge.

Billings has future plans for this research. He explains, "We are continuing to focus on mechanism of organ injury associated with surgery and testing therapies to reduce organ injury and improve patient outcomes."

Department Spotlight: Celebrating Departmental Accomplishments

At the 2018 6th Annual Congress of Enhanced Recovery and Perioperative Medicine (March 15 - 17, Fort Lauderdale, FL), **Bret Alvis, MD,** gave a presentation on enhanced recovery after surgery in total knee arthroplasty and total hip arthroplasty.

Claudius Balzer, MD, is the recipient of a two-year postdoctoral grant from the German Research Foundation (DFG). He will study the "Effect of Diabetes on Outcome after Cardiac Arrest and Cardiopulmonary Resuscitation with Postconditioning in a Rodent Model."

Josh Billings, MD, was presented the 2016 Biomedical Science Impact Award by Jeffrey Balser, MD, PhD, and Jennifer Pietenpol, PhD, for his publication entitled "High-Dose Perioperative Atorvastatin and Acute Kidney Injury Following Cardiac Surgery: A Randomized Clinical Trial," which was published in the March 2016 issue of the Journal of the American Medical Association.

David Chestnut, MD, will be awarded the 2018 Society for Obstetric Anesthesia and Perinatology Distinguished Service Award at the 2018 SOAP meeting in May.

Anesthesia Technician Sue Christian received both the VUMC Credo Award and the Department Staff Credo Award.

Eric Delpire, PhD, was honored during VUMC's first Directorship Celebration on Monday, Jan. 22, 2018. He was named the holder of the B.H. Robbins Directorship in Anesthesiology Research.

Jesse Ehrenfeld, MD, MPH, Leslie Fowler, MEd, and Matthew McEvoy, MD, were invited to serve on the 2018 ASA Ad Hoc Committee on Essentials of Professional Development.

Jesse Ehrenfeld, MD, MPH, presented Grand Rounds at the University of California, San Francisco, on Thursday, March 8, 2018. The topic was "Using Perioperative Informatics to Drive Reliability and Surgical Safety."

Holly Ende, MD, received the Society for Obstetric Anesthesia and Perinatology Young Investigator Grant for her research, "A randomized, double-blind, placebo-controlled trial of gabapentin in the post-cesarean pain management of patients receiving buprenorphine." **Heather Jackson, MSN, FNP-BC,** has received a grant for her study titled "To What Extent Can Auricular Acupressure Alter the Course of Neonatal Abstinence Syndrome: A Randomized Trial."

Heather Jackson, MSN, FNP-BC, reported that her abstract titled "A Scoping Review of Acupuncture and Acupressure as a Potential Intervention for Neonatal Abstinence Syndrome (NAS)" has been accepted for poster presentation at the Spring National Advanced Practice Neonatal Nurses Conference in Portland, OR. The conference will be held from May 3 through May 6, 2018.

Heather Jackson, MSN, FNP-BC, has been invited to participate as faculty in the World Congress on Regional Anesthesia & Pain Medicine in 2018.

Steve Klintworth, RN, was awarded the Department Staff Credo Award at the Wednesday, Dec. 6, 2017, All Staff Meeting.

Judy Lashbrook, Business Process Manager, was presented with the Department Staff Credo Award at the Wednesday, March 7, 2018, All Staff Meeting.

Yafen Liang, MD, gave a Grand Rounds presentation at the University of Texas Houston Health Science Center on Thursday, March 1, 2018. Her topic was "Venous Congestion and End Organ Injury in Heart Failure Patients."

Congratulations to **Katharina Modes**, **MD**. She has been chosen to assume the role of medical director of Monroe Carell Jr. Children's Hospital at Vanderbilt Preoperative Pediatric Anesthesia Clinic.

On Thursday, Jan. 20, 2018, we celebrated the retirement of **Debbie Nelson-Rouse**. She was with the Department of Anesthesiology for 30 years and worked in the Educational Affairs Office.

Kimberly Rengel, MD, (CA3) was presented the Golden LMA Award by Chief Resident Allison Janda, MD. The Golden LMA is an award we give out monthly to the resident who receives the most nominations from other residents and attendings for going above and beyond. Kimberly went especially above and beyond by helping in the main ORs during Epic roll out, assisting in the PACU and with codes while on her TEE and research rotations when things got busy for the team. She's a real team player!

Warren Sandberg, MD, PhD, has been elected to serve as a member of the Multicenter Perioperative Outcomes Group Executive Board for a 3-year term. MPOG develops the necessary policies, procedures and technical infrastructure required for multicenter perioperative outcomes research.

The Department of Anesthesiology hosted a farewell reception for **Andrew Shaw, MB, FRCA, FFICM, FCCM,** on Tuesday, Feb. 6. We will miss him as our executive vice chair but congratulate him on being appointed chair of the Department of Anesthesiology and Pain Medicine, University of Alberta, and Zone Clinical Department Head, Anesthesiology, for Alberta Health Services.

Jonathan Wanderer, MD, has been appointed vice-chair for the Anesthesia Quality Institute's Registery Operations Committee.

Congratulations to **Matt Weinger, MD**, for receiving the Nik Gravenstein Lifetime Achievement Award at the annual meeting of the Society for Technology in Anesthesia. Every year, the STA bestows the JS Gravenstein Award for lifetime achievement in the area of technology in anesthesia. The award is named for JS "Nik" Gravenstein (1925-2009), a founding member and former president of the STA. For over thirty years, Dr. Gravenstein was a driving force in advancing anesthesia technology, patient simulation and anesthesia patient safety. His lifelong commitment to developing and teaching anesthesia technology embodies the values of the Society.



Send us your news for inclusion in department publications: Weekly Update, Anesthesia Monitor & Blog

AnesthesiologyCommunications@Vanderbilt.edu



Steve Klintworth (left) was presented the Department Staff Credo Award by Stephen Doherty (right) at the Wednesday, Dec. 6, 2017, All Staff Meeting. **Photo by Jenelle Grewell**

LEADERSHIP ANNOUNCEMENT



Jeanette Bauchat, MD has been named Chief of the Obstetric Anesthesiology Division.



Judy Lashbrook (left) was presented the Department Staff Credo Award by Betsy DeMarcus (right) at the Wednesday, March 7, 2018, All Staff Meeting. **Photo by Jenelle Grewell**



Anesthesia Technician Sue Christian received both the VUMC Credo Award and the Department Staff Credo Award. Christian joined VUMC in 2004 and said she will do whatever it takes to get the job done.

Photo by Susan Urmy. Originally published in VUMC Voice on Thursday, Feb. 22, 2018.





Jeanette Bauchat, MD Associate Professor, Chief, Obstetric Anesthesiology

EDUCATION:

MS, Healthcare Quality and Safety, Northwestern University, Chicago, IL (2016) Residency, Anesthesiology, Columbia University Presbyterian Hospital, New York, NY (2006)

MD, Northwestern University FeinbergSchool of Medicine, Chicago, IL (2002)BS, Cellular and Molecular Biology, Universityof Michigan, Ann Arbor, MI (1997)

FUN FACT: I grew up in Sao Paulo, Brazil.



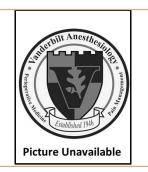
Jennifer Becker Research Assistant II Research Division

EDUCATION:

MS, Microbiology and Immunology, Vanderbilt University, Nashville, TN (2013) BS, Animal Science, University of Connecticut, Storrs, CT (2007)

FUN FACT:

I am a volunteer puppy raiser for Southeastern Guide Dogs (I raise guide dog puppies). I am also a dog trainer.



Clayne Benson, MD Assistant Professor Anesthesiology Critical Care Medicine

EDUCATION:

Fellowship, Cardiothoracic Anesthesiology, University of Pittsburgh, Pittsburgh, PA (2015) Fellowship, Critical Care, UT-San Antonio, San Antonio, TX (2009) Residency, Vanderbilt University Hospital, Nashville, TN (2008) MD, Georgetown University, Washington DC (2004) BA, Spanish, Brigham Young University, Provo, UT (1998)

FUN FACT:

I was Active Duty Air Force for 9 years, deployed to Africa and Afghanistan. I'm still in the Air Force Reserves.



Jodi Marie Benson Certified Registered Nurse Anesthetist

EDUCATION: MS, Nurse Anesthesia, Boston College, Chestnut Hill, MA (2007) BS, Nursing, University of Portland, Portland, OR (2003)

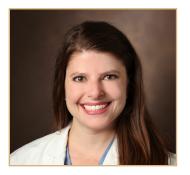
FUN FACT: I'm a commercial helicopter pilot.



Katherine Denney Associate Program Manager Administration

EDUCATION: BA, English, Smith College, Northhampton, MA (2017)

FUN FACT: I am a tap/modern dance enthusiast and history enthusiast.



Erin Grimm Certified Registered Nurse Anesthetist

EDUCATION: MS, Nurse Anesthesia, Virginia Commonwealth University, Richmond, VA (2017) BS, Nursing, University of South Carolina, Columbia, SC (2010)

FUN FACT:

I have two miniature dachshunds named Jackson and Franklin. I love college football - Go Gamecocks!



Brooke Hoover Associate Program Manager Educational Affairs Office

EDUCATION: BS, Healthcare Administration, Western Kentucky University, Bowling Green, KY (2013)

FUN FACT:

I have two nephews that I adore, my mother's name is Kimberly as well, technically making me a Kim Jr., and I enjoy making people laugh.



Rodrigo Llobet, MD Assistant Professor Pediatric Anesthesiology

EDUCATION:

Fellowship, Pediatric Anesthesiology at Children's Hospital Boston, Boston, MA (2009)

Residency, Anesthesiology at Brigham and Women's Hospital, Boston, MA (2008) MD, University of Illinois at Chicago College of Medicine, Chicago, IL (2004) BS, Biology, Purdue University, West Lafayette, IN (1999)

FUN FACT:

I love to cook, love anything outdoors, love to travel and be challenged with new ideas, lifestyles, food and culture.



Steven Marcum, MD Assistant Professor Multispecialty Adult Anesthesiology

EDUCATION:

Residency, Anesthesiology, University of California, Davis, School of Medicine, Sacramento, CA (1992)
MD, New York Medical College, Vahlalla, NY (1988)
BS, Medical Technology/Microbiology, Colorado State University, Fort Collins, CO (1979)

FUN FACT:

I'm a descendant of Richard Lee, a signatory of the Declaration of Independence and first Senator of Virginia.

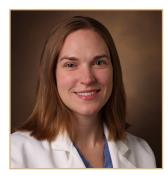


Sarah Mihalko Research Coordinator Research Division

EDUCATION:

BA, Interdisciplinary Program, University of Tennessee Knoxville, Knoxville, TN (2016)

FUN FACT: I have been to Italy.



Lindsay Murphy Certified Registered Nurse Anesthetist

EDUCATION:

MS, Nurse Anesthesia, Middle Tennessee
School of Anesthesia, Madison, TN (2017)
BS, Nursing, Belmont University, Nashville, TN (2011)
BA, Medicine Health and Society, Vanderbilt University, Nashville, TN (2009)

FUN FACT:

I enjoy home construction projects and woodworking.



Srijaya Reddy, MD, MBA Associate Professor Pediatric Anesthesiology

EDUCATION:

MBA, Healthcare, The George Washington School of Business, Washington DC (2013) Fellowship, Pediatric Anesthesiology, Children's National Health System/The George Washington University School of Medicine and Health Sciences, Washington DC (2010)

Residency, Anesthesiology, Henry Ford Health System, Detroit, MI (2009) MD, Medical University of the Americas, Nevis, West Indies (2005) BA, Sociology, Emory University, Atlanta, GA (2001)

FUN FACT:

I went to University School of Nashville and was on the state championship volleyball team from 1993 to 1997. I still play competitive volleyball to this day.



Sharon Stanley Associate Program Manager Center for Research and Innovation in Systems Safety

EDUCATION:

BS, English Literature, Middle Tennessee State University, Murfreesboro, TN (1982)

FUN FACT:

I am a Nashville native.



Judy Thompson Senior Administrative Assistant Center for Research and Innovation in Systems Safety

FUN FACT:

I have three successful grown children and six grandsons I adore. I live on 2.400 acres, our Century Farm of five generations. I own two beach homes in Gulf Shores, AL. I love cooking, gardening, the beach and vacations.

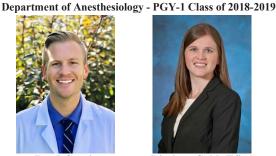
Welcome to our new PGY-1 Class of 2018-2019



Bobby Baranello University of South Carolina School of Medicine Greenville



Alex Baumgarten The Brody School of Medicine at East Carolina University



Brad Curtis University of Utah School of Medicine



Lindsey Cobb Efird University of Tennessee Health Science Center College of Medicine - Memphis



Rebekka Geldbart Florida International University Herbert Wertheim College of Medicine



Juliet Nash University of Texas Southwestern Medical School



Matt Roi Saint Louis University School of Medicine



Maricela Jacobo Ponce Health Sciences University School of Medicine

Greg Roop

University of

South Carolina

School of Medicine

- Greenville



Maxwell James Columbia University Vagelos College of Physicians and Surgeons

Caroline Ruminski

University of Virginia

School of Medicine



University of Arkansas for Medical Sciences



Claire Spradling University of Missouri-Columbia School of Medicine



Sung Min Kim Wake Forest School of Medicine of Wake Forest Baptist Medical Center



Alyssa Streff University of Arizona College of Medicine



Kathleen Rissi Arizona College of Osteopathic Medicine of Midwestern University



Sarah Thomas University of Tennessee Health Science Center College of Medicine - Memphis

Announcing Chief Residents for 2018-2019



Erica Adkins, MD



Jared Cummings, MD



Lauren Poe, DO

Recent Publications

Abdel-Kader K, Girard TD, Brummel NE, Saunders CT, Blume JD, Clark AJ, Vincz AJ, Ely EW, Jackson JC, Bell SP, Archer KR, Ikizler TA, **Pandharipande PP**, Siew ED. Acute Kidney Injury and Subsequent Frailty Status in Survivors of Critical Illness: A Secondary Analysis. Crit Care Med. 2018 Jan 25. doi: 10.1097/ CCM.00000000000003003. [Epub ahead of print] PubMed PMID: 29373362.

An SS, Henson CP, Freundlich RE, McEvoy MD. Case Report of High Dose Hydroxocobalamin in the Treatment of Vasoplegic Syndrome during Liver Transplantation. Am J Transplant. 2018 Mar 24. doi: 10.1111/ ajt.14736. [Epub ahead of print] PubMed PMID: 29573551.

Angel C, Glovak ZT, Alami W, Mihalko S, Price J, **Jiang Y**, Baghdoyan HA, Lydic R. Buprenorphine Depresses Respiratory Variability in Obese Mice with Altered Leptin Signaling. Anesthesiology. 2018 Feb 2. doi: 10.1097/ ALN.000000000002073. [Epub ahead of print] PubMed PMID: 29394163.

Barbeito A, Agarwala AV, **Lorinc A.** Handovers in Perioperative Care. Anesthesiol Clin. 2018 Mar;36(1):87-98. doi: 10.1016/j.anclin.2017.10.007. Review. PubMed PMID: 29425601.

Bellomy ML, Freundlich RE. Hyperglycemia and Elevated Lactate in Trauma: Where Do We Go From Here? Anesth Analg. 2018 Mar;126(3):748-749. doi: 10.1213/ANE.0000000000002757. PubMed PMID: 29461323.

Bennett JM, Nikolla I, **Hernandez A.** Deployment of a Sapien 3 Transcatheter Valve for Severe Tricuspid Insufficiency in a Patient With Non-obstructive Cor Triatriatum Dexter. J Cardiothorac Vasc Anesth. 2017 May 17. pii: S1053-0770(17)30501-3. doi: 10.1053/j.jvca.2017.05.023. [Epub ahead of print] PubMed PMID: 29203295.

Butler M, Drum E, Evans FM, Fitzgerald T, Fraser J, Holterman AX, Jen H, **Kynes JM**, Kreiss J, McClain CD, **Newton M**, Nwomeh B, O'Neill J, Ozgediz D, Politis G, Rice H, Rothstein D, Sanchez J, Singleton M, Yudkowitz FS. Guidelines and checklists for short-term missions in global pediatric surgery: Recommendations from the American Academy of Pediatrics Delivery of Surgical Care Global Health Subcommittee, American Pediatric Surgical Association Global Pediatric Surgery Committee, Society for Pediatric Anesthesia Committee on International Education and Service, and American Pediatric Surgical Nurses Association, Inc. Global Health Special Interest Group. J Pediatr Surg. 2017 Nov 15. pii: S0022-3468(17)30756-X. doi: 10.1016/j.jpedsurg.2017.11.037. [Epub ahead of print] Review. PubMed PMID: 29223665.

Chestnut DH. The Aortocaval Compression Conundrum. Anesth Analg. 2017 Dec;125(6):1838-1839. doi: 10.1213/ANE.000000000002400. PubMed PMID: 29189361.

Chrouser KL, Xu J, Hallbeck S, **Weinger MB**, Partin MR. The influence of stress responses on surgical performance and outcomes: Literature review and the development of the surgical stress effects (SSE) framework. Am J Surg. 2018 Feb 22. pii: S0002-9610(17)31286-2. doi: 10.1016/j.amjsurg.2018.02.017. [Epub ahead of print] Review. PubMed PMID: 29525056.

Drum ET, Workneh RS, Tilahun R, **McQueen KAK.** Safe Surgery for All: Early Lessons from Implementing a National Government-Driven Surgical Plan in Ethiopia. World J Surg. 2018 Feb 1. doi: 10.1007/s00268-018-4523-z. [Epub ahead of print] PubMed PMID: 29392432.

Ehrenfeld JM, Wanderer JP. Technology as friend or foe? Do electronic health records increase burnout? Curr Opin Anaesthesiol. 2018 Feb 22. doi: 10.1097/ACO.0000000000000588. [Epub ahead of print] PubMed PMID: 29474217.

Ehrenfeld JM, Zimmerman DR, Gonzales G. Healthcare Utilization among Transgender Individuals in California. J Med Syst. 2018 Mar 16;42(5):77. doi: 10.1007/s10916-018-0923-8. PubMed PMID: 29546483.

Epstein RH, Dexter F, **Ehrenfeld JM**. Differences in the incidence and timing of reintubation in the postanesthesia care unit among large teaching hospitals. J Clin Anesth. 2018 Feb 1;46:74. doi: 10.1016/j. jclinane.2017.10.014. [Epub ahead of print] PubMed PMID: 29414624.

Feng Z, Feng MP, Feng DP, **Rice MJ**, Solórzano CC. A cost-conscious approach to robotic adrenalectomy. J Robot Surg. 2018 Jan 31. doi: 10.1007/s11701-018-0782-9. [Epub ahead of print] PubMed PMID: 29388004.

Flores B, Schornak CC, **Delpire E.** A role for KCC3 in maintaining cell volume of peripheral nerve fibers. Neurochem Int. 2018 Jan 20. pii: S0197-0186(17)30634-4. doi: 10.1016/j.neuint.2018.01.009. [Epub ahead of print] Review. PubMed PMID: 29366908.

Francois B, Jeannet R, Daix T, Walton AH, Shotwell MS, Unsinger J, Monneret G, Rimmelé T, Blood T, Morre M, Gregoire A, **Mayo GA**, Blood J, Durum SK, **Sherwood ER**, Hotchkiss RS. Interleukin-7 restores lymphocytes in septic shock: the IRIS-7 randomized clinical trial. JCI Insight. 2018 Mar 8;3(5). pii: 98960. doi: 10.1172/ jci.insight.98960. [Epub ahead of print] PubMed PMID: 29515037.

Freundlich RE, Ehrenfeld JM. Perioperative Information Systems: Opportunities to Improve Delivery of Care and Clinical Outcomes in Cardiac and Vascular Surgery. J Cardiothorac Vasc Anesth. 2017 Nov 4. pii: S1053-0770(17)30880-7. doi: 10.1053/j.jvca.2017.11.002. [Epub ahead of print] Review. PubMed PMID: 29229258.

Freundlich RE, Lopez MG, Kingeter AJ. Not All Calcium Formulations Are Alike. Anesth Analg. 2017 Nov 14. doi: 10.1213/ANE.00000000002651. [Epub ahead of print] PubMed PMID: 29189270.

Girard TD, Thompson JL, **Pandharipande PP**, Brummel NE, Jackson JC, Patel MB, **Hughes CG**, Chandrasekhar R, Pun BT, Boehm LM, Elstad MR, Goodman RB, Bernard GR, Dittus RS, Ely EW. Clinical phenotypes of delirium during critical illness and severity of subsequent long-term cognitive impairment: a prospective cohort study. Lancet Respir Med. 2018 Mar;6(3):213-222. doi: 10.1016/S2213-2600(18)30062-6. PubMed PMID: 29508705.

Griffin ML, Agarwal S, **Murphy MZ**, Teeter LD, Graviss EA. Influence of seasonality and circulating cytokines on serial QuantiFERON discordances. Tuberculosis Research and Treatment.vol. 2018, Article ID 6731207, 5 pages, 2018. doi:10.1155/2018/6731207.

Gurien LA, Blakely ML, Crandall MC, Schlegel C, Rettiganti MR, Saylors ME, **France DJ, Anders S,** Thomas SL, Dassinger MS. Meta-analysis of surgeon-performed central line placement: real-time ultrasound vs landmark technique. J Trauma Acute Care Surg. 2018 Jan 4. doi: 10.1097/TA.000000000001784. [Epub ahead of print] PubMed PMID: 29300282.

Harris AN, Grimm PR, Lee HW, **Delpire E,** Fang L, Verlander JW, Welling PA, Weiner ID. Mechanism of Hyperkalemia-Induced Metabolic Acidosis. J Am Soc Nephrol. 2018 Feb 26. pii: ASN.2017111163. doi: 10.1681/ASN.2017111163. [Epub ahead of print] PubMed PMID: 29483157.

Herbert JT, **Kertai MD.** Transesophageal Echocardiography Use in Diagnosis and Management of Embolized Intravascular Foreign Bodies. Semin Cardiothorac Vasc Anesth. 2017 Oct 1:1089253217735912. doi: 10.1177/1089253217735912. [Epub ahead of print] PubMed PMID: 29327650.

Hughes CG, Patel MB, Brummel NE, Thompson JL, McNeil JB, **Pandharipande PP,** Jackson JC, Chandrasekhar R, Ware LB, Ely EW, Girard TD. Relationships between markers of neurologic and endothelial injury during critical illness and long-term cognitive impairment and disability. Intensive Care Med. 2018 Mar;44(3):345-355. doi: 10.1007/s00134-018-5120-1. Epub 2018 Mar 9. PubMed PMID: 29523900; PubMed Central PMCID: PMC5870884.

Hyman SA. In Response. Anesth Analg. 2018 Mar 14. doi: 10.1213/ANE.000000000002897. [Epub ahead of print] PubMed PMID: 29543645.

Itagaki T, **Jiang Y**, Mountjoy JR. Reply to: does the technique of two-hand mask ventilation matter? Eur J Anaesthesiol. 2018 Apr;35(4):319-320. doi: 10.1097/EJA.00000000000000790. PubMed PMID: 29485457.

Kaoutzanis C, Kumar NG, O'Neill D, Wormer B, Winocour J, Layliev J, **McEvoy M, King A,** Braun SA, Higdon KK. Enhanced Recovery Pathway in Microvascular Autologous Tissue-Based Breast Reconstruction: Should it Become the Standard of Care? Plast Reconstr Surg. 2018 Feb 9. doi: 10.1097/PRS.000000000004197. [Epub ahead of print] PubMed PMID: 29465485.

Kertai MD, Shaw AD. The curious tale of perioperative precision medicine: a story of hydroxocobalamin and cardiac surgery-associated vasoplegia. Can J Anaesth. 2018 Feb 8. doi: 10.1007/s12630-018-1083-5. [Epub ahead of print] PubMed PMID: 29423881.

King AB, Kensinger CD, Shi Y, Shotwell MS, Karp SJ, **Pandharipande PP,** Wright JK, **Weavind LM.** Intensive Care Unit Enhanced Recovery Pathway for Patients Undergoing Orthotopic Liver Transplants Recipients: A Prospective, Observational Study. Anesth Analg. 2018 Feb 9. doi: 10.1213/ANE.00000000002851. [Epub ahead of print] PubMed PMID: 29438158.

King AB, Spann MD, Jablonski P, **Wanderer JP, Sandberg WS, McEvoy MD.** An enhanced recovery program for bariatric surgical patients significantly reduces perioperative opioid consumption and postoperative nausea. Surg Obes Relat Dis. 2018 Feb 13. pii: S1550-7289(18)30089-3. doi: 10.1016/j.soard.2018.02.010. [Epub ahead of print] PubMed PMID: 29555468.

Marra A, **Pandharipande PP**, Shotwell MS, Chandrasekhar R, Girard TD, Shintani AK, Peelen LM, Moons K, Dittus RS, Ely EW, Vasilevskis EE. Acute Brain Dysfunction: Development and Validation of a Daily Prediction Model. Chest. 2018 Mar 23. pii: S0012-3692(18)30426-4. doi: 10.1016/j.chest.2018.03.013. [Epub ahead of print] PubMed PMID: 29580772.

McEvoy MD, Banerjee A, Murray DJ. Competence: The Link between Education and Quality Patient Care. Anesthesiology. 2018 Jan 25. doi: 10.1097/ALN.0000000000002092. [Epub ahead of print] PubMed PMID: 29369892.

McQueen K, Oodit R, Derbew M, Banguti P, Ljungqvist O. Enhanced Recovery After Surgery for Low- and Middle-Income Countries. World J Surg. 2018 Jan 30. doi: 10.1007/s00268-018-4481-5. [Epub ahead of print] PubMed PMID: 29383424.

Mukherjee D, Ignatowska-Jankowska BM, Itskovits E, Gonzales BJ, Turm H, Izakson L, Haritan D, Bleistein N, Cohen C, Amit I, Shay T, **Grueter B,** Zaslaver A, Citri A. Salient experiences are represented by unique transcriptional signatures in the mouse brain. Elife. 2018 Feb 7;7. pii: e31220. doi: 10.7554/eLife.31220. [Epub ahead of print] PubMed PMID: 29412137.

Nagrebetsky A, Dutton RP, **Ehrenfeld JM**, Urman RD. Variation in Frequency of Intraoperative Arterial, Central Venous and Pulmonary Artery Catheter Placement During Kidney Transplantation: An Analysis of Invasive Monitoring Trends. J Med Syst. 2018 Mar 2;42(4):66. doi: 10.1007/s10916-018-0920-y. PubMed PMID: 29497856.

Patil NK, Luan L, Bohannon JK, Hernandez A, Guo Y, Sherwood ER. Frontline Science: Anti-PD-L1 protects against infection with common bacterial pathogens after burn injury. J Leukoc Biol. 2018 Jan;103(1):23-33. doi: 10.1002/JLB.5HI0917-360R. Epub 2017 Dec 21. PubMed PMID: 29345058.

Polderman TJC, Kreukels BPC, Irwig MS, Beach L, Chan YM, Derks EM, Esteva I, **Ehrenfeld J,** Heijer MD, Posthuma D, Raynor L, Tishelman A, Davis LK; International Gender Diversity Genomics Consortium. The Biological Contributions to Gender Identity and Gender Diversity: Bringing Data to the Table. Behav Genet. 2018 Feb 19. doi: 10.1007/s10519-018-9889-z. [Epub ahead of print] Review. PubMed PMID: 29460079.

Raso Vasquez AO, **Kertai MD,** Fontes ML. Postoperative thrombocytopenia: why you should consider antiplatelet therapy? Curr Opin Anaesthesiol. 2018 Feb;31(1):61-66. doi: 10.1097/ACO.00000000000551. PubMed PMID: 29227290. Raykar NP, Ng-Kamstra JS, Bickler S, Davies J, Greenberg SLM, Hagander L, Johnson W, Leather AJM, **Mc-Queen KAK**, Mukhopadhyay S, Suzuki E, Weiser T, Shrime MG, G Meara J. New global surgical and anaesthesia indicators in the World Development Indicators dataset. BMJ Glob Health. 2017 May 24;2(2):e000265. doi: 10.1136/bmjgh-2016-000265. eCollection 2017. PubMed PMID: 29225929; PubMed Central PMCID: PMC5717956.

Rebel A, **Hester DL**, DiLorenzo A, **McEvoy MD**, Schell RM. Beyond the "E" in OSCE. Anesth Analg. 2018 Feb 23. doi: 10.1213/ANE.00000000003317. [Epub ahead of print] PubMed PMID: 29481435.

Richardson KM, Shen ST, Gupta DK, Wells QS, **Ehrenfeld JM, Wanderer JP.** Prognostic Significance and Clinical Utility of Intraventricular Conduction Delays on the Preoperative Electrocardiogram. Am J Cardiol. 2018 Feb 27. pii: S0002-9149(18)30114-0. doi: 10.1016/j.amjcard.2018.01.009. [Epub ahead of print] PubMed PMID: 29499923.

Roberts DA, Shaw AD. Impact of volume status and volume therapy on the kidney. Best Pract Res Clin Anaesthesiol. 2017 Sep;31(3):345-352. doi: 10.1016/j.bpa.2017.08.008. Epub 2017 Aug 24. Review. PubMed PMID: 29248141.

Robertson AC, Fowler LC. Medical Student Perceptions of Learner-Initiated Feedback Using a Mobile Web Application. J Med Educ Curric Dev. 2017 Dec 8;4:2382120517746384. doi: 10.1177/2382120517746384. eCollection 2017 Jan-Dec. PubMed PMID: 29349345; PubMed Central PMCID: PMC5736051.

Sammons MF, **Kharade SV**, Filipski KJ, Boehm M, Smith AC, Shavnya A, Fernando DP, Dowling MS, Carpino PA, Castle NA, Zellmer SG, Antonio BM, Gosset JR, Carlo A, **Denton JS**. Discovery and in Vitro Optimization of 3-Sulfamoylbenzamides as ROMK Inhibitors. ACS Med Chem Lett. 2018 Jan 19;9(2):125-130. doi: 10.1021/ acsmedchemlett.7b00481. eCollection 2018 Feb 8. PubMed PMID: 29456800; PubMed Central PMCID: PMC5807870.

Schlesinger JJ, Burdick K, Baum S, Bellomy M, Mueller D, MacDonald A, Chern A, Chrouser K, Burger C. Rethinking Clinical Workflow. Anesthesiol Clin. 2018 Mar;36(1):99-116. doi: 10.1016/j.anclin.2017.10.008. Review. PubMed PMID: 29425602.

Self WH, Semler MW, **Wanderer JP**, Wang L, Byrne DW, Collins SP, Slovis CM, Lindsell CJ, **Ehrenfeld JM**, Siew ED, Shaw AD, Bernard GR, Rice TW; SALT-ED Investigators. Balanced Crystalloids versus Saline in Noncritically III Adults. N Engl J Med. 2018 Mar 1;378(9):819-828. doi: 10.1056/NEJMoa1711586. Epub 2018 Feb 27. PubMed PMID: 29485926.

Semler MW, Self WH, Wanderer JP, Ehrenfeld JM, Wang L, Byrne DW, Stollings JL, Kumar AB, Hughes CG, Hernandez A, Guillamondegui OD, May AK, Weavind L, Casey JD, Siew ED, Shaw AD, Bernard GR, Rice TW; SMART Investigators and the Pragmatic Critical Care Research Group. Balanced Crystalloids versus Saline in Critically III Adults. N Engl J Med. 2018 Mar 1;378(9):829-839. doi: 10.1056/NEJMoa1711584. Epub 2018 Feb 27. PubMed PMID: 29485925.

Shinall MC Jr., **Ehrenfeld JM**, Gunter OL Jr.. Nonoperative Management of Perforated Hollow Viscera in a Palliative Care Unit. Ann Surg. 2018 Jan 15. doi: 10.1097/SLA.000000000002683. [Epub ahead of print] PubMed PMID: 29342021.

Smith LE, Smith DK, Blume JD, Linton MF, **Billings FT 4th.** High-Density Lipoprotein Cholesterol Concentration and Acute Kidney Injury After Cardiac Surgery. J Am Heart Assoc. 2017 Dec 9;6(12). pii: e006975. doi: 10.1161/JAHA.117.006975. PubMed PMID: 29223955.

Stewart MK, Henry RC, **Ehrenfeld JM**, Terhune KP. Utility of a Standardized Fourth-Year Medical Student Surgical Preparatory Curriculum: Program Director Perceptions. J Surg Educ. 2018 Jan 3. pii: S1931-7204(17)30313-6. doi: 10.1016/j.jsurg.2017.09.004. [Epub ahead of print] PubMed PMID: 29306578.

Stollings JL, Thompson JL, Ferrell BA, Scheinin M, Wilkinson GR, **Hughes CG**, Shintani AK, Ely EW, Girard TD, **Pandharipande PP**, Patel MB. Sedative Plasma Concentrations and Delirium Risk in Critical Illness. Ann Pharmacother. 2018 Jan 1:1060028017753480. doi: 10.1177/1060028017753480. [Epub ahead of print] PubMed PMID: 29363356.

Su E, Haileselassie B, **Hernandez A,** Díaz-Gómez JL. Certification in Critical Care Echocardiography: The Evolution of an Emerging PICU Practice. Pediatr Crit Care Med. 2018 Jan;19(1):88. doi: 10.1097/PCC.000000000001381. PubMed PMID: 29303901.

Su Z, Liu S, Oto J, Chenelle CT, Sulemanji D, Kacmarek RM, **Jiang Y.** Effect positive end-expiratory pressure (PEEP) on risk of postoperative pulmonary complications in patients undergoing elective craniotomy. World Neurosurg. 2017 Dec 15. pii: S1878-8750(17)32130-7. doi: 10.1016/j.wneu.2017.12.014. [Epub ahead of print] PubMed PMID: 29253690.

Theriault BM, Schlesinger JJ. Potential Impact of Medical Marijuana on Nonmedical Opioid Use. Am J Psychiatry. 2018 Mar 1;175(3):284. doi: 10.1176/appi.ajp.2017.17101149. PubMed PMID: 29490499.

Turner BD, Kashima DT, Manz KM, **Grueter CA, Grueter BA.** Synaptic Plasticity in the Nucleus Accumbens: Lessons Learned from Experience. ACS Chem Neurosci. 2018 Jan 24. doi: 10.1021/acschemneuro.7b00420. [Epub ahead of print] PubMed PMID: 29280617.

Wanderer JP, Nathan N. A Tale of Two Solutions: High vs Low-Chloride Intravenous Fluids. Anesth Analg. 2018 Feb;126(2):374. doi: 10.1213/ANE.00000000002769. PubMed PMID: 29346198.

Wanderer JP, Nathan N. Global Access to Safe Anesthesia: Addressing the Gap. Anesth Analg. 2018 Apr;126(4):1101. doi: 10.1213/ANE.00000000002881. PubMed PMID: 29547412.

Wanderer JP, Nathan N. Massive Transfusion Protocols: When to Turn On, and Off, the Fire Hose. Anesth Analg. 2017 Dec;125(6):1827. doi: 10.1213/ANE.000000000002617. PubMed PMID: 29189355.

Wanderer JP, Nathan N. Post-Cardiac Arrest Management: Time to Cool It on Cooling? Anesth Analg. 2018 Mar;126(3):738. doi: 10.1213/ANE.0000000002832. PubMed PMID: 29461318.

Wanderer JP, Nathan N. To Clot or Not to Clot: Understanding Coagulopathy in Liver Disease. Anesth Analg. 2018 Jan;126(1):2. doi: 10.1213/ANE.00000000002686. PubMed PMID: 29252472.

Wanderer JP, Nelson SE, Hester DL, Shotwell M, Sandberg WS, Anderson-Dam J, Raines DE, Ehrenfeld JM. Sources of Variation in Anesthetic Drug Costs. Anesth Analg. 2017 Dec 15. doi: 10.1213/ ANE.00000000002732. [Epub ahead of print] PubMed PMID: 29256939.

Wanderer JP, Rathmell JP. Painting the Picture: An Integrated View of Intraoperative Management. Anesthesiology. 2018 Feb;128(2):A1. doi: 10.1097/ALN.0000000000002083. PubMed PMID: 29337736.

Wanderer JP, Rathmell JP. Searching for Quality: Hip Fractures and Type of Anesthesia. Anesthesiology. 2018 Mar;128(3):A1. doi: 10.1097/ALN.00000000002115. PubMed PMID: 29438233.

Wanderer JP, Rathmell JP. Translational Research in Anesthesia: Animals Vs. Humans. Anesthesiology. 2018 Apr;128(4):A19. doi: 10.1097/ALN.00000000002178. PubMed PMID: 29533289.

Weitzel N, **Kertai MD.** Navigating the Perioperative Landscape of Patient-Oriented Outcome Studies of Cardiothoracic and Abdominal Transplant Surgical Patients in 2017. Semin Cardiothorac Vasc Anesth. 2018 Mar;22(1):5-8. doi: 10.1177/1089253218754660. PubMed PMID: 29400255.

Xu Z, Jin L, Smith B, Bai Y, Luo H, Strombergsson LA, Fei M, Jiang Y. A novel device for air removal from vascular access line: a bench study. J Clin Monit Comput. 2018 Feb 17. doi: 10.1007/s10877-018-0114-7. [Epub ahead of print] PubMed PMID: 29455322.

Department Leadership



Warren S. Sandberg, MD, PhD Chair, Department of Anesthesiology Vanderbilt University Medical Center

We provide uncompromising quality in clinical care, research and education. We are: **Compassionate:** Offering exceptional perioperative care and pain management to a complex population. Creative: Advancing the frontiers of science, healthcare and technology. **Committed:** Equipping future leaders with solid education and training, both here and abroad.

Collaborative: Working across Vanderbilt University Medical Center and beyond to achieve measurable outcomes.

Executive Committee



Brian J. Gelfand, MD Associate Vice Chair for **Educational Affairs**



Matthew McEvoy, MD Vice Chair for **Educational Affairs**



Mark Rice, MD Vice Chair for **Clinical Affairs**



Amy Robertson, MD Associate Vice Chair for Clinical Affairs



Edward Sherwood, MD, PhD Vice Chair for Research



Matthew Weinger, MD Vice Chair for Faculty Affairs



Stephen Doherty, MMHC Department Administrator

Division Chiefs



Jeanette Bauchat, MD Chief, Obstetric Anesthesiology



Eric Delpire, PhD Director, Basic Science Research



Katherine Dobie, MD Chief, Ambulatory Anesthesiology



Brent Dunworth, DNP, MBA, APRN, CRNA Chief CRNA



David Edwards, MD, PhD Chief, Pain Medicine



Alexander Hughes, MD Interim Chief, Pediatric Cardiac Anesthesiology



Jill Kilkelly, MD Chief, Pediatric Anesthesiology Neuroanesthesiology



Interim Chief,



Pratik Pandharipande, MD, MSCI Chief, Anesthesiology-Critical Care Medicine



Michael Pilla, MD Associate Chief, Multispecialty Adult Anesthesiology



Mias Pretorius, MBChB, MSCI Chief, Cardiothoracic Anesthesiology



Chief, Multispecialty Adult Anesthesiology



Ann Walia, MBBS Chief, Veterans Affairs Anesthesiology Service

