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MESSAGE FROM THE CHAIR



Prabhakar Baliga, M.D. FACS
Professor and Chair
Department of Surgery
Medical University of South Carolina

With the rise in the number of COVID cases across the country and world, this is a transformational time for the country and American medicine. Just as explorers navigated uncharted territory using the North Star, we in the Department of Surgery have followed our True North during these unprecedented times. With strength and resiliency, we are fulfilling our mission to provide the highest level of compassionate patient care, best-in-class training for the next generation of surgical leaders, and cutting-edge research. I feel extremely fortunate to have so much progress to report to you. Here are a few highlights of what you will find in this issue:

- Our feature article illustrates how our patients and health care providers have benefited by incorporating Telehealth technology into their practices, finding ways to improve some processes along the way.
- Under the leadership of Mark Lockett, M.D., the Ralph H. Johnson Veterans Affairs Medical Center's surgical outcomes have been ranked among the best in VA hospitals.
- The South Carolina Burn Center ribbon cutting ceremony marked a new era in MUSC Health burn care, changing what's possible through innovation and discovery.
- Dr. Nancy Klauber-DeMore's research led to a therapy which received rare pediatric disease designation from the FDA for the treatment of osteosarcoma.
- The Future Surgical Leaders Program is a first-of-its-kind training that will prepare our surgical residents and fellows to be the next generation of surgical leaders.

During this holiday season, my thoughts turn gratefully to the dedicated faculty, fellows, residents, staff and generous donors who have contributed to our success.

I wish you and your family a safe, healthy and happy holiday season.

With gratitude,

SAVE THE DATES

MARCH 9

Marion C. Anderson, M.D. Lecture

Invited Speaker
Christine Ferrone, M.D.
Associate Professor of Surgery
Harvard Medical School

MARCH 30

Vascular Surgery Grand Rounds

Invited Speaker
Ronald Dalman, M.D.
Walter Clifford Chidester and Elsa Rooney
Chidester Professor of Surgery
Stanford University

JUNE 8

Kredel-Springs Lecture

Invited Speaker
Mary Hawn, M.D.
Professor of Surgery and Chair
Department of Surgery
Stanford University

NEWS AND ANNOUNCEMENTS

■ PRABHAKAR BALIGA M.D. ELECTED TO ACS BOARD OF GOVERNORS



P. Baliga

Prabhakar Baliga, M.D. FACS, Chair of the MUSC Department of Surgery, has been elected to the Board of Governors for the American College of Surgeons (ACS) as the Surgical Specialty Society Governor from the Southern Surgical Association.

As a Specialty Society Governor, he will serve as a direct communications link between the Fellows of the College and the members of the Board of Governors. The College has more than 82,000 Fellows, including

more than 6,600 Fellows in other countries, making it the largest organization of surgeons in the world. The College is governed by a 24-member Board of Regents which includes the ACS President. The Board is elected by a geographically balanced and specialty-representative Board of Governors. The select group of Governors are surgical leaders who each serve as a communications link between their constituent Fellows of the College and the members of the Board of Governors.

■ SHAREE WRIGHT, M.D. JOINS DIVISION OF VASCULAR SURGERY



S. Wright

Sharee Wright, M.D. joins the MUSC Division of Vascular Surgery as clinical associate professor of Surgery, effective February 2021. Dr. Wright practices all aspects of vascular and endovascular surgery with special interests in aneurysmal disease of the aorta, endovascular management of aortic pathology, carotid disease, diabetic limb salvage, open revascularization, hemodialysis access,

and management of venous insufficiency. Dr. Wright completed her medical and general surgery training at MUSC. She was named the administrative chief resident of the MUSC General Surgery Residency for the 2012 – 2013 academic year. Dr. Wright completed fellowship training in Vascular and Endovascular Surgery at Temple University.

■ NEW LEADERSHIP ROLES IN PERIOPERATIVE GROUPS



B. Crookes



K. Morgan



R. Veeraswamy

Congratulations to Bruce Crookes, M.D., Katherine Morgan, M.D. and Ravi Veeraswamy, M.D. for their new leadership roles. Dr. Crookes has been appointed to the Main Hospital Perioperative Group, Dr. Morgan has been appointed to the Ashley

River Tower Perioperative Group, and Dr. Veeraswamy has been named the Chair of The Perioperative Executive Committee. Their leadership and voice will facilitate optimal care of our patients and clinicians.

■ FACULTY RECOGNITIONS



E. Eriksson



F. Herrera



M. Katz



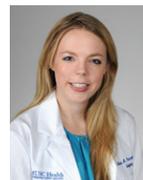
S. Mehrotra



R. Mukherjee



S. Leon



A. Privette



C. Talley



M. Yost

- Evert Eriksson, M.D., Stuart Leon, M.D., Alicia Privette, M.D. *Efficacy of Methocarbamol for Acute Pain Management in Young Adults With Traumatic Rib Fractures* published in *Annals of Pharmacotherapy*.
- Evert Eriksson, M.D., Stuart Leon, M.D. *Outcome after surgical stabilization of rib fractures versus nonoperative treatment in patients with multiple rib fractures and moderate to severe traumatic brain injury (CWIS-TBI)* published in *Journal of Trauma*
- Fernando Herrera, M.D. *Botulinum Toxin for the Treatment of Intractable Raynaud Phenomenon* published in *The Journal of Hand Surgery*.
- Marc R. Katz, M.D. MPH awarded the AATS Foundation Gardner Lectureship; invited lecturer: Dr. Yolanda Colson.
- Shikhar Mehrotra, Ph.D. named to the MUSC College of Medicine's Research Oversight Committee.
- Rupak Mukherjee, Ph.D. named a 2020-2021 Maralynne D. Mitcham Interprofessional Fellow.
- Cynthia Talley, M.D. *ACGME Case Log Accuracy Varies Among Surgical Programs* published in *Journal of Surgical Education*.
- Michael Yost, Ph.D. *Biomaterials for Bioprinting Microvasculature* published in *Chemical Review*.

RAPID RESPONSE

As Telehealth rapidly scaled up during the pandemic to provide care to patients, surgeons and patients realize the benefits to virtual care.



With the onset of the pandemic, rapid changes to the way healthcare is delivered was needed to minimize the impact the virus had on patients, reduce staff exposure and preserve personal protective equipment.

Luckily for South Carolinians, the Medical University of South Carolina, one of only two Telehealth Centers of Excellence nationwide, already had an excellent telehealth infrastructure and our health care providers in the Department of Surgery were quick to pivot into the new model, finding added benefits in the process.

Better access to care



“When Governor McMaster placed a COVID-19 moratorium on elective surgery last March, much of our practice quickly turned to a Telehealth model,” said [Katherine Morgan, M.D.](#), chief of Gastrointestinal and Laparoscopic Surgery. “Our practice continues to incorporate telehealth with about 20 percent of our patients currently seen through virtual visits.”

Patient feedback has been very positive, especially those who are at higher risk or live far away. Morgan says her practice serves the region for pancreatic cancer and upper GI malignancies and pancreatitis, with many patients traveling from Florida, Georgia and Tennessee. For many of these patients, Telehealth has been a wonderful experience.

“We adjusted and modified our model and now have a telehealth format that is systematized to offer care for our tertiary referrals,” she said. “Patients have the advantage of using MUSC Health from the comfort of their own home, often with a family member by their side. The added stress of traveling from another state is removed,

and they can focus on their health.”

She adds that this model of care is a result of the strong teamwork in her division.

More purposeful visits



Transplant patients on immunosuppressants have weakened immune systems and are at greater risk of complications due to COVID. The transplant team quickly incorporated Telehealth visits for post-transplant patients, who were at a higher risk of complications should they contract COVID-19.

“We use Telehealth visits to monitor their post-operative recovery remotely to reduce COVID exposure risk,” said [Derek DuBay, M.D.](#), chief of Transplant Surgery. “After learning from these experiences, we realized that Telehealth afforded tremendous benefits for patients undergoing a transplant evaluation, as well.”

The transplant team now screens pre-transplant patients and potential living donors. These visits include social workers who are able to give their full undivided attention to the patient during the hour long session. Provided the patient can move forward, all necessary testing is ordered and an in-person visit is coordinated all from the telemedicine visit.

“When the in-person visit occurs, it is a purposeful and efficient process orchestrated from the initial telemedicine visit,” said DuBay. “Since the evaluation process is now streamlined through an upfront Telehealth visit, we are surprisingly able to see more patients in a way that is convenient for them.”

He adds that since they have implemented these changes using the Telehealth model, their patient satisfaction scores have never been higher.

BURN CENTER OFFICIALLY OPENS OFFERING CUTTING-EDGE CARE

writer: Leslie Cantu

The only burn center in the state, [Steven Kahn, M.D.](#), chief of Burn Surgery, established the South Carolina Burn Center at MUSC Health to provide comprehensive care for patients of all ages in both the inpatient and outpatient settings.

Prior to opening the new comprehensive center, most adults in South Carolina would travel to Georgia for burn care, while pediatric patients have been able to receive care at MUSC. Burn patients have access to more than 50 specialists and programs whether treated at the new adult burn unit, or the already established pediatric burn unit at the MUSC Shawn Jenkins Children's Hospital, which is led by Dr. Aaron Leshner, M.D., MSCR.

Since it opened in May, the burn center has met the projections established for the 3 - 5 year mark and is changing what's possible in burn care through innovation and discovery.

The adult burn care team recently performed the first reported successful minimally invasive skin graft in the U.S. When Tommy Porcha, 54, suffered deep second-degree burns over 17% of his body, he was able to be treated at MUSC Health's burn center, one of a handful of burn centers in the U.S. that is participating in a study of using an enzyme gel rather than traditional surgery to treat burn wounds. In addition, MUSC Health regularly uses a regenerative technology that utilizes a skin cell spray rather than entire sheets of skin.

The combination of these two technologies allowed Kahn to avoid a conventional skin graft and, instead, perform a more precise repair that should result in less scarring over the burned areas and more long-term mobility.

For burn care, the first step for the surgeon is removing all of the damaged tissue. This is typically done visually, using a knife. But NexoBrid, derived from pineapple stems, eats away at dead tissue without touching living tissue – even minute traces of living tissue invisible to the surgeon, Kahn said. The product is awaiting approval from the U.S. Food and Drug Administration after completing phase 3 clinical trials.

This precision cleaning of the wound means patients have more dermis preserved and are less likely to need a skin graft, he said. Porcha was able to avoid a conventional skin graft. With the wound cleaned with the enzymatic solution, Kahn believed Porcha was a good candidate for another relatively new technology – Spray-On Skin Cells.



Dr. Steven Kahn, chief of Burn Surgery, examines Tommy Porcha, who suffered burns over 17% of his body and was able to avoid a conventional skin graft.

Even if there aren't enough remaining dermis and healthy skin cells that can heal on their own after wound cleaning, the skin cell spray can be used to replace missing cells and allow healing where it wouldn't have otherwise occurred without a graft.

Instead of taking all of the skin from Porcha's thighs, Kahn removed three sections from an unharmed section of his back of about a half-dollar size each. The skin from those donor sites was then placed in the ReCell device to incubate for about 20 minutes. In that time, the skin was broken down and turned into a skin cell spray capable of covering 80 times the area of the donor sites.

"That's very dramatic compared to regular grafting," Kahn said. With a conventional skin graft, he explained, "We usually only expand one to three times the original size, and the more you expand them, the worse the scar and the worse the functional outcome is."

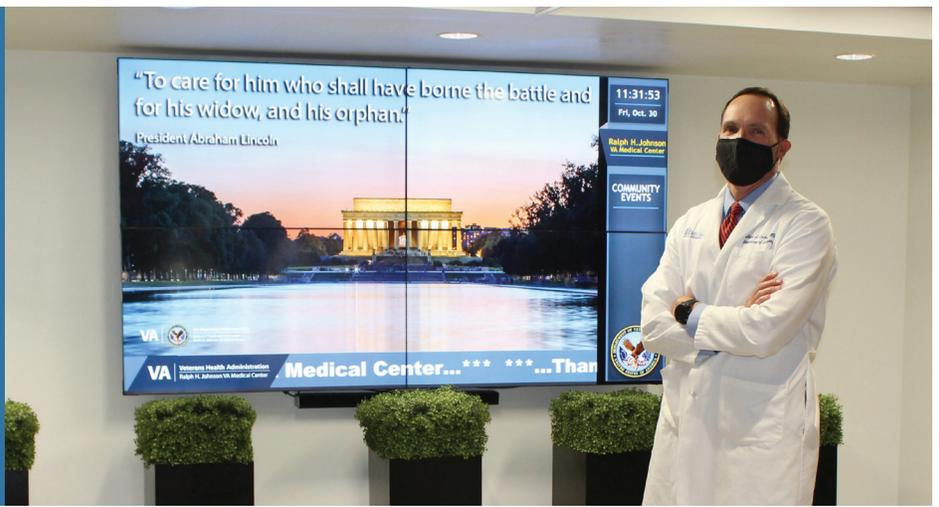
The regenerated skin cells are then sprayed over the wound, where they begin to grow. Kahn said the spray can be used without a graft only on certain burns, like Porcha's deep second-degree burns. The enzyme is available only through a clinical trial, and this is the first reported combination of the two technologies in the United States.

The new technique and the accompanying data will be presented at the American Burn Association Annual Meeting in 2021. The burn center also performs research regarding telemedicine, firefighter safety, regenerative medicine, reconstructive surgery, treating burn shock and smoke inhalation, non-opiate pain management, and minimally invasive burn care.

To support the MUSC Burn Fund,
visit <https://connect2.musc.edu/surgery>

VA SURGICAL OUTCOMES

AMONG THE BEST IN THE U.S.



A recent analysis performed by the Veterans Affairs Office of the Inspector General (OIG) to evaluate operating room efficiency revealed MUSC's affiliated VA, the Ralph H. Johnson Veterans Affairs Medical Center (RHJVAMC) ranked 2nd out of 135 facilities. The audit team analyzed operating room efficiency data from 2014-2018 by scoring outcomes for OR utilization, first case on time start percentage, turnover time between cases, and case cancellations. The OIG performed the analysis to determine factors contributing to efficiency. More efficient operating rooms utilize resources more effectively and provide better access to care for patients.

Much has changed in the RHJVAMC surgical program since [Mark Lockett, M.D.](#) took over as the Chief of Surgery and joined MUSC's surgery department as the Vice Chair of Veterans Affairs in 2011. When he arrived at RHJVAMC, the surgery program was considered a poor-quality outlier within the VA system. Working with facility leadership, surgeons, anesthesia, nursing and others he helped chart a course that resulted in significant improvements in outcomes.

As quality issues improved, VA Surgical Services began to focus on expanding care expertise and access. As Charleston and the surrounding areas grew, so did the number of veterans seeking care at RHJVAMC. It has been one of the fastest growing VA Hospitals in the country. "When I started in 2011, we had 44 full-time-equivalent faculty," said Lockett. "We now have 98 clinicians, 23 advanced practice providers, 24 health care technicians, and support educational efforts for 22 MUSC residents. 40 of our 61 surgeons work at MUSC as well as the VA. The relationship with MUSC helped us build a robotic surgery program, create a bariatric surgery program, bring breast cancer care to the VA, establish a comprehensive gynecology program, start a cochlear implant program, and expand expertise in all 13 of our surgical sections."

With programmatic growth, more complex care, increased

patient volume and staffing, the surgical productivity data improved as well. The RHJVAMC consistently ranks in the top 5 hospitals in VA in productivity per operating room. Despite the challenges of COVID-19, RHJVAMC ORs ranked 2nd in fiscal year 2020. "We've added high quality and high complexity care at the VA over the years," said Lockett. "While our hospital is not large it provides some of the most complex care in the VA system. We are able to do this in part because of the excellent relationship we have with MUSC Health. Our goal is for patients and providers to not notice a difference in care between being at a complex tertiary referral center like MUSC and the RHJVAMC. The paint on the walls may be different, but the care should be the same." Lockett credits the hard work and surgical expertise MUSC Health providers offer at the VA as a significant part of why the RHJVAMC has one of the most efficient and productive ORs in the largest healthcare system in the country.

In addition to his leadership at the VA, Dr. Lockett holds a number of other leadership positions. His track record of improving quality at the VA was a significant reason [Prabhakar Baliga, M.D.](#), chair of the Department of Surgery, named him the Surgical Lead for the South Carolina Surgical Quality Collaborative. In this role, he helps guide quality improvement efforts at multiple hospitals across South Carolina. He performs a similar role as the Surgery Integrated Clinical Community lead for the VA's region 7, which includes South Carolina, Georgia, and Alabama. His other leadership roles include being a member of the leadership team of the Louisiana Hospital Association's Surgical Quality Collaborative, Chair of the MUSC Opioid Task Force, and Course Director of the MUSC Postgraduate Course in Surgery.

Whether consulting with a newly diagnosed cancer patient in his busy surgical oncology practice, building a new program at the VA to improve patient outcomes, or training the next generation of surgical leaders, Lockett always keeps the patient in the forefront of his decision making. "A lot of my roles are administrative roles, but I approach all of them from the standpoint of putting patients first," said Lockett. "Every decision we make needs to be geared toward taking better care of patients."

SPOTLIGHT ON:

LAURA HOLLINGER, M.D.

Laura Hollinger, M.D. joined the MUSC Department of Surgery in 2017 and is medical director of the MUSC Pediatric ECMO Program at the MUSC Shawn Jenkins Children's Hospital.



Under Hollinger's leadership, the Pediatric ECMO Program received the platinum-level Award for Excellence in Life Support from the Extracorporeal Life Support Organization (ELSO), an international consortium of centers offering ECMO (extracorporeal membrane oxygenation) for support of failing organ systems in infants, children and adults. This award is the highest attainable level of achievement an ELSO Center of Excellence can receive and is one of eight children's hospitals in the U.S. to achieve this recognition in 2020.

"Dr. Hollinger has been an amazing addition to the MUSC Pediatric Surgery team. She is an outstanding clinician, gifted technician, provides tireless energy to her patients and teammates and is absolutely unflappable; I have never seen her without a smile on her face," said [Christian Streck, M.D.](#), chief of Pediatric Surgery. "She is kind in the face of adversity and truly loves pediatric surgery. Her teamwork and dedication have helped to significantly elevate the quality of our ECMO program."

Hollinger found her passion in pediatric surgery and care for critically ill infants and children during general surgery residency at Houston Methodist Hospital and fellowship training at McGovern Medical School at University of Texas Health Sciences. During general surgery residency, she first envisioned a career in vascular surgery after rotating in the DeBakey Heart and Vascular Center and spending two years conducting research at the Research Institute.

When she started her next rotation in pediatric surgery, something changed inside of her. "It was like a lightbulb went off and I just knew this is what I was meant to do," said Hollinger. "But fellowship training in pediatric surgery is highly competitive." Hollinger credits her research experience during training, which involved ischemia reperfusion injury, and strong relationships with her mentors, Dr. Heitham Hassoun and Dr. Barbara Bass, then chair of the Department of Surgery, for leading her on the path towards pediatric surgery. "Dr. Bass is a significant reason on why I chose Methodist for residency," said Hollinger. "She is a premier academic surgeon in the United States and has held many

national leadership positions, including serving as president of the American College of Surgeons."

Hollinger credits her mentor Kevin Lally, M.D., chair of Pediatric Surgery at UT Health Sciences, as the reason why she is a pediatric surgeon. "He taught me that there is no greater honor nor reward than taking care of a sick child, no matter the time of day or night. I remember one Saturday night we were putting a baby on ECMO and Dr. Lally looked at me and asked 'Are you sure this is what you want to do?' I couldn't imagine being anywhere else on a Saturday night aside from taking care of a sick child, and I think that was the pivotal moment where I knew it was the perfect fit for me."

Lally is Surgeon-in-Chief of the Children's Memorial Hermann Hospital and the A.G. McNeese Chair in Pediatric Surgery at the McGovern Medical School. Hollinger said she is grateful for the solid foundation she received under Lally's mentorship, which spurred her interest in ECMO and leading a team to care for a really sick patient and their family.

"It takes a village of specialists and at UT Health Sciences and Children's Memorial Hermann Hospital, I had the opportunity to experience how surgeons can lead an ECMO team and coordinate all of the areas that are needed to care for that patient. After graduation, I knew I wanted to work in academic medicine at a Children's Hospital that fit my training and interests in critically ill children, ECMO, and fetal care." Upon graduation, Hollinger looked at many programs in the Houston area. But none were the fit she was looking for. Then she learned that the MUSC Department of Surgery was seeking a pediatric surgeon and there was significant growth in MUSC Shawn Jenkins Children's Hospital fetal center and Pediatric ECMO program.

Dr. Hollinger's training and interests were the perfect match.

"To me, there's just nothing better on earth than to see a sick child get better," said Hollinger. "I think that really drives me each day to do my best, and to be my best and to hold everyone to that same high standard because it's all the unifying concept of taking care of a child."



Dr. Kevin Delaney discusses the innovative approach to sensation-sparing surgery with his patient, Suzette Bussey.

Written and photographed by Dawn Brazell

BREAST CANCER SURVIVOR TAKES A BOLD STAND, PAVES PATH FOR NEW SENSATION-SPARING SURGERY

When entrepreneur and accessories designer Suzette Bussey, 43, chose her theme *Be Bold* for the year, she had no idea just how much that would play out in her life.

When diagnosed with breast cancer in August 2020, the theme deepened. Bussey found out that not only did she have the BRCA1 gene mutation but that she also had triple negative breast cancer. Neither was good news.

It challenged her to have faith in herself, that she could get through the treatment and have the courage she needed not just to survive but also thrive, despite the fear she felt. “I realized I had to be bold to believe that I will be cancer free, and I could get through all of these things.”

The good news was that the cancer seemed not to have spread, and her doctors, including oncologist [Young Lee, M.D.](#), surgical oncologist [Mark Lockett, M.D.](#), reconstructive surgeon [Kevin Delaney, M.D.](#), and gynecologist, [Gweneth Lazenby, M.D.](#), developed a treatment plan for her. She was facing a mastectomy and oophorectomy, a procedure to remove her ovaries, given her BRCA1 mutation.

One night, when Bussey scrolled through the news feed on her phone, she ran across a story about a woman who was able to preserve breast sensation following reconstruction from a mastectomy. The article featured San Francisco surgeon, Anne Peled, M.D., who had been doing an innovative procedure to spare the nipples and retain sensation for women having reconstructive surgery after breast cancer.

Excited, she contacted her doctors, Lockett and Delaney. They weren’t doing the procedure at the time, and with COVID-19 and insurance restrictions, it would be hard for her to go to San

Francisco. She made the pitch to Delaney to see if he’d check it out. Delaney reached out to Peled. After much discussion, Delaney decided he was willing to do it if Bussey wanted it. “I told her straight up, ‘So, I’ve never done this. I work with nerves all the time, but I’ve never done this particular surgery.’”

Bussey said she trusted him, given his reputation and the excellent care she had received. “I realized if I was going to survive, then I wanted my quality of life to be as close to normal as possible. That was very important to me. I felt they listened to me, and we had several conversations. In the end, they were willing to do it because it wasn’t going to affect the health outcomes.”

Her treatment had to be done in stages. First, Lockett scheduled a lumpectomy to remove the cancer. Because she responded well to her rounds of chemotherapy, her doctors found that she had a complete pathologic response, which means there were no active cancer cells growing anywhere.

Then Lockett and Delaney prepared to do the new procedure. The doctors worked in tandem, with Delaney handling the nerve grafting and placing tissue expanders for a later surgery to insert implants.

Delaney said the procedure went well, and he appreciated that she advocated for her cause, noting he wouldn’t have agreed if he thought it would affect her cancer outcome.

It will take a year for Bussey to know how much sensation will return.

“I told them how important it was to me and how I wanted to be able to feel a hug and to feel like a woman. They were willing to take into account quality-of-life issues,” said Bussey. “For them to consider this in the treatment plan was incredible.”

O.R. OF THE FUTURE

ARRIVES AT MUSC

Innovative physicians, Siemens Healthineers strategic partnership credited.

MUSC Health nurse anesthetist Brady Thomas works in the new operating room. It took more than a year of discussions and careful planning to make the room a reality. Written by Celia Spell, Photo by Sarah Pack

Space and technology come together to create the optimal surgical environment in MUSC Health's new hybrid operating room. In this new state-of-the-art O.R., physicians can perform both open and laparoscopic procedures on the same patient during the same visit, which lessens the patient's need for multiple rounds of anesthesia and lowers overall risk.



R. Veeraswamy



M. Katz



D. Steinberg

Ravikumar Veeraswamy, M.D., chief of Vascular Surgery, worked with fellow MUSC heart and vascular surgeon Marc R. Katz, M.D., MPH, the Fred A. Crawford, Jr. M.D. Endowed Chair in Cardiothoracic Surgery, and interventional cardiologist Daniel Steinberg, M.D., the Michael R. Gold Endowed Chair in Structural Heart Disease, to design an operating room that would provide a space for these surgeries.

"Collaborating on this project was a natural fit for us," Veeraswamy said, referring to his two colleagues. Accustomed to working together on patients and offering solutions, as well as sharing new techniques from their own areas of expertise, Veeraswamy, Katz and Steinberg were excited for this opportunity. After more than a year of meeting with each other and with MUSC's strategic partner, Siemens Healthineers, the team brought the room to life.

What Veeraswamy finds most useful about this new room is its imaging capabilities. With the most up-to-date technology, surgeons and interventionalists in this operating room can visualize more of their surgical field ahead of surgery. By combining ultrasound imagery with X-ray imagery, physicians

can see everything more clearly – like upgrading to a high-definition TV. And this imaging can even be captured through the table the patient is lying on.

Ultrasound imagery is ideal for capturing movement and tissues, according to Steinberg, while X-rays capture changes in density. "By being able to merge the two, you can look at one picture that has the advantages of two," he said, "which helps us perform more minimally invasive procedures on our patients."

Patients with complex aortic pathologies are great candidates for this operating room, and Veeraswamy points to an endovascular stent replacement as a surgery that utilizes the technology to its fullest extent. By keeping the procedure as minimally invasive as possible, while also allowing the physician the opportunity to transition to an open procedure if needed, surgeons can tackle problems that were once thought too complicated. They can also expose the patient to less radiation and less anesthesia, both of which contribute to the risks involved with any surgery.

One drawback to technology is that it is always evolving, and it doesn't always take much time for it to become obsolete. But the physician team at MUSC Health worked with Siemens Healthineers to prepare for that possibility by making sure the room was adaptable as well as flexible. It can change as technology does, and Siemens Healthineers is prepared to incorporate technological upgrades like augmented reality and other updated software.

"This strategic partnership is ultimately about patient care," said Dave Pacitti, president and head of the Americas for Siemens Healthineers. "By empowering MUSC with the technology they need as patient care evolves, we hope to help their clinicians do even more for their stroke patients and improve post-stroke outcomes."

Between its teamwork capabilities, technological advancements and efficient design, the new hybrid operating room gives surgeons at MUSC Health the ability to help more patients.

Certificate in Applied Surgical Education Leadership

Leading transformational  change at your institution

EDUCATION NEWS

FUTURE SURGICAL LEADERS PROGRAM ROLLS OUT First-of-its-kind residency training program in the U.S.



C. Talley

When [Cynthia Talley, M.D. FACS](#), associate professor and vice chair of Education in the Department of Surgery, was selected to participate in the American College of Surgeons (ACS) Certificate in Applied Surgical Education Leadership (CASEL) program, she had a singular goal in mind: to develop an innovative surgical

leadership program for trainees.

“Surgical residency curriculum consists largely of patient care and surgical skills,” said Talley. “Training programs don’t traditionally provide the much-needed tools to empower trainees in key leadership skills: collaborating across disciplines, navigating difficult situations, developing effective communication skills, or incorporating diversity and inclusion into their practice.”

Over the past year, Talley worked closely with her CASEL mentor, [John Mellinger, M.D. FACS](#), chair of General Surgery at Southern Illinois University and chair of the American Board of Surgery (ABS), to develop a leadership program for residents in the MUSC Department of Surgery.

When building the program, the first step was to identify stakeholders and develop a needs-assessment survey. Luckily, development of leadership domains and competencies had recently been validated by the Master in Health Administration (MHA) curriculum director, [Abby Swanson Kazley, Ph.D.](#), professor in the College of Health Professions.

Talley was able to collaborate with Kazley to build on the MHA needs assessment and customize the survey to surgical trainees. The survey was delivered to 240 people with a 360-degree perspective.

The respondents were grouped into 3 weighted super-groups: Attendings and Recent Graduates (44 of 74, 59% response),

Residents and Fellows (42 of 72, 58% response), and Multi-Disciplinary (44 of 95, 46% response) including APPs, Students, Administrative Staff, and Nurses. The importance of each competency was compared among groups and overall importance was defined as >75% important and very important responses.

With important competencies selected, a heat map for PGY delivery was created. A curriculum for each PGY was created with competencies and subtopics. Program directors and resident stakeholders for each PGY and program assisted with educational design. The program was introduced by Grand Rounds with feedback solicited. Speakers were then identified by stakeholders.

“Our program is unique to residency training programs throughout the country,” said Talley, “The ACS does offer a weekend-long course for residents and surgical leaders, but to my knowledge we are the only academic residency program offering a full five-year program. Plus, we offer one-year programs for our fellows and preliminary interns.”

She believes the innovative program will have sweeping downstream effects, including improved patient satisfaction and reduced medical malpractice claims. Talley says these areas are not difficult to measure. “For instance, we can measure patient satisfaction and incident reports and track progress over time.” The plan is to measure both short- and long-term outcomes and provide immediate feedback to the trainees.

The program includes ten sessions or less a year for each PGY group. Due to COVID restrictions, most sessions are currently virtual. These sessions involve role playing and case scenarios to provide “hands-on” experiential workshop learning. All trainees at the end of the program with a 75 percent attendance will be awarded a Future Surgical Leadership certificate of completion. So far, the sessions have received rave reviews by the residents and faculty moderators.

After the initial deployment, assessment, and fine tuning, Talley would like to develop regional education collaboratives to expand the program beyond the walls of MUSC residency education.

RESIDENT EDUCATION SUPPORT FUND

To help support the Future Surgical Leaders Program, visit <https://connect2.musc.edu/surgery>



left to right: Prabhakar Baliga, M.D. chair of the Department of Surgery, PGY-2 residents: Bryce Lambert, M.D., John Lucas, M.D., David Mann, M.D., Brie Gerry, M.D., Chris Thomas, M.D., Tyler Rives, M.D., Christian Streck M.D. chief of Pediatric Surgery and General Surgery Program Director

IN THE LOUPES

Since 2014, the *Curtis P. Artz MUSC Surgical Society* has provided surgical loupes to all second-year residents as a way to ease the financial burden. General Surgery residents no longer have to worry about where they will find that extra \$1000 dollars to cover the cost of their loupes, which are specialty glasses that includes a magnification device mounted in the lenses and are custom made for the individual surgeon to ensure the highest quality results in surgical procedures.

To help support Resident Education, visit <https://connect2.musc.edu/surgery>

ERIC R. FRYKBERG, M.D. LECTURE & SURGERY RESEARCH RECOGNITION DAY GOES VIRTUAL

Each fall, our trainees have the opportunity to highlight their research during Surgery Research Recognition Day. This year, due to COVID-19 restrictions, the day looked a little different. In fact, the virtual event spanned an entire week, providing many new opportunities for both the presenters and the attendees. “We offered electronic poster presentations and had two days of excellent podium presentations in Clinical Science, Basic Science, and Quality Improvement,” said [Jean Marie Ruddy, M.D.](#), Associate Program Director of Resident Research. “We appreciate everyone who engaged with our presenters & voted throughout the week.”

Congratulations to our award winners: Best Clinical Science Presentation: Melissa Hite, M.D. PGY-5 Best Basic Science Presentation: Jerec Ricci, M.D. PGY-3, Best Poster Presentation: Christopher Thomas, M.D PGY-2.



M. Hite



J. Ricci



C. Thomas



A. Kirk

During Surgery Research Recognition Day, visiting professor Allan Kirk, M.D. presented *Preparing for the Future of Surgery*. Dr. Kirk is chair of the Department of Surgery at Duke University College of Medicine. He holds Professorships in Surgery, Pediatrics and Immunology and serves as Surgeon-in-Chief for the Duke University Health System. In addition to his clinical transplant practice, he has published over 300 scientific manuscripts, and continues NIH-, DoD- and FDA-sponsored investigations in organ transplantation and immune management. He has focused increasingly on the curation and analysis of multidimensional data for use in Real World Evidence trial design, clinical decision support tool development and drug discovery.



RESEARCH NEWS

INNOVA THERAPEUTICS RECEIVES RARE PEDIATRIC DISEASE DESIGNATION FROM THE FDA FOR NEW OSTEOSARCOMA TREATMENT

writer: Dawn Brazell; photographer: Sarah Pack

Innova Therapeutics Inc., a biotechnology company dedicated to developing innovative cancer therapies for patients who have inadequate treatment options, announced today that the U.S. Food and Drug Administration (FDA) has granted rare pediatric disease designation for IVT-8086 for the treatment of osteosarcoma.

MUSC Hollings Cancer Center researcher [Nancy Klauber-DeMore, M.D.](#), who is the co-founder and chairman of the Scientific Advisory Board for Innova Therapeutics, based in Charleston, South Carolina, was instrumental in the development of the research that led to the therapy. IVT-8086 is a humanized monoclonal antibody (mAb) with a high affinity receptor for secreted frizzled-related protein 2 (SFRP2) and is believed to be the only SFRP2 antagonist in development.

Under the Creating Hope Act, passed into federal law in 2012, the FDA grants rare pediatric disease designation for serious and life-threatening diseases that primarily affect children ages 18 years or younger and includes fewer than 200,000 people in the U.S.

Robert Ryan, Ph.D., president and chief executive officer of Innova Therapeutics, said the FDA's rare pediatric disease designation for IVT-8086 for the treatment of osteosarcoma highlights the significant unmet medical needs of patients with this devastating and life-threatening disease.

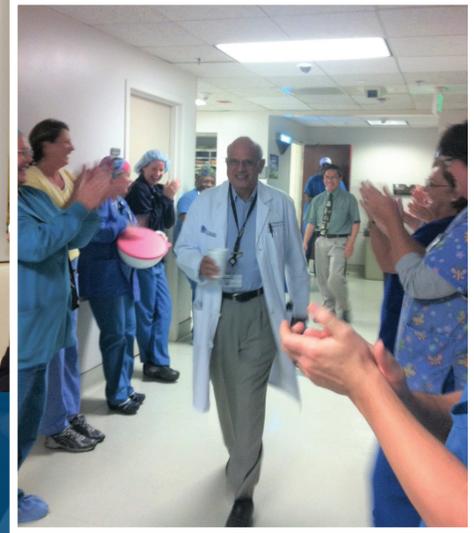
"Receiving rare pediatric disease designation from the FDA is a significant milestone for this program and underscores the

critical value of our work," Ryan said. "The entire Innova team is encouraged by this designation and will continue to work diligently toward determining the efficacy and registration for IVT-8086 for the treatment of osteosarcoma."

Klauber-DeMore, who holds the BMW Endowed Chair in Cancer Research in the Department of Surgery at MUSC, said the FDA designation of their drug is a huge breakthrough for osteosarcoma research. "This designation is an enormous validation of the work that we've been doing. It's really exciting because there have been no breakthroughs in osteosarcoma treatments in decades," she said. "IVT-8086 has the potential to become the first FDA-approved therapy for individuals with osteosarcoma in over 30 years."

Osteosarcoma is a primary malignant bone tumor that generally arises in the long bones and, more rarely, in soft tissues. Osteosarcoma affects approximately 40,000 Americans, predominantly children, teenagers and young adults. It is a highly metastatic cancer wherein up to 20% of patients have detectable lung metastasis upon initial diagnosis, with a greater incidence in pediatric patients compared to adult patients, and 40% of patients develop lung metastasis in later stages.

"We're passionate about trying to move the field forward and hopeful that we can find something to improve survival for these patients," Klauber-DeMore said.



PAY IT FORWARD: WHY DR. RAJA STAYS CONNECTED & GIVES BACK

Dr. Prathivadibhayankaram Rajagopalan started his transplant surgical career at MUSC in 1976 after completing a two-year MUSC fellowship in transplant surgery. Over the next thirty-five years, Dr. Raja, as he is popularly called, touched the lives of thousands of patients with end stage renal disease.

Clinically, he built the foundation of the MUSC vascular access and kidney-pancreas transplant programs. His commitment to clinical translational research has been at the forefront for introducing new immunosuppressive agents to clinical transplantation. These endeavors helped to build South Carolina's reputation for having a world-class kidney transplant program with outstanding quality and innovative research serving the most underserved populations in the state.

In addition to his surgical expertise and leadership at MUSC, Dr. Raja built the foundation for Lifepoint, formerly known as SCOPA (South Carolina Organ Procurement Agency), for organs, tissue and eyes. He served as Medical Director and on the Board of Directors for decades and is responsible for making this one of the top performing OPOs (Organ Procurement Organizations) in the country.

During this long tenure, he educated hundreds of trainees who have benefited from his expertise and he supported MUSC and resident education through his many philanthropic gifts. Dr. Raja lives by the words of wisdom, "From everyone who has been given much, much will be required." (Luke 12:48) Having been blessed with the wealth and knowledge a surgical career provided, Dr. Raja believes it is only fitting to pay it forward to the MUSC surgical faculty and trainees.

When Dr. Raja ceremoniously walked out of the OR for the last time on June 26, 2015, he continued his long-standing commitment to educating hundreds of

transplant fellows, medical students, post graduates, pharmacy students and nurses.

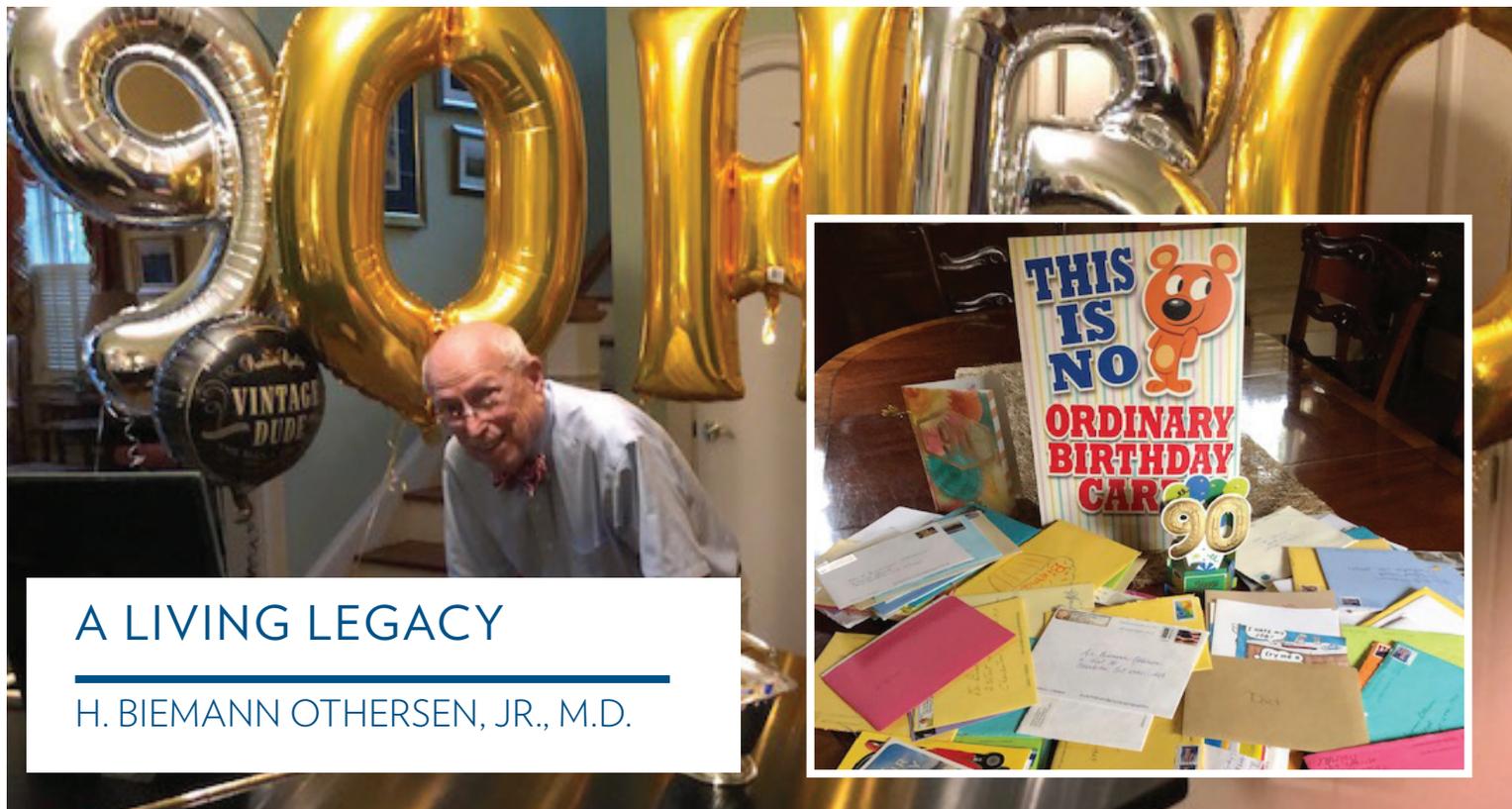
At a meeting for retired faculty that explored ways faculty can continue to engage with the Department, Dr. Raja shared why he chooses to stay involved in education and give back to the MUSC Department of Surgery. "It's good to see how the program has grown, how MUSC has grown," said Dr. Raja. "It's a privilege to be able to share knowledge to younger faculty and trainees that will help them build a rewarding career."

Prior to COVID restrictions, a typical Friday morning transplant conference would include transplant surgeons, fellows, pharmacy and medical students, all eager to learn from Dr. Raja's experiences.

"Sharing my experiences and lessons learned pays long term dividends to educating the next generation of surgical leaders," said Dr. Raja. "A whole host of people attend the conference because they value the importance of learning from experienced surgeons." Dr. Raja says he looks forward to when the in-person meeting can resume.

"Modeling professional behaviors and embracing a culture of respect creates a positive culture," said Prabhakar Baliga, M.D., chair of the MUSC Department of Surgery. "Our residents and fellows are fortunate to learn from Dr. Raja, who is the epitome of the ultimate professional in moral, ethical and behavioral standards in both clinical and research practice."

Many of our faculty, like Dr. Raja, desire to give back to MUSC. We hope that you will partner with us to help pave the path for the next generation of surgical leaders. Please contact Vera Ford, Director of Development, at 843-792-1840 or fordva@musc.edu or visit musc.edu/surgery/give.



A LIVING LEGACY

H. BIEMANN OTHERSEN, JR., M.D.

When Dr. Othersen reached a birthday milestone, more than 150 people sent him birthday cards to celebrate. “It started with members of my church who decided to have everyone send me 90 cards to commemorate my 90th birthday and it turned out I received more than 150. It was really quite touching.”

To all who have crossed paths with Dr. Othersen, you can certainly understand why so many people felt compelled to recognize him on his special day. His infectious laugh, endless energy, and engaging thoughtfulness are just some ways to describe the effect he has on people. These personality traits fit perfectly for the pediatric surgery career he chose more than 60 years ago.

Charleston born and raised, Dr. Othersen attended the College of Charleston, and the medical school at MUSC, completed an intern year at Philadelphia General Hospital, served two years in the U.S. Navy, and then spent a year at the University of Pennsylvania graduate school before returning to MUSC for general surgery and thoracic surgery training. It was during his surgical training that he met and courted Janelle Lester, a nursing student. They have been married for 62 years, and have four children and nine grandchildren.

After residency, he entered fellowship training in Pediatric Surgery at Ohio State University followed by a research year at Massachusetts General Hospital

before returning to MUSC.

One of the most respected and loved pediatric surgeons in medicine, in his more than 50-year association with MUSC, few have made a more significant impact on patients, faculty, staff and students.

When Dr. Othersen joined the faculty at MUSC in 1965, he was the state’s first pediatric surgeon and one of the first in the Southeast. Dr. Othersen remembers when there was not a Children’s Hospital, and he says opening it in 1987 made a remarkable difference. As one of the founders of the MUSC Children’s Hospital, Dr. Othersen worked hard to ensure that children had the best care that could be found anywhere. Without Dr. Othersen’s vision, the MUSC Children’s Hospital would not be what it is today. He is a giant in the development of pediatric surgery at MUSC.

His vision, determination and work ethic continue to inspire and motivate others. Dr. Othersen and his wife, Janelle, personally helped lead the charge for the Shawn Jenkins Children’s Hospital campaign with a generous matching gift challenge to the Pediatric faculty and staff; he leads and continues to inspire residents, faculty and alumni as chairman of the Curtis P. Artz MUSC Surgical Society; and every Wednesday at 7:15 a.m. without fail, he holds thought-provoking lectures for the MUSC residents on their pediatric surgery rotation in the famous “Bee Hive Sessions.”

Dr. Othersen holds the distinction of being the longest consecutive contributor for the entire MUSC enterprise. His philanthropy at MUSC began in 1976 and spans 44 years.



Dr. and Mrs. Othersen with their children in 1977. Pictured from left to right: Mandy, Megan, Biemann and Margaret.

When asked why he is so thoughtful in his philanthropy, he fondly recalls a time in his life when someone's philanthropy made all the difference in the world.

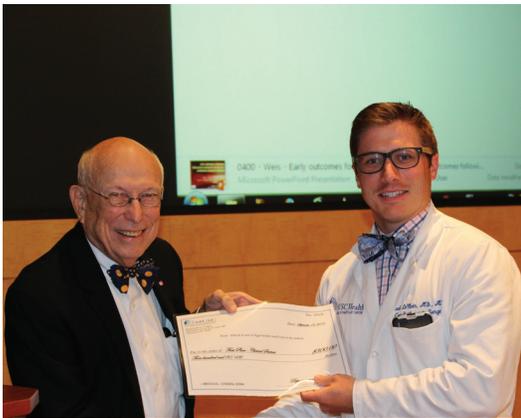
"When Janelle and I moved to Boston to start my fellowship training in 1964, we were poor as church mice," said Dr. Othersen. He explains that the previous fellowship program paid salaries on the first of the month and the research program he entered paid salaries at the end of the month. "We were very concerned on how we were going to feed our young daughter when a friend of Janelle's generously sent us \$25. That meant the world to us - it meant food on the table.

Our gratitude remains with us to this day and we hope our gifts make a similar lasting impact."

THE CURTIS P. ARTZ MUSC SURGICAL SOCIETY:

CONNECTING FACULTY, RESIDENTS AND ALUMNI AND SUPPORTING RESIDENT EDUCATION

Ten years ago, Dr. Othersen revived the Curtis P. Artz MUSC Surgical Society and serves as the chair of the Society. Originally founded in 1974, the Curtis P. Artz MUSC Surgical Society is a member organization representing alumni of the MUSC surgery residency programs, fellows, and Department of Surgery faculty members. Over the past decade, the Society has supported resident research and education through sponsoring training software, travel, journal club meetings, loupes, and resident research. Many of our current faculty and alumni are members of prestigious societies and national organizations. The Society hosts receptions at annual meetings such as The Southern Surgical Society Meeting, providing an opportunity for comradery and a vibrant exchange of ideas.



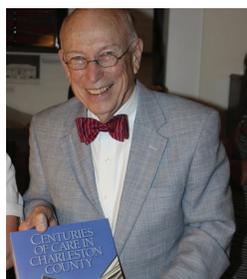
Dr. Othersen presenting a check to Dr. Bradley LeNoir during the 2016 Surgery Research Recognition Day.



Members of the Curtis P. Artz MUSC Surgical Society gather in front of the Christmas Tree during the annual Southern Surgical Society Meeting in 2015.



Dr. Baliga and Dr. Othersen during an Artz Society reception.



Dr. Othersen during a book signing for "Centuries of Care."



Dr. Othersen meets with residents at a Journal Club meeting sponsored by the Curtis P. Artz MUSC Surgical Society.



David B. Adams, M.D., Chair Prabhakar Baliga, M.D., President David J. Cole, M.D. and H. Biemann Othersen, Jr. M.D.

Gratitude

To our generous donors, alumni, faculty, care providers, and fellow staff:
On behalf of the MUSC Department of Surgery Office of Development

Thank You

are not words enough.



For any questions you may have on the impact philanthropy makes on our patients and surgical programs, please contact Vera Ford, Director of Development, at fordva@musc.edu or 843-792-1840 or Pam Loudon, Development and Alumni Coordinator, at loudon@musc.edu 843-792-3342.

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