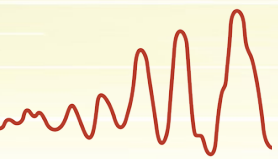


# AM

## ANESTHESIA MONITOR



### DEPARTMENT OF ANESTHESIOLOGY

VANDERBILT UNIVERSITY  
MEDICAL CENTER

Department News | December 2016

#### MESSAGE FROM THE CHAIR



Warren S. Sandberg, MD, PhD

As the calendar year concludes, we can reflect with pride on the Department of Anesthesiology's accomplishments in 2016, highlighted by our particularly gratifying showing at the October ASA Annual Meeting. Our collective dedication to the guiding principles of Compassion, Creativity, Commitment and Collaboration was evident in the contributions of each individual department member this year.

In the remaining months of the 2016-17

#### VANDERBILT UNIVERSITY MEDICAL CENTER

PEOPLE	SERVICE	QUALITY	GROWTH & FINANCE	INNOVATION
We nurture a caring, culturally sensitive, and professional atmosphere as we continuously invest in the individual and collective aspirations of our people	Collegiality is a central characteristic of our culture and defines how we serve our patients, those we teach, and the local and worldwide community	We relentlessly pursue and measure ourselves against the highest quality performance in all areas, from patient care to scholarship	We invest our resources in a manner that supports our long-term obligation to society; to achieve local, national and worldwide impact in improving health	We seek excellence and leadership as we advance our systems of care, educational practices and our commitment to discovery
<b>Department Goal</b>	<b>Department Goal</b>	<b>Department Goal</b>	<b>Department Goal</b>	<b>Department Goal</b>
<b>Faculty &amp; Staff Retention</b>	<b>Bed Days Returned</b>	<b>Medication Safety in the OR</b>	<b>OR Utilization</b>	<b>Academic Performance</b>

academic year, we shall continue to pursue the departmental goals that support the foundational values of VUMC, distilled in the institutional Pillar Goals shown above - addressing People, Service, Quality, Growth & Finance, and Innovation.

Take a few moments in the coming holiday months to reflect on your own accomplishments and the collective accomplishments of the department in service to these values, and give thanks for the diverse, vital, and generous community to which we all contribute.

**In this issue:**

- Staff Service Awards | 1
- 2016 ASA Annual Meeting in Review | 2
- Department Spotlight | 4
- Leadership Announcements | 6
- Perioperative Medicine Fellowship | 7
- New Hires | 8
- Recent Publications | 10

OFFICE OF THE CHAIR  
1211 21ST AVENUE SOUTH  
722 MAB  
NASHVILLE, TN 37212

615-936-1595

[www.vandydreamteam.com](http://www.vandydreamteam.com)  
Twitter: @vanderbilt\_anes

#### Faculty and Staff Recognized for Service

Service awards were presented to 54 members of the Department of Anesthesiology for 2016, representing a combined total of 710 years of service. These awards honor faculty and staff for their commitment to Vanderbilt.



Dr. Benjamin Johnson

The employee with the greatest longevity is Gail Mayo, a Research Nurse Specialist in the Perioperative Clinical Research Institute (pictured far right), with 30 years of service. CRNAs Robert Atwood and Amy Smith have each been with Vanderbilt for 25 years.



Raymond Johnson

The longest serving faculty members are Dr. Benjamin Johnson, Associate Professor of Anesthesiology in the Division of Obstetric Anesthesiology, and Raymond Johnson, Associate in the Division of Research, each with 25 years of service.

Congratulations and well done to all of our department's service award recipients for 2016!



Among the staff members honored at the October All-Staff Meeting were (pictured above, left to right): Mark Stevens (10 years), Judy Lashbrook (5 years), Chris Lindsey (10 years), Susan Taylor (15 years), Kristie Lee (20 years), and Gail Mayo (30 years).

## Department Demonstrates Excellence at 2016 ASA Annual Meeting

Amy Nabours

The 2016 annual meeting of the American Society of Anesthesiologists (ASA), held in October, was a showcase for the Department of Anesthesiology's achievements. Members of the department offered over 100 academic activities - such as seminars, hands-on workshops, poster discussions, and medically challenging case presentations - at the conference. These contributions came primarily from faculty members, but our CRNAs and trainees were also very involved - this year 25 residents and 6 fellows presented at the ASA.

Not only did our department contribute significantly to this year's meeting of the primary specialty society for Anesthesiology, we also enjoyed opportunities to connect with co-workers, alumni, and colleagues from other institutions and were made proud of the honors garnered by members of the department as well. The annual alumni reception was held Sunday night, October 23rd, at the Mid-America Club on the 80th floor of the AON Center in downtown Chicago and was hosted by our department in conjunction with the anesthesiology departments of the University of North Carolina and Emory University.



PHOTOS COURTESY OF DR. MICHAEL PILLA

**Dr. Pratik Pandharipande, Professor of Anesthesiology and Chief of the Division of Anesthesiology-Critical Care Medicine, presents at the 2016 ASA annual meeting.**

Chestnut presented "On the Road to Professionalism" at Anesthesiology Grand Rounds here at Vanderbilt, allowing members of our department who could not attend the ASA Annual Meeting to hear this inspirational lecture.

Also on Monday, October 24th, Dr. Mark Newton, Professor of Clinical Anesthesiology and Director of the Vanderbilt International Anesthesia program, was presented the 2016 Nicholas M. Greene Outstanding Humanitarian Contribution Award. This annual award originated in 2010 and is conferred by the Global Humanitarian Outreach (GHO) Committee of the ASA on an ASA member who demonstrates commitment to international humanitarian aid, disaster relief, or education and training in low income countries through personal sacrifice, academic contribution, or technological innovation. Dr. Newton was nominated for this award by someone outside our institution, and the nomination was enthusiastically supported by Dr. Newton's colleagues at Vanderbilt.



**Dr. Mark Rice, Professor of Anesthesiology and Associate Vice Chair for Clinical Affairs, served as abstract moderator for a poster presentation session on Equipment, Monitoring and Engineering Technology: Cardiac Output, Pressure and Circulation.**

**Academic Excellence in Action**

Our department contributed over 100 activities at the 2016 ASA and related meetings, including:

- 1 Point-Counterpoint
- 2 Seminars
- 2 Special Meetings/Events
- 7 Oral Presentations
- 5 Problem-Based Learning Discussions
- 5 Refresher Courses
- 8 Panel Discussions
- 16 Hands-on Workshops
- 22 Poster Presentations/Discussions
- 34 Medically Challenging Cases

Monday morning, October 24th, Dr. David Chestnut, Chief of the Division of Obstetric Anesthesiology, presented the 54th annual Emery A. Rovenstine Memorial Lecture, one of the premier events of the conference. This standing lecture, named for Emery Andrew Rovenstine who was considered a pioneer in the practice of anesthesiology, was endowed in 1962 and is presented by a prominent anesthesiologist.

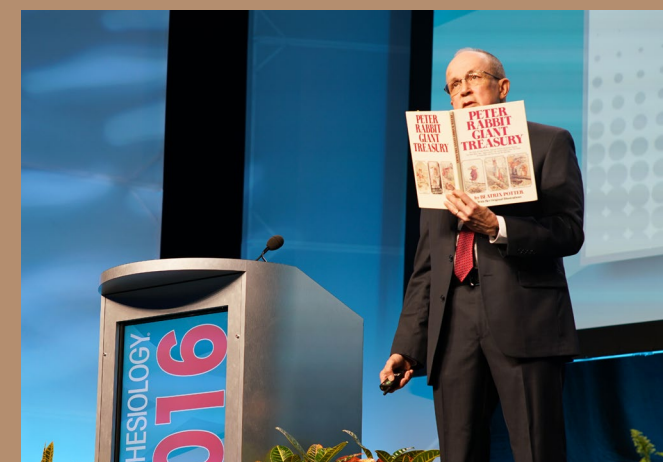
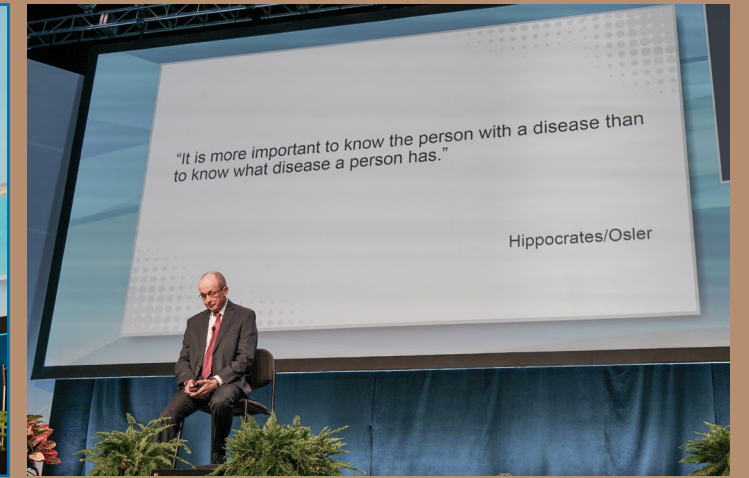
Dr. Chestnut's lecture, titled "On the Road to Professionalism," examines the characteristic qualities of professionalism, the concept of professionalism as a dynamic attribute that physicians must cultivate throughout their careers, and the critical role of professionalism in health care. The lecture was greeted with enthusiastic praise and transcended the boundaries of specialty - the content applies to physicians outside of anesthesiology and to non-medical professionals alike. Following the conference Dr.

## Honors at the ASA Annual Meeting

PHOTOS COURTESY OF DR. MICHAEL PILLA



**Dr. David Chestnut presents the 2016 Emery A. Rovenstine Memorial lecture.**

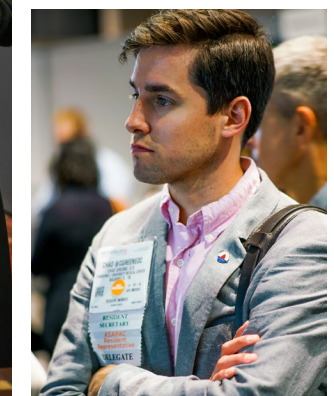


**Dr. Mark Newton receives the 2016 Nicholas M. Greene Outstanding Humanitarian Contribution Award.**

## Residents Make an Impact at the ASA Annual Meeting



**Melissa Murphy, MD, offers a Medically Challenging Case presentation.**

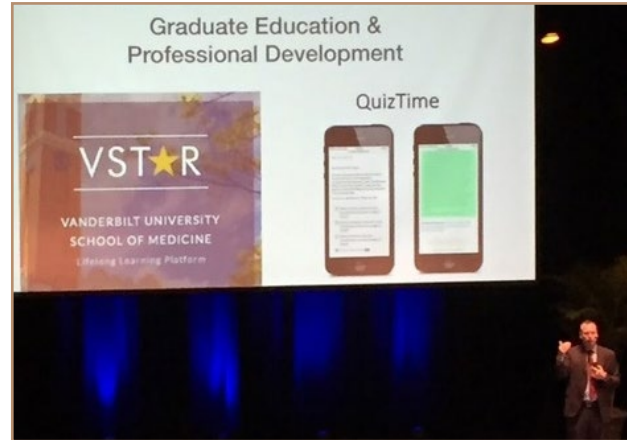


**Chad Greene, DO, attended the ASA Resident Component House of Delegates as the National Secretary.**

## Department Spotlight

**Dr. Jill Boyle's** poster, "Anesthetic outcomes following a redesign of the perioperative management of placenta percreta," received the 3rd Society of Anaesthetists of Hong Kong poster prize in the Obstetric Category at the 2016 World Congress of Anaesthesiologists.

**Dr. David Edwards** was interviewed as part of a story on NPR about Middle Tennessee School of Anesthesia's emphasis on training students to use nerve blocks as an alternative to opioids.



**Dr. Balser** cited the QuizTime smartphone app in his "State of the Medical Center" address as an example of innovation in support of the institution's focus on learning as a core competency. This app is being developed through a collaboration between the Departments of Anesthesiology (Leslie Fowler, MEd) and Radiology (Lori Deitte, MD) with the objective of improving the decision-making process of trainees.

**Dr. Jane Easdown** was named a Top 10 Peer Reviewer by MedEdPORTAL Publications and the Association of American Medical Colleges, recognizing those who have completed at least three reviews and provided the most comprehensive and timely feedback.

**Leslie Fowler, MEd,** has been accepted by the Vanderbilt University School of Medicine as a full Portfolio Coach Advisor (1 of 10) for the 2016-2017 academic year.

**Dr. Chad Greene** was elected to the ASA Resident Component Governing Council as National President-Elect.

**Dr. Calvin Gruss** was elected to the ASA Resident Component Governing Council as National Secretary.

**Callie Hanks** graduated with a Master of

Management in Healthcare degree from Vanderbilt University on September 24, 2016.

**Callie Hanks** was selected for membership in Beta Gamma Sigma, the international honor society serving business programs accredited by AACSB International (The Association to Advance Collegiate Schools of Business). To be eligible for BGS, students must rank in the top 20 percent of their graduating class. Students are selected on the basis of their cumulative academic record.

**Dr. Stephen Harvey** was named section editor for "Mind to Mind," the creative writing section in *Anesthesiology*.

**Dr. Antonio Hernandez** has been promoted to Associate Professor of Anesthesiology.

**Rachel Herrmann** graduated with a Master of Management in Healthcare degree from Vanderbilt University on September 24, 2016.

**Heather Jackson, MSN, APRN-BC,** presented "Advance Practice Providers in Interventional Pain Medicine: Creation of a New Role," at the Sigma Theta Tau International Honor Society of Nursing Region 8 Conference in Mississippi.

**Heather Jackson, MSN, APRN-BC,** was named a founding member of the NP Special Interest Group for the American Society of Regional Anesthesia and Pain Medicine (ASRA).

**Dr. Tracy Jackson** has been promoted to Associate Professor of Anesthesiology.

**Dr. Adam King** presented Grand Rounds on the Perioperative Consult Service at The University of

Texas Health Science Center at Houston.

**Dr. Avinash Kumar** led the Advanced Mechanical Ventilation and Difficult Airway workshop at the Neurocritical Care Society Annual Meeting in Washington, DC, where he also presented a poster titled "Myasthenic Crisis: Epidemiology, economics and outcomes."

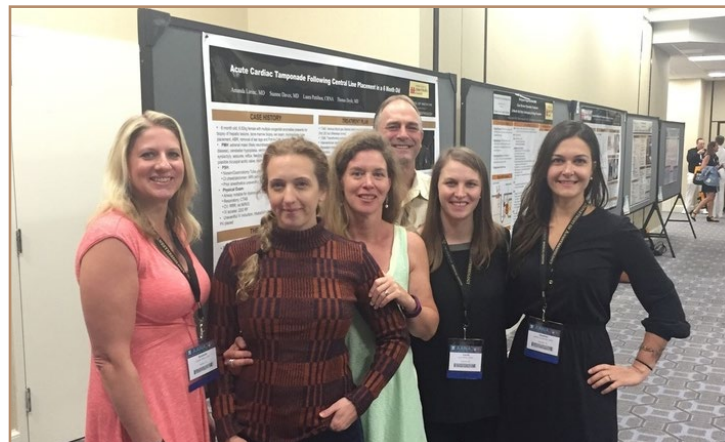
**Dr. Avinash Kumar** was appointed to the Fellowship and Education Committee for the Society of Critical Care Medicine, January 2017-January 2020.

**Dr. Marcos Lopez** was awarded a 2-year NIH Loan Repayment grant via the National Heart, Lung, and Blood Institute for his study of perioperative endothelial function in the Risk of Oxygen During Cardiac Surgery (ROCS) trial. The mentor on this project is **Dr. Josh Billings**.

**Dr. Camila Lyon's** poster, "Task shifting in setting of shortage of first responders in Mozambique," received the 2nd Society of Anaesthetists of Hong Kong poster prize in the Education and Development category at the 2016 World Congress of Anaesthesiologists.

**Dr. Matthew McEvoy** visited Kenya, where he offered training to Impact Africa partners on topics such as "Team Response to Emergency Obstetric Cases."

**Dr. Matt Riess** has been selected to serve on the VUMC Limited Submission



Seven Vanderbilt CRNAs had the opportunity to present five different posters at the American Association of Nurse Anesthetists' (AANA) Annual Congress in Washington, DC, last week. Their collaborative efforts with our anesthesiologists produced some heavy traffic and discussion in the poster sessions. Congratulations to all who were involved!

Opportunity (LSO) review committee. The LSO Committee is charged with reviewing internal applications to select the most competitive for development into full applications that represent the institution in nominations for major awards (e.g., Pew, Searle, Keck Foundation).

**Dr. Warren Sandberg** was invited to serve on the search committee for a new Chair of Vanderbilt's Department of Biostatistics.

**Dr. Joseph Schlesinger** participated in the 4th World Conference of the International Association for Music and Medicine Conference in Beijing, China, where a mul-

tidisciplinary group presented research on auditory medical alarms, integrating music education in medical education, fMRI studies for a music therapeutic approach to PTSD, utilizing music as a pharmacotherapy for pain, and tailored music prescriptions to ameliorate physician burnout. The 5th World Conference will be held in the summer of 2018 in Barcelona, Spain.

**Dr. Liza Weavind** has been elected to the Medical Center Medical Board and has received a grant to study Bedside Monitoring from Medtronic.



Please send us your news for inclusion in department publications (*Weekly Update, Anesthesia Monitor!*)

AnesthesiologyCommunications@Vanderbilt.edu

## Residents and Faculty Represent Department at Tennessee Pain Society Annual Meeting



**Dr. Okwuchukwu Obi** presents his poster at the 2016 Tennessee Pain Society Annual Meeting.

A group of eight of our department's residents presented posters at the annual meeting of the Tennessee Pain Society, held in Nashville, Tennessee, November 4-6, 2016.

**Dr. Chad Greene's** poster, titled "A

Novel Web-Based Pharmacologic Requisition Platform and Data Respository for Targeted Intrathecal Drug Delivery Devices," received first place in the 2016 Trainee Poster Competition at the conference.

Faculty members on the project included **Dr. Chris Sobey** and **Dr. Jenna Walters**.

**Dr. Tracy Jackson,** Assistant Professor of Anesthesiology in the Division of Pain Medicine, who serves as a director for the Tennessee Pain Society, acted as moderator of the session on "Emerging Therapies."

**Dr. David Edwards,** Assistant Professor of Anesthesiology and Clinical Service Chief for the Inpatient Chronic Pain Service, delivered a presentation titled "Preparing the Chronic Pain Patient for Surgery."



### Save the Date for the TSA Annual Meeting

**Date:** February 4, 2017

**Location:** Nashville Downtown Hilton

Watch the TSA Website for details, including a call for posters and PBLD submissions:

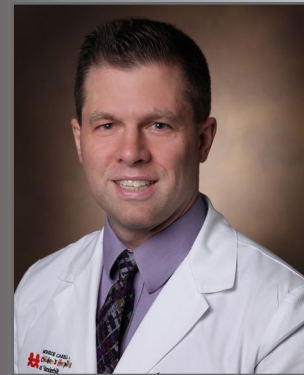
<https://www.tsahq.com/annual-meeting/>



## Leadership Announcements



**Dr. Kurt Dittrich** has been named Interim Chief of the Division of Pain Medicine.



**Dr. Alex Hughes** has been named Interim Chief of the Division of Pediatric Cardiac Anesthesiology.



**Dr. Jill Kilkelly** has been named Interim Chief of the Division of Pediatric Anesthesiology.



**Dr. Letha Mathews** has been named Interim Chief of the Division of Neuro-anesthesiology.

## Department Makes a Splash on Social Media



**Dr. Nancy Glass** @DrNancyGlass1 · Oct 27  
@vanderbilt\_anes @VanderbiltU, Congrats Mark Newton. Dr Chestnut's inspiring talk was the Best.Anesthesia.Sermon.Ever. Vanderbilt Strong!



**Alexandru Visan** @executivecortex · Oct 24  
This is not your typical talk on #professionalism. Join David Chestnut now as its a special moment! @ASALifeline #ANES16



**AnesthesiaHygiene** @AnesthesiaHygie · Oct 24  
A humble suggestion-Rovenstein lecture by Dr Chestnut- @ASALifeline must make it available online for free for everyone. #ANES16



**Deepak Sharma** @deepak\_neuro · Oct 24  
#ANES16 Congratulations Mark Newton for @ASALifeline #Global #humanitarian #Award . Certainly well deserved!



**Amol Utrankar** @AmolUtrankar · Nov 3  
Looking forward to #AnesJC next week, featuring @vanderbilt\_anes study on NMBA use, reversal, and post-op pneumonia. #ASAMedStudent



Follow us on Twitter for real-time updates:  
[twitter.com/vanderbilt\\_anes](https://twitter.com/vanderbilt_anes)

## Education Program Coordinators Attend New Conference

This year's annual meeting of the Society of Academic Anesthesiology Associations (SAAA), a conference for directors of educational programs in anesthesiology, included the first annual meeting of the newly formed component of SAAA, the Association of Anesthesiology Program Administrators and Educators (AAPAE).

Leslie Fowler, MEd, Director of Educational Development and Research, is one of the founders of the AAPAE

and serves on the organization's council for 2016-2017.

Eight of our department's educational program coordinators, along with our Fellowship Program Coordinator, Elisabeth Hudson, had the opportunity to attend this new conference to enhance their skills in program administration, making Vanderbilt the institution with the largest cohort in attendance.



Pictured Left to Right: Le'Rae Stanton (OB Fellowship), Katie Nash (Pediatric Fellowship), Rebecca Stadler (Pain Medicine Fellowship), Elisabeth Hudson (Fellowship Program Coordinator), Robin Snyder (Residency Coordinator), La'Keisha Horton (Regional/Acute Pain Fellowship), and Leslie Fowler (Director of Educational Development and Research). Not pictured: Lindsey Kilgore (CT Fellowship), Kristi Yunker (Critical Care Fellowship), Nicki King (Perioperative Medicine Fellowship).

# INNOVATION IN EDUCATION

The Department of Anesthesiology has instituted a new Fellowship in Perioperative Medicine, becoming one of a select few academic anesthesiology programs in the country to offer such an opportunity for prospective trainees. Applications are now being accepted for training to start in July 2017.

The term perioperative medicine describes the non-surgical care of patients from the time surgery is considered through the perioperative period and to full recovery. In the practice of perioperative medicine, many medical specialties work in concert to provide optimal outcomes for surgical patients. The medical knowledge distinct to this field includes that of surgical and anesthesia risks and complications, patient-specific risks due to co-morbid medical conditions, and methods by which to reduce risk and manage medical illness in the perioperative period.

The evidence supporting the value of best practices in perioperative medicine is rapidly expanding, and the full spectrum of this domain of medicine is not covered in any core residency program. In light of this, the Department of Anesthesiology's innovative new fellowship program is designed to place trainees at the forefront of this important area of medicine, preparing them to provide personalized precision perioperative care. For example, if postoperative mortality from cardiac causes (within 30

## VUMC's Department of Anesthesiology introduces new Fellowship in Perioperative Medicine

days of surgery) was considered as a disease entity, it would be the third leading cause of death among adults in the United States. Knowledge of how to properly assess risk and manage medical comorbidities throughout the entire perioperative period stands to make significant improvement in the highest risk patients.

**P**erioperative Medicine is an emerging multidisciplinary concept that healthcare reform has made an essential part of any successful perioperative enterprise. Equipping physicians with the clinical, administrative, financial, and research tools they will need to embrace this new discipline is a key part of VUMC's perioperative strategy, and we are absolutely delighted to provide our full support to this innovative program of physician education.

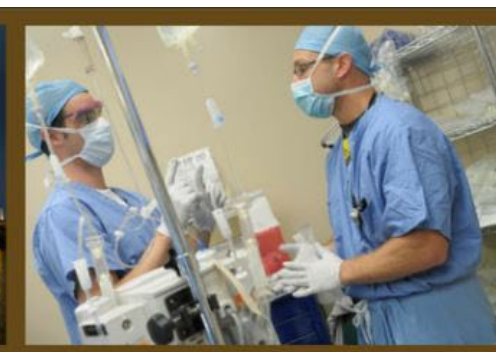
*Dr. Andrew Shaw, Executive Vice Chair of the Department of Anesthesiology and Executive Medical Director of Perioperative Services*

The Perioperative Medicine Fellowship is a one-year program that will train participants to be leaders in the clinical and academic research components of their professions, teaching them the skills needed to implement and manage their own perioperative consult service upon completion. Up to four trainees will be admitted into the fellowship each year. During the fellowship program, participants can expect

to gain experience in the following core rotations: Perioperative Consult Service, High-Risk Preoperative Evaluation Clinic, Echocardiography and Cardiac Implantable Electronic Device Management, Research, and a wide variety of electives.

One unique aspect of this new fellowship offering is that it is open to those who have completed an ACGME-accredited residency program in anesthesiology or in general surgery. Furthermore, faculty instructors in the program come from the VUMC Departments of Anesthesiology, Surgery, and Medicine, making this a truly cross-departmental educational effort - mirroring the collaboration inherent to the concept of perioperative medicine. "Perioperative medicine is the natural destination of the increasing collaboration between the anesthesia and procedural services. This is necessary and will enable best practices to be instituted in a standardized fashion to improve patient outcomes. Through the leadership of Dr. Matthew McEvoy, Vanderbilt is and will continue to be a leader in this field," says Dr. Seth Karp, Professor and Chairman, Department of Surgery.

To learn more about the new Perioperative Medicine Fellowship, including information on how to apply, visit the Department of Anesthesiology's website at [www.vandydreamteam.com](http://www.vandydreamteam.com).



## Welcome New Department Members



**Ashley Burdette**  
CRNA



**Adam Canter, MD**  
Fellow, Division of Pediatric Anesthesiology



**Greg Carpenter, MD**  
Fellow, Division of Pain Medicine



**Catherine Clark**  
Clinical Trials Associate, PCRI



**Jeffery Clemmons, MD**  
Fellow, Regional Anesthesiology and Acute Pain



**Joel Conway**  
Clinical Trials Associate, PCRI



**Sara Nelson**  
Research Analyst III, VAPIR



**Irida Nikolla, MD**  
Fellow, Division of Cardiothoracic Anesthesiology



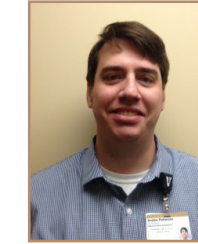
**Lavanya Nookala**  
Application Developer, CRISS



**Brooks Ohlson, MD**  
Fellow, Division of Anesthesiology-Critical Care Medicine



**Jason O'Neal, MD**  
Fellow, Division of Cardiothoracic Anesthesiology



**Jordan Patterson**  
Administrative Assistant II, Division of Anesthesiology-Critical Care Medicine



**Daltry Dott, MD**  
Fellow, Division of Pain Medicine



**Joy Dunavant**  
CRNA



**Holly Ende, MD**  
Assistant Professor, Division of Obstetric Anesthesiology



**Joonyup Eun, PhD**  
Postdoctoral Research Fellow



**Laura Gardner, MD**  
Fellow, Division of Pediatric Anesthesiology



**Melissa Gerke**  
Program Coordinator, Faculty Affairs



**Brice Perez**  
Business Intelligence Analyst I, VAPIR



**Jason Pollack, MD**  
Fellow, Division of Pediatric Anesthesiology



**Brandon Rein, DO**  
Fellow, Regional Anesthesiology and Acute Pain



**Tiffany Richburg, MD**  
Assistant Professor, Division of Cardiothoracic Anesthesiology



**Leslie Schornack, MD**  
Fellow, Division of Obstetric Anesthesiology



**Emma Schremp**  
Research Assistant II, CRISS



**Brandon Gish, MD**  
Fellow, Division of Pain Medicine



**Yin Guo, PhD**  
Postdoctoral Research Fellow



**Scott Harshman, MD**  
Fellow, Division of Obstetric Anesthesiology



**La'Keisha Horton**  
Administrative Assistant II, Division of Ambulatory Anesthesiology



**Patrick Jablonski, PhD**  
Senior Statistical Analyst, VAPIR



**Harrison Johnson**  
Administrative Assistant II, VAPIR



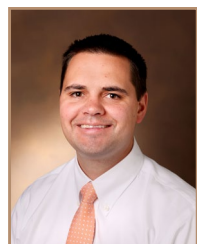
**Rebecca Shah**  
CRNA



**Matthew Stansbury, MD**  
Fellow, Division of Anesthesiology-Critical Care Medicine



**Le'Rae Stanton**  
Administrative Assistant II, Division of Obstetric Anesthesiology



**Elliott Karren, MD**  
Fellow, Division of Anesthesiology-Critical Care Medicine



**Jesse Kiefer, MD**  
Fellow, Division of Anesthesiology-Critical Care Medicine



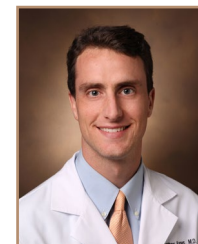
**Erich Klintworth**  
Clinical Trials Associate, PCRI



**Kelly Kohorst, MD**  
Fellow, Division of Cardiothoracic Anesthesiology



**Rafal Kopanczyk, DO**  
Fellow, Division of Anesthesiology-Critical Care Medicine



**Matthew Kynes, MD**  
Assistant Professor, Division of Pediatric Anesthesiology



**Zachary Stevens**  
Clinical Trials Associate, PCRI



**Elizabeth Sutherland**  
CRNA



**Kathryn Tippey**  
Postdoctoral Research Fellow, CRISS



**Ingrid Laubach**  
Administrative Assistant II, Administration



**Willem Lombard, MBChB**  
Associate Professor, Division of Cardiothoracic Anesthesiology



**Patrick McConville, MD**  
Fellow, Division of Anesthesiology-Critical Care Medicine



**Nitin Mehdiratta, MD**  
Fellow, Division of Anesthesiology-Critical Care Medicine



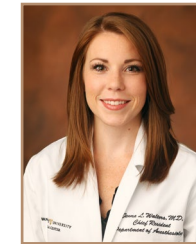
**Dorothee Mueller, MD**  
Fellow, Division of Anesthesiology-Critical Care Medicine



**Joel Musee, MD, PhD**  
Fellow, Division of Anesthesiology-Critical Care Medicine



**Sara Walls, MD**  
Assistant Professor, Division of Pediatric Anesthesiology

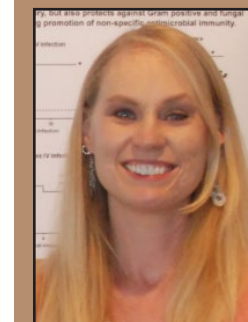


**Jenna Walters, MD**  
Assistant Professor, Division of Ambulatory Anesthesiology



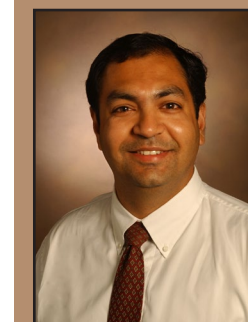
**Misty White**  
Administrative Assistant II, Division of Multispecialty Adult Anesthesiology

## Faculty Members Receive NIH Funding



**Dr. Julia Bohannon** has received funding from the NIH for her study titled "Enhancing Resistance to Infection after Burn Injury with TLR Agonists" (R01 GM121711-01).

This grant is aimed at identifying potential immunomodulatory strategies as a means of offering protection against infection in burn patients, through the study of toll-like receptor agonists and the signaling pathways they mediate.



**Dr. Pratik Pandharipande** and **Dr. Chris Hughes** will serve as co-investigators on a grant that was recently approved for NIH funding for the INSIGHT-ICU study (R01-NIGMS). The PI on the grant is Dr. Mayur Patel (Trauma/ Surgery).

This study aims to evaluate the interaction of macro (e.g., TBI) and micro diffuse (delirium) brain injury on long term cognitive outcomes, including impact on return to employment, taking into account in-hospital factors as well as post critical illness variables such as social support/resilience.

The study will also try to elucidate biomarkers and neuroimaging correlates of acute and long term brain injury in trauma patients.

The grant will cover a 5-year period of enrollment of 900 patients in this cohort and follow-up.

## Recent Publications

**Bansal V, Shastri U, Gupta R, Canlas C.** Continuous Perineural Catheters for Postoperative Pain From an Ambulatory Surgery Center. *Reg Anesth Pain Med.* 2016 Jul-Aug;41(4):543. doi: 10.1097/AAP.0000000000000404. PubMed PMID: 27315178.

Bartos JA, Matsuura TR, Tsangaris A, Olson M, McKnite SH, Rees JN, Haman K, Shekar KC, **Riess ML**, Bates FS, Metzger JM, Yannopoulos D. Intracoronary Poloxamer 188 Prevents Reperfusion Injury in a Porcine Model of ST-Segment Elevation Myocardial Infarction. *JACC Basic Transl Sci.* 2016 Jun;1(4):224-234. PubMed PMID: 27695713; PubMed Central PMCID: PMC5042154.

**Billings FT 4th**, Brown NJ. Statins to Reduce Acute Kidney Injury After Cardiac Surgery--Reply. *JAMA.* 2016 Jul 19;316(3):349-50. doi: 10.1001/jama.2016.6148. PubMed PMID: 27434456.

**Brindley RL, Bauer MB**, Blakely RD, **Currie KP.** An interplay between the serotonin transporter (SERT) and 5-HT receptors controls stimulus-secretion coupling in sympathoadrenal chromaffin cells. *Neuropharmacology.* 2016 Aug 18;110(Pt A):438-448. doi: 10.1016/j.neuropharm.2016.08.015. [Epub ahead of print] PubMed PMID: 27544824.

Broman KK, Poulouse BK, Phillips SE, **Ehrenfeld JM**, Sharp KW, Pierce RA, Holzman MD. Unnecessary Transfers for Acute Surgical Care: Who and Why? *Am Surg.* 2016 Aug;82(8):672-8. PubMed PMID: 27657580.

**Bruehl S**, Burns JW, **Gupta R**, Buvanendran A, **Chont M**, Orłowska D, Schuster E, France CR. Do Resting Plasma Beta-Endorphin Levels Predict Responses to Opioid Analgesics? *Clin J Pain.* 2016 May 13. [Epub ahead of print] PubMed PMID: 27183154.

**Bruehl S**, Ohrbach R, Sharma S, Widerstrom-Noga E, Dworkin RH, Fillingim RB, Turk DC. Approaches to Demonstrating the Reliability and Validity of Core Diagnostic Criteria for Chronic Pain. *J Pain.* 2016 Sep;17(9 Suppl):T118-31. doi: 10.1016/j.jpain.2015.10.014. PubMed PMID: 27586829.

Bulka CM, Terekhov MA, Martin BJ, Dmochowski RR, Hayes RM, **Ehrenfeld JM.** Nondepolarizing Neuromuscular Blocking Agents, Reversal, and Risk of Postoperative Pneumonia. *Anesthesiology.* 2016 Aug 8. [Epub ahead of print] PubMed PMID: 27496656.

Chamessian A, Van de Ven T, Buchheit T, Hsia HL, McDuffie M, Gamazon ER, Walsh C, **Bruehl S**, Buckenmaier C' 3rd, **Shaw A.** Differential expression of systemic inflammatory mediators in amputees with chronic residual limb pain. *Pain.* 2016 Sep 23. [Epub ahead of print] PubMed PMID: 27682210.

Chen Y, Lorenzi NM, **Sandberg WS**, Wolgast K, Malin BA. Identifying collaborative care teams through electronic medical record utilization patterns. *J Am Med Inform Assoc.* 2016 Aug 28. pii: ocw124. doi: 10.1093/jamia/ocw124. [Epub ahead of print] PubMed PMID: 27570217.

**Chin PA.** Is It Time to Ask Different Questions about Aspiration? *Anesthesiology.* 2016 Aug;125(2):425. doi: 10.1097/ALN.0000000000001171. PubMed PMID: 27433758.

**Chinnadurai K**, Fenlason L, Bridges B, Espahbodi M, Chinnadurai S, Blood-Siegfried J. Implementation of a Sustainable Ventilator-Associated Pneumonia Prevention Protocol in a Pediatric Intensive Care Unit in Managua, Nicaragua. *Dimensions of Critical Care Nursing.* 2016;35(6):323-31. doi: 10.1097/DCC.0000000000000178.

**Currie KP.** Focus on "Activation of MEK/ERK signaling contributes to the PACAP-induced increase in guinea pig cardiac neuron excitability". *Am J Physiol Cell Physiol.* 2016 Sep 21:ajpcell.00270.2016. doi: 10.1152/ajpcell.00270.2016. [Epub ahead of print] PubMed PMID: 27653986.

**Dobie KH**, Shi Y, Shotwell MS, **Sandberg WS.** New technique targeting the C5 nerve root proximal to the traditional interscalene sonoanatomical approach is analgesic for outpatient arthroscopic shoulder surgery. *J Clin Anesth.* 2016 Nov;34:79-84. doi: 10.1016/j.jclinane.2016.03.064. Epub 2016 May 3. PubMed PMID: 27687351.

**Downing JW, Baysinger CL**, Johnson RF, **Paschall RL**, Shotwell MS. The Effects of Vasopressin and Oxytocin on the Fetoplacental Distal Stem Arteriolar Vascular Resistance of the Dual-Perfused, Single, Isolated, Human Placental Cotyledon. *Anesth Analg.* 2016 Sep;123(3):698-702. PubMed PMID: 27537759.

Dworkin RH, **Bruehl S**, Fillingim RB, Loeser JD, Terman GW, Turk DC. Multidimensional Diagnostic Criteria for Chronic Pain: Introduction to the ACTION-American Pain Society Pain Taxonomy (AAPT). *J Pain.* 2016 Sep;17(9 Suppl):T1-9. doi: 10.1016/j.jpain.2016.02.010. Review. PubMed PMID: 27586826.

**Easdown LJ**, Moore DE Jr. Maintaining Professional Excellence in Contemporary Anesthesia Practice. *Int Anesthesiol Clin.* 2016 Summer;54(3):170-87. doi: 10.1097/AIA.0000000000000100. PubMed PMID: 27285079.

Fabbri D, **Ehrenfeld JM.** Hands Free Automatic Clinical Care Documentation: Opportunities for Motion Sensors and Cameras. *J Med Syst.* 2016 Oct;40(10):213. doi: 10.1007/s10916-016-0570-x. PubMed PMID: 27530759.

**Franklin AD**, Cierny GB, Luckett TR. Interventional and multimodal pain rehabilitation in a child with meralgia paresthetica. *J Clin Anesth.* 2016 Sep;33:456-9. doi: 10.1016/j.jclinane.2016.04.015. Epub 2016 Jul 13. PubMed PMID: 27555210.

**Franklin AD, Menser CC**, Naftel RP. Fluoroscopically Guided Epidural Blood Patch Effective for Treatment of a Post-surgical Pseudomeningocele in a Pediatric Patient. *Reg Anesth Pain Med.* 2016 Jul-Aug;41(4):542-3. doi: 10.1097/AAP.0000000000000405. PubMed PMID: 27315177.

**Hanks CA, Weinger MB.** Know Yourself, Know the System: Developing a Successful Career and Being Promoted as an Academic Anesthesiologist. *Int Anesthesiol Clin.* 2016 Summer;54(3):155-69. doi: 10.1097/AIA.0000000000000104. PubMed PMID: 27285078.

**Harvey S, Canlas CL, Shastri U, McQueen KA.** Pecs Blocks in Ambulatory Surgery. *ASA Monitor.* 2016 Sep;80:48-9.

Hashim NW, Wilkes M, Salomon R, Meggs J, **France DJ.** Evaluation of Voice Acoustics as Predictors of Clinical Depression Scores. *J Voice.* 2016 Jul 26. pii: S0892-1997(16)30105-9. doi: 10.1016/j.jvoice.2016.06.006. [Epub ahead of print] PubMed PMID: 27473933.

**Hayhurst CJ, Pandharipande PP, Hughes CG.** Intensive Care Unit Delirium: A Review of Diagnosis, Prevention, and Treatment. *Anesthesiology.* 2016 Sep 30. PubMed PMID: 27748656.

**Hernandez A, Bohannon JK, Luan L**, Fensterheim BA, Guo Y, **Patil NK**, McAdams C, **Wang J, Sherwood ER.** The role of MyD88- and TRIF-dependent signaling in monophosphoryl lipid A-induced expansion and recruitment of innate immunocytes. *J Leukoc Biol.* 2016 Jun 27. pii: jlb.1A0216-072R. [Epub ahead of print] PubMed PMID: 27354411.

House LM, Marolen KN, **St Jacques PJ, McEvoy MD, Ehrenfeld JM.** Surgical Apgar score is associated with myocardial injury after noncardiac surgery. *J Clin Anesth.* 2016 Nov;34:395-402. doi: 10.1016/j.jclinane.2016.05.009. Epub 2016 Jun 8. PubMed PMID: 27687420.

**Hughes CG**, Patel MB, Jackson JC, Girard TD, Geevarghese SK, Norman BC, Thompson JL, Chandrasekhar R, Brummel NE, May AK, Elstad MR, Wasserstein ML, Goodman RB, Moons KG, Dittus RS, Ely EW, **Pandharipande PP**; MIND-ICU, BRAIN-ICU investigators. Surgery and Anesthesia Exposure Is Not a Risk Factor for Cognitive Impairment After Major Noncardiac Surgery and Critical Illness. *Ann Surg.* 2016 Jul 18. [Epub ahead of print] PubMed PMID: 27433893.

Humble SS, Wilson LD, Leath TC, Marshall MD, Sun DZ, **Pandharipande PP**, Patel MB. ICU sedation with dexmedetomidine after severe traumatic brain injury. *Brain Inj.* 2016 Jul 26:1-5. [Epub ahead of print] PubMed PMID: 27458990.

Humble SS, Wilson LD, McKenna JW, Leath TC, Song Y, Davidson MA, **Ehrenfeld JM**, Guillaumondegui OD, **Pandharipande PP**, Patel MB. Tracheostomy risk factors and outcomes after severe traumatic brain injury. *Brain Inj.* 2016 Oct 14:1-6. PubMed PMID: 27740854.

Hund HC, **Rice MJ, Ehrenfeld J.** An Evaluation of the State of Neuromuscular Blockade Monitoring Devices. *J Med Syst.* 2016 Dec;40(12):281. PubMed PMID: 27787785.

**Jackson T**, Thomas S, Stabile V, Han X, Shotwell M, **McQueen KA.** Chronic Pain Without Clear Etiology in Low- and Middle-Income Countries: A Narrative Review. *Anesth Analg.* 2016 Jun;122(6):2028-39. doi: 10.1213/ANE.0000000000001287. PubMed PMID: 27195643.

**Jackson T**, Thomas S, Stabile V, Shotwell M, Han X, **McQueen K.** A Systematic Review and Meta-Analysis of the Global Burden of Chronic Pain Without Clear Etiology in Low- and Middle-Income Countries: Trends in Heterogeneous Data and a Proposal for New Assessment Methods. *Anesth Analg.* 2016 Sep;123(3):739-748. PubMed PMID: 27537761.

Joffe ME, **Grueter BA.** Cocaine Experience Enhances Thalamo-Accumbens N-Methyl-D-Aspartate Receptor Function. *Biol Psychiatry.* 2016 Apr 7. pii: S0006-3223(16)32265-X. doi: 10.1016/j.biopsych.2016.04.002. [Epub ahead of print] PubMed PMID: 27209241.

Kahle KT, Flores B, Bharucha-Goebel D, Zhang J, Donkervoort S, Hegde M, Hussain G, Duran D, Liang B, Sun D,

Bönnemann CG, **Delpire E**. Peripheral motor neuropathy is associated with defective kinase regulation of the KCC3 cotransporter. *Sci Signal*. 2016 Aug 2;9(439):ra77. doi: 10.1126/scisignal.aae0546. PubMed PMID: 27485015.

Kappen TH, **Wanderer JP, Ehrenfeld JM, Weinger MB**. Is Intraoperative Hypotension Truly a Too Simple Problem for Useful Decision Support? *Anesth Analg*. 2016 Jun 21. [Epub ahead of print] PubMed PMID: 27331779.

Kappen TH, **Wanderer JP**, Peelen LM, Moons KG, **Ehrenfeld JM**. Prediction Model for In-hospital Mortality Should Accurately Predict the Risks of Patients Who Are Truly at Risk. *Anesthesiology*. 2016 Oct;125(4):815-6. doi: 10.1097/ALN.0000000000001269. PubMed PMID: 27649433.

**King AB, Alvis BD, McEvoy MD**. Enhanced recovery after surgery, perioperative medicine, and the perioperative surgical home: current state and future implications for education and training. *Curr Opin Anaesthesiol*. 2016 Sep 20. [Epub ahead of print] PubMed PMID: 27652514.

**King AB**, O'Duffy AE, **Kumar AB**. Heparin Resistance and Anticoagulation Failure in a Challenging Case of Cerebral Venous Sinus Thrombosis. *Neurohospitalist*. 2016 Jul;6(3):118-21. doi: 10.1177/1941874415591500. Epub 2015 Jun 19. PubMed PMID: 27366296; PubMed Central PMCID: PMC4906550.

**King AB, Rice MJ**. Important Outcomes Should Be Reported. *Anesth Analg*. 2016 Sep 20. [Epub ahead of print] PubMed PMID: 27655280.

Koch SR, Lamb FS, Hellman J, **Sherwood ER**, Stark RJ. Potentiation and tolerance of toll-like receptor priming in human endothelial cells. *Transl Res*. 2016 Aug 8. pii: S1931-5244(16)30158-X. doi: 10.1016/j.trsl.2016.08.001. [Epub ahead of print] PubMed PMID: 27567430.

Kummerow Broman K, Hayes RM, Kripalani S, Vasilevskis EE, Phillips SE, **Ehrenfeld JM**, Holzman MD, Sharp KW, Pierce RA, Nealon WH, Poulouse BK. Interhospital transfer for acute surgical care: does delay matter? *Am J Surg*. 2016 Jun 1. pii: S0002-9610(16)30240-9. doi: 10.1016/j.amjsurg.2016.03.004. [Epub ahead of print] PubMed PMID: 27381817.

**Liang Y, Alvis B, Rice MJ, Shaw AD**, Deitte LA, **Eagle S**. A Near-Field Clutter Artifact Mimicking Pulmonary Thrombus During Transesophageal Echocardiography. *Anesth Analg*. 2016 Oct;123(4):831-3. doi: 10.1213/ANE.0000000000001366. PubMed PMID: 27636573.

Liu YH, Dhakal BP, Keesakul C, Kacmarek RM, Lewis GD, **Jiang Y**. Continuous non-invasive cardiac output monitoring during exercise: validation of electrical cardiometry with Fick and thermodilution methods. *Br J Anaesth*. 2016 Jul;117(1):129-31. doi: 10.1093/bja/aew156. PubMed PMID: 27317712; PubMed Central PMCID: PMC4913407.

Martin GM, Rex EA, Devaraneni P, **Denton JS**, Boodhansingh KE, DeLeon DD, Stanley CA, Shyng SL. Pharmacological Correction of Trafficking Defects in ATP-Sensitive Potassium Channels Caused by Sulfonylurea Receptor 1 Mutations. *J Biol Chem*. 2016 Aug 29. pii: jbc.M116.749366. [Epub ahead of print] PubMed PMID: 27573238.

**McEvoy MD**, DiLorenzo AN, **Fowler LC**, Schell RM. Faculty Development of Education Researchers in Academic Anesthesiology. *Int Anesthesiol Clin*. 2016 Summer;54(3):107-30. doi: 10.1097/AIA.000000000000106. PubMed PMID: 27285076.

**McEvoy MD**, Lien CA. Education in Anesthesiology: Is It Time to Expand the Focus? *A A Case Rep*. 2016 Jun 15;6(12):380-2. doi: 10.1213/XAA.0000000000000353. PubMed PMID: 27301051.

**McQueen K**, Coonan T, Hendel S, Bangutifils P, Froese A, Neighbour R, Perndt H. The Bare Minimum: Addressing a Reality and Hoping for Much More. *World J Surg*. 2016 Jul 21. [Epub ahead of print] PubMed PMID: 27443371.

**McQueen K**, Watters DA, Tangi V. Resolutions and Declarations in an Era of Global Surgery. *World J Surg*. 2016 Jul 26. [Epub ahead of print] PubMed PMID: 27460139.

**McQueen KA**, Coonan T, Derbew M, Tangi V, Bickler S, Banguti P, Gruen R, Watters D. The 2015 Bangkok Global Surgery Declaration: A Call to the Global Health Community to Promote Implementation of the World Health Assembly Resolution for Surgery and Anaesthesia Care. *World J Surg*. 2016 Sep 6. [Epub ahead of print] PubMed PMID: 27600709.

**Mehr SR, Neeley RC, Wiley M, Kumar AB**. Profound Autonomic Instability Complicated by Multiple Episodes of Cardiac Asystole and Refractory Bradycardia in a Patient with Anti-NMDA Encephalitis. *Case Rep Neurol Med*. 2016;2016:7967526. doi: 10.1155/2016/7967526. Epub 2016 Apr 17. PubMed PMID: 27190663; PubMed Central PMCID: PMC4852123.

Miller TE, **Shaw AD**, Mythen MG, Gan TJ; Perioperative Quality Initiative (POQI) I Workgroup. Evidence-Based Perioperative Medicine comes of age: the Perioperative Quality Initiative (POQI): The 1st Consensus Conference of the Perioperative Quality Initiative (POQI). *Perioper Med (Lond)*. 2016 Oct 13;5:26. PubMed PMID: 27777751.

Morandi A, Davis D, Bellelli G, Arora RC, Caplan GA, Kamholz B, Kolanowski A, Fick DM, Kreisel S, MacLulich A, Meagher D, Neufeld K, **Pandharipande PP**, Richardson S, Slooter AJ, Taylor JP, Thomas C, Tiegies Z, Teodorczuk A, Voyer P, Rudolph JL. The Diagnosis of Delirium Superimposed on Dementia: An Emerging Challenge. *J Am Med Dir Assoc*. 2016 Sep 16. pii: S1525-8610(16)30292-4. doi: 10.1016/j.jamda.2016.07.014. [Epub ahead of print] Review. PubMed PMID: 27650668.

Morris MC, Walker LS, **Bruehl S**, Stone AL, Mielock AS, Rao U. Impaired conditioned pain modulation in youth with functional abdominal pain. *Pain*. 2016 Jul 6. [Epub ahead of print] PubMed PMID: 27389918.

Nguyen L, Afshari A, Kahn SA, **McGrane S**, Summitt B. Utility and outcomes of hydroxocobalamin use in smoke inhalation patients. *Burns*. 2016 Aug 20. pii: S0305-4179(16)30267-4. doi: 10.1016/j.burns.2016.07.028. [Epub ahead of print] PubMed PMID: 27554631.

Odegard KC, Vincent R, Baijal RG, **Daves SM**, Gray RG, Javois AJ, Love BA, Moore P, Nykanen D, Riegger LQ, Walker SG, Wilson EC. SCAI/CCAS/SPA Expert Consensus Statement for Anesthesia and Sedation Practice: Recommendations for Patients Undergoing Diagnostic and Therapeutic Procedures in the Pediatric and Congenital Cardiac Catheterization Laboratory. *Anesth Analg*. 2016 Nov;123(5):1201-1209. PubMed PMID: 27749349.

**O'Neal JB, Shaw AD, Billings FT 4th**. Acute kidney injury following cardiac surgery: current understanding and future directions. *Crit Care*. 2016 Jul 4;20(1):187. doi: 10.1186/s13054-016-1352-z. Review. PubMed PMID: 27373799; PubMed Central PMCID: PMC4931708.

**Parker RO, King AB, Hughes CG**. Dexmedetomidine for the treatment of hyperactive delirium refractory to haloperidol in non-intubated patients. *J Thorac Dis*. 2016 Jul;8(7):E596-8. doi: 10.21037/jtd.2016.05.47. PubMed PMID: 27501127; PubMed Central PMCID: PMC4958851.

**Patil NK, Bohannon JK, Luan L**, Guo Y, Fensterheim B, **Hernandez A, Wang J, Sherwood ER**. FLT3 Ligand Treatment Attenuates T Cell Dysfunction and Improves Survival in A Murine Model of Burn Wound Sepsis. *Shock*. 2016 Jul 21. [Epub ahead of print] PubMed PMID: 27454384.

**Patil NK, Bohannon JK, Sherwood ER**. Immunotherapy: A promising approach to reverse sepsis-induced immunosuppression. *Pharmacol Res*. 2016 Jul 25;111:688-702. doi: 10.1016/j.phrs.2016.07.019. [Epub ahead of print] Review. PubMed PMID: 27468649.

Phillips ML, Willis BC, Broman AJ, Lam HV, **Nguyen TT**, Austin TM. Bimodal analgesia vs fentanyl in pediatric patients undergoing bilateral myringotomy and tympanostomy tube placement: a propensity matched cohort study. *J Clin Anesth*. 2016 Aug;32:162-8. doi: 10.1016/j.jclinane.2016.03.003. Epub 2016 Apr 22. PubMed PMID: 27290968.

Rathmell JP, **Sandberg WS**. Anesthesiologists and Healthcare Redesign: Time to Team Up with Experts. *Anesthesiology*. 2016 Aug 1. [Epub ahead of print] PubMed PMID: 27483128.

Reynolds WS, Brown ET, Danford J, Kaufman M, Wein A, Dmochowski R, **Bruehl S**. Temporal summation to thermal stimuli is elevated in women with overactive bladder syndrome. *Neurourol Urodyn*. 2016 Jul 19. doi: 10.1002/nau.23059. [Epub ahead of print] PubMed PMID: 27434229.

Reynolds WS, Dmochowski R, Wein A, **Bruehl S**. Does central sensitization help explain idiopathic overactive bladder? *Nat Rev Urol*. 2016 Jun 1. doi: 10.1038/nrurol.2016.95. [Epub ahead of print] Review. PubMed PMID: 27245505.

Reynolds WS, Mock S, Zhang X, Kaufman M, Wein A, **Bruehl S**, Dmochowski R. Somatic syndromes and chronic pain in women with overactive bladder. *Neurourol Urodyn*. 2016 Jul 1. doi: 10.1002/nau.23060. [Epub ahead of print] PubMed PMID: 27367486.

**Rice MJ**. Potpourri for the holiday season. *Curr Opin Anaesthesiol*. 2016 Sep 28. [Epub ahead of print] PubMed PMID: 27685798.

**Riess ML**, Pagel PS. Noninvasively Measured Hemoglobin Concentration Reflects Arterial Hemoglobin Concentration Before but Not After Cardiopulmonary Bypass in Patients Undergoing Coronary Artery or Valve Surgery. *J Cardiothorac Vasc Anesth*. 2016 Oct;30(5):1167-71. doi: 10.1053/j.jvca.2016.03.148. Epub 2016 Mar 24. PubMed PMID: 27475734; PubMed Central PMCID: PMC5028293.

**Rothman BS**, Shotwell MS, **Beebe R, Wanderer JP, Ehrenfeld JM, Patel N, Sandberg WS**. Electronically Mediated Time-out

Initiative to Reduce the Incidence of Wrong Surgery: An Interventional Observational Study. *Anesthesiology*. 2016 Jun 6. [Epub ahead of print] PubMed PMID: 27272671.

**Saied NN, Gupta RK, Saffour L, Helwani MA.** Dexamethasone and Clonidine, but not Epinephrine, Prolong Duration of Ropivacaine Brachial Plexus Blocks, Cross-Sectional Analysis in Outpatient Surgery Setting. *Pain Med*. 2016 Aug 22. pii: pnw198. [Epub ahead of print] PubMed PMID: 27550952.

Sappenfield JW, **Rice MJ**, Gravenstein N, Morey TE. Still Waiting for Evidence That Current Noninvasive Hemoglobinometry Adds Value. *Anesth Analg*. 2016 Jun 1. [Epub ahead of print] PubMed PMID: 27258070.

Sathiyakumar V, Estevez-Ordóñez D, Thakore RV, Lee YM, **Ehrenfeld JM**, Obremskey WT, Sethi MK. American Society of Anesthesiologists Score as a Predictive Tool to Optimize Blood Ordering for Intraoperative Transfusion in Orthopaedic Trauma Cases. *J Surg Orthop Adv*. 2016 Summer;25(2):105-9. PubMed PMID: 27518295.

Semler MW, Rice TW, **Shaw AD**, Siew ED, Self WH, **Kumar AB**, Byrne DW, **Ehrenfeld JM**, **Wanderer JP**. Identification of Major Adverse Kidney Events Within the Electronic Health Record. *J Med Syst*. 2016 Jul;40(7):167. doi: 10.1007/s10916-016-0528-z. Epub 2016 May 27. PubMed PMID: 27234478.

Semler MW, **Wanderer JP**, **Ehrenfeld JM**, Stollings JL, Self WH, Siew ED, Wang L, Byrne DW, **Shaw AD**, Bernard GR, Rice TW; SALT Investigators and the Pragmatic Critical Care Research Group. Balanced Crystalloids versus Saline in the Intensive Care Unit: The SALT Randomized Trial. *Am J Respir Crit Care Med*. 2016 Oct 17. PubMed PMID: 27749094.

**Sileshi B**, O'Hara BK, Davis ME, Haglund NA, Meng X, **Deegan R**, Stulak JM, Kushwaha SS, **Shaw A**, Maltais S. Outcomes of Patients Implanted Using a Left Thoracotomy Technique for a Miniaturized Centrifugal Continuous-Flow Pump. *ASAIO J*. 2016 Jun 24. [Epub ahead of print] PubMed PMID: 27347709.

Simmons SE, Schnelle JF, Sathe NA, **Slagle JM**, Stevenson DG, Carlo ME, McPheeters ML. Defining Safety in the Nursing Home Setting: Implications for Future Research. *J Am Med Dir Assoc*. 2016 Jun 1;17(6):473-81. doi: 10.1016/j.jamda.2016.03.005. PubMed PMID: 27235760.

**Smith HA**, Han JH, Ely EW. Meeting the Challenges of Delirium Assessment Across the Aging Spectrum. *Crit Care Med*. 2016 Sep;44(9):1775-7. doi: 10.1097/CCM.0000000000001966. PubMed PMID: 27525996; PubMed Central PMCID: PMC4988335.

**Sobey CM, King AB, McEvoy MD.** Postoperative Ketamine: Time for a Paradigm Shift. *Reg Anesth Pain Med*. 2016 Jul-Aug;41(4):424-6. doi: 10.1097/AAP.0000000000000429. PubMed PMID: 27315176.

Stokes JW, **Wanderer JP, McEvoy MD.** Significant discrepancies exist between clinician assessment and patient self-assessment of functional capacity by validated scoring tools during preoperative evaluation. *Perioper Med (Lond)*. 2016 Jul 13;5:18. doi: 10.1186/s13741-016-0041-4. eCollection 2016. PubMed PMID: 27413530; PubMed Central PMCID: PMC4942938.

Sun LS, Li G, Miller TL, Salorio C, Byrne MW, Bellinger DC, Ing C, Park R, Radcliffe J, **Hays SR**, DiMaggio CJ, Cooper TJ, Rauh V, Maxwell LG, Youn A, McGowan FX. Association Between a Single General Anesthesia Exposure Before Age 36 Months and Neurocognitive Outcomes in Later Childhood. *JAMA*. 2016 Jun 7;315(21):2312-20. doi: 10.1001/jama.2016.6967. PubMed PMID: 27272582.

Sun YT, Tzeng SF, Lin TS, Hsu KS, **Delpire E**, Shen MR. KCC3 deficiency-induced disruption of paranodal loops and impairment of axonal excitability in the peripheral nervous system. *Neuroscience*. 2016 Aug 24. pii: S0306-4522(16)30404-3. doi: 10.1016/j.neuroscience.2016.08.031. [Epub ahead of print] PubMed PMID: 27568057.

Swale DR, Kurata H, **Kharade SV**, Sheehan J, Raphemot R, Voigtritter KR, Figueroa EE, Meiler J, Blobaum AL, Lindsley CW, Hopkins CR, **Denton JS**. ML418: The First Selective, Sub-Micromolar Pore Blocker of Kir7.1 Potassium Channels. *ACS Chem Neurosci*. 2016 May 24. [Epub ahead of print] PubMed PMID: 27184474.

Terekhov MA, **Ehrenfeld JM**, Dutton RP, Guillaumondegui OD, Martin BJ, **Wanderer JP**. Intraoperative Care Transitions Are Not Associated with Postoperative Adverse Outcomes. *Anesthesiology*. 2016 Jul 26. [Epub ahead of print] PubMed PMID: 27466034.

Thiele RH, Raghunathan K, Brudney CS, Lobo DN, Martin D, Senagore A, Cannesson M, Gan TJ, Mythen MM, **Shaw AD**, Miller TE; Perioperative Quality Initiative (POQI) I Workgroup. American Society for Enhanced Recovery (ASER) and Perioperative Quality Initiative (POQI) joint consensus statement on perioperative fluid management within an enhanced

recovery pathway for colorectal surgery. *Perioper Med (Lond)*. 2016 Sep 17;5:24. doi: 10.1186/s13741-016-0049-9. eCollection 2016. PubMed PMID: 27660701; PubMed Central PMCID: PMC5027098.

**Wanderer JP**, Nathan N. A World of Hurt: Chronic Pain in Low- and Middle-Income Countries. *Anesth Analg*. 2016 Sep;123(3):523. PubMed PMID: 27537749.

**Wanderer JP**, Nathan N. Anesthetizing Patients and Their Immune Systems: Volatile Anesthetics at Work. *Anesth Analg*. 2016 Aug;123(2):263. doi: 10.1213/ANE.0000000000001533. PubMed PMID: 27442770.

**Wanderer JP**, Nathan N. Opioids and Adverse Effects: More Than Just Opium Dreams. *Anesth Analg*. 2016 Oct;123(4):805. doi: 10.1213/ANE.0000000000001570. PubMed PMID: 27636566.

**Wanderer JP**, Nathan N. Pre- and Postoperative Troponin Elevation: Effects on Postoperative Mortality. *Anesth Analg*. 2016 Jul;123(1):1. doi: 10.1213/ANE.0000000000001467. PubMed PMID: 27314688.

**Wanderer JP**, Nathan N. Towards Understanding Mechanisms of Anesthesia. *Anesth Analg*. 2016 Nov;123(5):1069. PubMed PMID: 27763915.

**Wanderer JP**, Nelson SE, **Ehrenfeld JM**, Monahan S, Park S. Clinical Data Visualization: The Current State and Future Needs. *J Med Syst*. 2016 Dec;40(12):275. PubMed PMID: 27787779.

**Wanderer JP**, Poler SM, **Rothman BS**. Show Me the Data! A Perioperative Data Warehouse of Epic Proportions. *Anesth Analg*. 2016 Jun;122(6):1742-3. doi: 10.1213/ANE.0000000000001321. PubMed PMID: 27195619.

**Wanderer JP**, Rathmell JP. Assessing the Quality of Anesthesia Quality Metrics. *Anesthesiology*. 2016 Jun;124(6):A21. doi: 10.1097/01.anes.0000482715.81732.22. PubMed PMID: 27187142.

**Wanderer JP**, Rathmell JP. Functional Breakdown of Cortical Networks: A Tale of Three Anesthetics. *Anesthesiology*. 2016 Nov;125(5):A21. PubMed PMID: 27755026.

**Wanderer JP**, Rathmell JP. Keeping an Eye on Perioperative Visual Loss. *Anesthesiology*. 2016 Sep;125(3):A21. doi: 10.1097/ALN.0000000000001278. PubMed PMID: 27529865.

**Wanderer JP**, Rathmell JP. Paralysis Is Bad for Breathing. *Anesthesiology*. 2016 Oct;125(4):A17. doi: 10.1097/ALN.0000000000001328. PubMed PMID: 27649446.

**Wanderer JP**, Rathmell JP. Perioperative and Acute Care Transfusion Strategies: One size may not fit all. *Anesthesiology*. 2016 Jul;125(1):A21. doi: 10.1097/01.anes.0000484132.34078.b6. PubMed PMID: 27326508.

**Wanderer JP**, Sweitzer B, Bader AM, Rathmell JP. The Many Benefits of a Preoperative Clinic. *Anesthesiology*. 2016 Aug;125(2):A21. doi: 10.1097/01.anes.0000488750.72800.05. PubMed PMID: 27433778.

**Watkins SC, Shaw AD.** Fluid resuscitation for acute kidney injury: an empty promise. *Curr Opin Crit Care*. 2016 Sep 29. PubMed PMID: 27748663.

Williams MR, Ward DS, Carlson D, Cravero J, Dexter F, Lightdale JR, Mason KP, Miner J, Vargo JJ, Berkenbosch JW, Clark RM, Constant I, Dionne R, Dworkin RH, Gozal D, Grayzel D, Irwin MG, Lerman J, O'Connor RE, **Pandharipande P**, Rapaport BA, Riker RR, Tobin JR, Turk DC, Twersky RS, Sessler DI. Evaluating Patient-Centered Outcomes in Clinical Trials of Procedural Sedation, Part 1 Efficacy: Sedation Consortium on Endpoints and Procedures for Treatment, Education, and Research Recommendations. *Anesth Analg*. 2016 Sep 12. [Epub ahead of print] PubMed PMID: 27622720.

**Witherspoon B**, Braunlin K, **Kumar AB**. A Secure, Social Media-Based "Case of the Month" Module in a Neurocritical Care Unit. *Am J Crit Care*. 2016 Jul;25(4):310-7. doi: 10.4037/ajcc2016203. PubMed PMID: 27369029.

Woolard AA, **Ehrenfeld JM, Eagle SS, Wanderer JP.** A retrospective study showing the extent of compliance with perioperative guidelines in patients with coronary stents with regard to double antiplatelet therapy. *J Clin Anesth*. 2016 Sep;33:179-84. doi: 10.1016/j.jclinane.2016.01.030. Epub 2016 Apr 29. PubMed PMID: 27555160.

Yagihara N, Watanabe H, Barnett P, Duboscq-Bidot L, Thomas AC, Yang P, Ohno S, Hasegawa K, Kuwano R, Chatel S, Redon R, Schott JJ, Probst V, Koopmann TT, Bezzina CR, Wilde AA, Nakano Y, Aiba T, Miyamoto Y, Kamakura S, Darbar D, **Donahue BS**, Shigemizu D, Tanaka T, Tsunoda T, Suda M, Sato A, Minamino T, Endo N, Shimizu W, Horie M, Roden DM, Makita N. Variants in the SCN5A Promoter Associated With Various Arrhythmia Phenotypes. *J Am Heart Assoc*. 2016 Sep 13;5(9). pii: e003644. doi: 10.1161/JAHA.116.003644. PubMed PMID: 27625342.



# 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**  
Associate Vice Chair for  
Clinical Affairs



**Andrew Shaw, MB,  
FRCA, FFICM, FCCM**  
Executive Vice Chair,  
Anesthesiology



**Edward Sherwood,  
MD, PhD**  
Vice Chair for Research  
Affairs



**Matthew Weinger, MD**  
Vice Chair for Faculty  
Affairs



**Stephen Doherty, MMHC**  
Department Administrator

## Division Chiefs



**David H. Chestnut, MD**  
Chief, Obstetric  
Anesthesiology



**Eric Delpire, PhD**  
Chief, Basic Science  
Research



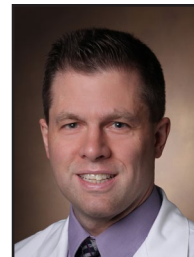
**Kurt Dittrich, MD**  
Interim Chief,  
Pain Medicine



**Katherine Dobie, MD**  
Chief, Ambulatory  
Anesthesiology



**Brent Dunworth,  
CRNA, MBA**  
Chief CRNA



**Alexander Hughes, MD**  
Interim Chief, Pediatric  
Cardiac Anesthesiology



**Jill Kilkelly, MD**  
Interim Chief, Pediatric  
Anesthesiology



**Letha Mathews, MBBS**  
Interim Chief,  
Neuroanesthesiology



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



**Mias Pretorius, MBChB,  
MSCI**  
Chief, Cardiothoracic  
Anesthesiology



**Mark Rice, MD**  
Chief, Multispecialty  
Adult Anesthesiology



**Ann Walia, MBBS**  
Chief, Veterans Affairs  
Anesthesiology Service

## DEPARTMENT OF ANESTHESIOLOGY

VANDERBILT UNIVERSITY  
MEDICAL CENTER

