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David B. Adams, M.D. Receives SC and MUSC's Highest Honors

...and more.

MESSAGE FROM THE CHAIRMAN



This issue highlights some of the latest research and innovations, including the division of Research's roadmap that will lead our efforts into the next era of surgical innovation, significant NIH funding in the Wang Lab, and leading-edge approaches to surgical care that reduces hospital stays and increases patient satisfaction.

Next month the department celebrates a milestone -- 50 years of kidney transplantation.

This issue highlights the continued innovation, beginning with the first surgery in 1968. The MUSC kidney transplant program now ranks as the tenth largest kidney transplant program in the nation.

We highlight the important work of the South Carolina Surgical Quality Collaborative (SCSQC) and thank Dr. Mark Lockett for leading the charge for MUSC. The SCSQC is one of a few statewide collaboratives in the country and it is paving the way to provide quality improvement initiatives throughout the state, improving surgical outcomes with reduced costs to South Carolinians.

We celebrated the remarkable career of Dr. David B. Adams during an evening filled with heartfelt tributes, much laughter and expressions of gratitude.

In recognition of his lifetime achievements, Dr. Adams was awarded the Order of the Palmetto. The award is the highest civilian honor given to citizens of South Carolina for their extraordinary lifetime service and achievements.

In addition to receiving the highest honor from the State and in recognition of his many contributions, we announced that MUSC and the Department of Surgery are distinguishing Dr. Adams with an endowed chair named in his honor.

Many have already contributed to the David B. Adams Endowed Chair campaign, among the many other giving opportunities within the department. During this holiday season, my thoughts turn gratefully to those who have made our progress possible.

I wish you and your loved ones a happy and healthy holiday season.

Prabhakar Baliga, M.D., FACS

Fitts-Raja Professor of Surgery

Chairman, MUSC Department of Surgery



SAVE THE DATES

DECEMBER 3, 2018

MUSC Faculty and Alumni Reception
Southern Surgical Association
Palm Beach, FL

FEBRUARY 12, 2019

Marion Anderson Lecture
Timothy M. Pawlik, M.D.
MUSC Campus

FEBRUARY 24, 2019

Southeastern Surgical Faculty
and Alumni Reception
Charlotte, NC

MARCH 29-30, 2019

Reunion Weekend
MUSC Campus

APRIL 9, 2019

Kredel-Springs Lecture
MUSC Campus

APRIL 25-27, 2019

48th Annual Postgraduate
Course in Surgery
Hyatt Place, Charleston, SC

MAY 20, 2019

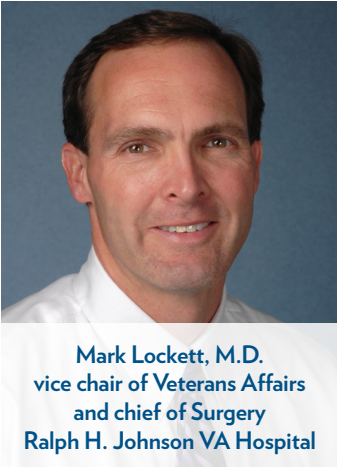
2nd Chance Golf Invitational
and Celebration Reception
Seabrook Island, SC

CME COURSES

Up-to-date CME Course
information can be found at
www.musc.edu/surgery/events

COVER: Evert Eriksson, M.D., associate professor of General and Acute Care Surgery, works with John Yost, CAD illustrator, in the bioengineering laboratory to develop a 3D model from CT Scans to use as an educational opportunity.

SOUTH CAROLINA SURGICAL QUALITY COLLABORATIVE MAKES STRIDES



Mark Lockett, M.D.
vice chair of Veterans Affairs
and chief of Surgery
Ralph H. Johnson VA Hospital

The South Carolina Surgical Quality Collaborative (SCSQC) is a new regional surgical quality collaborative designed to improve the quality and value of general surgical care in South Carolina. It was modeled after successful Collaboratives in Michigan and Tennessee. Funding is provided by the Blue Cross Blue Shield of South Carolina Foundation and the Duke Endowment.

As published in the June 2018 *American Surgeon*, the Collaborative is built on the principle that highly reliable, actionable data can impact surgical outcomes.

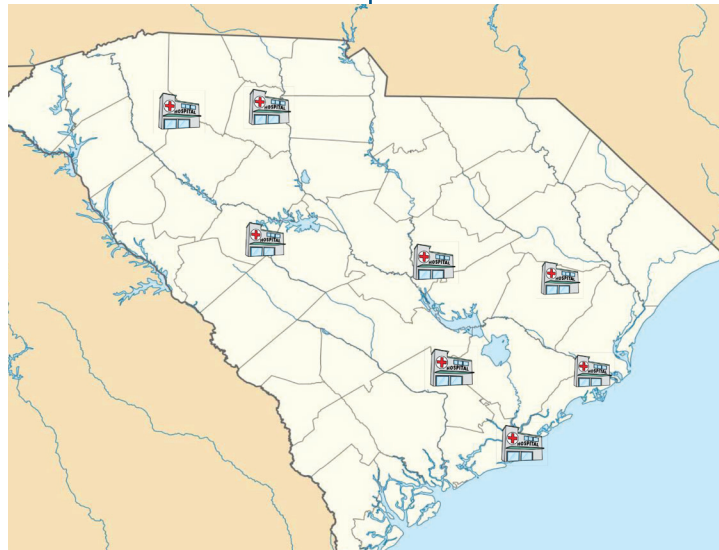
This study was a retrospective observational analysis which showed outcome rates for select general surgery procedures across the eight hospitals involved in the SCSQC. Facilities collected data from 15,978 general surgical cases. SCSQC member facilities improved outcomes in 15 of 16 quality measures over the two-year period of the initiative.

The study concludes that the SCSQC empowers providers with the data resources they need to improve the quality and value of surgical care for South Carolinians.

“It has been really encouraging to see surgical leaders from facilities that normally compete with each other get in a room and work together to figure out how to provide better care for patients,” said Lockett.

SCSQC is led by a leadership team representing the South Carolina Hospital Association, Health Sciences South Carolina, MUSC, and Blue Cross Blue Shield of SC.

The Collaborative provides surgeons with real-time, risk - adjusted, surgeon - specific data. The data is abstracted from patient charts by trained abstractors utilizing established outcome definitions. The risk-adjusted outcomes are then utilized to guide Quality Improvement (QI) efforts at member hospitals and across the Collaborative as a whole.



The South Carolina Surgical Quality Collaborative is comprised of eight hospital systems dedicated to improving surgical outcomes.

“SCSQC provides a mechanism by which we can obtain better outcomes by providing actionable and believable data and facilitating collaboration between surgical leaders across the state.”

Each participating site has a surgeon lead and a data abstractor who are responsible for leading site-specific QI projects.

Conference calls and quarterly face-to-face meetings are used to facilitate QI projects and speed the implementation of best practices.

Mark Lockett, M.D., vice chair of Veterans Affairs and chief of Surgery at the Ralph H. Johnson VA Hospital serves as the Surgeon Lead for the Collaborative.

The SCSQC is also committed to shaping the next generation of surgical leaders.

Both MUSC Health and Spartanburg Regional Health System’s residency programs are involved in the Collaborative. They send residents to quarterly meetings and residents are involved in each site’s QI projects. The data abstraction system records which residents are involved in cases, so they can see their own outcomes.

Training tomorrow’s surgeons to focus on quality and value will help them be leaders when they go out into practice. ♦

DAVID MAHVI, M.D. APPOINTED VICE CHAIR OF CLINICAL AFFAIRS



David Mahvi, M.D. was appointed vice chair of Clinical Affairs in the MUSC Department of Surgery by **Chairman Prabhakar Baliga, M.D.**, who created the position to help build and facilitate operational efficiencies and collaborative programs within the Department of Surgery. In this newly created role, Mahvi will build a collaborative general surgery group (GI, Oncology and Acute Care); coordinate activities in care delivery on and off the Charleston peninsula; facilitate growth with improved access, utilizing Advanced Practice Providers and a Telemedicine model as needed; coordinate inpatient activity for acute care surgery cases; introduce human centered design to improve care efficiency and facilitate funding opportunities; and work with the Education Team to create innovative models of education to fit the above programs. ♦

INTERNATIONALLY SPEAKING



Nancy DeMore, M.D. was selected to participate in an exchange program in France. Also selected were Dr. Dave Shibata, University of Tennessee and Dr. Mark Eskandari, Northwestern University, pictured here with host professor, Dr. Francois Patou.



Rana Pullatt, M.D. presented at the International Federation for the Surgery of Obesity and Metabolic Disorders (IFSO) 2018 World Congress in Dubai, United Arab Emirates.



David Adams, M.D. and **Will Lancaster, M.D.** presented at the 28th annual conference of the Indian Association of Surgical Gastroenterology, recognized as one of the top medical meetings in India.



Mark Rubinstein, Ph.D. was invited speaker at the 2018 annual meeting of the Chinese Society for Clinical Oncology in Xiamen, China.



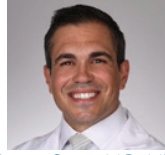
CYNTHIA TALLEY, M.D. JOINS DEPARTMENT

Cynthia Talley, M.D. joins the Division of General and Acute Care Surgery as an associate professor on December 1, 2018. Prior to joining MUSC, she was an associate professor for the Section of Trauma and Acute Care Surgery, University of Kentucky, associate program director for the Acute Care Surgery Education, director of the ATLS Course, program director for the Surgical Critical Care Residency, and faculty advisor for the Ward O. Griffin Surgical Society at the University of Kentucky. She also served as the co-director for the Trauma and Surgical ICU for seven years and the chair for Trauma Mass Casualty Taskforce for a year. ♦

DEPTH AND BREADTH OF DEPARTMENT EXPANDS



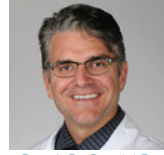
Andrea Abbott, M.D., MSCR



Thomas Curran, M.D., MPH



Marci Dorlon, M.D.



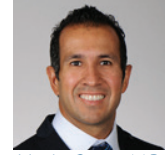
Derek DuBay, M.D.



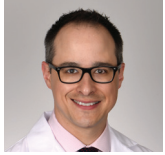
Heather Evans, M.D., MPH



Elizabeth Genovese, M.D., MS



Virgilio George M.D.



Barry Gibney, D.O.



Ashley Hink, M.D., MS



Laura Hollinger, M.D.



Mahsa Javid, M.D., D.Phil



Marc R. Katz, M.D., MPH



William Lancaster, M.D.



Angello Lin, M.D.



Lucian Lozonschi, M.D.



David Mahvi, M.D.



Vinayak Rohan, M.D.



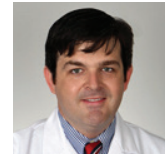
Cynthia Talley M.D.



Ravi Veeraswamy, M.D.



Mathew Wooster, M.D.



Sanford Zeigler M.D.

Twenty one new faculty have joined the department since 2015. Beyond the fact that they are gifted surgeons, each brings new skills that collectively build on the existing clinical expertise, outcomes research and education opportunities in the department.

“By adding this depth of expertise to an already outstanding department and building on the strong foundation of the past, we are creating an even more attractive environment for innovation and discovery,” said **Prabhakar Baliga, M.D.** chair of the department.

MUSC embarked two years ago on a plan to strengthen the cardiovascular services with a focus on adult cardiac surgery. **Marc Katz, M.D.**, division chief, a pioneer in minimally invasive and robotic heart surgery, joined in 2016. He built team of highly specialized minimally invasively trained surgeons, including **Lucian Lozonschi, M.D.** and **Sanford Zeigler, M.D.** The adult cardiac surgical team is ahead of the plan’s schedule, almost doubling case volumes over the past six months. The vascular surgery team under the leadership of **Ravi Veeraswamy, M.D.** has experienced robust growth and expansion as well, with new faculty including **Elizabeth Genovese, M.D.** and **Mathew Wooster, M.D.**

These innovative and collaborative cardiac and vascular surgeons have partnered with structural interventional cardiologists directed by **Daniel Steinberg, M.D.** in crafting novel procedures in patients with valvular and structural heart disease, further differentiating invasive options for our most complex patients. **Barry Gibney, D.O.** joined a busy thoracic team that is already looking at additional expansion.

Many new faculty serve the department and MUSC Health in leadership positions. **David Mahvi, M.D.** chief of the Division of Oncologic and Endocrine Surgery, is also vice chair of Clinical

Affairs in the department and chief of the Oncology Integrated Center of Clinical Excellence (ICCE). Mahvi added several renowned surgeons to his team, including **Mahsa Javid, M.D.** and **Andrea Abbott, M.D.** In addition, **Virgilio George, M.D.** and **Tom Curran, M.D.** have initiated new innovative techniques to a growing colorectal service.

Derek DuBay, M.D. chief of Transplant Surgery and director for the Transplant Integrated Center of Clinical Excellence (ICCE), is building his division to address the growing need for organ transplantation. DuBay expanded access to kidney transplantation through telemedicine. **Angello Lin, M.D.** returned to MUSC as a clinical surgeon and **Vinayak Rohan, M.D.** joined after completing his fellowship and MUSC surgery residency. The added depth to the division allowed the kidney transplant program to increase the number of transplantations, and the program now ranks as 10th highest volume in the country.

As vice chair of Clinical Research and Applied Informatics, **Heather Evans, M.D.** professor of General and Acute Care Surgery, brings a research focus on the application of telehealth solutions to the unique problems faced by the surgical patient. **Laura Hollinger, M.D.** assistant professor in the Division of Pediatric Surgery, brings a special interest in pediatric ECMO and serves as the director of ECMO for the MUSC Children’s Hospital.

With **David Adams, M.D.** retiring in 2018, **Will Lancaster, M.D.** was recruited to join the Division of GI Surgery.

The Division of General and Acute Care Surgery continues to expand with the growing needs in the greater Charleston area. **Marci Dorlon, M.D.** joined in 2016, **Cynthia Talley, M.D.** starts in December and **Ashley Hink, M.D.** will start upon completion of her fellowship in 2019. ♦

RESEARCH ROADMAP SUPPORTS INNOVATION AS DRIVER TO IMPROVING PATIENT OUTCOMES

There is a tidal wave of change in the healthcare landscape generated from external forces. Cuts in federal research funding threaten to slow the pace of progress, affecting how we conduct our research and translate the latest developments into improved surgical patient care.

This summer, the MUSC Department of Surgery embarked on developing a research roadmap that will adapt to our changing environment by developing a culture of innovation and continuous improvement with a strong return on investment (ROI) strategy.

The department continuously improves the art and practice of surgery and the roadmap positions the surgeon-scientists and researchers to build on the strengths of the existing research structure.

As part of the roadmap, the team leaders plan to create and develop:

- an engineering theme to our surgery research effort
- a workable and transparent research management structure that benefits all stakeholders
- compelling, motivational stories for each research effort
- technologies that change patient outcomes

As the team maintains their curiosity needed to drive continuous improvement, their goal is to develop technologies to bring to the clinic and change patient outcomes. More specifically, they aspire to improve patient care with shorter stays, greater post-operative quality of life, and reduction of cost to our patients and the hospital system.

“It is a well thought out roadmap,” said **Michael Yost, Ph.D.**, vice chair of Research in the Department of Surgery. “Detailed plans are in the development phase and they will continuously roll out over the next eight months. We will include methods to measure our progress and adjust as needed through our faculty-driven framework.”

RETURN ON INVESTMENT

Michael Yost, Ph.D., **Jamie Meyer**, vice chair of Finance, **Prabhakar Baliga, M.D.** chair of the Department, and **Satish Nadig, M.D., Ph.D.**, associate vice chair of Research, developed an outline for the research projects to serve as starting points for ROI evaluation and project selection.

The criteria include:

- potential to have sustained impact on the practice of surgery
- time to implement
- market size
- disruption potential
- cost and time savings potential as well as cost of project

OUTCOMES RESEARCH

Outcomes research serves as the driver for research within the department. The outcomes research arm of the roadmap will focus on epidemiology (EPI), clinical trials and implementation. More specifically, within EPI, the study of the causes, distribution, and control of disease in populations, there are three categories of research: database research, electronic medical records research and observational studies. Clinical trials encompass government and industry sponsored research. Within implementation are both quality and process improvement projects.

Dave Taber, Pharm.D., associate professor of Surgery, leads the effort by creating the ORION Center for Surgical Outcomes Research currently focused on growing the effort in clinical trials. Taber reports that the department’s portfolio of clinical trials is expanding with representation in most divisions, and new CT, Trauma and Transplant trials are about to open. There are currently 350 patients active in clinical trials.

Moving forward, Taber plans to grow investigator-initiated research. “We have a good portfolio of pharma and therapeutic sponsored research,” he said. “Our goal is to grow the supportive research where the investigators are actually driving the hypothesis generation. To that end, I put together a research toolkit to give to each division.”

Another step is to establish a directory of funding opportunities, including foundation funding such as the Duke Endowment, Blue Cross Blue Shield Foundation, and provide the deadlines and information to each division. This makes it user friendly and centralized so faculty can easily access the information.

HUMAN CENTERED DESIGN

Using a human-centered approach by incorporating human factors and system engineering principles to improve both patient safety and job satisfaction, **David Mahvi, M.D.**, vice

chair of Clinical Affairs, is in the process of hiring a designer who will incorporate ergonomics, human factors, and sustainability integrating the needs of the user from the very beginning of the development process.

“After carefully observing how surgeons are using instruments, or how they interact with the health care system the designer can develop improvement options into the new design,” explains Mahvi.

Yost plans to disseminate training so all clinicians can get an idea on what human centered design is and how they can get involved. “When human centered design is implemented, you see improvement in quality, cost and job satisfaction,” said Yost.

ENGINEERING IN MEDICINE

The digital age is upon us. Surgical innovation using 3-dimensional imaging (3D), Virtual Reality (VR) and Augmented Reality (AR) are advances in technology that enhance data in the surgical workplace. At MUSC, the bioengineering lab, led by Yost, conducted a pilot study to investigate these disruptive technologies and their role in a surgeon’s repertoire of tools.

3D printed models can optimize perioperative planning. Transplant surgeon **Satish Nadig** recently used a 3D printed model of a patient’s horseshoe kidney to better understand the unique vasculature and to identify the spatial relationship between the vasculature and tumor as well as the depth of infiltration of the tumor. A horseshoe kidney is a rare congenital disorder where the patient’s kidneys fuse together to form a horseshoe-shape.

Thoracic surgeon **Barry Gibney** also used a 3D model of a chest wall tumor in preparation for surgery. **Katie Morgan, M.D.** chief of GI Surgery used a 3D model to plan for a surgery involving a patient with a pancreatic tumor. The group found that 3D models were excellent resources for shared decision making with the patient.

Trauma surgeon **Evert Eriksson**, also participated in the 3D leg

of the pilot study, Trauma surgeons often don’t have time to print a 3D model perioperatively, so Eriksson chose to create the model post-operatively as a learning and teaching mechanism.

While VR is interesting, the cohort found it is not as useful as desired. Limitations include inability to interact with others while in the virtual space and inconvenience due to connectivity to the device. AR provides more flexibility and the department is moving in the direction of incorporating this technology into its toolkit for researchers and clinicians.

All three technologies provide excellent training opportunities for surgical residents, providing opportunities for them to more deeply explore patient-specific anatomy.

NEW FACULTY MENTORING AND SUPPORT

Faculty mentoring and support are paramount to the success of new faculty. Nadig leads this charge and met with all divisions to assess the current research teams and assist with building, formalizing and strengthening the team structure for research.

The next step is to assist the junior faculty by building a team around them and addressing their logistical issues. “Fostering Team Science is the only path to success in my opinion,” said Nadig. “As it turns out... we go farther together.”

MOVING FORWARD

The roadmap allows members of the research division to operate on a continuous improvement time line where they can rapidly bring innovative technologies into the clinic within 6 months, while they develop technologies that have a 2-3 year time horizon and continue federally sponsored research that has much longer time lines for implementation.

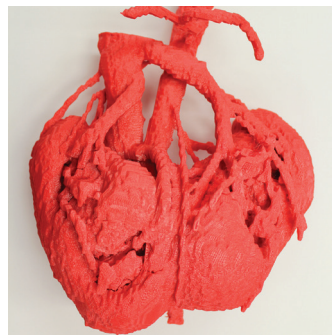
“Moving forward with the strategy outlined in our roadmap will bring technological improvements to patient care much more quickly and allow for continuous improvement of the art and science of surgery,” said Yost. ♦



Dr. Eriksson using VR in the bioengineering lab.



3 D Model of Seat Belt Injury



3 D Model of Horseshoe Kidney



3 D Model of Chest Wall Tumor

CLEMSON SENIOR DESIGN PROGRAM

This past spring, the Clemson Bioengineering Senior Design Program expanded its partnership with MUSC. Established in 2011, students in the program worked with physicians in the upstate to identify and design innovative healthcare solutions, winning many awards along the way. As the program grew, Clemson alumna, **Chelsea Ex-Lubeskie, MS**, Business Development Manager at the MUSC Foundation for Research Development (MUSC FRD), recognized the opportunity to engage MUSC in the collaboration.

Chelsea Ex-Lubeskie and **Michael J. Yost, Ph.D.** professor of Surgery and Bioengineering and vice chairman for Research in the Department of Surgery, serve as the innovation and clinical leads for the students' interaction with MUSC clinicians. For the 2017-18 academic year, six Clemson teams actively collaborated with MUSC clinicians.

Satish Nadig, M.D., Ph.D. and **Carl Atkinson, Ph.D.**, an expert in immunology, worked with Clemson students to develop a prototype medical device that could allow the repeated delivery of disease-fighting cells or other therapies to the body without using a catheter. This device placed first at the year-end Clemson Bioengineering Senior Design Program Symposium, and the MUSC FRD has filed a provisional patent on the device.

Plastic and reconstructive surgeon **Lance Tavana** worked with Clemson students to develop a surgical drain securement device prototype and a provisional patent has been filed. Clemson students involved in the Designing with Docs program are continuing to work with Dr. Tavana on this design.

Fernando Herrera, M.D., also a plastic and reconstructive surgeon, is developing a melanoma detector, and he plans to continue working with the design team in the 2018-19 design life cycle.

Others have joined in as well. Trauma surgeons **Evert Eriksson** and **Steve Fann** skyped with Clemson students to explore developing a rib fixation device prototype.

"These types of collaborations are the future of bioengineering innovation," said Yost. "I know the program will only grow and get stronger."

Yost encourages any clinicians who have broad ideas of what their needs are to consider utilizing this partnership with Clemson to explore if there is space in the market to carry the idea forward. ♦

HONGJUN WANG, PH.D. RECEIVES \$2.15M FUNDING

Type 1 diabetes (T1D) is a chronic condition in which the body's own immune system attacks and destroys beta cells in the pancreas. Once the beta cells are destroyed, the pancreas can no longer produce insulin. Currently, there is no cure for T1D and treatment focuses on managing blood sugar levels.

Researchers at MUSC, including **Hongjun Wang, Ph.D.**, professor in the Department of Surgery, hope to offer patients a better alternative. Wang received a \$2,154,880 National Institutes of Health grant to explore novel treatments for patients with T1D.

New strategies for T1D intervention should effectively target the immune system and protect/regenerate beta cells. To date, there is no single intervention that targets these areas and novel combined therapies would be beneficial for such a complex disease.

The use of mesenchymal stem cells (MSCs) as a therapeutic tool represents a promising new intervention. Evidence suggests that MSC therapy can effectively target several injury pathways

in a variety of autoimmune and inflammatory diseases, something that most pharmacological interventions cannot accomplish. In fact, recent studies from the Wang Lab have shown that infusion of MSCs promotes T regulatory cell generation and prevents beta cell death. However, most human studies using MSCs alone have not been successful at sustained suppression of the autoimmune response.



The newly funded work in the Wang Lab is going further by combining MSCs with the protective effects of alpha 1-antitrypsin (AAT). AAT protects tissues from the damaging effects of inflammation by decreasing insulin auto-antibodies and promoting T regulatory cell function. Using a humanized mouse model of T1D, the Wang Lab will monitor the sustained efficacy of this combined therapy on the immune system as well as the preservation/reconstitution of beta cells.

Charlie Strange, M.D., professor, Department of Medicine, serves as the co-investigator for this grant, combining Wang's expertise in islet transplantation and immunology and Strange's expertise in AAT biology and genomics. ♦

THERE IS NO “I” IN SYNERGY

A NEW PERSPECTIVE IN TEAM SCIENCE

The Cardiovascular Surgery Research Laboratory uses an integrative bedside-to-bench-to-bedside approach to translational research, exploring many aspects of cardiothoracic and vascular diseases but perhaps none more so than research in aortic aneurysm disease.

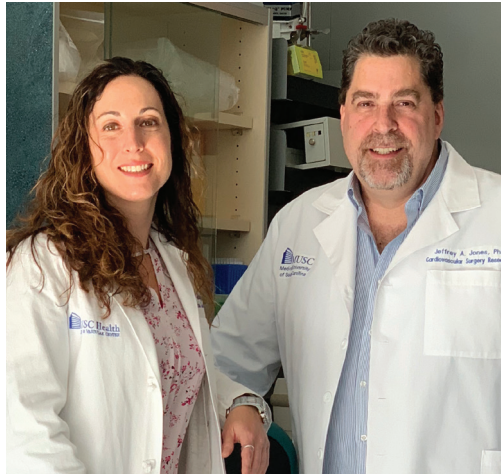
Jeff Jones, Ph.D. and **Jean Ruddy, M.D.** work collaboratively to study mechanisms underlying several key cardiovascular diseases. These collaborative investigations into initiation and propagation of thoracic and abdominal aortic aneurysms are able to occur in a single laboratory since many experimental techniques overlap, both at the benchtop and in small animal modeling.

Ruddy’s interest in aortic pathology during residency led her to step away from clinical training to pursue two years of dedicated research training in the cardiovascular research lab under the mentorship of Drs. John Ikonomidis and Jeff Jones.

With the support from an NIH institutional T-32 training grant (Training to Improve Cardiovascular Therapies; T32 HL007260-42), she explored tension related protease production in the thoracic aorta and benefited from Jones’ insights on experimental design and data analysis on a daily basis.

Jones’ experience in preparing graduate students for careers built on scientific inquiry, combined with Ruddy’s hard work and unrelenting desire to do research, resulted in the publication of three high-impact journal articles and Ruddy winning the prestigious American Heart Association’s Vivien Thomas Young Investigator Award during her research training.

Given the opportunity to revisit this mentor-mentee relationship when Ruddy joined the Department of Surgery



faculty in 2014, it was an easy decision on both sides.

A faculty position carries additional responsibilities and new challenges, however; so the team immediately began to focus on resource management, protected time, and steps toward independence.

Ultimately, the purpose of the research collaborations is to enhance the quality and the creativity of the science, as well as to provide assistance in navigating the early years of a research career. The most beneficial collaborations take place naturally because of the nature of the work, but mentorship shouldn’t be restricted to one phase of a long-term career. In fact, Jones encouraged Ruddy to establish multiple mentors that can provide guidance for all aspects of her life (e.g. research, clinical, work-life balance, etc.).

As the cardiovascular research lab’s pathologic interests expanded, Jones provided valuable insights to account for confounding variables and maintain scientific rigor, while Ruddy’s medical background enabled her to see opportunities to optimize clinical relevance.

Through the ability to bring together their independent areas of expertise to bear, the team is able to have a greater

impact together than either could achieve working independently; a critical goal of translational research in order to investigate topics from the bedside to the bench and back.

“Collaborating with someone who has complementary expertise provides access to different perspectives and helps avoid tunnel vision,” said Ruddy. “Jeff’s friendship and mentorship is a bonus.”

In addition, the two collaborate closely with basic and clinical science investigators outside of their respective divisions in the Department of Surgery, including faculty and trainees from Adult and Pediatric Cardiology, Pathology, and Cell and Regenerative Medicine.

These collaborations bring unique viewpoints to common problems and add a layer of complexity to their training efforts.

While team science is essential to achieve funding in the modern medical research community, it also allows for effective mentorship of trainees from multiple backgrounds. In just the past few years, the Cardiovascular Surgery Research Laboratory has provided research training to high school, undergraduate, medical, and graduate students, as well as post-docs and surgical residents.

“Our goal is to conduct world-class research in cardiothoracic and vascular disease, educate our next-generation of surgical investigators, and build a model laboratory that focuses on cultivating a long-lasting interest in aortic research in order to provide a foundation for careers in scientific investigation,” said Jones.

“By refining and focusing the interests of our trainees, it helps them to build confidence in their own abilities and integrate into the team.” ♦

NO LONGER A WAITING GAME

Kim McGhee,
MUSC writer

Treatment for patients with complex rib fractures used to be a waiting game. MUSC Health trauma surgeon **Evert A. Eriksson** remembers being taught in medical school to provide only supportive care, often including mechanical ventilation, to the most severely injured patients, those with “flail chest,” and wait for the ribs to mend well enough for normal breathing to resume.

In flail chest, at least two ribs are broken in two places, compromising the chest wall’s rigidity and leading to difficulties breathing and severe pain.

Unfortunately, due to prolonged periods on the respirator, these patients had a higher risk of pneumonia and often required narcotics for pain control.

The wait is over. New rib fixation technology and minimally invasive techniques for its implantation enable rib stabilization in patients with flail chest, leading to better respiration and lower rates of ventilator usage.¹

These encouraging findings led surgeons to extend the use of surgical rib fixation to patients who begin to fail ventilation and to those with major chest wall injuries who do not require ventilation.

“We’re changing how we manage rib fractures,” said Eriksson. “We can now put in specially designed plates to fix the ribs and get these patients out of the hospital faster, decrease their pain and get them back to



Dr. Evert Eriksson (left) inserts a rib fixation device during surgery.

their lives sooner. Their ICU length of stay and their risk of pneumonia go down.”

The Chest Wall Injury Society (CWIS; <https://cwisociety.org/>) recently conducted a survey of trauma surgeons to learn when they opted for surgical rib fixation.

For patients with three or more rib fractures with at least 50 percent displacement, there was a split decision, with roughly half of respondents opting for surgical fixation and half opting for a “wait and see” approach.

“ WE’RE CHANGING HOW WE MANAGE RIB FRACTURES. WE CAN NOW PUT IN SPECIALLY DESIGNED PLATES TO FIX THE RIBS. THE PATIENT HAS LESS PAIN, LESS TIME IN THE HOSPITAL AND LESS RISK OF PNEUMONIA.”
—EVERT ERIKSSON, M.D.

The CWIS is coordinating a multicenter trial to test whether surgical fixation improves pain control, breathing function and quality of life in these patients.

Eriksson is the principal site investigator for MUSC Health, which is the second center in the nation to open the trial and currently the second highest-enrolling site.

“Dr. Eriksson is involved in exciting work,” commented **Bruce Crookes, M.D.** chief of the Division of General and Acute Care Surgery. “This cutting-edge surgical intervention is improving the care we now provide for our trauma patients with major chest wall injuries.”

Eriksson also serves on the national research committee and guidelines committee for the CWIS. ♦



A model of the specially designed plates used for surgical rib fixation.

REFERENCES 1. Pieracci FM, et al. J Trauma Acute Care Surg. 2016 Feb;80(2):187-194.

NEWLY APPROVED PROCEDURE IMPROVES RECOVERY TIME FOR LVAD PATIENTS

Leslie Cantu,
MUSC writer



If there's ever a good place for your heart to stop beating, it's probably your cardiologist's office. And if there's ever a good time for this to happen, it's probably just as a world-class surgeon is about to start offering a new way of performing an existing heart procedure that drastically reduces recovery time.

Douglas Cox, 53, is the first MUSC patient to have a pump

implanted via thoracotomies, which are small incisions between the ribs, instead of the traditional sternotomy, in which the chest is cracked wide open.

The Food and Drug Administration approved the new procedure this summer. **Lucian Lozonschi, M.D.** director of Surgical Heart Failure and Cardiac Transplantation, performed the surgery in which he threaded a Medtronic HeartWare HVAD Pump through the ribs into place below Cox's heart to keep blood moving from the left ventricle into the aorta.

Cox, who lives in Columbia, and Lozonschi met after Cox woke up in an MUSC ICU bed. Cox's doctor had referred him to cardiologist **Michael Craig** after Cox's legs and feet began to swell because he was retaining fluids. Cox's sons drove him to Charleston on Aug. 14 for his appointment. The three joked around in the waiting area until Cox was called back. Cox suddenly began to feel dizzy and lightheaded. He told the nurse he felt funny, and she directed him to a chair – except he couldn't see the chair. The nurse helped him to sit, and Craig came in to check on the situation.

"That's the only thing I can remember – when he said, 'Hey Mr. Cox, how you doing? How you feeling?' And next thing I know, when I woke up, he was doing compressions on my chest, and he said the defibrillator had shocked me and brought me back to life."

Cox's sons, meanwhile, knew something bad was happening, because suddenly all the doctors and nurses began running in. Cox later learned he'd been technically dead for six minutes. Craig and **Adrian B. Van Bakel, M.D., Ph.D.** along with the clinic staff had sprung into action to get him defibrillated even before the hospital code team arrived. Once he was conscious and in a bed, doctors said his heart was too weak and he'd need a left ventricular assist device to help his heart to pump. When

Lozonschi met with Cox, he told him about the new way of implanting the pump. Cox would be the first person he would do the surgery on, but Cox readily agreed because he didn't want his chest split open and he trusted his surgeon.

Lozonschi was amazed himself at Cox's quick recovery.

"What surprised me with this patient was how easy it was for him to turn and twist his upper body. You don't see that in patients who had a sternotomy," Lozonschi said.

A sternotomy cuts through the breastbone. People who've had one can't twist their bodies, can't hold anything heavy for three months and can't even sleep on their sides for six weeks.

Lozonschi noted that a recent patient of his, a woman with a newborn, would have been a perfect candidate for this new procedure, because she couldn't hold her baby after she underwent the traditional sternotomy. Avoiding the breastbone is a big deal, Lozonschi said. Because the breastbone contains marrow, it will continue to bleed throughout the surgery. In a thoracotomy, the surgeon cuts through the muscles between the ribs. Muscles bleed less during surgery and heal faster. MUSC is one of about 20 hospitals across the country offering this new procedure. Lozonschi noted it's more difficult for surgeons than the traditional method. "Minimally invasive procedures are less invasive for the patient and maximally painful for the surgeon," he joked.

However, he's enthusiastic about the results, and said he plans to offer the procedure whenever appropriate. Cox, too, is happy with the result. It was very easy for him to work with the MUSC therapists. "They were like, 'Mr. Cox, you're walking faster than I usually walk.' I said, 'Yeah I feel good; I feel great.' It revived me, this machine," Cox recalled. Cox said he would recommend that anyone in his shoes choose the new thoracotomy procedure. "I think it was great," he said. ♦



Douglas Cox, 53, is the first MUSC patient to have a pump implanted via thoracotomies.

TRIO SHARE THE HOPES, EXPECTATIONS OF BEING BLACK, FEMALE AND SURGICAL RESIDENTS



Left to right: Quiana Kern, M.D., Kiandra Scott, M.D. and Avianne Bunnell, M.D. are pursuing surgical specialties at MUSC. Photo by Sarah Pack Writer Leslie Cantu, MUSC News Center

Avianne Bunnell, M.D., Quiana Kern, M.D. and Kiandra Scott, M.D. are pursuing surgical specialties at MUSC. For one resident, being a surgeon is a chance to develop long-term relationships with patients and nudge them onto healthier paths. For another, it's an opportunity to 'fix' people. And for a third, it's helping people reconstruct their appearances after cancer.

All three are young, smart and ambitious — that's a given for any MUSC surgical resident who's bested dozens, if not hundreds, of other applicants to win a spot in one of the integrated programs that accept one intern each year.

They're also all black women, which makes them part of an even more select group. African-Americans represent between 2 and 10.2 percent of surgical residents, depending on the specialty, according to a January 2017 article in the Journal of Surgical Education.

Diversity is important to MUSC, which has made "Embrace Diversity and Inclusion" one of the five pillars of its Imagine MUSC 2020 strategic plan. Diversifying the health care team to reflect the community as a whole strengthens it and improves patient outcomes. Only 5 percent of South Carolina's physicians identify as black or African-American, yet the state's population is more than

27 percent black, according to a 2014 report by the Association of American Medical Colleges.

At MUSC, Bunnell, Kern and Scott comprise more than 20 percent of the 2017-18 class in the three integrated surgery programs: vascular, plastic and cardiothoracic.

“ THERE ARE A LOT OF HIGH-ACHIEVING MINORITIES AND PEOPLE FROM OTHER CULTURES IN MEDICINE. THEY'RE THERE. YOU JUST HAVE TO WORK TO RECRUIT THEM, AND YOU HAVE TO SUPPORT THEM FOR IT TO BE SUCCESSFUL. ”

—AVI BUNNELL, M.D.

They're each the first black doctor accepted into their respective programs, two of which are relatively new. Scott is the first resident ever in the plastic surgery integrated program and Bunnell is only the third resident in the vascular integrated program.

Prabhakar K. Baliga, M.D. chairman of the Department of Surgery, said diversity and inclusion are integral to the department's vision. "We are truly excited and delighted that Avi, Kiandra and Quiana chose our department. Each of them has such a strong and compelling personal story that serves to inspire all of us. They have built strong foundations and have shown courage in blazing trails that makes me confident that they will be national leaders in their fields. It is a joy and a privilege to be part of that journey," Baliga said.

Read their inspiring stories and how they are helping to change the face of healthcare at <http://academicdepartments.musc.edu/newscenter/2018/trio-share-hopes-expectations-black-female-physicians/index.html> ♦

SURGERY RESEARCH RECOGNITION DAY

Surgery Research Recognition Day showcases the exceptional research work in which our residents, medical students and graduate students participate.

“This day provides a great opportunity to not only learn about the fascinating projects pursued by our colleagues, but also to provide meaningful recognition to our hard-working students,” said **Jean Ruddy, M.D.** associate program director for Resident Research. “This year we had a tremendous response, allowing us to expand the program to include poster presentations.” The

department highlighted the top ten oral presentations and 11 poster presentations in both Basic and Clinical Science.

Surgery Research Recognition Day is also an opportunity for faculty and residents to stay abreast of the latest data and research during the Eric R. Frykberg, M.D. Lecture. This year, Melina Kibbe, M.D. professor of Surgery with tenure, the Colin G. Thomas, Jr. distinguished professor and chair of the Department of Surgery at the University of North Carolina delivered her inspiring and motivational talk “The Ups and Downs of Translational Research - One

Surgeon’s Journey” where she discussed the challenges and tenacity needed to successfully advance innovation in academic surgery. Dr. Kibbe also served as guest judge for the day.

Once the scores were tallied, the winners were announced: For both the Clinical Science Oral Presentation and Poster Presentation: **Denise Garcia, M.D.**, Basic Science Oral Presentation: **Kunal Patel, M.D.** and Basic Science Poster Presentation: **Wenyu Gou, Ph.D.** Congratulations to all award winners and participants! ♦



Left to right: Jean Marie Ruddy, M.D., Associate Program Director for Research, Wenyu Gou, Ph.D., Denise Garcia, M.D., Heather Evans, M.D., judge, Kunal Patel, M.D., David Mahvi, M.D., judge, Melina Kibbe, M.D. Eric R. Frykberg guest lecturer and judge, and Prabhakar Baliga, M.D., chairman of the Department of Surgery

RESEARCH OPPORTUNITIES AND PRESENTATIONS

Denise Garcia, M.D. PGY-3 was awarded an NIH T-32 training grant and offered a position in the Integrative Training in Oncogenic Signaling Program in the Hollings Cancer Center. The title of her work is “A Novel Humanized SFRP2 Monoclonal Antibody for Triple Negative Breast Cancer.”

Kathryn Engelhardt, M.D. PGY- 4 received the Excellence in Research Award during the Owen H. Wangensteen Scientific Forum at the ACS Clinical Congress, where Dr. Engelhardt also presented her research, entitled “Are Residents Prepared for General Surgery Residency? A National Mixed-Methods Study on Predictors of and Perspectives on Readiness for Residency.”

Six residents and one alumna presented during Plastic Surgery – The Meeting, the annual meeting for the American Society of Plastic Surgeons. They are:

Craig Moores, M.D. PGY-7 “Significantly Decreasing Narcotic Prescriptions in A Residency Training Program

Did Not Affect Overall Provider Rating Scores Of Attendings.”

Zachary Young, M.D. PGY- 7 “A Reduction Mammoplasty NSQIP Analysis of 12,198 Patients, Identifying Risk Factors Associated with Complications in the Elderly Population.”

Jon “Simon” Ivey, M.D. PGY- 8 “Patient Demographics and Factors Influencing Cosmetic Procedures at an Academic Medical Center.”

Daniel Crane, M.D. PGY- 7 “Venous Thromboembolism Incidence and Risk Factors Associated with Microvascular Reconstructive Surgery: A NSQIP Analysis.”

Sami Tarabishy, M.D. PGY- 2 “The Epidemiology of Upper Extremity Nerve Injuries and Associated Cost in the United States Emergency Departments, 2014.”

Yemi Ogunleye, M.D. Surgical alumna, “Collagen 1A1 gene expression levels in resected skin predict acute wound healing complications after skin reduction procedures.” ♦

CELEBRATING 50 YEARS OF KIDNEY TRANSPLANTATION

Nearly fifty years ago, on December 3, 1968, the Medical College of South Carolina performed the first major organ transplant in its history and the first in the state. The kidney transplant was performed by a team of doctors and researchers who developed an innovative procedure that addressed the body's rejection of foreign matter.

Overcoming the Rejection Factor

Knowledge of the rejection factor was extremely limited at the time of the 1968 operation. **Curtis P. Artz, M.D.**, chair of the department, had studied the role that lymphocytes played in transplanted organ rejection. His work led his colleagues at MUSC to pursue research into lymphocyte depletion in animals. The Kidney Transplant and Immunology Team consisted of **C. Thomas Fitts, M.D.**, assistant professor of surgery, **Fletcher C. Derrick, Jr., M.D.**, assistant professor of urology, **James S. Harvin, M.D.**, chief of plastic surgery, **Lloyd L. Martin**, supervisor of the Department of Surgery Research Laboratory, **H. Biemann Othersen, Jr., M.D.**, assistant professor of pediatric surgery, **Arthur V. Williams, M.D.**, chief of the renal section of the Department of Medicine, **Charles Graber, M.D.**, associate professor of microbiology, and **Thomas S. Hargest, III**, assistant professor of surgery, bioengineering.



A Patient Identified



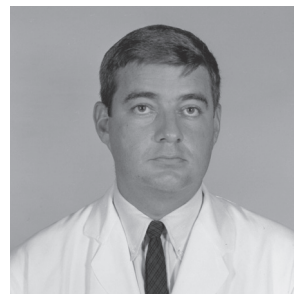
The patient, William Ashley, was a 24-year-old man who suffered from chronic glomerulonephritis. After months of laboratory work to perfect the operational technique and compiling evidence to indicate the ability to deplete these lymphocytes enough to lessen the rejection process, the transplant team decided that Ashley's best

chance of avoiding the risks of tissue rejection was through a newly discovered process known as lymphocyte depletion.

The Operation

All of the medical professionals involved brought expertise and experience and the operation was a success. What made this operation unique was the use of lymphocyte depletion as the principal pre-operative measure against organ rejection. No anti-serum or drugs were used before or during the transplant.

Two Decades of Growth



C. Thomas Fitts, M.D., recognized as the creator of the MUSC Health organ transplant program, led the transplant section for 39 years. He served as director of Transplant Surgery and director of the Transplant Program.



P.R. Rajagopalan, M.D., commonly referred to as **Dr. Raja**, attended MUSC as a transplant fellow in 1974 and joined Fitts in 1975, spending the next 25 years building and strengthening the foundation of the vascular-access program and the kidney-pancreas transplant programs. From his early years, Raja has

been committed to innovation and progress in the field of transplantation. For the first two years at MUSC, Raja worked primarily on establishing a donor program. In the first year, he secured 10 donors and set the stage for the program to grow.

Under his leadership, the program grew in large part due to his commitment to formalize the organ procurement process in South Carolina. "At the time, there was no organ procurement organization in South Carolina," said Raja. "Establishing an OPO in South Carolina was critical to the success of our program. OPOs are effective third party affiliates that are vital to connecting the donor families and recipients. Not only did we establish one for South Carolina, ours has one of the highest levels of patient consent."

By the 1980s, the transplant team entered a portal of endless possibilities in technology, medications and patient education, making kidney transplant an efficient, sound and established procedure. During the next two decades, kidney transplantation changed dramatically.



Fred Crawford, M.D. then chairman of the department, led the initiative to expand the kidney program to a multi-organ transplant program. Recruitment of individuals with expertise in transplantation and research continued.



In 1992, **Prabhakar Baliga, M.D.** joined the team and provided expertise in pediatric transplantation, adding strength and depth to the organ transplant program, which now included kidney, liver, pancreas, and heart. Shortly after Baliga's arrival, Fitts retired and Raja was selected as

chief of the Section of Transplant Surgery. A few years later, **Ken Chavin, M.D., Ph.D.** joined the transplant team, bringing with him the ability to perform minimally invasive surgery via laparoscopic nephrectomy. This new procedure increased the number of living transplants at MUSC. By 1999, Raja stepped down as head of the transplant section and Baliga was named the chief of transplant surgery. Raja officially retired in 2013.

Y2K and Beyond

As we entered the new millennium, exciting changes were occurring – starting with the transplant section becoming a full service division. The team grew as well. **Angello Lin, M.D.** joined in 2000 and **Charles Bratton, M.D.** joined shortly after Lin.

In 2002, Baliga was awarded his first NIH R01 grant. In 2007, the division was awarded National Kidney Foundation Center of Excellence status in kidney transplantation. That same year, **John McGillicuddy, M.D.** joined the division and subsequently received an NIH-K research award. The Division of Transplant Surgery recruited **David Taber, Pharm.D.**, to conduct research on patient outcomes. **Satish Nadig, M.D., Ph.D.** also joined, bringing new levels of collaboration, innovation and funding opportunities to the division.

By 2011, the division celebrated a new milestone: The first endowed chair in the division was funded. The Fitts-Rajagopalan Chair was awarded to Dr. Baliga during a dinner. That same evening, Dr. Raja was awarded the Order of the Palmetto, South Carolina's highest civilian honor, recognizing his lifetime achievements and contributions to the State of South Carolina.

The Living Donor Institute was created to study innovative methods of health care delivery and provide patient and community education with the goal of improving the patient care experience, access to transplantation and improvement in long-term patient outcomes.

When Baliga was named the department chair in 2015, he



recruited **Derek DuBay, M.D.** to lead the division. DuBay, an expert in solid organ transplantation, is building the division to address the growing need for organ transplantation in South Carolina.

DuBay expanded access to kidney transplantation through telemedicine and secured a Duke Endowment to fund research to reduce disparities in access to kidney transplantation in South Carolina, a state with one of the highest incidences of kidney failure in the country due to the frequency of diabetes and hypertension. Volume steadily increased. By 2017, MUSC ranked 10th in the country for kidney transplants. **Vinayak Rohan, M.D.** joined the team after completing his transplant fellowship and MUSC surgery residency.

Research opportunities grew when the Lee Patterson Allen Transplant in Immunobiology Laboratory became a reality through the generous donation from family members of Lee Patterson Allen, who donated a half million dollars to support the Lab's work. The lab represents the only comprehensive transplant research laboratory in South Carolina and is focused on all aspects of multi-organ transplantation from donor management to recipient survival. Using a multidisciplinary approach, including the application of bioengineering to transplant immunology, the laboratory is dedicated to representing the leading edge in transplantation. **Satish Nadig, M.D., Ph.D.** and **Carl Atkinson, Ph.D.** lead the effort as co-directors.

For 50 years, beginning with the innovative, living donor transplant in 1968, the MUSC Health transplant surgeons and scientists continue to innovate and collaborate to create better patient outcomes, improving the lives of those in need of organ transplantation. ♦

editor's note: Content courtesy of the Waring Historical Library, MUSC, Charleston, SC, and "Approaching Two Centuries" by Fred A. Crawford, Jr.



Dr. Raja (right) and J.R. Gabuyo, a patient he transplanted on July 15, 1983, took a selfie last month when they encountered each other shopping in Cotsco. J.R. still has the original transplanted kidney after undergoing lymphocyte depletion.

To support kidney transplantation,
visit [musc.edu/giving/ldi](https://www.musc.edu/giving/ldi)

WHAT'S YOUR WHY?

DR. JON VAN HEERDEN SHARES WHY HE SUPPORTS THE DEPARTMENT OF SURGERY



Haley Sulka and Natalie Hahn, MUSC planned giving officers, recently sat down with **Jon van Heerden, M.D.** to learn a little more about him and why he supports MUSC.

PG: Tell us a little about yourself and how you came to work at MUSC.

JVH: I was a general surgeon at the Mayo Clinic in Rochester, MN for

nearly 40 years. During that time, I would always remind my residents that I'd never in my life done a day's work. It was never work, but a privilege.

When I retired, I knew I wanted to get out of the cold and move to the southeast. A few days after moving to Seabrook Island, my phone rang and it was **Dr. Fred Crawford** welcoming me to the Lowcountry and inviting me to dinner.

I went to dinner with him and at the table with us were two young surgeons: **Dr. David Cole** and **Dr. David Adams**. It took about five minutes for me to realize that the dinner was an interview. I ended up signing on to teach MUSC residents endocrine surgery and eventually becoming the vice chairman of Education in the Department of Surgery under Dr. Cole, who was the chair at the time.

PG: What inspired you to start supporting MUSC philanthropically?

JVH: I've always had the giving spirit in me. I live by this Khalil Gibran quote, "You give but little when you give of your possessions.

It is when you give of yourself that you truly give."

Working in the Department of Surgery, I eventually met **Vera Ford**, Director of Development, and she was my avenue.

She was the one who got me involved with using my IRA to make contributions. I called my financial advisor and he explained that when I turned 70 that it was something we could easily do. I am giving less to the government and more to the charities I support. It's just easy.

PG: How do you envision your gifts impacting MUSC?

JVH: My colleague from Mayo, Edward Rosenow, wrote a book titled, "The Art of Living...The Art of Medicine."

One of my favorite quotes from the book is, "What counts most in life is what you do for others."

I chose for my IRA to support the **David B. Adams, M.D. Endowed Chair in GI Surgery** fund because David epitomizes just what an ideal surgeon should be. He is a recognized expert in his field.

This expertise is coupled with his remarkable personality traits which include kindness and compassion, a gift for listening, a sense of humor and an appreciation of the moment. He is a true lover of life. I trust MUSC and its leaders to take my donation and use it for the greater good.

PG: Is there anything else you'd like to share about your time at MUSC?

JVH: If I hadn't had dinner with those three men after moving here many years ago, I don't know where I'd be. I'm indebted to MUSC, I owe MUSC. I am grateful. ♦

“I CHOSE MY IRA TO SUPPORT THE DAVID B. ADAMS M.D. ENDOWED CHAIR IN GI SURGERY FUND BECAUSE DAVID EPITOMIZES JUST WHAT AN IDEAL SURGEON SHOULD BE.”
—JON VAN HEERDEN, M.D.

Rolling over is easier than it looks!



If you are 70 1/2 and must take a Required Minimum Distribution from your IRA, consider supporting the Department of Surgery.

Please call the Office of Planned Giving at 843-792-9562 or visit muscgiving.org for specific instructions!

HAVE YOU INCLUDED THE DEPARTMENT OF SURGERY IN YOUR ESTATE PLANS?

If the answer is yes, we want to celebrate you!

Have you considered making this type of gift, but just needed the proper bequest language? We've made it easy for you!

"I hereby give, devise, and bequeath _____ to the Medical University of South Carolina Foundation, Charleston, South Carolina, designated in support of the Department of Surgery."

Please contact us at 843-792-9562 or visit muscgiving.org for more information!

We invite YOU to join us in honoring Dr. Adams by contributing to The David B. Adams, M.D. Endowed Chair in GI Surgery
To learn more, visit www.musc.edu/giving/

DAVID B. ADAMS, M.D. RECEIVES SC AND MUSC'S HIGHEST HONORS

Governor Henry McMaster awarded the Order of the Palmetto to **David B. Adams, M.D.** distinguished university professor emeritus in the Department of Surgery. The award is the highest civilian honor awarded to citizens of South Carolina for their extraordinary lifetime service and achievements.

Since joining MUSC in 1986, Adams served in many leadership positions including interim chair of the department of surgery, medical director for One West Trauma Center, program director for the General Surgery Residency Training Program, director of the MUSC Postgraduate Course in Surgery, and director of the International Chronic Pancreatitis Symposium. Adams served in numerous national level leadership positions including: the ACS Board of Governors; president, Southeastern Surgical Congress; president, Halsted Society; governor, SC Chapter of the ACS; and second vice-president, Southern Surgical Society.

Nominated by **Prabhakar Baliga, M.D.** chairman of the MUSC Department of Surgery, the award was presented by MUSC President **David J. Cole, M.D.** on behalf of the governor during Adams' retirement dinner Oct. 12 at High Cotton restaurant. When presenting the award to Adams, Cole described him as a person with a true north.

"We all need people that make a difference in our lives," Cole said. "People with a true north; people with a compass; people who have the ability to know what path we should take. David is one such person."

"I now have the honor of giving to David from the office of the Governor of the state of South Carolina the Order of the Palmetto," Cole announced to the cheering audience of nearly 100 of Adams' friends, family and colleagues. In a night filled with heartfelt tributes, much laughter and expressions of gratitude, the evening was a celebration of Adams' lifelong contributions to GI Surgery, resident education and the countless patients across the state he has treated and cured.

In addition to receiving the highest honor from the state and in recognition of these many contributions, Baliga announced that MUSC and the Department of Surgery are distinguishing Adams with an endowed chair named in his honor.

"An endowed chair is the highest award a university can bestow upon a faculty member," said Baliga. "I can't think of a better

way to express our gratitude than to offer this endowed chair as a tribute to David's significant contributions to improve patient care in GI Surgery across the state and the nation."

"Many of life's expectations are truly wonderful; perhaps most wonderful are lifetime's unexpected gifts. Dr. Baliga's efforts and energy in naming an endowed chair in GI Surgery is an unexpected gift and honor," said Adams. "It serves as a beautiful exclamation point to my MUSC career where I have received from students, residents, colleagues, and patients much more than I have given."

An added highlight of the evening was when **Richard "Duke" Hagerty, M.D.** surgical alumnus and accomplished surrealist artist, presented his long-time friend and colleague with one of his paintings.

"My cup runneth over and my heart tonight is an open book filled with gratitude," said Adams. "I have many people here to thank, beginning with **Layton McCurdy, Fred Crawford,** and **Peter Cotton,** who were with me at the beginning with a goal of making MUSC one of the best academic centers in the country.

Their legacy was carried on with **Dave Cole** and **Pat Cawley,** and particularly **Fred Crawford** who made it possible for me to be the program director as he built a strong foundation for the department. I want to thank and recognize the GI Surgery team – **Karl Byrne, Rana Pullatt, Pinckney Johnstone Maxwell, Virgilio George,** and **Katie Morgan.** One aspect of my MUSC life that gives me greatest pride is how strong the GI Surgery team is right now."

"The department is no longer a hidden gem in the South. It is a program with a strong national reputation. I owe a plenitude of thanks to **Dr. Baliga,** who has done a fabulous job in taking the department to its highest pinnacle ever," he added.

Known for his mentorship and dedication to surgical resident education, Adams commented that what he is most proud of is the residents he trained, many of whom were in the audience. "**Will Lancaster, Aaron Leshner, Vinayak Rohan, Jean Ruddy, Mark Lockett...**what better tribute than to have so many residents I trained here with me tonight," he said.

"Thank you to all who share this moment. If I had known I was going to have such a great party, I would have retired a long time ago," he said with a twinkle in his eye. ♦



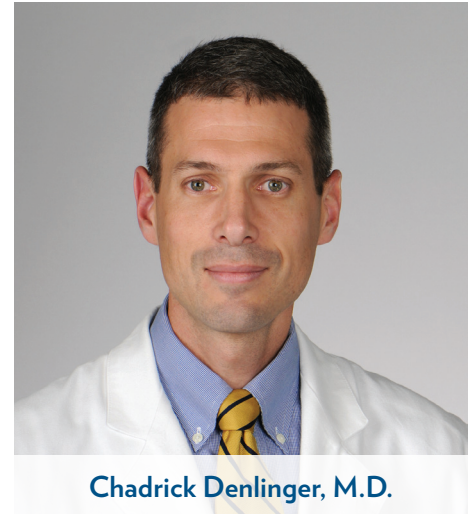
MUSC AWARDS THREE NEW ENDOWED CHAIRS IN THE DIVISION OF CARDIOTHORACIC SURGERY



Marc R. Katz, M.D., MPH



Lucian Lozonschi, M.D.



Chadrick Denlinger, M.D.

Three faculty members of the division of cardiothoracic surgery have been honored with endowed chair appointments in recognition of their significant contributions to cardiothoracic surgery. Congratulations to these distinguished faculty who have recently been recognized with endowed chairs, the highest honor that the University can bestow upon a faculty member. The outstanding faculty who now hold these endowed professorships will continue to provide great benefit to patients for generations to come. They are:

- **Marc R. Katz, M.D., MPH** named as the Fred A. Crawford, Jr. M.D. Endowed Chair in Cardiothoracic Surgery
- **Lucian Lozonschi, M.D.** appointed as the Edna M. Sutton Endowed Chair in Advanced Heart Failure Surgery
- **Chadrick Denlinger, M.D.** designated as the Flora McLeod Edwards Distinguished Endowed Chair in Cancer Research

Endowed chairs are reserved for distinguished faculty and carry prestige and honor for the chair holders and the persons for whom they are named.

Dr. Katz, chief in the Division of Cardiothoracic Surgery, specializes in minimally invasive, trans-catheter and robotic approaches for valve disease, plus surgery for congestive heart failure, placement of ventricular assist devices and heart transplantation.

The Fred A. Crawford, Jr. M.D. Endowed Chair was established to honor the contributions of **Dr. Fred Crawford** to MUSC and the field of cardiothoracic surgery and is one of a very few MUSC endowed chairs at the \$2 million level.

Dr. Lozonschi, professor of surgery in the Division of Cardiothoracic Surgery and the director of Surgical Heart Failure and Cardiac Transplantation, has a special interest in the treatment of transplantation and heart failure.

The Edna M. Sutton Endowed Chair in Advanced Heart Failure was established through an estate trust of Edna M. Sutton supporting the MUSC Heart and Vascular Center.

Dr. Denlinger, professor in the Division of Cardiothoracic Surgery and surgical director of the Lung Transplant Program, specializes in lung transplantation and video-assisted thoroscopic surgery for lung cancer.

The Flora McLeod Edwards Distinguished Endowed Chair in Cancer Research was established through a bequest to Hollings Cancer Center from Phillip L. Edwards in memory of his wife. ♦

LIFE AFTER THE OR

What do a pilot, celebrated artist, avid sailor, photographer, renowned author, generous philanthropist, chef de cuisine, historian and relentless cross-country biker all have in common?

Well, for one thing, they are all former MUSC surgeons who tirelessly dedicated their lives to the care of patients, teaching future generations and leading innovative research. Their successes can certainly be attributed to having been enormously focused on their careers as surgeons. Now retired, these faculty share the desire to remain engaged with MUSC and the Department of Surgery.

On September 28, **Chairman Prabhakar Baliga** hosted the inaugural “Brunch and Muster” for retired surgical faculty, staff and alumni, gathering these giants in the field of surgery with the goal of harnessing their remarkable talents and promoting a culture that values and encourages retirees’ desire for continued productivity and contributions. Retirement for many is not a disengagement from MUSC but rather a shift in the relationship – moving from success to significance.

Dr. Baliga recognizes that there is a great opportunity - through partnership with retired faculty, alumni and staff - to more effectively facilitate their roles as advocates, ambassadors and assets in support of the department’s mission while fulfilling their aspirations to find continued intellectual engagement. “Our retired faculty represent an enormous resource; their accomplishments are outstanding, said Baliga. “My goal is to understand how those assets can be meshed with the needs of the department to benefit the overall community.”

Many of these individuals are currently contributing as volunteers in the education of our medical students and residents. Surgery small group



Dr. Raja begins the round of self-introductions.



Dr. Othersen (left) and Dr. Raja sharing some memories during the brunch.



Dr. Baliga, far right, chatting with Dr. Jeb Hallett (left) and Dr. Joseph Rubin.



(left) Dr. C.D. Smith hugs Dr. Peter DeVito, a former classmate at Duke Medical School.

sessions, suturing labs, H&P, mock oral reviews, mentoring, patient bedside rounding, teaching hours – are but a few of the programs supported by our retired surgeons.

In addition, MUSC retirees are strong financial supporters of the University. **Vera Ford**, Director of Development for the MUSC Department of Surgery recognizes “retirees play an important role in the work that we do to raise private support. Not only do they generously support MUSC through their individual philanthropic contributions, but they also serve as our best advocates, helping us reach alumni and friends across the country by sharing news of all of the tremendous work and achievements happening in the Department of Surgery.”

A stellar example is **H. Biemann Othersen, Jr., M.D.** Not only does he lead weekly lectures at the famed “Bee Hive” sessions, but he also chairs the Curtis P. Artz MUSC Surgical Society. Known to generations of MUSC physicians and surgeons, Othersen travels regularly to national surgical meetings serving as host of alumni receptions that keep our graduates engaged, informed and instilling pride in their training program.

Next steps for the retired surgeon program include providing a comprehensive list of opportunities for engagement and developing a more formal structure for the group.

So while you may catch one of these surgical legends on center stage at a book-signing, an art gallery or at the helm of a clipper, rest assured that retirement includes the recognition that their cumulative wisdom and clinical experience is an invaluable asset that is both honored and in high demand. ♦

Gratitude

Your generous support has made much possible.

In this season of giving thanks, we extend our deepest gratitude to each of you who has included the Department of Surgery in your charitable giving. Thanks to you, we raised over \$2 million in private philanthropic contributions this past fiscal year in support of dozens of meaningful initiatives.

These are just a few of the areas of most significant impact:

Transplant

- The Living Donor Institute
- Living Donor Education & Research
- Transplant Patient Support
- Immunobiology & Bioengineering Research
- Reducing Disparities in Access to Kidney Transplant

Surgical Resident Education

- Global Surgery Education
- Surgical Resident Educational Materials & Equipment
- Vascular Surgery Research and Education

Endocrine Surgery Research

Chronic Pancreatitis Research

Plastic Surgery Research and Education

Trauma and Acute Care Surgery

- Injury Prevention

Endowed Chairs

- The Fred A. Crawford MD Endowed Chair in Cardiothoracic Surgery
- The Elliott-Robison Endowed Chair in Vascular Surgery
- The Robert M. Sade MD Endowed Chair in Pediatric Cardiac Surgery
- The David B. Adams Endowed Chair in Gastrointestinal Surgery

In Memory

A beautiful soul is never forgotten.



(far right) Mr. Robert Walton Pearce (9/2/28 to 7/2/18)



(far right) Mr. Robert "Bob" Marshall Scott (8/14/43 to 10/1/18)

We were deeply saddened to lose two members of our Living Donor Institute family. Their love of family, generosity of spirit and of community have generously contributed to helping improve the lives of thousands in need of life-saving transplants.