

Susan Eagle named new executive vice chair for the Department of Anesthesiology

Article by *Erin Wides*

Susan Eagle, MD, has been named the new executive vice chair for the Department of Anesthesiology, effective July 1. With this role, Eagle also takes on a hospital level role as the VUH anesthesiology executive medical director of Perioperative Services.

Dr. Eagle was selected after a formal internal search led by the Department of Anesthesiology's Executive Committee. Previously, Eagle served as assistant vice chair of Anesthesiology Faculty Affairs, where she led mentorship and professional development for over 170 faculty.

Clinically, Dr. Eagle has always been drawn to high-acuity medical care, so it's

no surprise that she has had a two-decade career as a cardiothoracic anesthesiologist.

"It is a natural fit for me to do cardiothoracic anesthesia, as I am drawn to high-acuity cases where the stakes are high and the conditions are rapidly evolving," Eagle said. "I have been so fortunate to work alongside talented and dedicated teams of patient care providers at VUMC for over two decades. The executive vice chair role feels like a natural extension of my work across clinical, research, and faculty affairs in the Department of Anesthesiology."



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Dr. Mark Rice transitioning to executive vice chair emeritus role in Department of Anesthesiology

Article by *Erin Wides*

He is somebody who has been described by colleagues as a "transformational" part of the Department of Anesthesiology at Vanderbilt University Medical Center. He's had multiple careers and most recently, transitioned from executive vice chair to executive vice chair emeritus in the Department of Anesthesiology.

For most of the past decade, Mark Rice, MD, has worked in the department. He started his career at VUMC in spring of 2015, when he joined the Department of Anesthesiology as professor and chief of the Division of Multispecialty Anesthesiology. Back in 2018, when the department was adding leadership roles, Rice earned the role of associate

vice-chair for Clinical Affairs and, after that, the role of executive vice chair of Anesthesiology.

"He took over at a time when the department's activities and leadership vistas could almost be managed by a single person, and as a true executive officer, co-led the department to the point that the scope of our operations requires a second executive vice chair to handle the Pediatric Anesthesia enterprise," said Anesthesiology Department Chair Warren Sandberg, MD, PhD. "This is a remarkable accomplishment for the individual, but also speaks volumes about the department's success on his watch."

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MESSAGE FROM THE CHAIR



Warren Sandberg, MD, PhD
Chair, Department of Anesthesiology

The end of the year is a great time to reflect on all the things our department has accomplished in the past few months.

In October a handful of faculty and residents attended the 2024 annual meeting of the American Society of Anesthesiologists in Philadelphia, PA. We participated in over 70 activities. From the medically challenging cases to the hands-on workshops to our annual alumni reception, the ASA was a huge success.

Back at home we have had some leadership transitions. Mark Rice, MD, transitioned from executive vice chair to executive vice chair emeritus. In this role, Rice remains around to help with recruiting and supporting faculty and staff. We're thankful for all that Dr. Rice has contributed to our faculty, staff, and patients.

Dr. Susan Eagle was named the new executive vice chair for the Department of Anesthesiology. We look forward to all that she will do in this role. Dr. Eagle previously served as assistant vice chair of Anesthesiology Faculty Affairs.

In federal fiscal year 2023, our department placed fifth among U.S. academic anesthesiology departments in NIH funding. This included more than \$11.8 million in awarded NIH grants.

Earlier this year we were able to send a team of Certified Registered Nurse Anesthetists (CRNAs) to Nairobi, Kenya, to attend the inaugural Pan African Nurse Anesthetists Conference. The conference brought together non-physician anesthesia providers from 18 different countries in Africa for continued education and networking. The purpose was to reduce maternal mortality by improving safe access to anesthesia for pregnant women across Africa.

I hope you can take a few moments in the coming holiday weeks to reflect on your own accomplishments and those you have brought to the department. We are thankful for the diverse, vital, and generous community to which we all contribute.

2024 Dr. Charles Beattie Endowed Lectureship



Daniel J. Cole, MD, was the guest lecturer for the 2024 Dr. Charles Beattie Endowed Lectureship on Perioperative Medicine and Systems-Based Practice on Friday, October 4, 2024. His topic was "A Transformative Future for Perioperative Medicine: Connecting Purpose and Performance."

Eagle

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Eagle ascends to these important roles during a massive moment of growth for the department and hospital. This year, anesthesia services are now being provided at both Vanderbilt Bedford Hospital and Vanderbilt Tullahoma-Harton Hospital, which brings many more clinical positions to the department. VUH-wide, a 15-story, 470,000-square foot tower is being built, bringing additional adult inpatient beds, operating rooms, clinics and office space, thus needing additional staff to work these spaces.

“It’s a very dynamic time for VUMC and an exciting time to be part of leadership,” Eagle said. “We are at the forefront of clinical expansion and innovation in the perioperative space, and we continue to positively impact clinical care well beyond the borders of Nashville, often for patients who have been deemed too sick to be cared for by other medical centers. This is a great source of pride for our clinical teams.”

One goal Eagle hopes to accomplish is closing the gap a bit between leadership and faculty. Now that she’s been in the role for a few months, she said that she sees how one can get swept up into the administrative tasks, but she will be balancing clinical days.

“I think having visibility in the department is very important to really understanding the challenges of and barriers to providing excellent clinical care while also providing an environment in which faculty and healthcare providers can flourish in the academic setting,” she said. “Once you establish a thriving clinical team and provide the highest standards of clinical care, everything else follows—research, education, and innovation.”

Keeping faculty and their well-being is a focus Eagle plans to carry with her into this next chapter.

Mark Rice, MD, held this position previously and is now vice chair emeritus in the department. With the rapid growth happening, Rice will continue assisting with recruiting.

“Susan is the perfect person to take over. She does a lot of mentoring of young faculty, she already works with our professionalism group, and she has the confidence of a lot of our faculty,” Rice said. “We’ve been transitioning since

this announcement was made, and she’s easily taken over a lot of this.”

The formal appointment was made by Warren Sandberg, MD, PhD, Chair of Anesthesiology.

“Dr. Eagle has always been fearless with respect to challenging or novel assignments. In her assistant vice chair role, she has reached in to support and help individuals and divisions across the medical center, often far from her cardiac clinical home,” Sandberg said. “I knew when I appointed her to the vice chair position and nominated her as anesthesia periop executive medical director, we were getting a person fully committed to the VUMC patient care mission, no matter what setting.”

Eagle received her anesthesiology residency training at Medical College of Georgia (Augusta). In 2003, she joined the Anesthesiology faculty here at VUMC and completed a cardiothoracic anesthesiology fellowship in 2005. Throughout her tenure here, Eagle has held various leadership positions and served on many committees. In 2018, she achieved the rank of professor. Since 2021, she has served as assistant vice chair, Anesthesiology Faculty Affairs, focusing on faculty mentorship, professional development, and professional coaching. Eagle is currently funded with an NIH R01 grant (co-principal investigator) and a grant from the Department of Defense (co-investigator).

Recent honors for Eagle include the B.E. Smith Faculty Mentorship Award (2016); induction into VUMC’s Academy for Excellence in Clinical Medicine (2021, inaugural class); and Master Innovator Award, Center for Technology Transfer, Vanderbilt University (2023). Also in 2023, Meharry-Vanderbilt Alliance (MVA) presented Eagle with the inaugural Faculty Commitment to Student Excellence Award. In addition, she is the recipient of the 2024 WICTA (Women in Cardiothoracic Anesthesiology) Excellence in Mentoring Award from the Society of Cardiovascular Anesthesiologists.

Rice

Continued from page 1

Rice has a lengthy resume, filled with multiple careers, all of which he said he's enjoyed. From private practice to academic medicine to startup work, "I'd have to say that the academic work has been the most rewarding, honestly. I think back to all the residents that I've trained over the years, all the mentees that I've had, and I'm thankful for all the people that have mentored me."

With explosive growth coming to the medical center and department, Rice said it's important that he remain around to help with recruiting. Whether that involves having conversations with recruits, interviewing them, helping check references—whatever needs to be done—he's here to help.

Rice said his advice to recruits is to keep an open mind, nothing is forever, and don't be afraid to reinvent yourself.

"I never imagined that I'd be doing administrative work, and that's almost all that I do now. I thought I was going to be a researcher," he said. "So, I would tell people you can have several careers, it's much more fun."

Rice came to Vanderbilt from the University of Florida College of Medicine, Gainesville, where he served as section chief for General Surgery in the Department of Anesthesiology, and as chief of the department's Liver Transplantation Section.

He received his medical degree from the University of Wisconsin (Madison), and completed an internship in surgery, a research fellowship in the transplantation laboratory, and a residency in anesthesiology, all at University of Wisconsin Hospitals and Clinics in Madison. From a personal standpoint, family is important to him, and Rice said Nashville will remain home base. However, he's got children and grandchildren in three states, and his new role gives him the flexibility to be with family more often while also staying connected with friends and colleagues in Nashville.

Over the years Sandberg and Rice have been able to work in tandem. Sandberg said Rice has always been able to maintain focus on what makes academic anesthesiology special and rewarding, which for him has been the education and development of his eventual successors.

"His students and mentees appreciate this passion for what it is: a genuine desire to challenge, educate, and cultivate the student," Sandberg said. "Their appreciation is made tangible in the teaching awards he's won, not just at VUMC, but also at his previous institutions."

Rice mentioned receiving teaching awards as one of his most proud accomplishments. "I've had six teaching awards at three different institutions, which I'm very proud of. I had one at Wisconsin, two in Florida, and now three at Vanderbilt," he said. "From a professional standpoint, I'm probably most proud of that."

VUMC team attends first Pan African Nurse Anesthetists Conference

Article by Matt Batchelder, originally published on July 26, 2024, in VUMC News

Certified Registered Nurse Anesthetists (CRNAs) from Vanderbilt University Medical Center recently traveled to Kenya to attend the inaugural Pan African Nurse Anesthetists Conference. The VUMC group raised about \$34,000 to enable the trip while sponsoring 27 Africans to also attend the meeting.

The conference, which took place June 18-20 in Nairobi, Kenya, brought together non-physician anesthesia providers from 18 different countries in Africa for continued

education and networking. The purpose was to reduce maternal mortality by improving safe access to anesthesia for pregnant women across Africa.

According to the United Nations Population Fund (UNFPA) in Kenya, more than 80% of maternal deaths are attributed to poor quality of care. By increasing access to training, medical supplies and educated professionals, Vanderbilt professionals have been working to change that, said Brent Dunworth, CRNA, DNP, MBA, associate nurse executive for Advanced Practice at VUMC.

Dunworth noted that VUMC clinicians have been working in Kenya for about two decades, creating curriculum and training nurse anesthetists to address the maternal mortality crisis. This work was founded by Mark Newton, MD, professor of Anesthesiology, and has resulted in the minting of nearly 500 anesthesia nurses in a sustainable model with an exceptional reputation of quality care delivery. The African nurse anesthetists are often the sole anesthetic providers in their rural facilities.

Vanderbilt representatives and others began planning the conference in 2018. The original date was to be in 2020, but it was delayed until this year because of the COVID-19 pandemic.

“Our successes at Vanderbilt in advanced practice, which are many and award-winning and laudable, extend far beyond Middle Tennessee,” Dunworth said. “We have now taken those gifts halfway around the globe, and we are privileged to be able to share our expertise.”

The conference resulted in the formation of the African Association of Nurse Anesthetists, and a movement is underway to create a standard curriculum for nurse anesthetists throughout the continent in coordination with the International Federation of Nurse Anesthetists.

Several of the Department of Anesthesiology’s CRNAs were involved in planning the conference and traveled to Nairobi to lecture and lead workshops, including Dunworth, Jill

Moore, CRNA, MS; Michael Leersnyder, CRNA, DNAP; Casey Balthazar, CRNA, DNAP; and Heather Larson, CRNA, MS.

Faculty members included Greg Sund, MD, adjoint associate professor of Anesthesiology; Mark Newton, MD; professor of Anesthesiology; and Matt Kynes, MD, associate professor of Anesthesiology. Two of the department’s trainees, who are participating in an elective rotation in nearby Kijabe, Kenya, also attended: Hollie Humphries, MD, and Julian Rios, MD.

Many members of the Department of Anesthesiology contributed financially to the conference’s success. Thanks to the generosity of these donors, Vanderbilt International Anesthesia was able to award travel scholarships to 27 participants from 10 African countries to attend the conference.

“Fundraising efforts were infectious as our CRNA divisions competed to see which group could raise the most money to support this inaugural conference,” said Amanda Dickert, DNAP, CRNA, assistant professor of Clinical Anesthesiology. “Our CRNAs offered generous donations and volunteered to organize chili cook-offs, bake sales, raffles and silent auctions. This initiative provided numerous meaningful ways to participate in impactful global work, even for those unable to travel across the globe.”



Left: Greg Sund, MD; Mark Newton, MD; Brent Dunworth, DNP, MBA, CRNA; Hollie Humphries, MD; Julian Rios, MD; Jill Moore, MS, CRNA; Michael Leersnyder, DNAP, CRNA; Casey Balthazar, DNAP, CRNA; Heather Larson, MS, CRNA; and Matt Kynes, MD.

VUMC Anesthesiology 2024 Graduation



VUMC Department of Anesthesiology's graduation was held at the Frist Art Museum on the evening of June 15th. We had 18 graduates this year.



2024 Anesthesia Annual Awards Ceremony

B.E. Smith Mentorship and the Volker I.
Striipe Awards
Mark Rice, MD

Golden Apple Award
**William Chang, MD, Jeffery Clemmons,
MD, and Danial Shams, MD**

James Tayloe Gwathmey Award
Amber Wesoloski

Adult Multispecialty Anesthesia Resident Award
Brian Paoletti, MD

Ambulatory Resident Award
Brittney Jackson, MD

Cardiothoracic Anesthesia and Excellence in
Quality and Safety Resident Awards
Stephen Tapia-Ruano, MD

Cardiovascular (Veterans Affairs) and Obstetric
Anesthesia Resident Awards
Christine Henderson, MD

Critical Care and Neuroanesthesia Resident
Awards
Maggie O'Connor Whittle, MD

Hepato-Vascular and Regional Resident
Awards
Molly Brazil, MD

Hi-RiSE Resident Award
Anna-Maria Eid, MD

Pain Medicine Resident Award
Jenny Kim, MD

Pediatric Anesthesia and Resident Teacher of the
Year Awards
Jessica Clark, DO, MS

Perioperative Medicine Resident Award
Skyler Gordon, MD

Transesophageal Echocardiography Resident
Award
Ellen Stallings, MD

Chief Resident Award
**Ellen Stallings, MD,
Stephen Tapia-Ruano, MD, and
Maggie O'Connor Whittle, MD**

SRNA of the Year Award
Danielle Heredia, SRNA

CRNA Instructor of the Year Award
Margaret Bessey, CRNA

Anesthesia Tech of the Year Award
Jarvis Singleton

Junior CRNA Clinical Excellence Award
Carter Ivey, CRNA, DNAP

Senior CRNA Clinical Excellence Award
Tammy Freehling, CRNA

Vice-Chair's Award
Matthew Zapf, MD

New VUMC hospital expansion to be named Jim Ayers Tower

Article by **Nancy Humphrey**, originally published on Oct. 22, 2024, in VUMC News

Vanderbilt University Medical Center will name the new expansion tower for Vanderbilt University Hospital the Jim Ayers Tower in recognition of Janet and Jim Ayers' philanthropic legacy and abiding interest in improving the health care and quality of life for Tennesseans.

The naming of the 15-level, 470,000-square-foot tower, currently under construction between 21st Avenue South and Medical Center Drive on the Main Campus in Nashville, honors the couple's steadfast community leadership and longtime connection to VUMC. The tower is scheduled to open its first floor — Level 7 — in October 2025.

A Parsons, Tennessee, native, Ayers has achieved business successes in financial services, real estate and health care ventures, and he is widely recognized for increasing educational opportunities for young people. In 1999, he established The Ayers Foundation, now known as the Ayers Foundation Trust, which supports a wide range of programs and institutions.

"We are honored to announce the Jim Ayers Tower, which will allow us to better fulfill the mission of Vanderbilt University Medical Center to make health care personal for the patients we serve. The tower's new space is essential as we expand to meet the needs of our rapidly growing Middle Tennessee communities," said Jeff Balsler, MD, PhD, President and CEO of VUMC and Dean of Vanderbilt University School of Medicine.

"As our largest facility expansion to date, this structure is being named to recognize the unparalleled dedication of Janet and Jim Ayers to the health and well-being of all Tennesseans."

The Ayerses expressed their gratitude at having the tower named in Jim's honor.



Construction of the new tower is taking place amid the daily hustle and bustle of Vanderbilt University Medical Center's campus on 21st Avenue in Nashville. This picture captures progress as of early October 2024. (photo by Susan Urmy)

"To have my name connected with empowering access to health care is the honor of a lifetime," Ayers said. "This isn't just a building but rather a space for families to receive care that can improve their lives. I'm humbled that it also represents how much Janet and I value the well-being of everyone in the community and that it will stand as a reminder long into the future of the importance of helping people," he said.

"Jim and I hold Nashville and all of Tennessee close to our hearts," said Janet Ayers, who spent her career in health care administration. "The Jim Ayers Tower reflects the principles we share with VUMC of serving others and ensuring the best quality of life, including for those who may otherwise be underserved. We are so touched to see Jim recognized in such a meaningful way."

The Ayerses have a long history of philanthropy and community leadership.

"Janet and Jim's desire to open doors and change lives has had a widespread impact on so many institutions, so many people, and in so many ways all across Tennessee, from rural Tennessee to Nashville and beyond. As leaders who truly care about and invest in others, they have influenced education, research, patient care and much more," said C. Wright Pinson, MBA, MD, Deputy CEO and Chief Health System Officer for VUMC.

At VUMC, the Jim Ayers Institute for Precancer Detection and Diagnosis at Vanderbilt-Ingram Cancer Center was established in 2005 to help researchers find early markers for colorectal cancer that could improve diagnosis and potentially save lives.

Within nine years, the center had yielded an impressive return: identification of protein “signatures” of the genetic mutations that drive the nation’s second leading cancer killer after lung cancer.

Janet Ayers has served as a member of the Vanderbilt Eye Institute (VEI) Advisory Board since 2012, and the couple has supported VEI research in regenerative visual neuroscience, low-vision patients and families, and a directorship in the low-vision program. Joshua Robinson, OD, assistant professor of Clinical Ophthalmology and Visual Sciences, holds the Janet and Jim Ayers Directorship.

Their community involvement is also extensive. They established the Ayers Foundation Scholarship Program, supporting almost 20,000 students over the past 25 years to attend postsecondary education in over 100 institutions of higher education.

In recognition of their community support, the Ayerses received the Association of Fundraising Professionals 2007 Philanthropists of the Year Award.

The Jim Ayers Tower is the largest expansion to date for Vanderbilt University Hospital.

The last sizable expansion was the 11-floor Critical Care Tower that opened in 2009. The need for the tower is a result of the area’s booming population growth and the hospital operating at more than 90% capacity most of the year. It will initially include 180 inpatient beds, with five shelled floors for additional inpatient beds in the future.

The building will also include radiology services, a spacious lobby, a three-floor expansion to Central Garage adding 600 spaces, and 44,000 square feet of operating room space in adjacent Medical Center East. A two-story bridge will connect the new tower to the existing The Vanderbilt Clinic at levels 3 and 4.

The Jim Ayers Tower will also include a statue of his likeness, commemorating Ayers’ enduring influence for generations of patients. Serving as the new front door to Vanderbilt University Hospital, the building serves as a visible reminder of the monumental impact Janet and Jim Ayers have had on the people of Tennessee.

By the Numbers

Currently under construction between 21st Avenue South and Medical Center Drive on the Main Campus in Nashville, the Jim Ayers Tower is the largest expansion to date for Vanderbilt University Hospital.

Scheduled to open its first floor — Level 7 — in October 2025, the Jim Ayers Tower will include:

- 15 levels
- 470,000 square feet
- 180 inpatient beds initially
- 5 shelled floors for future inpatient beds
- Radiology services
- Spacious lobby

The building project will also include:

- 3 floors with 600 parking spaces in Central Garage
- 44,000 square feet of operating room space in adjacent Medical Center East
- 2-story bridge connecting the Jim Ayers Tower and The Vanderbilt Clinic at levels 3 and 4

Department Accomplishments

Jonathan Wanderer, MD, MPhil, and Ron Bell, CRNA, DNAP, presented a talk on May 2 at XGM 2024, the annual conference of Epic's Expert Group Meetings, held April 29- May 9 in Verona, Wisconsin. The talk was titled "Block and Tackle: Two Approaches for Coordinating Regional Anesthetics."

Congratulations to **Melissa Chont** for being promoted to Clinical/Translational Research Coordinator IV within the Research Division.

Congratulations to **Thomas Myles** for being promoted to Research Assistant II within the Research Division.

Holly Ende, MD, Jonathan Wanderer, MD, MPhil, and Matt Zapf, MD, presented at the Vanderbilt Symposium on Implementation Research in the Learning Health System. Their presentation was titled "Tackling Clinical Challenges with Artificial Intelligence: Implementing Models into Practice."

Congratulations to the **faculty and CRNAs at Vanderbilt Cool Springs Surgery Center**. They have been nationally recognized as one of the top Ambulatory Surgery Centers by U.S. News & World Report's inaugural ranking of the best ASCs in the state of Tennessee.

Christina Boncyk, MD, was promoted to Associate Professor.

Lindsey Efird, MD, was selected as the Medical Director of our FEL Surgery Center.

Lauren Siemer, MD, appointed to Director of Undergraduate Medical Education.

Daniel Shams, MD, appointed to the leadership position of Rotation Director, APRN Regional Anesthesia/APS-PMCS.

Stephanie Woodward, MD, appointed to Obstetric Anesthesiology Fellowship Director.

John Bryant, MD, was named as Assistant Program Director of the Adult Cardiothoracic Anesthesiology Fellowship.

Daniel Larach, MD, MSTR, has been promoted to Associate Professor of Anesthesiology.

Vikram Tiwari, PhD, was promoted to Professor of Anesthesiology.

Brooke Hoover was promoted to Program Manager in the Education Office.

David McIlroy, MBBS, MD, MClInEpi, has been promoted to Professor of Anesthesiology.

Julia Mitchell has been promoted to Research Nurse Specialist IV (PCRI).

Nicholas Statzer, MD, appointed to Associate Director of the Acute Pain and Perioperative Medicine Consult Services.

Martha Tanner has been promoted to Senior Communications Specialist in the Chair's Office.

Aditi Balakrishna, MD, accepted the role of Quality & Patient Safety Director.

Jonathan Wanderer, MD, MPhil, was nominated back to the Epic Anesthesia Steering Board.

Susan Eagle, MD, has been named the new executive vice chair for the Department of Anesthesiology, effective July 1.

Congratulations to **Julie Bohannon, PhD**, and graduate student **Mary Oliver** for being selected as a mentee-mentor pair for the Howard Hughes Gilliam Fellowship! Vanderbilt has been awarded one out of 50 fellowships nationwide.

Lusine Danakian, MD, accepted the role of Associate Quality and Patient Safety Director.

Susan Eagle, MD, has been accepted into the membership of the Foundation for Anesthesia Education and Research (FAER) Academy of Research Mentors in Anesthesiology. Academy members include academic anesthesiologists who have demonstrated outstanding contributions to the development of anesthesiologist investigators.

Jason Slagle, PhD, was promoted to Research Professor of Anesthesiology.

Michelle Binkley has been promoted to the role of Administrative Supervisor.

Tanya Bradley has been promoted to Administrative Supervisor.

Lexi Davis has been promoted to Administrative Supervisor.

Erica Luhrs was promoted to Administrative Supervisor.

Lisa McIntosh has been promoted to Program Manager for the residency program.

Willie Agee, MD, PhD, joined the Office of Educational Affairs as Assistant Program Director of Anesthesiology Residency.

Meredith Kingeter, MD, has been promoted to Associate Program Director of Anesthesiology Residency.

Cara Lyle started a new position as Associate Program Manager for our Pediatric Anesthesiology, Cardiothoracic Anesthesiology, and Pain Medicine fellowships.

Rachel Herrmann was promoted to Financial Manager.

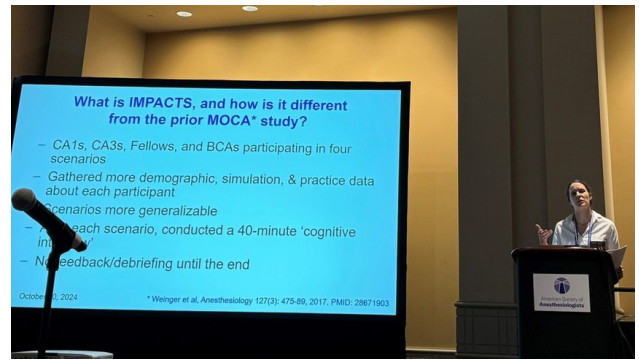
Amy Zipp has been promoted to Program Manager in the Research Division.

Christian Jasper was promoted to Associate Program Manager in our Research Division.

Dr. Jonathan Wanderer was invited to speak at a virtual Grand Rounds meeting for the Department of Anesthesiology at the Mayo Clinic Hospital in Phoenix, Arizona. He discussed the “Artificial Intelligence in Anesthesia: Are Zombie Robots Going To Take Your Job?”

Christie Crotts, CRNA, received CRNA of the Year award for National Advanced Practice Provider (APP) Week.

Department attends 2024 American Society of Anesthesiologists Annual Meeting in Philadelphia, Pennsylvania



VANDERBILT UNIVERSITY | Department of Anesthesiology
MEDICAL CENTER

Academic Excellence in Action

This guide represents our department's contribution of over 70 activities at the 2024 ASA Annual Meeting:

<ul style="list-style-type: none"> 21 Medically Challenging Cases 8 Hands-on Workshops 8 Snap-Talks 7 Oral Presentations 6 Panels 5 ePosters 4 MCC Paper Posters 	<ul style="list-style-type: none"> 3 Paper Posters 2 Point-Counterpoints 2 Special Sessions 1 Clinical Forum 1 MCC Quality Improvement Project 1 Pre-Recorded Virtual Panel 1 Residency Programs Open House
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High or low oxygen levels are safe during heart surgery: study

Article by **Matt Batchelder**, originally published on August 21, 2024, in VUMC News

Two out of 10 people who receive cardiac surgery are affected by acute kidney injury, prolonging their hospital stay and increasing their risk for chronic kidney disease, cognitive decline and heart failure.

A Vanderbilt University Medical Center study explored one possible cause — hyperoxia or high concentrations of oxygen given to such patients during surgery — as opposed to doses more similar to air. The study, recently published in the journal *JAMA Surgery*, concluded that hyperoxia increased oxidative stress during surgery, but this effect did not persist after surgery and did not lead to more acute kidney injury.

The results suggest that administering high or low levels of oxygen are both safe during cardiac surgery, said corresponding author Frederic (Josh) Billings IV, MD, MSc, professor of Anesthesiology and Medicine.

“This study broadens the acceptability of various oxygen administration strategies during cardiac surgery,” Billings said.

The clinical trial, from April 2016 to October 2020 with one year of follow-up, took place entirely at VUMC. Participants were randomly assigned to receive high oxygen (hyperoxia) or a lower amount of oxygen intended to maintain normal blood oxygen levels (normoxia).

Two hundred study participants were assessed for oxidative stress, acute kidney injury, delirium, myocardial injury, atrial fibrillation and other secondary outcomes. Other than an increase in oxidative stress, the participants in the study who received hyperoxia had similar outcomes as those with normoxia.

First author Marcos Lopez, MD, MS, associate professor of Anesthesiology, said, “The study was designed to examine oxygen administration at the high and low ends of the spectrum to maximize the likelihood of seeing an oxygen treatment effect. We achieved oxygen treatment goals with meticulous protocol adherence but saw no significant differences in organ injury.”

Billings noted that the study covered just the operative period and suggests future research might examine the results of extending hyperoxia or normoxia into the postoperative period. This is a time when cardiac surgery patients receive mechanical ventilation and may benefit from other oxygen administration strategies, Billings said.

Other authors of the study were Matthew Shotwell, PhD, Cassandra Hennesey, MS, Mias Pretorius, MBChB, David McIlroy, MBBS, Melissa Kimlinger, MD, Eric Mace, MD, Terek Absi, MD, Ashish Shah, MD, and Nancy Brown, MD.



Josh Billings, MD



Marcos Lopez, MD, MS

Recent Publications

Aggarwal AK, Barad M, Chai NC, Furnish T, **Mishra P**, Kohan L, Moeschler S, Reddy RD, Yalamuru B. Current state of the pain medicine match: perspective and an eye to the future. *Reg Anesth Pain Med*. 2024 Sep 3:rapm-2024-105770. doi: 10.1136/rapm-2024-105770. Epub ahead of print. PMID: 39231574.

Alvis BD, Brophy C, Cheung-Flynn J, **Case M**, Hocking K. A Porcine Model of Acute Respiratory Failure with a Continuous Infusion of Oleic Acid. *J Vis Exp*. 2024 Mar 8;(205). doi: 10.3791/65963. PMID: 38526074.

Azu MA, **Han GT**, Wolf JM, Naples AJ, Chawarska K, Dawson G, Bernier RA, Jeste SS, Dziura JD, Webb SJ, Sugar CA, Shic F, McPartland JC. Clinician-caregiver informant discrepancy is associated with sex, diagnosis age, and intervention use among autistic children. *Autism*. 2024 Sep 30:13623613241279999. doi: 10.1177/13623613241279999. Epub ahead of print. PMID: 39344965.

Bachman TE, Newth CJL, Ross PA, **Patel N**, Bhalla A. Association of extreme hyperoxemic events and mortality in pediatric critical care: an observational cohort study. *Front Pediatr*. 2024 Jul 31;12:1429882. doi: 10.3389/fped.2024.1429882. PMID: 39144469; PMCID: PMC11322569.

Barajas MB, Oyama T, Shiota M, **Li Z**, Zaum M, Zecevic I, **Riess ML**. Ischemic Post-Conditioning in a Rat Model of Asphyxial Cardiac Arrest. *Cells*. 2024 Jun 17;13(12):1047. doi: 10.3390/cells13121047. PMID: 38920675; PMCID: PMC11201463.

Beyene RT, Wallace MW, **Statzer N**, Hamblin SE, Woo E, Nelson SD, **Allen BFS**, McEvoy MD, Riffert DA, Wesoloski AN, Ye F, Irlmeier R, Fiorentino M, Dennis BM. Comparison of thoracic epidural catheter and continuous peripheral infusion for management of traumatic rib fracture pain. *J Trauma Acute Care Surg*. 2024 Sep 13. doi: 10.1097/TA.0000000000004445. Epub ahead of print. PMID: 39269315.

Bhutiani M, **Hester DL**, **Lonsdale HJ**. Artificial Intelligence and the Simulationists:More Iterations Needed. *Simul Healthc*. 2024 Jun 25. doi: 10.1097/SIH.0000000000000803. Epub ahead of print. PMID: 38922444.

Bieber ED, **Smith HAB**, Fuchs DC, Gangopadhyay M. Altered Mental Status and Delirium in Pediatric Patients. *Semin Neurol*. 2024 Sep 30. doi: 10.1055/s-0044-1791227. Epub ahead of print. PMID: 39348852.

Billings FT 4th, **McIlroy DR**, Shotwell MS, **Lopez MG**, Vaughn MT, Morse JL, Hennessey CJ, **Wanderer JP**, Semler MW, Rice TW, Wunsch H, Kheterpal S. Determinants and practice variability of oxygen administration during surgery in the U.S., a retrospective cohort study. *Anesthesiology*. 2024 May 17. doi: 10.1097/ALN.0000000000005078. Epub ahead of print. PMID: 38759157.

Brenn BR, Baidya J, Choudhry DK. Management of Cerebrospinal Fluid Leak After Intrathecal Baclofen Pump Procedures in Adolescents With Cerebral Palsy: A Retrospective Study. *Cureus*. 2024 Jun 3;16(6):e61582. doi: 10.7759/cureus.61582. PMID: 38962607; PMCID: PMC11221390.

Brenn BR, Disilvio GM, Yarnall E, Steindler J, Tarazi S, Rompala A, Akhnouk K, Choudhry DK. A Comparative Evaluation of Unilateral and Bilateral Sequential Lung Isolation for Vertebral Body Tethering: A Retrospective Propensity Matched Analysis. *Cureus*. 2024 May 6;16(5):e59723. doi: 10.7759/cureus.59723. PMID: 38854196; PMCID: PMC11156618.

Brummel NE, **Hughes CG**, McNeil JB, **Pandharipande PP**, Thompson JL, Orun OM, Raman R, Ware LB, Bernard GR, Harrison FE, Ely EW, Girard TD. Systemic inflammation and delirium during critical illness. *Intensive Care Med*. 2024 Apr 22. doi: 10.1007/s00134-024-07388-6. Epub ahead of print. PMID: 38647548.

Carmona-Berrio D, Adarve-Rengifo I, Marshall AG, Vue Z, Hall DD, Miller- Fleming TW, Actkins KV, Beasley HK, Almonacid PM, Barturen-Larrea P, Wells QS, **Lopez MG**, Garza-Lopez E, Dai DF, Shao J, Neikirk K, **Billings FT 4th**, Curci JA, Cox NJ, Gama V, Hinton A Jr, Gomez JA. SOX6 expression and aneurysms of the thoracic and abdominal aorta. *iScience*. 2024 Jul 24;27(9):110436. doi: 10.1016/j.isci.2024.110436. PMID: 39262802; PMCID: PMC11388018.

Chandrashekar AS, Hymel A, Pennings J, Wilson JM, **Gupta RK**, Polkowski GG, Martin JR. Is a Failed Spinal Attempt Associated with a Worse Clinical Course Following Primary Total Hip and Knee Arthroplasty? *J Arthroplasty*. 2024 May 29:S0883-5403(24)00521-7. doi: 10.1016/j.arth.2024.05.049. Epub ahead of print. PMID: 38821430.

Clifton JC, Ende HB, Rathnam C, Freundlich RE, Sandberg WS, Wanderer JP. A Mobile Post Anesthesia Care Unit Order Reminder System Improves Timely Order Entry. *J Med Syst*. 2024 Jun 10;48(1):60. doi: 10.1007/s10916-024-02079-7. PMID: 38856813; PMCID: PMC11164754.

Coronado RA, Pennings JS, Master H, **Brintz CE**, Cole KR, Helmy J, Oleisky ER, Davidson C, Abtahi AM, Stephens BF, Archer KR. The Combined Influence of Sleep Disturbance and Depression on 12-month Outcomes after Lumbar Spine Surgery. *Spine (Phila Pa 1976)*. 2024 Apr 12. doi: 10.1097/BRS.0000000000005000. Epub ahead of print. PMID: 38605675.

Cummins ML, Wechsler S, Delmonte G, **Schlesinger JJ**. The emerging role of Panx1 as a potential therapeutic target for chronic pain. *Mil Med Res*. 2024 Jul 5;11(1):44. doi: 10.1186/s40779-024-00549-0. PMID: 38970139; PMCID: PMC11229491.

Cummins ML, Yang S, Sicard C, Shive J, **Schlesinger JJ**. Designing Novel Physiologic Monitor Displays for Combat Medics. *Mil Med*. 2024 Aug 19;189(Supplement_3):551-559. doi: 10.1093/milmed/usae183. PMID: 39160889.

Denton JS. Dam antidepressants. *Nat Chem Biol*. 2024 Mar 7. doi: 10.1038/s41589-024-01567-8. Epub ahead of print. PMID: 38454073.

Dikalova A, Fehrenbach D, Mayorov V, Panov A, **Ao M**, Lantier L, Amarnath V, **Lopez MG, Billings FT 4th**, Sack MN, Dikalov S. Mitochondrial CypD Acetylation Promotes Endothelial Dysfunction and Hypertension. *Circ Res*. 2024 Apr 19. doi: 10.1161/CIRCRESAHA.123.323596. Epub ahead of print. PMID: 38639088.

Douville NJ, Bastarache L, He J, Wu KH, Vanderwerff B, Bertucci-Richter E, Hornsby WE, Lewis A, Jewell ES, Kheterpal S, Shah N, Mathis M, Engoren MC, Douville CB, Surakka I, Willer C, **Kertai MD**. Polygenic Score for the Prediction of Postoperative Nausea and Vomiting: A Retrospective Derivation and Validation Cohort Study. *Anesthesiology*. 2024 Sep 9. doi: 10.1097/ALN.0000000000005214. Epub ahead of print. PMID: 39250560.

Durbhakula S, Wang TY, Segna KG, Limerick GR, Broachwala MY, Schatman ME, Zaidi MA, Siddarthan IJ, Toy S. Shifts in Students' Attitudes Towards Pain Patients, Pain, and Opioid Management Following a Dedicated Medical School Pain Curriculum. *J Pain Res*. 2024 Mar 2;17:827-835. doi: 10.2147/JPR.S447671. PMID: 38449798; PMCID: PMC10916513.

Dye ME, Runyan P, Scott TA, Dietrich MS, Hatch LD, **France D**, Alrifai MW. Small Patients but a Heavy Lift: Workload and Burnout of Advanced Practice Providers and Physicians in a Level IV Neonatal Intensive Care Unit. *J Perinat Neonatal Nurs*. 2024 Apr-Jun 01;38(2):192-200. doi: 10.1097/JPN.0000000000000804. Epub 2024 May 13. PMID: 38758274; PMCID: PMC11104510.

Ende HB, Bateman BT. Quality Improvement in the Digital Age: The Promise of Using Informatics to Improve Obstetric Anesthesia Care. *Anesth Analg*. 2024 Sep 4. doi: 10.1213/ANE.0000000000006841. Epub ahead of print. PMID: 39231038.

Ende HB, Domenico HJ, Polic A, Wesoloski A, Zuckerwise LC, Mccoy AB, Woytash AR, Moore RP, Byrne DW. Development and Validation of an Automated, Real-Time Predictive Model for Postpartum Hemorrhage. *Obstet Gynecol*. 2024 May 10. doi: 10.1097/AOG.0000000000005600. Epub ahead of print. PMID: 38723260.

Ende HB, Habib AS, Lim G, Landau R, Beilin Y, Wong CA. Behavioural disorders after prenatal exposure to anaesthesia for maternal surgery: is it the anaesthesia or the surgery? Comment on Br J Anaesth 2024; 132: 899-910. Br J Anaesth. 2024 Jun 27:S0007-0912(24)00326-X. doi: 10.1016/j.bja.2024.05.023. Epub ahead of print. PMID: 38942643.

Ende HB, Wanderer JP. NPO! Ready to Go?: Do Current Fasting Guidelines Ensure Empty Stomach in Diabetic Patients? Anesthesiology. 2024; 140(4):A16-A16.

Ende HB, Wanderer JP. Rev It Up! A Novel Drug to Improve Respiratory Drive during Propofol Sedation. Anesthesiology. 2024; 140(6):A16-A16.

Ende HB, Yuan I, Wanderer JP. Itsy Bitsy Inductions: The Effect of High-dose Sevoflurane Following Loss of Consciousness in Children. Anesthesiology. 2024; 140(5):A16-A16.

Ewing JK, Cassling KE, Hanneman MA, Broucek JR, **Raymond BL**, Pierce RA, Geiger TM, Bradley JF 3rd. Development of an Enhanced Recovery After Surgery Program in Ventral Hernia. Am Surg. 2024 Aug 3:31348241268330. doi: 10.1177/00031348241268330. Epub ahead of print. PMID: 39096287.

Ferdaus MZ, Terker AS, **Koumangoye RB**, Al-Qusairi L, Welling PA, **Delpire E**. Deletion of KS-WNK1 promotes NCC activation by increasing WNK1/4 abundance. Am J Physiol Renal Physiol. 2024 Jul 4. doi: 10.1152/ajprenal.00101.2024. Epub ahead of print. PMID: 38961847.

Franklin AD, Tsao K, Barq R, Kelley-Quon LI, Veneziano G, Aldrink JH. Updates From the Other Side of the Drape: Recent Advances in Multimodal Pain Management and Opioid Reduction Among Pediatric Surgical Patients. J Pediatr Surg. 2024 Mar 16:S0022-3468(24)00179-9. doi: 10.1016/j.jpedsurg.2024.03.027. Epub ahead of print. PMID: 38614947.

Gupta RK, Pawa A. Beam me up, Scotty! Apple Vision Pro highlights how we could teleport ultrasound-guided regional anesthesia education into the future. Reg Anesth Pain Med. 2024 Apr 4:rapm-2024-105424. doi: 10.1136/rapm-2024-105424. Epub ahead of print. PMID: 38580337.

Haines D, Grell R, Huang J, Abrams B, **Kertai MD**. The Important Thing Is Not to Stop Questioning. Semin Cardiothorac Vasc Anesth. 2024 Aug 29:10892532241279627. doi: 10.1177/10892532241279627. Epub ahead of print. PMID: 39207841.

Hurley NC, **Gupta RK**, Schroeder KM, Hess AS. Reply: 'Danger, Danger, Gaston Labat! Does zero-shot artificial intelligence correlate with anticoagulation guideline recommendations for neuraxial anesthesia?'. Reg Anesth Pain Med. 2024 Mar 14:rapm-2024-105441. doi: 10.1136/rapm-2024-105441. Epub ahead of print. PMID: 38485234.

Jameson AN, Siemann JK, **Grueter CA, Grueter B**, McMahan DG. Effects of age and sex on photoperiod modulation of nucleus accumbens monoamine content and release in adolescence and adulthood. Neurobiol Sleep Circadian Rhythms. 2024 Mar 26;16:100103. doi: 10.1016/j.nbscr.2024.100103. PMID: 38585223; PMCID: PMC10990739.

Jevotovsky DS, Chopra H, Pak DJ, **Durbhakula S**, Shustorovich A, Juneja T, Broachwala MY, AlFarra T, Silver C, Kreitzer G, Oreoluwa P, Weissman BB, AlFarra A, Mayrsohn BG, Orhurhu V, Emerick T, Furnish T, Castellanos JP. Psilocybin and chronic neuropathic pain: a systematic review. Reg Anesth Pain Med. 2024 Aug 8:rapm-2024-105532. doi: 10.1136/rapm-2024-105532. Epub ahead of print. PMID: 39106989.

Jevotovsky DS, Suarez M, Chopra H, **Marascalchi BJ**. Peripheral nerve stimulation (PNS) of the phrenic nerve for intractable hiccups: a novel use case report. Reg Anesth Pain Med. 2024 Aug 5:rapm-2024-105796. doi: 10.1136/rapm-2024-105796. Epub ahead of print. PMID: 39106986.

Krause M, Tzeng E, **Kertai MD**, Abrams BA. A Year of Changes: The End of the Pandemic Marks the Beginning of New Priorities. Semin Cardiothorac Vasc Anesth. 2024 Jun;28(2):61-65. doi: 10.1177/10892532241255427. PMID: 38730539.

Kuntz MT, Eagle SS, Dalal A, Samouil MM, Staudt GE, **Londergan BP**. What an anesthesiologist should know about pediatric arrhythmias. *Paediatr Anaesth*. 2024 Aug 15. doi: 10.1111/pan.14980. Epub ahead of print. PMID: 39148245.

Lefevre RJ, **Jelly CA**, Schmelz C, Bennett J, Shi Y, Shotwell M, **Ford J, Hernandez A**. Comparison of i-gel® and LMA® Supreme™ for Facilitating Fiberoptic Endotracheal Intubation: A Prospective Randomized Trial. *AANA J*. 2024 Jun;92(3):197-205. PMID: 38758714.

Lemoine N, Wakefield B, **Agee W, Bauchat J, Ende H, Raymond B**. Do essential oil diffusers during labor pose a contamination risk to sterile neuraxial procedures? *Int J Obstet Anesth*. 2024 Jul 23;104237. doi: 10.1016/j.ijoa.2024.104237. Epub ahead of print. PMID: 39227291.

Li K, Satpute Janve V, **Denton J**. Characterization of four structurally diverse inhibitors of SUR2-containing K⁺ATP channels. *Channels (Austin)*. 2024 Dec;18(1):2398565. doi: 10.1080/19336950.2024.2398565. Epub 2024 Sep 20. PMID: 39303216; PMCID: PMC11418212.

Lonsdale H, O'Reilly-Shah VN, Padiyath A, Simpao AF. Supercharge Your Academic Productivity with Generative Artificial Intelligence. *J Med Syst*. 2024 Aug 8;48(1):73. doi: 10.1007/s10916-024-02093-9. PMID: 39115560.

Lonsdale H, Rodriguez K, Shargo R, Ekblad M, Brown JM, Dolan I, Fierstein JL, Miller A, Dey A, Peck J, Rehman MA, Wilsey MJ. Natural airway as an alternative to intubation for pediatric endoscopic esophageal foreign body removal: A retrospective cohort study of 326 patients. *Paediatr Anaesth*. 2024 Apr 9. doi: 10.1111/pan.14888. Epub ahead of print. PMID: 38591665.

Lopez MG, Shotwell MS, Hennessy C, **Pretorius M, McIlroy DR**, Kimlinger MJ, Mace EH, Absi T, Shah AS, Brown NJ, **Billings FT 4th**; ROCS trial investigators. Intraoperative Oxygen Treatment, Oxidative Stress, and Organ Injury Following Cardiac Surgery: A Randomized Clinical Trial. *JAMA Surg*. 2024 Aug 7:e242906. doi: 10.1001/jamasurg.2024.2906. Epub ahead of print. PMID: 39110454; PMCID: PMC11307166. (*ROCS trial investigators: Robert Deegan, Susan S Eagle, Antonio Hernandez, Brian J Gelfand, Miklos D Kertai, Meredith Kingeter, Ryan LeFevre, Frederic W Lombard, Michael F Mantinan, Kelly K Mishra, Andrew D Shaw, Kara K Siegrist, Ban Sileshi, Robert E Freundlich, Jonathan P Wanderer*)

Mart MF, Boehm LM, Kiehl AL, Gong MN, Malhotra A, Owens RL, Khan BA, Pisani MA, Schmidt GA, Hite RD, Exline MC, Carson SS, Hough CL, Rock P, Douglas IS, Feinstein DJ, Hyzy RC, Schweickert WD, Bowton DL, Masica A, Orun OM, Raman R, Pun BT, Strength C, Rolfsen ML, **Pandharipande PP**, Brummel NE, **Hughes CG**, Patel MB, Stollings JL, Ely EW, Jackson JC, Girard TD. Long-term outcomes after treatment of delirium during critical illness with antipsychotics (MIND-USA): a randomised, placebo-controlled, phase 3 trial. *Lancet Respir Med*. 2024 Apr 30:S2213-2600(24)00077-8. doi: 10.1016/S2213-2600(24)00077-8. Epub ahead of print. PMID: 38701817.

McBride MA, Caja KR, Patil TK, Owen AM, Luan L, **Bohannon JK, Hernandez A**, Stothers CL, Trenary IA, Rahim M, Young JD, Calcutt MW, Stephens VR, **Davis X**, Oliver MA, **Hao D**, Si C, McRae M, Nguyen KK, Davis NS, **Wang J**, Patil NK, **Sherwood ER**. Immunoresponsive Gene 1 Facilitates TLR4-agonist-Induced Augmentation of Innate Antimicrobial Immunity. *J Leukoc Biol*. 2024 Oct 1;qiae198. doi: 10.1093/jleuko/qiae198. Epub ahead of print. PMID: 39351765.

McIlroy DR. Predictive modelling for postoperative acute kidney injury: big data enhancing quality or the Emperor's new clothes? *Br J Anaesth*. 2024 Jun 19:S0007-0912(24)00306-4. doi: 10.1016/j.bja.2024.05.013. Epub ahead of print. PMID: 38902116.

Nabukenya MT, **Newton MW**, Gray RM, Kapoor I, Kuratani N, Moore J, Rai E, Evans FM. The role of collaboration in educating the global pediatric anesthesia workforce. *Paediatr Anaesth*. 2024 Mar 12. doi: 10.1111/pan.14877. Epub ahead of print. PMID: 38470009.

Nabukhotna K, Kordus SL, Shupe JA, Cano Rodríguez R, Smith A, **Bohannon JK**, Washington MK, Lacy DB. Purified CDT toxins and a clean deletion within the CDT locus provide novel insights into the contribution of binary toxin in cellular inflammation and *Clostridioides difficile* infection. *PLoS Pathog*. 2024 Sep 19;20(9):e1012568. doi: 10.1371/journal.ppat.1012568. PMID: 39298531; PMCID: PMC11444381.

Nishizawa Y, Thompson KC, Yamanashi T, Wahba NE, Saito T, Marra PS, Nagao T, Nishiguchi T, Shibata K, Yamanishi K, **Hughes CG, Pandharipande P**, Cho H, Howard MA 3rd, Kawasaki H, Toda H, Kanazawa T, Iwata M, Shinozaki G. Epigenetic signals associated with delirium replicated across four independent cohorts. *Transl Psychiatry*. 2024 Jul 4;14(1):275. doi: 10.1038/s41398-024-02986-w. PMID: 38965205; PMCID: PMC11224347.

O'Brien JR, Lee AH, **Stone AL**, Dieckmann NF, Zalewski M, Wilson AC. Maternal depression, parenting, and child psychological outcomes in the context of maternal pain. *Child Dev*. 2024 Apr 25. doi: 10.1111/cdev.14106. Epub ahead of print. PMID: 38664925.

O'Gara B, **Boncyk C**, Meiser A, Jerath A, Bellgardt M, Jabaudon M, Beitler JR, **Hughes CG**. Volatile Anesthetic Sedation for Critically Ill Patients. *Anesthesiology*. 2024 Jul 1;141(1):163-174. doi: 10.1097/ALN.0000000000004994. PMID: 38860793.

Patel H, Dupuis L, Bacchetta M, **Hernandez A**, Kanwar MK, Lindenfeld J, Shah Z, Siddiqi HK, Sinha SS, Shah AS, Schlendorf KH, Rali AS. Three-year outcomes after bridge to transplantation ECMO-pre- and post-2018 UNOS revised heart allocation system. *J Heart Lung Transplant*. 2024 Aug 7:S1053-2498(24)01785-6. doi: 10.1016/j.healun.2024.07.025. Epub ahead of print. PMID: 39122220.

Poorsattar SP, Kumar N, Vanneman M, Kinney D, **Jelly CA**, Bodmer N, Lefevre R, Dalia A, Bardia A. The Year in Electrophysiology: Selected Highlights From 2023. *J Cardiothorac Vasc Anesth*. 2024 Aug;38(8):1641-1649. doi: 10.1053/j.jvca.2024.04.009. Epub 2024 Apr 9. PMID: 38876815.

Rali AS, Tran L, **Balakrishna A**, Senussi M, Kapur NK, Metkus T, Tedford RJ, Lindenfeld J. Guide to Lung Protective Ventilation in Cardiac Patients. *J Card Fail*. 2024 Mar 19:S1071-9164(24)00079-4. doi: 10.1016/j.cardfail.2024.01.018. Epub ahead of print. PMID: 38513887.

Reese TJ, Domenico HJ, **Hernandez A**, Byrne DW, Moore RP, Williams JB, Douthit BJ, Russo E, McCoy AB, Ivory CH, Steitz BD, Wright A. Implementable Prediction of Pressure Injuries in Hospitalized Adults: Model Development and Validation. *JMIR Med Inform*. 2024 May 8;12:e51842. doi: 10.2196/51842. PMID: 38722209; PMCID: PMC11094428.

Ripoll JG, Orjuela RB, Ortoleva J, Nabzdyk CS, Dasani S, **Bhowmik S, Balakrishna A**, Hain S, Chang MG, Bittner EA, Ramakrishna H. HeartMate 3: Analysis of Outcomes and Future Directions. *J Cardiothorac Vasc Anesth*. 2024 Aug 15:S1053-0770(24)00531-7. doi: 10.1053/j.jvca.2024.08.016. Epub ahead of print. PMID: 39214797.

Roth I, Tiedt M, **Brintz C**, Thompson-Lastad A, Ferguson G, Agha E, Holcomb J, Gardiner P, Leeman J. Determinants of implementation for group medical visits for patients with chronic pain: a systematic review. *Implement Sci Commun*. 2024 May 23;5(1):59. doi: 10.1186/s43058-024-00595-8. PMID: 38783388; PMCID: PMC11112917.

Salwei ME, Reale C. Workflow analysis of breast cancer treatment decision- making: challenges and opportunities for informatics to support patient-centered cancer care. *JAMIA Open*. 2024 Jun 21;7(2):ooae053. doi: 10.1093/jamiaopen/ooae053. PMID: 38911330; PMCID: PMC11192055.

Salwei ME, Weinger MB. Artificial Intelligence in Anesthesiology: Field of Dreams or Fire Swamp? Preemptive Strategies for Optimizing Our Inevitable Future. *Anesthesiology*. 2024 Aug 1;141(2):217-221. doi: 10.1097/ALN.0000000000005046. PMID: 38980165.

Schulte TE, Archie CA, Sherrer DM, **Franklin AD**, Tsai MH. Letter to the Editor [No title available]. *J Clin Anesth*. 2024 Apr 18;96:111471. doi: 10.1016/j.jclinane.2024.111471. Epub ahead of print. PMID: 38640837.

Shahian DM, Paone G, Habib R, Krohn C, Bollen BA, Jacobs JP, Bowdish M, **Kertai MD**. The Society of Thoracic Surgeons Preoperative Beta Blocker Working Group Interim Report. *Ann Thorac Surg*. 2024 Aug 17;S0003-4975(24)00670-2. doi: 10.1016/j.athoracsur.2024.06.038. Epub ahead of print. PMID: 39159910.

Shams D, Sachse K, **Statzer N**, **Gupta RK**. Regional Anesthesia Complications and Contraindications. *Anesthesiol Clin*. 2024 Jun;42(2):329-344. doi: 10.1016/j.anclin.2023.11.013. PMID: 38705680.

Stone AL, Favret LH, Luckett T, Nelson SD, Quinn EE, Potts AL, Eden SK, Patrick SW, **Bruehl S**, **Franklin AD**. Association of Opioid Disposal Practices with Parental Education and a Home Opioid Disposal Kit Following Pediatric Ambulatory Surgery. *Anesth Analg*. 2024 Aug 8. doi: 10.1213/ANE.0000000000007104. Epub ahead of print. PMID: 39159290.

Stone AL, Pham A, Osmundson SS, Pedowitz A, Kingsley PJ, Marnett LJ, Patel S, Wickersham N, **Sorabella LL**, **Bruehl S**. Interactions Between Endocannabinoid and Endogenous Opioid Systems Prospectively Influence Postoperative Opioid Use in Pregnant Patients Undergoing Cesarean Delivery. *J Pain*. 2024 Apr 23;104548. doi: 10.1016/j.jpain.2024.104548. Epub ahead of print. PMID: 38663651.

Sutter C, **Freundlich RE**, **Raymond BL**, Osmundson S, Morton C, **McIlroy DR**, Shotwell M, Feng X, **Bauchat JR**. Effectiveness of Oral Iron Therapy in Anemic Inpatient Pregnant Women: A Single Center Retrospective Cohort Study. *Cureus*. 2024 Mar 25;16(3):e56879. doi: 10.7759/cureus.56879. PMID: 38659546; PMCID: PMC11041524.

Thibeault KC, Leonard MZ, Kondev V, Emerson SD, Bethi R, Lopez AJ, Sens JP, Nabit BP, Elam HB, Winder DG, Patel S, Kiraly DD, **Grueter BA**, Calipari ES. A cocaine-activated ensemble exerts increased control over behavior while decreasing in size. *Biol Psychiatry*. 2024 Jun 18;S0006-3223(24)01388-X. doi: 10.1016/j.biopsych.2024.06.008. Epub ahead of print. PMID: 38901723.

Thomas PA, Goodin BR, Meints SM, Owens MA, Wiggins AM, Quinn T, Long L, Aroke EN, **Morris MC**, Sorge RE, Overstreet DS. Adverse Childhood Experiences and Chronic Low Back Pain In Adulthood: The Role of Emotion Regulation. *J Pain*. 2024 Apr 29;104551. doi: 10.1016/j.jpain.2024.104551. Epub ahead of print. PMID: 38692399.

Turer RW, Gradwohl S, Stassun J, Johnson J, **Slagle J**, **Reale C**, **Beebe R**, Nian H, Zhu Y, Albert D, Coffman T, Alaw H, Wilson T, Just S, Peguillan P, Freeman H, Arnold DH, Martin JM, Suresh S, Coglio S, Hixon R, Ampofo K, Pavia AT, **Weinger M**, Williams D, Ozdas Weitkamp A. User-Centered Design and Implementation of an Interoperable FHIR Application for Pediatric Pneumonia Prognostication in a Randomized Trial. *Appl Clin Inform*. 2024 Apr 2. doi: 10.1055/a-2297-9129. Epub ahead of print. PMID: 38565189.

Walco JP, **Rengel KF**, McEvoy MD, **Henson CP**, **Li G**, Shotwell MS, Feng X, **Freundlich RE**. The Association between Preoperative Blood Pressures and Postoperative Adverse Events. *Anesthesiology*. 2024 Apr 1. doi: 10.1097/ALN.0000000000004991. Epub ahead of print. PMID: 38558232.

Ward MJ, Matheny ME, Rubenstein MD, Bonnet K, Dagostino C, Schlundt DG, **Anders S**, Reese T, Mixon AS. Determinants of appropriate antibiotic and NSAID prescribing in unscheduled outpatient settings in the veterans health administration. *BMC Health Serv Res*. 2024 May 18;24(1):640. doi: 10.1186/s12913-024-11082-0. PMID: 38760660; PMCID: PMC11102113.

Weatherly AJ, Johnson CA, Liu D, Kannankeril PJ, **Smith HAB**, Betters KA. Association of Hyperoxia During Cardiopulmonary Bypass and Postoperative Delirium in the Pediatric Cardiac ICU. *Crit Care Explor*. 2024 Jul 5;6(7):e1119. doi: 10.1097/CCE.0000000000001119. PMID: 38968166; PMCID: PMC11230773.

Welling PA, Little R, Al-Qusairi L, **Delpire E**, Ellison DH, Fenton RA, Grimm PR. Potassium-Switch Signaling Pathway Dictates Acute Blood Pressure Response to Dietary Potassium. *Hypertension*. 2024 Mar 11. doi: 10.1161/HYPERTENSIONAHA.123.22546. Epub ahead of print. PMID: 38465625.

Williams DJ, Nian H, Suresh S, **Slagle J**, Gradwohl S, Johnson J, Stassun J, **Reale C**, Just SL, Rixe NS, **Beebe R**, Arnold DH, Turer RW, Antoon JW, Sartori LF, **Freundlich RE**, Grijalva CG, Smith JC, Weitkamp AO, **Weinger MB**, Zhu Y, Martin JM. Prognostic clinical decision support for pneumonia in the emergency department: A randomized trial. *J Hosp Med.* 2024 May 26. doi: 10.1002/jhm.13391. Epub ahead of print. PMID: 38797872.

Winkler K, McKinney J, **Reale C**, **Anders S**, Rubenstein M, Cavagnini L, Crowe R, Ward MJ. A Qualitative Analysis of Barriers to Evidence-Based Care in the Prehospital Management of Patients with Suspected Acute Coronary Syndrome. *Prehosp Emerg Care.* 2024 Jul 22:1-9. doi: 10.1080/10903127.2024.2372817. Epub ahead of print. PMID: 38981118.

Woodward SK, McCrory EH, Neumann KE, Lu SF, McCarthy RJ, Peralta FM. P6 acupuncture versus sham acupuncture for prevention of intraoperative nausea and vomiting during cesarean delivery under neuraxial anesthesia: a randomized controlled trial. *Int J Obstet Anesth.* 2024 Aug 6:104242. doi: 10.1016/j.ijoa.2024.104242. Epub ahead of print. PMID: 39209577.

Wu A, Zhang Y, Bock F, Arroyo JP, **Delpire E**, Zhang MZ, Harris RC, Terker AS. Macrophage SPAK deletion limits a low potassium-induced kidney inflammatory program. *Am J Physiol Renal Physiol.* 2024 Sep 19. doi: 10.1152/ajprenal.00175.2024. Epub ahead of print. PMID: 39298551.

Zaleski KL, **Kuntz MT**, Staffa SJ, Van Pelt H, Hamilton ARL, Atkinson DB. Central Arterial Line Placement for Pediatric Cardiac Surgery: A Single-Center Experience. *Anesth Analg.* 2024 Jun 27. doi: 10.1213/ANE.0000000000006972. Epub ahead of print. PMID: 38935540.

Zarrin DA, Suri A, **McCarthy K**, Gaonkar B, Wilson BR, Colby GP, **Freundlich RE**, Gabel E. Machine learning predicts cerebral vasospasm in patients with subarachnoid haemorrhage. *EBioMedicine.* 2024 Jun 19;105:105206. doi: 10.1016/j.ebiom.2024.105206. Epub ahead of print. PMID: 38901147.

Zhang Y, Bock F, **Ferdaus M**, Arroyo JP, L Rose K, Patel P, **Denton JS**, **Delpire E**, Weinstein AM, Zhang MZ, Harris RC, Terker AS. Low potassium activation of proximal mTOR/AKT signaling is mediated by Kir4.2. *Nat Commun.* 2024 Jun 17;15(1):5144. doi: 10.1038/s41467-024-49562-w. PMID: 38886379; PMCID: PMC11183202.

Zuchowski Y, Carty JS, Trapani JB, Watts JA, Bock F, Zhang M, Terker AS, Zent R, **Delpire E**, Harris RC, Arroyo JP. Kidney collecting duct-derived vasopressin is not essential for appropriate concentration or dilution of urine. *Am J Physiol Renal Physiol.* 2024 Jun 1;326(6):F1091-F1100. doi: 10.1152/ajprenal.00057.2024. Epub 2024 May 2. PMID: 38695074.

Scan the QR code to see additional department publications.



National Institutes of Health sponsored training grant renewed for an additional 5 years

Our NIH sponsored training grant, T32 GM108554, was renewed for an additional five years. The training program, entitled “Training in Perioperative Science,” supports trainees in our BH Robbins Scholar Program. The Robbins Scholar Program was founded in 2007 and continues to pursue the mission of training the next generation of physician-scientists in Anesthesiology.

Dr. Eric Delpire serves as principal investigator of the T32 grant. The Robbins Scholar Program is led by Drs. Josh Billings (director) and Carrie Greuter (associate director). Congratulations to the leaders of the program for continuing to provide outstanding training and mentoring to the Scholars. This award underscores the outstanding quality of research training in our department.



Josh Billings, MD



Eric Delpire, PhD



Carrie Greuter, PhD

Vanderbilt graduate student among the 2024 HHMI Gilliam Fellows

Excerpts from article by Bill Snyder, originally published on July 19, 2024, in VUMC News

Vanderbilt University graduate student Mary Oliver and her adviser, Julia Bohannon, PhD, have been named to the 2024 cohort of the Howard Hughes Medical Institute (HHMI) Gilliam Fellows Program in recognition of “their outstanding research and commitments to advancing equity and inclusion in science.”

Oliver, a graduate student in Molecular Pathology & Immunology, is working with Bohannon, associate professor of Anesthesiology and of Pathology, Microbiology and Immunology at VUMC, on ways to modulate innate immunity, the body’s first line of defense against infection, to prevent infection and sepsis in patients with severe burn injuries.

HHMI, the nation’s largest private biomedical research institution, created the Gilliam Fellows Program in 2004 to nurture excellence and diversity in science and in recognition of the importance of mentorship in developing tomorrow’s scientific leaders.

Department Leadership



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*Chair, Anesthesiology;
 Chief of Staff, Vanderbilt
 University Hospital*



Bret Alvis, MD
*Associate Division Chief,
 Anesthesiology Critical Care
 Medicine*



Arna Banerjee, MD, MMHC
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Christopher Canlas, MD
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Gordon Davis, MD
*Medical Director, Vanderbilt Wilson
 County Hospital*



Eric Delpire, PhD
*Director, Basic Science Research;
 BH Robbins Director in
 Anesthesiology Research*



Amanda Dickert, CRNA, DNAP
*Chief CRNA;
 Director, Anesthesia Advanced
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Stephen Doherty, MMHC
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Holly Ende, MD
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Brian Gelfand, MD
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Vice Chair, Anesthesiology Faculty
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James Tayloe Gwathmey Director in
Anesthesiology



Michael Pilla, MD
Director, Anesthesiology Residency
Program



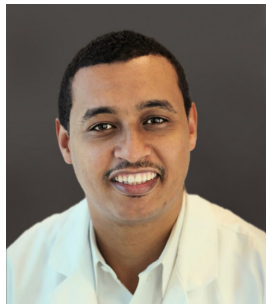
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