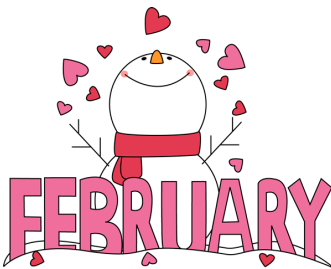




SLEEPY TIMES

VOLUME 12, ISSUE 2 FEBRUARY 2018

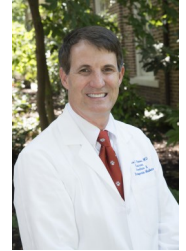


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MESSAGE FROM THE CHAIRMAN: *THE GIFT* -SCOTT T. REEVES, MD, MBA

Several years ago, I had a potential faculty member and spouse come to Charleston for a second recruitment visit. He was excited about the possibility of coming here, as they had both grown up in New Orleans and thought Charleston had similarities (but was cleaner). Cathy and I took them out to dinner and the conversation shifted to what Charleston is like during the changing seasons. The candidate's spouse was very interested in having four seasons wherever they relocated. I quickly asked, "What is your definition of winter?" For her, it meant snow.



I asked her if she had had the opportunity to tour the Market and she said she had. I then asked if she had seen the beautiful photos of the Battery with four inches of snow. Her face lit up, as she had seen those pictures. "So, you do have snow!" I responded with, "Yes, it was God's gift to Charleston on Christmas Day following Hurricane Hugo in 1989." She exclaimed, "That was over 10 years ago!" Needless to say, they ultimately did not come.

On January 3rd, we had another gift. Our department was instrumental in caring for our patients with a significant operating room presence to take care of our in-patient and same day surgical admits. I want to personally thank everyone who worked during the hazardous weather and volunteered to work to accommodate the backlog of canceled patients in the weeks that followed. I am so proud of our teams.

For many of our children, it may have been the first time that they experienced snow. I hope that all of us had an opportunity to make memories with our families during the snow event.

In this edition of Sleepy Times, we have accumulated some of the many pictures that members of our department took both on campus and at home. As you look at them, I hope that you too fondly remember *the gift*.



Happy Valentine's Day

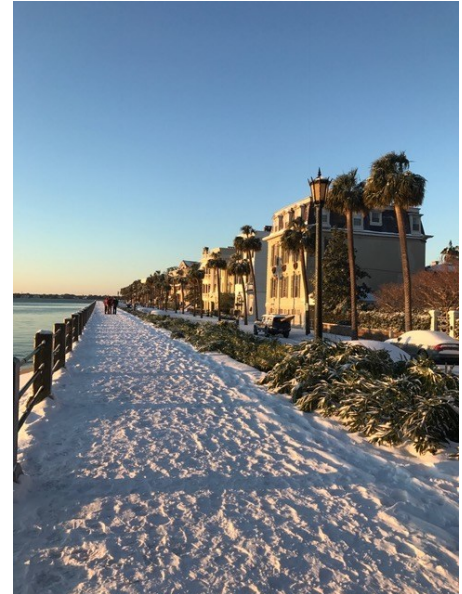
The Battery
Christmas, 1989



SNOW DAYS!



SNOW DAYS CONTINUED...



KATIE BRIDGES, MD SELECTED AS PHYSICIAN OF THE MONTH, NOVEMBER 2017



I am honored to nominate the Medical Director of the Pre-Operative Clinic in Rutledge Tower, Dr. Kathryn Bridges, for the physician of the month award in recognition of her outstanding leadership and tireless efforts for supporting our unit, her patients and their families. Dr. Bridges is a compassionate, kind hearted and caring physician that handles stressful situations and gets patients to relax when others cannot. Her professional approach definitely helps to increase MUSC and the Pre-Operative Clinic's success rates. Dr. Bridges has spent countless hours helping and spearheading the revamping of the pre-operative clinics to a model that is patient driven. Her abilities allow her to work with all of the intra-professional groups with a smile and grace that is unparalleled. It is

because of her determination, positive attitude and care that the pre-operative clinic is off to a successful start. But what is also staggering and worth mentioning is how the efforts of one person, one particular person, can truly make a difference in a patient's life. Dr. Bridges approaches her work in a caring, competent manner that is also motivating. She is inspiring to watch in action as she makes difficult tasks appear easy because of her approach to her work. Watching her work with her team and with patients preparing for surgery reveals an individual who is transparent with the procedure and inclusive in her approach. We meet on a regular basis to discuss the clinic's patients, our utilization and how we can work together with the unit to avoid unnecessary cancellations to surgery and surgical mishaps. Through this work, the staff members of the clinic are involved in all areas of the patient's care and when working together we are empowered to improve the patient's health and wellbeing. As effective as she is in pressure hospital situations, I respect her desire to constantly do more than is expected of her. Dr. Bridges has an exceptional sense of responsibility that has caused her to spend countless hours here at the hospital not only caring for patients but serving on committees representing the pre-operative clinic's overhauling. She has not only shaped the future of the clinic, but also helped with the layout, project design, and decor. Dr. Bridges is always approachable, professional and consistently demonstrates outstanding customer service skills. She deals effectively with me as the director, the clinical operation manager, the hospitalists, her fellow anesthesiologists, our staff and our countless number of patients that represent all levels of diverse personality styles and backgrounds. She truly connects with people at a personal level and helps to keep spirits light. With her open and unpretentious communication style Dr. Bridges promotes transparency. Her focus is never on defending or laying blame but at understanding and resolving problems. Our unit, the Rutledge Tower Pre-Operative clinic, is significantly enhanced by help of Dr. Katie Bridges and we are proud to work alongside of her.

Nominated by: Zeh Wellington; Interim Director Peri-Anesthesia



NEW TEXTBOOK IN THE DEPARTMENT

Congratulations to Drs. Cory Furse and Matthew McEvoy on the publishing of their new textbook, *Advanced Perioperative Crisis Management* by Oxford University Press! Several other members of the department also contributed chapters to the book as listed below.

Part I. Crisis Resource Management: Nontechnical Skills of Team Performance
Chapter 2: Teamwork and Crisis Resource Management, Cory Furse

Part II. Cardiac Crises

Chapter 7: Cardiac Dysrhythmias, Mark Henry

Part IV. Pulmonary Crises

Chapter 16: Laryngospasm, Cory Furse and Matthew McEvoy

Part V. Metabolic and Endocrine Diseases

Chapter 25: Introduction to Metabolic and Endocrine Diseases, Stephen Dierdorf

Chapter 26: Malignant Hypothermia, Christopher Heine

Chapter 27: Porphyria, Stephen Dierdorf

Chapter 37: Hyperkalemia/Hypokalemia, Stephen Dierdorf

Chapter 39: Hypocalcemia/Hypercalcemia, Stephen Dierdorf

Part VII. Neurologic Crises

Chapter 69: Cerebral Salt Wasting, Mark Henry

Chapter 77: Emergency Noncardiac Surgery in the Congenital Heart Disease Patient, Marc Hassid and Amanda Redding

Chapter 78: Epiglottitis, Croup, and Stridor, Michel Sabbagh and John Freely

Chapter 79: Acute Severe Asthma and Bronchospasm, Amanda Redding and Marc Hassid

Chapter 80: Post-Tonsillectomy Bleeding, Michelle Rovner

Chapter 81: Drowning and Near Drowning, Alison Jeziorski

Chapter 83: Pyloric Stenosis, John Freely and Michel Sabbagh

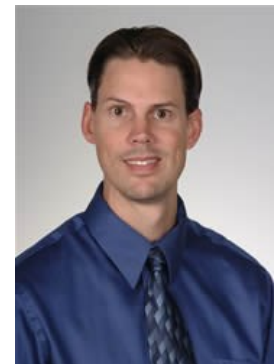
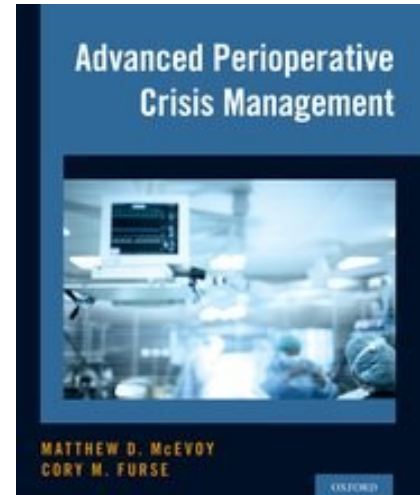
Part IX. Toxins

Chapter 86: Introduction to Perioperative Crisis Management: Toxins, William Hand

Chapter 87: Local Anesthesia Systemic Toxicity, Joel Barton and Gavin Martin

Chapter 92: Opioid and Benzodiazepine Overdose, Brad Eastman and Larry Field

Chapter 94: Serotonin Toxicity, Patrick Britell and Charles Andrews



**EDITORIAL IN POST AND COURIER DATED 12/21/2017
BY JERRY REVES, MD**

Transforming Charleston's Medical District

On Nov. 20, Mayor John Tecklenburg, Roper Hospital CEO Stephen Porter, VA Medical Center Assistant Director Felissa Loernig, and Dr. David Cole, president of MUSC, opened Phase I of the Medical District Greenway.

What does it mean to say that the first phase of transforming the Medical District is underway? It means that we're shifting from the mindset of providing health care to holistically supporting and cultivating the entire well-being of the people of this community.

And what will this look like? In addition to the initial, visible sign of progress from the closure of Doughty Street, we will also soon see other fruits of our labor. We'll be able to sit on the benches, watch the trees and flowers bloom and celebrate life, enjoy fellowship, come together for healing, learning and renewal. With the thoughtful design of this space, the hope is that it creates a live-learn community where people feel empowered to come together in ways they haven't before.

Doughty Street is closed to vehicles between Ehrhardt and President Streets, and one lane of Doughty from Courtenay to Ehrhardt will become the beginning of the greenway. The closed road is painted shades of green and has large cypress trees and gathering places for people. In short, a park-like pedestrian zone has been initiated in the middle of the medical district to create a place for collaboration and healing.

Why do this? Research shows that patients and their families have quicker and better recoveries when they're surrounded by natural elements. In other words, this transformation from hardscape to landscape fully embodies the medical missions of Roper Hospital, MUSC and the Veterans Administration hospitals.

Though the benefits to patients are self-evident, one does not have to be acutely ill to experience the benefit of a walk in the park. Countless studies have shown that anxiety, blood pressure, concentration and many other conditions are improved simply by integrating with nature and slowing down the pace that comes from man-made amenities and noise. Thus, visitors, staff and students will all benefit from this initiative.

Charleston is an exceptional American city and has long been a top international destination. It is well-known for its magnificent public gardens, as well as houses with private gardens and many other historical attractions that boast numerous green spaces and places to gather. It was with this fundamental understanding that years ago, Charleston and MUSC sought — and were awarded — the honorable Tree City and Tree Campus designations from the Arbor Day Foundation.

More recently, in 2007, the Charleston Parks Conservancy was formed to further the formation and maintenance of stunning natural places in our community. Their recent redevelopment of Colonial Lake is a superb example of how beautification can be accomplished amid busy roads. These efforts by the city, Charleston Parks Conservancy and the Medical District are examples of "tactical urbanism," a term for the process of reclaiming a space for people that improves the livability of an entire city.

Some might wonder, "Why spend money on anything in the city besides flooding mitigation?" And the answer is that tactical urbanism and the creation of less impervious surface parking, more green space, more grass, more trees and more water features are a proven way to mitigate storm water and the problems associated with flooding. The flood-prone Medical District needs new tactics.

The plans for the Medical District hold a vision for the future. Ultimately, all of Doughty Street should be closed and used only by pedestrians walking in the heart of the Medical District. Courtenay Street will be calmed. Transportation and parking for the thousands of patients, staff and students will be conveniently streamlined with novel solutions to 1950s problems of automobile transport and surface parking.

With the creation of the MUSC Shawn Jenkins Children's Hospital at the corner of Calhoun and Courtenay Streets, the opportunity exists for Courtenay to be extended to 4th Street (south across Calhoun Street), and for Long Lake to be redesigned and improved. Just as a good portion of the East Side of Charleston is now a park, there can be a park-like space on the west side of the Charleston peninsula, extending from Colonial Lake to The Citadel.

The development of the Medical District will be a place where citizens come not only to get well, but to feel well. President, David Cole has summed it up: "This initiative is not only about healing the body, but healing the soul."

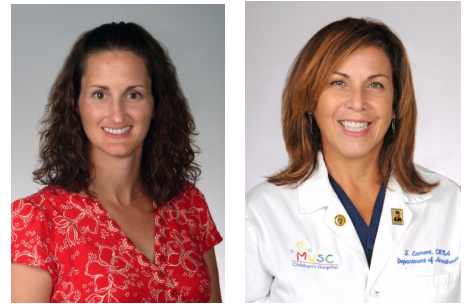
Dr. Jerry Reves is Dean Emeritus of the MUSC College of Medicine and chair of the MUSC Arboretum Advisory Board.



RENOVATED RUTLEDGE TOWER HOLDING AREA BY SYLVIA WILSON, MD AND TAMMY LAMONT, CRNA

Rutledge Tower Holding Renovation

You may notice a brand new look to holding the next time you rotate to Rutledge Tower operating rooms. During November and December 2017, the RT holding area was closed in order to renovate the space. We want to thank all of the RT CRNAs, anesthesia attendings, and nursing staff that demonstrated flexibility and creativity to ensure excellent patient care during the construction period. This renovation resulted in the addition of four more holding room spaces, giving us a grand total of twelve holding bays.



What does this ultimately mean? This means that all first cases will now be located in the preoperative holding area, including pediatric cases. Additionally, the regional anesthesia block cart is now in the middle of the holding room, rather than in a back corner. Fast turnover ORs with short cases (e.g. cataracts, carpal tunnels, BMTs) are also now able to utilize more than one preoperative bay for a single operating room. On this note, to assist with finding your patients, please check out the electronic EPIC OR schedule across from the front desk. A black block, located on the far right of each patient's chart, will indicate where that patient is located in the perioperative process, including which holding bay. Please check out this new feature and let us know if you have questions.

Sylvia Wilson and Tammy Lamont



- Patient in OR
- RT Holding Spot 3
- RT Holding Spot 2
- RT Holding Spot 5



NEW LIVER CART IN OR 19 BY ROBERT HARVEY, MD

The Transplant Team is happy to announce that they have acquired a new liver cart that will stay in the back corner of OR 19. The old cart, with its busted drawers and numerous scrapes and scars, has been retired after many years of service. The new cart has been stocked with lab supplies, emergency medications, common liver transplant medications, supplies for high volume resuscitation, and equipment commonly used during liver transplants. We have worked with Pharmacy to update the medications and par-stocked to be more consistent with our current practice. Our techs have helped to update the equipment and supplies we use as well. This cart will be a useful resource for other cases requiring a high acuity of care or massive resuscitation. Many thanks to Katie Smith for helping to acquire the new cart. Residents (and other interested parties), please take a moment to familiarize yourselves with the new cart.



MUSC ON THE FORBES DIVERSITY LIST AGAIN



Did you see MUSC on the Forbes list again?

Dear MUSC Health Care Team,

Business publication powerhouse, Forbes, has just named MUSC to a ranking for the second time in a year. This time it was for America's Best Employers for Diversity. MUSC is ranked #53 out of 250 organizations on the list. We are in the company of giants such as Google, Starbucks, Walt Disney, Smithsonian Institute, Harvard University, Procter & Gamble and many others. We can all be proud knowing that we are part of an organization making real progress toward meaningful culture change and becoming a national model for diversity and inclusion.

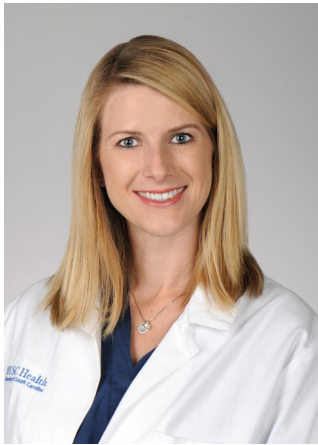
[Forbes List of America's Best Employer For Diversity - #53](#)

[Forbes List of America's Best Midsize Employers - #74](#)



Dr. Cawley

WELCOME TO THE DEPARTMENT



Please welcome Dana Huber, new CRNA in the Main OR. She is very excited to be here! Dana moved to Charleston after high school and attended the College of Charleston. She went to nursing school and worked in the ICU for 3.5 years before going to CRNA school, graduating in 2015. Just before starting classes, Dana married her high school sweetheart. She worked at McLeod Regional Medical Center for 2 years in Florence, SC while her husband was going through CRNA school at MUSC. Dana and her husband knew they wanted to make Charleston their long term home, so they decided to work at the best hospital in the city! Their son, James, was born in October 2017. James has made their lives so much more fulfilling and happy!

JOURNAL CLUB

Faculty and residents recently gathered for their monthly discussion of current literature at the home of Dr. Robert Harvey on January 16, 2018. This month's article theme was Pediatrics. Following a discussion of the effects of anesthesia on neurodevelopment and factors influencing patient and parental satisfaction in the ambulatory setting, the group enjoyed a delicious meal catered by Santi's Restaurante Mexicano. Pictured below, the senior residents enjoy an evening of engaging discussion and fellowship with other residents and faculty.



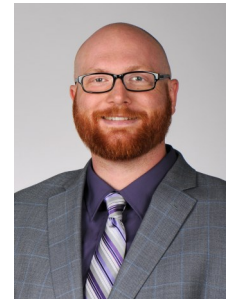
RESEARCH CORNER

Review



Exploring the Role of Astroglial Glutamate Release and Association With Synapses in Neuronal Function and Behavior

Michael D. Scofield



Dr. Michael Scofield

ABSTRACT

Astrocytes are stellate cells whose appearance can resemble a pointed star, especially when visualizing glial fibrillary acidic protein, a canonical marker for astrocytes. Accordingly, there is a commonly made connection between the points of light that shine in the night sky and the diffuse and abundant cells that buffer ions and provide support for neurons. An exceptional amount of function has been attributed to, negated for, and potentially reaffirmed for these cells, especially regarding their ability to release neuroactive molecules and influence synaptic plasticity. This makes the precise role of astrocytes in tuning neural communication seem difficult to grasp. However, data from animal models of addiction demonstrate that a variety of drug-induced molecular adaptations responsible for relapse vulnerability take place in astrocyte systems that regulate glutamate uptake and release. These findings highlight astrocytes as a critical component of the neural systems responsible for addiction, serving as a key component of the plasticity responsible for relapse and drug seeking. Here I assemble recent findings that utilize genetic tools to selectively manipulate or measure flux of internal calcium in astrocytes, focusing on G protein-coupled receptor-mediated mobilization of calcium and the induction of glutamate release. Further, I compile evidence regarding astrocyte glutamate release as well as astrocyte association with synapses with respect to the impact of these cellular phenomena in shaping synaptic transmission. I also place these findings in the context of the previous studies of Scofield *et al.*, who explored the role of astrocytes in the nucleus accumbens in the neural mechanisms underlying cocaine seeking.

Keywords: Astrocyte, Calcium, Cocaine, Gliotransmission, Glutamate, GPCR

<https://doi.org/10.1016/j.biopsych.2017.10.029>

Deep Serratus Plane Catheter for Management of Acute Postthoracotomy Pain After Descending Aortic Aneurysm Repair in a Morbidly Obese Patient: A Case Report

Renuka M. George, MD, Maria Yared, MD, and Sylvia H. Wilson, MD

Regional procedures for postthoracotomy pain control have classically focused on paravertebral blocks and thoracic epidurals; however, these techniques may be challenging in an increasingly obese population and contraindicated with numerous anticoagulant and antiplatelet agents. While less studied, truncal blocks allow analgesic intervention for this growing patient cohort. This case report describes placement of a deep serratus anterior plane catheter in an intubated, morbidly obese patient with a lumbar drain who failed extubation secondary to acute post-thoracotomy pain. The serratus plane catheter facilitated extubation and adequate analgesia without prohibiting anticoagulant use or interfering with the monitoring of spinal cord function. (A&A Case Reports. 2017;XXX:00–00.)



Dr. Renuka George



Dr. Maria Yared



Dr. Sylvia Wilson

RESEARCH CORNER CONTINUED...

Labor Analgesia Onset With Dural Puncture Epidural Versus Traditional Epidural Using a 26-Gauge Whitacre Needle and 0.125% Bupivacaine Bolus: A Randomized Clinical Trial

Sylvia H. Wilson, MD, Bethany J. Wolf, PhD, Kellie N. Bingham, BS, Quiana S. Scotland, MD, John M. Fox, MD, Erick M. Woltz, BS, and Latha Hebbar, MD, FRCA

BACKGROUND: Lumbar epidurals (LEs) provide excellent analgesia. Combined spinal epidural and dural puncture epidural (DPE) are 2 techniques to expedite neuraxial analgesia onset. In DPE, dura is punctured but medication is not administered in the cerebrospinal fluid. Expedited analgesia onset has been demonstrated with DPE, using 0.25% bupivacaine; however, this concentration may impede an unassisted vaginal birth and is not currently used for induction and maintenance of labor analgesia. The primary goal of this study was to compare the percentage of patients who achieved adequate labor analgesia following DPE or LE with an epidural bolus of 0.125% bupivacaine. Adequate labor analgesia was defined as Visual Analog Scale (VAS) measurement ≤ 10 mm on a 100-mm scale during active contractions, measured 10 minutes after epidural bolus initiation.

METHODS: Laboring patients were randomly assigned to receive LE or DPE. Immediately before epidural placement, subjects marked a VAS score during an active contraction and parturients with VAS < 50 mm were excluded. The epidural space was identified by a loss of resistance technique to saline (17G Tuohy needle [Arrow International, Inc, Redding, PA]). In the DPE group, dura was punctured with a 26G Whitacre needle (Arrow International, Inc). In all participants, a 19G epidural catheter (Arrow International, Inc) was inserted. An epidural bolus was then administered over 3 minutes (12 mL, 0.125% bupivacaine, 50 μ g fentanyl) followed by infusion (0.1% bupivacaine, 2 μ g/mL fentanyl). After initiation of epidural bolus (time zero), VAS measurements were collected at 2-minute intervals for up to 20 minutes. Median time to achieve adequate analgesia by treatment group was assessed by Kaplan-Meier analysis. Time to achieving adequate analgesia was evaluated using a Cox regression model. All analyses were conducted in SAS version 9.4. (SAS Institute, Cary, NC)

RESULTS: Data were analyzed from 80 participants (40 per group). Adequate analgesia at 10 minutes did not differ by neuraxial technique (DPE = 55.3% vs LE = 44.7%; $P = .256$). However, parturients receiving DPE had shorter median times to adequate analgesia (median [95% confidence interval], 8 minutes [6–10] vs 10 minutes [8–14]) and a 67% increase in the relative risk of achieving adequate analgesia compared to LE (relative risk = 1.67; 95% confidence interval, 1.02–2.64; $P = .042$).

CONCLUSIONS: Although the percentage of parturients achieving adequate labor analgesia at 10 minutes after epidural bolus did not differ by technique, DPE was associated with faster time to VAS ≤ 10 mm compared with LE. (Anesth Analg 2017;XXX:00–00)



Dr. Sylvia Wilson

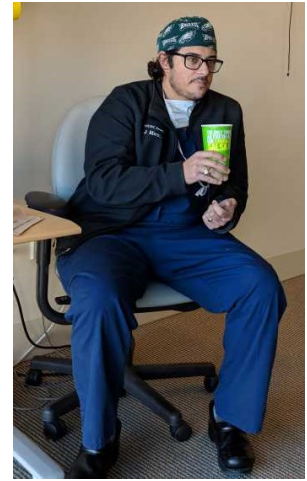


Dr. Bethany Wolf

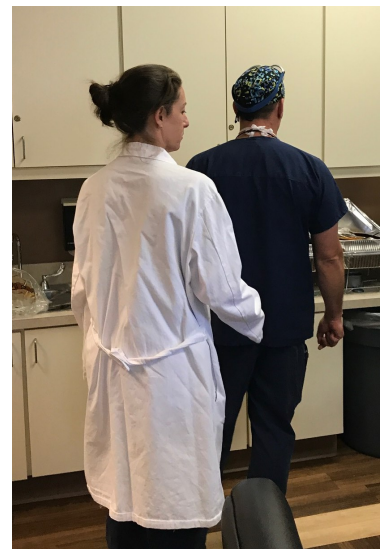


Dr. Latha Hebbar

NATIONAL CRNA WEEK JANUARY 21-27, 2018



NATIONAL CRNA WEEK JANUARY 21-27, 2018 CONTINUED...

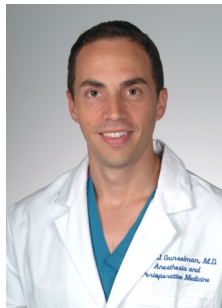
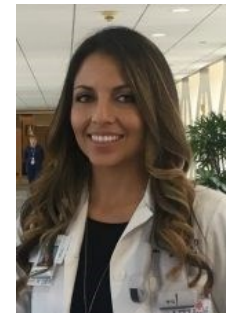


GRAND ROUNDS FOR THE MONTH OF FEBRUARY



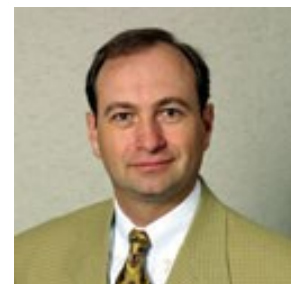
“Neurotoxicity”
February 6, 2018
Lauren Moore, MD, Assistant Professor
Dept. of Anesthesia & Perioperative Medicine
Medical University of South Carolina

“Point of Care Ultrasound”
February 13, 2018
Nadia Hernandez, MD, Assistant Professor
Department of Anesthesiology
University of Texas



“Morbidity & Mortality Conference”
February 20, 2018
George Guldán, M.D., Associate Professor
Ryan Günselman, M.D., Associate Professor
Dept. of Anesthesia & Perioperative Medicine
Medical University of South Carolina

“Neuroanesthesia—Topic TBA”
February 27, 2018
Sergio Bergese, MD, Professor-Clinical
Department of Anesthesiology
Ohio State University





DEPARTMENT OF ANESTHESIA AND
PERIOPERATIVE MEDICINE

Email: fisherja@musc.edu
Phone: 843-792-7503
Fax: 843-792-9314

CHECK OUT OUR WEBSITE AT:
[HTTP://WWW.MUSC.EDU/ANESTHESIA](http://www.musc.edu/anesthesia)

Future Events/Lectures

Intern Lecture Series

February 8th—Bleeding and Transfusion,
Dr. Roberts, SEI 314

February 22nd—Fluids, Electrolytes, Acid/Base,
Dr. Walton, SEI 314

CA 1 Lecture Series

February 15-20th—ITE Study/Exam, No Lecture

February 28th—Anesthesia for Neurosurgery,
Dr. Whiteley, SEI 314

CA 2/3 Lecture Series

February 5th—Anesthesia for Complex Spine
Surgery & Trauma, Dr. McSwain, Moodle

February 12th—Visiting Professor Lecture—All
Residents, CSB 429

February 19th—Neurophysiology, Cerebral
Protection & Monitoring, Dr. Skorke, Moodle

February 26th—Visiting Professor Lecture—All
Residents, CSB 429

Grand Rounds

February 6th—Neurotoxicity, Dr. Moore

February 13th—Visiting Professor Lecture, Point
of Care Ultrasound, Dr. Hernandez (UT)

February 20th—Morbidity & Mortality
Conference, Drs. Guldán & Gungelman

February 27th—Visiting Professor Lecture,
Topic TBA, Dr. Bergese (OSU)



I HUNG THE MOON

Please don't forget to nominate your co-workers for going 'Beyond the Call of Duty.' I Hung The Moon slips are available at the 3rd floor front desk and may be turned in to Kim Pompey. Thank you!

Kim Warren, Administrative Coordinator—Helping new employee with training and guidance of the relief list when we were short staffed. Thanks!

Rhonda Haynes, Administrative Assistant—Helping new employee with training and guidance of the relief list when we were short staffed. Great job!

Drs. Brown and Guldán—Doing their own cases during the "Great Ice Storm of 2017." Thank you!



Resident Graduation 2018
Friday, June 22, 2018
Founders Hall

Holiday Party 2018
Friday, December 1, 2018
Carolina Yacht Club



[Imagine 2020 Strategic Plan](#)

We Would Love to Hear From You!

If you have ideas or would like to contribute to *Sleepy Times*, the deadline for the March edition will be February 16, 2018.