

MUSC, Medtronic partner with aim to enhance care, reduce costs

New five-year medical technology services partnership to provide value-based health care

BY HELEN ADAMS

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Just about every week, MUSC Health vascular surgeon Ravi Veeraswamy, M.D., sees a patient with gangrene in his or her toes due to vascular disease that has cut off the blood supply. Sometimes, it's too late to avoid amputation.

"At that point in the disease, we don't have as many options," he said. "We underestimate how reluctant patients are when it comes to seeking medical care, especially those in rural or suburban areas. They're waiting until their conditions become unbearable to seek care."

He's hoping that will change under a new partnership between MUSC and Medtronic, which is listed among the world's largest medical technology, services and solutions companies. The five-year deal aims to catch health problems earlier, streamlining and improving care while reducing costs.

It will combine MUSC's clinical and academic expertise with Medtronic's therapies, technology and operational knowledge.

Early areas of focus in the MUSC/Medtronic partnership include:

- Vascular disease.
- Joint replacement.
- Tracheostomy procedures.
- Respiratory monitoring after surgery.

MUSC President David J. Cole,

M.D., FACS, calls the agreement transformative. "We believe this partnership will help us find new ways to deliver the best outcomes for patients at the lowest cost possible. That's the true meaning of value-based health care."

Omar Ishrak, chairman and chief executive officer of Medtronic, says health care has to move in this direction. "We recognize that the shift to value-based health care is hard work, but we truly believe this approach offers the best pathway to better outcomes and reduced costs," Ishrak said. "It requires a new way of thinking and the involvement of many stakeholders. It will take time. But we'll get there."

The leaders of both MUSC and Medtronic see a future in health care in which payment is based on patient outcomes, not volume. That means catching diseases before they get really bad and flagging people at risk for problems early, so they can get preventive treatment. Both believe that the patients will do better and care will be less expensive as a result.

MUSC Health doctors will continue to make their own decisions about patient care but now will have more data, thanks to Medtronic, to help guide those choices. Both teams hope to develop new delivery and payment systems that can benefit the health care system as a whole, well beyond MUSC.

And since MUSC is an academic



Photo by Brennan Wesley

Vascular surgeon Dr. Ravi Veeraswamy is among many physicians and specialists seeking new solutions and improvements in how they care for patients and can catch health problems early.

"We believe this partnership will help us find new ways to deliver the best outcomes for patients at the lowest cost possible. That's the true meaning of value-based health care."

David Cole, M.D.

medical center, there will be an educational focus, too. The partnership

will mean the development of a new curriculum to educate future health care providers.

Veeraswamy likes the partnership's emphasis on pushing for better results for patients. "This is a data-driven process. We take current patient demographics on things like smoking, obesity, geo-location and build an algorithm that defines their risk profiles. We apply this algorithm to other patients, and as we gather more data and more outcomes, our ability to predict who is at risk for the disease will improve. Partnering with Medtronic will allow us to continuously improve the care we provide our patients."

6

Warning to fish eaters
New research shows
dangers in chemical levels.

8

New at the Urban Farm
Cob oven adds to warmth,
memories.

3
5
12

MUSC rheumatologist praised
Meet Dr. Elizabeth Weed
Road closure through May

MUSC and Medical University Hospital Authority (MUHA) Board of Trustees held their regularly scheduled meeting to review initiatives that support their tripartite mission of education, research and patient care.

For commencement speaker at the 190th MUSC graduation ceremony, Lisa K. Saladin, PT, Ph.D., executive vice president for Academic Affairs and provost, proposed Caroline DeLongchamps, manager of Patient-and-Family-Centered Care in the MUSC Quality and Safety Department. An MUSC team member for more than eight years, DeLongchamps is a staunch advocate for partnership among patients, families and care team members.

“Caroline’s personal experience as the mother of a child who suffered and survived a traumatic brain injury after being hit by a car gives her a unique perspective on how MUSC can continually improve how we care for and support our patients and families,” Saladin said. The MUSC spring graduation ceremony will be held on Saturday, May 18. The board voted to approve DeLongchamps as the speaker and recipient of the MUSC honorary degree, Doctor of Humane Letters.

In other academic matters, the board reviewed and approved a joint degree program that will allow eligible students enrolled in the College of Pharmacy, seeking a Pharm.D. (doctorate in pharmacy), to also earn a Master of Science in Health Informatics (MSHI). While both of these degrees already exist at MUSC, the dual-degree plan will allow students to concurrently pursue both degrees.

“The Pharm.D. prepares graduates to be licensed

pharmacists, while the MSHI trains health care professionals in the collection, organization and use of data in health care and medical research. Combining these skillsets is of critical interest to the state and to MUSC,” Saladin said. “The United States is in the midst of its largest health information technology investment ever, as the majority of health care organizations are in the throes of implementing or upgrading their electronic health record systems.

When we think about how to deliver expected quality improvements, including the safer and more responsible use of pharmacy services, one logical, practical step is to train pharmacists in how to design, build and maximize the use of health information systems that are used to support health decisions and e-prescribing,” she noted.

“MUSC is in the midst of a robust expansion phase,” said James Lemon, DMD, vice chairman of the MUSC board. “Our teams have planned, started or are nearing completion on a number of major projects designed to enhance this institution’s ability to serve the people of South Carolina and those in need who are well beyond our state borders.”

The board received project updates on the:
❑ MUSC Health purchase of four Community Health Systems-affiliated hospitals – Announced in mid-November, this transaction is currently in process and is expected to close before the end of March. For details on the hospitals being acquired, please visit <https://web.musc.edu/about/leadership/institutional-offices/communications/pamr/news-releases/2018/musc-board-votes-to-acquire-four-community-hospitals-from->

subsidiaries-of-community-health-systems.

❑ MUSC Shawn Jenkins Children’s Hospital and Pearl Tourville Women’s Pavilion at Calhoun Street and Courtenay Drive – The \$388.7 million project with 250 beds is proceeding on schedule and is set to open in October. Support for the new children’s facility continues to grow with more than \$139.1 million pledged to date. When it opens, the new hospital will provide the most technologically advanced facilities available for the children of the city, state and region.

❑ MUSC Children’s Health R. Keith Summey Medical Pavilion – The 100,000-square-foot facility in North Charleston is solely dedicated to outpatient pediatric care. The \$57.7 million project is expected to open in the first quarter of 2019.

❑ MUSC Health West Campus – With renovations underway, MUSC is investing \$16.4 million to convert former department store space at the Citadel Mall in West Ashley into a 128,000-square-foot health care site. The range of available services will include musculoskeletal care, ophthalmology and ambulatory surgery. The facility will open in late 2019.

❑ Consolidated Service Center – The warehouse for material management supply chain, which will also function as a central sterile processing distribution center, is a \$28 million facility. It is expected to be operational in the third quarter of 2019.

❑ MUSC Health Community Hospital at Nexton – The 311,221-square-foot facility with 128 beds will provide a range of specialized inpatient and outpatient services. The project is estimated at \$325 million and expected to be operational in 2022.

In other business, the board voted to approve:

- A request for MUSC Health to file a certificate of need with the South Carolina Department of Health and Environmental Control to add 29 beds to MUSC University Hospital.

See **UPDATE** on page 12



Saladin



Lemon

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MUSC rheumatologists receive prestigious awards from American College of Rheumatology

Staff Report

Gary S. Gilkeson, M.D., Distinguished University Professor in the Division of Rheumatology and Immunology at MUSC and associate dean for Faculty Affairs and Faculty Development in the MUSC College of Medicine, was awarded the American College of Rheumatology's (ACR) master's designation, its highest honor, at the organization's annual meeting in Chicago. The award recognizes a lifetime of clinical and research contributions to the field of rheumatology. Gilkeson, whose research focuses on lupus, was one of only 18 rheumatologists worldwide to receive this distinction.

Founded in 1934, the ACR is a global medical society that seeks to improve the care of patients with rheumatic disease and support rheumatology research. "It's very special and humbling to me to be selected for this award given the thousands of rheumatologists there are in the world," said Gilkeson. "To get recognition by our peers is something special that we all look for."

Of his many contributions to the field of rheumatology, Gilkeson is most proud of his mentoring. He has been the primary mentor for 10 National Institutes of Health K award recipients, all of whom remain active in academic research. He received the ACR 2015 Award for Excellence in Investigative Mentoring. The Lupus Foundation of America named its Career Development Award in his honor.

"People that I have trained are successful in the field now," says Gilkeson. "I have been recognized for my mentoring of junior colleagues and investigators, and that has been the major achievement I am most proud of."

How fitting, then, that Gilkeson was recognized the same year that his former mentee, Deanna Baker Frost, M.D., Ph.D., assistant professor in the Division of Rheumatology and Immunology at MUSC, received the ACR's

Distinguished Fellows Award. With this award, the ACR recognizes up to ten fellows for clinical or research excellence.

"It was just crazy how all of it came full circle," said Baker Frost, who was mentored by Gilkeson as she completed her medical and doctoral degrees in rheumatology. "I did my Ph.D. in his lab, and I worked with him

in clinic. Prior to that, I knew nothing about rheumatology at all. But I saw the relationship he had with his patients. I saw how much they loved him and cared about him and how much he cared



Baker Frost



Photo by Sarah Pack

Dr. Gary Gilkeson was honored with an ACR master's designation for his contributions to the field of rheumatology and mentoring work.

about them as well."

Gilkeson is a quintessential clinician-scientist, simultaneously engaging in treating patients with lupus and in conducting research that will provide these patients better treatments in the future. He has studied why women and African-Americans are more susceptible to the disease. He has also explored the

role genetic and environmental factors play in lupus in African-Americans, leading him to make four trips to Sierra Leone, West Africa. He is collaborating with Chinese investigator Linyung Sun, Ph.D., of Nanjing University to explore mesenchymal stem cells as a therapeutic approach in lupus.

MUSC PICO, ETV documentary on climate change attracts huge viewership

Staff Report

A television documentary on the impacts of climate change co-produced by MUSC's Public Information and Community Outreach group and South Carolina Educational Television, has reached an estimated audience of nearly 82 million viewers nationwide.

TRAC Media Services reports that "Sea Change," the one-hour documentary on the impacts of climate change on coastal communities in South Carolina and Georgia, has achieved:

- ❑ Carriage in 76 percent of the top 50 markets in the United States.
- ❑ Primetime and/or "fringe prime" airings in 54 percent of the markets nationwide.
- ❑ An estimated 81,832,548 viewers.

MUSC PICO and ETV produced "Sea Change" in 2017 as part of a package of community meetings, made-for-television programming and localized videos to illustrate the impacts of climate change associated with sea level rise and catastrophic weather events. The program first aired on ETV statewide and in bordering areas of North Carolina and Georgia in 2017. Later that year, the National Educational Television Association (NETA) distributed the program to public and educational television affiliates nationwide.

"The TRAC numbers confirm what we have long believed — that made-for-television programming is an extremely effective means of communicating important information to large audiences," said David E. Rivers, director of MUSC PICO. "Dating back to the early 1990s, we have enjoyed a long and

productive partnership with ETV. For this program, primary partners also included Allen University and the South Carolina Aquarium. We look forward to continuing these and other such partnerships in the near future."

Don Godish is the senior director for digital strategies, regional operations and public affairs at ETV. He also served as the program's producer and director. "The fact that this program garnered such a large audience when its content is focused on a small geographic area speaks to the intense national interest in climate change and its impacts," he said.

In addition to its viewership numbers, "Sea Change" received a Bronze Telly Award in 2018 in the General-Public Interest and Awareness category.

MUSC celebrates surgery researcher as NAI fellow

By LESLIE CANTU

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During a reception Feb. 5, MUSC celebrated its fifth National Academy of Inventors fellow and inducted a new member into the MUSC chapter.

Michael Yost, Ph.D., vice chairman of research in the Department of Surgery, will be formally accepted as a fellow at a reception at Space Center Houston in April, but his MUSC colleagues honored him locally during the fifth annual induction ceremony on campus.

The ceremony also honored J. Matthew Rhett, Ph.D., a new inductee into the MUSC chapter, and MUSC members who received patents this year: Rhett and Yost as a team, Patrick Woster, Ph.D., and Stephen Tomlinson, Ph.D.

More than 250 institutions worldwide belong to the National Academy of Inventors, which was founded to recognize academics with accomplishments in patents, licensing and commercialization, said Michael Rusnak, executive director of the MUSC Foundation for Research Development.

People nominated as fellows have had an impact on quality of life, economic development and the welfare of society, he said.

Provost Lisa Saladin, PT, Ph.D., said interacting with faculty members like Yost is one of the great pleasures of her job.

“He has made substantial contributions to engineering, science, tissue engineering, inflammation modulation, muscle repair and regeneration, 3D bioprinting and the use of collagen as a biomaterial for regenerative medicine,” she said.

Yost, who has seven patents to his name, talked to the audience about how he has “stood on the shoulders of giants” throughout his life and career, because other people took the time to lend him a hand.

One of those giants was his father, who changed the trajectory of his own life, and that of his future family, by leaving behind the coal mining and farm life he knew to become a submariner. His father then worked his way through undergraduate and graduate school, Yost explained, eventually securing a position at the Johns Hopkins University Applied Physics Laboratory and contributing to projects like the specially designed Apollo spacesuits and Pershing IIA and cruise missiles.

Another was his graduate school mentor, Lou Terracio Ph.D., who pushed him to begin applying for patents and held his hand through his first federal grant funding application, Yost said.

A family friend and inventor, Jim Ferguson, gave Yost thoughtful advice when Yost was struggling with the demands of working, raising a young family, attending graduate school and following his mentor’s advice to pursue patents.



Photos by Anne Thompson

Dr. Michael Yost reflected on those who lent a hand along the way. Yost was the speaker at the 2019 MUSC Chapter of the NAI induction event.



J. Matthew Rhett is a 2019 inductee in the MUSC chapter of the National Academy of Inventors.

“Jim said to me, ‘I want to tell you something else. I want you to learn to quiet your mind. I want you to start trusting your intuition and I want you to trust your own creative thoughts,’” Yost said.

Later, when Yost as a young faculty member pursued the next level of federal funding, he got an unwelcome result: His application was returned as “not discussed,” meaning none of the reviewers thought it worth debate by the full review committee.

“I was devastated. I thought my academic career was over,” Yost said. He went to talk to Richard Bell, M.D., chairman of the Department of Surgery at the University of South Carolina School of Medicine.

“I had to sit in the big chair — you know the big chair in the boss’s office that nobody wants to sit in? I had to sit in the big chair, and I had to tell Dr. Bell how I failed to get funding for my research,” Yost said.

But Bell, a U.S. Air Force flight surgeon, provided some perspective. No one had died because Yost failed to get funded. No one had lost a limb. He told Yost to get back in the lab and try again — and this time, Bell said, make it better.

To conclude his remarks, Yost passed along the very wisdom he had collected from the people who helped him throughout his career.

“I want you to start to learn to trust your intuition, quiet your mind and trust your own creative thoughts,” he told the audience. “Get your work out there in the world where it can do some good and get it in the hands of people who can use it. And when you fail, much like I did, I want you to go back, and I want you to try again. And I want you to make it better.”

“And,” he added, “when the opportunity arises — and it will — I want you to bend down, and I want you to extend your hand, and I want you to lift up the next person and be the giant in their life.”

The John N. Vournakis NAI reception was sponsored by the MUSC Foundation for Research Development.



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How are you changing what's possible at MUSC

My interest is in wellness, promoting the mental and emotional well-being of our students and preceptors. Today's findings show the level of stress and burnout health care professionals are experiencing. Currently, I'm working with Dr. Shannon Drayton on a mind-body course she began for pharmacy students. We'd like to expand this on different levels and offer it as an interprofessional course to other students.

Family

Brothers, Forbes and Stephen; nieces, Kelsey, Caitlin, Kirsten and Camryn (great niece); and an aunt, Susanne

Favorite quote

"Your beliefs become your thoughts, Your thoughts become your words, Your words become your actions, Your actions become your habits, Your habits become your values, Your values become your destiny."
— Mahatma Gandhi

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New (ish) Faculty Welcome

Please join Lisa Saladin, Ph.D., provost and executive vice president for Academic Affairs, for an informal social gathering with plenty of coffee, breakfast, and conversation. Meet leaders from the functional areas of most interest to you during our breakout sessions.

March 18, 2019
8 – 9 a.m.
Gazes 125

*This is a rescheduled event for faculty joining MUSC in 2018, as the original was cancelled due to Hurricane Florence.
For more information, contact Megan Fink at finkm@musc.edu.

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Pollutants in local waterways pose dangers to fish eaters

Researchers caution an advisory might be needed (limit consumption)

By **BRYCE DONOVAN**

donovanb@musc.edu

Manny Kirpakis keeps a sharp eye on the line as it quivers ever so slightly, glinting in the sun. A nearby duo of seagulls with a vested interest looks on. “I’d say I’m here almost every day,” Kirpakis shares, his face a deep tan, confirming his story. “I pretty much always catch something.”

On this cloudless, spring-like day at the Pitt Street Bridge in Mount Pleasant, Kirpakis is fishing alongside Mark Andrews. They are just a couple of the ever-growing number of locals who eat what they catch – or subsistence consumers – at spots just like this around Charleston Harbor.

However, environmental factors such as polluted runoff have made the waters around the Holy City less fish-friendly over the years. MUSC researchers John Vena, Ph.D., chairman of the Department of Public Health Sciences, and Patricia Fair, Ph.D., a research professor in public health and former research physiologist with the National Ocean Service, are acutely aware of this threat, not only to wildlife but to us as well.

In their latest scientific study, which was recently published in *Environmental Research* – a peer-reviewed environmental science and environmental health journal – the duo focused on perfluoroalkyl substances, or PFASs.

Back in the 1930s, PFASs were first introduced, and the chemical industry fell in love with this new kind of compound. It was made up of various carbon and fluorine atoms, and almost like magic, grease and water didn’t stick to it. Naturally, manufacturers got excited, and their applications became endless: non-stick cookware, rain gear, the paper wrappers for fast-food burgers, fire-fighting foams and stain-resistant textiles and fabrics.

To put it simply, what make PFASs so dangerous is the fact that their bonds are among the strongest known in nature. In other words, they don’t degrade.

According to a University of Hawaii study, though the use of certain PFASs have been discontinued in the U.S., they are still produced in other parts of the world and imported into our country on a daily basis.

“Even though we’re not sure of the risks to human health these pollutants pose, it’s safe to assume we need to minimize our exposure to them,” said Fair.

In the study led by Vena and Fair, they looked at 39 whole fish and 37 fish fillets, focusing on Atlantic croaker, red drum, spot, spotted seatrout, striped mullet



Photos by Bryce Donovan

Manny Kirpakis stands on the old Pitt Street Bridge, which once connected Mount Pleasant to Sullivan’s Island. It’s now a public pier.



and southern flounder. The fish were collected by the S.C. Department of Natural Resources at 17 different locations in Charleston Harbor, the Ashley River and Cooper River.

After months of research on these specimens, Vena and Fair discovered that not only were the PFAS levels higher than anticipated, but people who eat or prepare their fish with the skin on are exposed to two to three times higher doses of PFASs. In short, frequent consumption of wild fish may pose health risks to the local population.

“Look. Let’s be clear. We’re not saying to stop eating fish,” Vena said. “It’s got all kinds of good nutrients in it. Fish is great. We’re just saying be aware of where it comes from.”

According to the study, fish consumption has increased by about 30 percent in the United States over the last several decades.

Back at the pier in the Old Village of Mount Pleasant, Andrews, who says he doesn’t typically eat

The Charleston area is considered among the best spots for fishing on the East Coast of the U.S.

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See **FISH** on page 10

MUSC celebrates accomplishments during Black History Month

BY ALLISON LEGGETT

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As MUSC celebrates Black History Month, assistant professor Titus Reaves, Ph.D., is encouraged by what he sees. "I think MUSC has made much progress in the area of diversity," he said.

Reaves was one of six honorees at MUSC's Black History Awards program. All have had a significant impact on diversity and inclusion at MUSC.

To kick off the evening, Chris Powers, manager of recruiting and diversity education in the College of Medicine, was selected by students to offer the keynote speech based on a selection of Maya Angelou's poem and theme for the event, "Still I Rise."

Each of MUSC's six colleges honored a person who has had a significant impact on its area.

COLLEGE OF DENTAL MEDICINE

Isaiah L. Davis, D.M.D, a graduate of the MUSC College of Dentistry, has been heavily involved in establishing scholarships for minority dental students at MUSC. He was one of 12 dentists invited by the American Dental Association to its Institute for Diversity in Leadership at Northwestern University's



Honorees are Dr. Titus Reaves, from left, Phillip Griggs, Dr. James Hodges, Dr. Rose Delores Gibbs, Dr. Felesia Bowen and Dr. Isaiah L. Davis.

Photos by Chris Smith/Chris & Cami Photography

Kellogg School of Management. He is in private practice in Columbia, South Carolina.

COLLEGE OF GRADUATE STUDIES

Reaves is an assistant professor in the MUSC's Department of Regenerative Medicine and Cell Biology and instructor for the Anatomical Basis of Medicine

course for first-year medical students. Reaves directs and organizes MUSC's annual E.E. Just Symposium, which celebrates the life and scientific accomplishments of Charleston-born Ernest E. Just, often referred to as the "Black Apollo of Science."

See **CELEBRATE** on page 11

Faculty award nominations now open

A call for nominations is now underway for the MUSC faculty to recognize peers who have made outstanding contributions to the university. Awards may be given in the following categories:

- Distinguished Faculty Service
- Outstanding Clinician
- Population Health
- Developing Scholar (Research)
- The Peggy Schachte Research Mentor Award

Any regular full-time faculty member who holds an academic rank of instructor or higher in a college or department at MUSC and has not been the recipient of this award within the previous three years is eligible for nomination.

The deadline for nominations is March 15. Visit <https://education.musc.edu/leadership/provost/leadership/faculty-awards> or call 843-792-0945.

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Students in a joint MUSC-American College of the Building Arts course put the finishing touches on the cob oven which is the centerpiece of the new outdoor kitchen at MUSC's Urban Farm. The cob oven is an earthen oven of the type found in communities around the world. Organizers will unveil the oven and new kitchen in an opening event scheduled in late February.

Gather around the fire – MUSC Urban Farm installs traditional cob oven, outdoor kitchen

By LESLIE CANTU

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Whether around an open campfire or in the kitchen during a holiday party, people always seem to gather near a hearth to seek community and friendship. The staff at the MUSC Urban Farm hopes the new outdoor kitchen, complete with a traditional cob oven – thanks to the artisans at the American College of the Building Arts together with MUSC students – will become a new gathering place for both the MUSC and greater Charleston community.

Urban Farm educator Carmen Ketron said earthen ovens have been used in every culture around the world that she's researched. They're not ancient artifacts either – many people came up to her during the construction of the Urban

Farm's cob oven to say their mothers or grandmothers used one or to offer to share recipes and cooking techniques.

"These are almost a universal symbol of community, food, sharing and health," Ketron said.

And the MUSC cob oven came into being because of sharing. It all started a couple of years ago, when Mary Mauldin, Ed.D., executive director of the Office of Instructional Technology and Faculty Resources and associate director of education for the Office of Interprofessional Initiatives, invited the faculty from the American College of the Building Arts to the South Carolina Conference on Innovations in Teaching and Learning, a bi-annual conference hosted at MUSC. Her department then provided lunchtime sessions focused on

See **OVEN** on page 10

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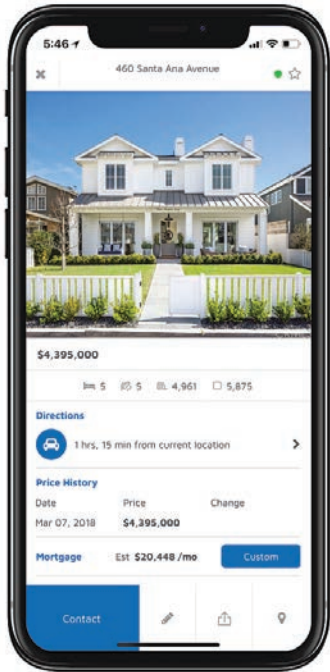
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Nobel laureate's visit shows her power as research rock star

By HELEN ADAMS

adamshel@musc.edu

It's not often you see an auditorium full of scientists so excited about hearing someone speak that they're willing to sit on the floor in front of the podium and in the aisles once the seats fill up. But that's exactly what happened at MUSC when Nobel prize winner Elizabeth Blackburn, Ph.D., arrived to accept the Women Scholars Initiative's Eminent Scholar Award.

It was easy to see why. The Australian-born molecular biologist is a research rock star.

"Dr. Blackburn is one of only 20 women to have received the Nobel prize in one of the science fields, physiology or medicine, chemistry or physics, out of more than 600 Nobel laureates," said Carol Feghali-Bostwick, Ph.D. She directs the campuswide Women Scholars Initiative and the MUSC College of Medicine's Center for ARROWS, a group focusing on the Advancement, Recruitment and Retention of Women in Science. WSI and ARROWS gave the award to Blackburn.

Blackburn is former president of the Salk Institute, current professor emeritus at the University of California-San Francisco and, most famously, a winner of the 2009 Nobel Prize in Physiology or Medicine. She's known for her discoveries involving chromosome caps called telomeres.

MUSC leaders said they were thrilled to have Blackburn on campus. Melissa Cunningham, M.D., Ph.D., said the Womens Scholars Initiative's award goes to prominent internationally known female scholars from outside of MUSC. "We ask the scholar to visit campus to receive their award, to give a seminar and to meet with junior and senior faculty to expose MUSC women faculty to outstanding role models and increase the exposure of exceptional women scholars in their accomplishments to the entire MUSC faculty."

While the focus is on female scholars, the crowd that turned out to see Blackburn appeared to include as many men as women. College of Medicine

"Blackburn's work will also affect people for years to come. These discoveries have had a huge global impact on many medical disciplines, including my own research, which is in the area of cancer prevention and interception. And luckily, Liz has become interested in supporting that area."

Ray DuBois, M.D., Ph.D.

Dean Ray DuBois, M.D., Ph.D., was among them. He and Blackburn are friends. "Liz Blackburn, welcome to MUSC and Charleston," he said.

Blackburn, 70 and charming, gave a talk about her research on telomeres. While she's a scientist with a long list of credentials, she wants to make her work relevant to the general public. She co-authored a 2017 anti-aging book for the general public, "The Telomere Effect: A Revolutionary Approach to Living Younger, Healthier, Longer."

So what are telomeres? Basically, they're protective caps on the ends of our chromosomes. Blackburn compared them to the plastic tips on shoelaces that keep them from fraying. She believes protecting telomeres can slow aging.

"We start off life with about 10,000 base pairs of [telomeres]. Throughout our lives, for a variety of reasons, there is attrition of telomeres, and we end up in late life with something on the order of about half of that."

Choices you make along the way, such as smoking and drinking too much alcohol, affect the health of your telomeres, Blackburn said. It's a mind-body connection that she sees as essential for slowing the aging process and possibly preventing cancer.

It may also have an impact that goes beyond a person's own life, Blackburn said. "Shorter and shorter telomeres are directly transmitted to the offspring



Photo by Helen Adams

Dr. Elizabeth Blackburn speaks to a packed MUSC auditorium on Feb. 6.

through the generations."

Blackburn's work will also affect people for years to come, DuBois said. "These discoveries have had a huge global impact on many medical

disciplines, including my own research, which is in the area of cancer prevention and interception. And luckily, Liz has become interested in supporting that area."

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Grant winners will be determined by the
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OVEN *Continued from Page Eight*

teaching and learning for faculty at the ACBA. As a result, the ACBA members wanted to repay the favor. The college suggested building a cob oven, and Mauldin approached Robin Smith, MUSC grounds department supervisor, for permission.

Smith loved the idea. She said she's always ready for a chance to be innovative and promote healthy food and, just by coincidence, the Urban Farm staff was already building an outdoor kitchen replete with a propane grill, charcoal grill and refrigerator.

The idea behind building the kitchen was to get even more people out to the farm, whether to eat lunch, hold a luncheon or host events, Smith said.

The farm is a joint project of the grounds department and the Office of Health Promotion, and part of its purpose is to educate people on eating for health, Ketron said. Farm volunteers can harvest what they like, but the staff has found that preparing fresh fruits and veggies in a healthy way often stumps people. Before the kitchen, Ketron said, she was basically limited to showing people how to prepare smoothies or massaged kale salads — kale that has been rubbed together to break down some of its tough fiber.

Now, she said, "One of the big dreams for the kitchen is to bring in chefs and to bring in our dieticians, so we can actually do hands-on learning. That's why cooking shows are so popular — because you can see it. If you can actually have an interactive experience with it, you're more likely to enjoy eating for health."

Susan Johnson, Ph.D., director of health promotion, said the farm provides a living classroom for the Office of Health Promotion to teach about the connection between food and health. The office has had events in the past, including cooking demonstrations and tastings, but having a full kitchen on site opens up a world of possibilities, she said.

Some of the office's past programs have included events focused on the intersection of culture, heritage and food and how to update traditional recipes in a healthy way.

Besides food-specific events, the



Students and faculty from MUSC and the American College of Building Arts use their bare feet to mix the mud that will be used to build the oven.

Photos provided



A student waters down the cob oven in its early phase.

farm has hosted a range of events from a 3-year-old's birthday party to interdepartmental team-building exercises. Every Tuesday there's a lunch and learn from 12:15 to 12:45 p.m. that's open to all.

Volunteers can help with the gardening, too. A pain rehab group, breast cancer survivors' group, Veterans Affairs garden club, as well as youth groups and school groups, have all participated either as volunteers or to

take a tour. Ketron said she gets a lot of MUSC students who take breaks from studying to do "a little bit of Zen weeding."

Several MUSC students also participated in the cob oven building alongside the ACBA students in an interprofessional elective course, IP 745 — Community Cooking. They built the oven, designed by architect April Magill, over the course of five Fridays in October and November. The traditional oven is made of mud, clay, sand and straw — mixed with bare feet — that uses wood fuel.

The students also spent an afternoon repairing an existing cob oven at a community garden in North Charleston.

Cob ovens will typically need a new application of the plaster outer layer every few years as cracks appear.

The grounds crew celebrated the inaugural run of the cob oven and grill during its holiday party. Ketron said the wood-fired oven takes a little practice, but, she noted, pizza is a pretty forgiving recipe. She's looking forward to the volunteers who want to make grandma's bread or stews in the oven.

"It will be a lot of fun, and it will be a really great mingling of cultures, too," she said.

Johnson said her office is still working on developing programming to take advantage of the new kitchen.

FISH *Continued from Page Six*

more than one fish a week, says none of this information surprises him.

"Every day I pick up plastic bottles and garbage around here. As responsible citizens, we can do better," he says. "Just by picking up the trash before it gets blown into the water, we can do our small part."

Kirpakis is slightly less convinced. Though he acknowledges the possibility of health risks associated with consuming higher quantities of local fish, he says he doesn't plan to make any changes to his diet any time soon.

"Yeah, I think about it," he says. "But

what can you do?"

Vena and Fair are hoping that going forward, researchers can continue to study these chemicals that end up in our food — and learn more about them. But in the meantime, they said, our best defense is simply being better informed. Both researchers agree that an advisory about local fish may be needed, and experts should urge people to consume no more than one to two a week.

"We all want a cleaner environment. It's pivotal for good health," said Fair. "But until those big-scale changes occur, the only thing we can control is what we choose to eat."

CELEBRATE *Continued from Page Seven*

The annual symposium, now in its 19th year, attracts 300 to 400 primarily African-American students from K-12 and undergraduate schools in the Southeastern U.S. The impact of this program on diversifying the student body at MUSC has been significant, with over 100 attendees of the 2011 to 2016 symposia eventually matriculating to MUSC.

COLLEGE OF HEALTH PROFESSIONS

Phillip Griggs serves as the associate director of student diversity and community outreach for the College of Health Professions. A relative newcomer to MUSC, he is an experienced student support services expert with more than 10 years of experience working with students in K-12 schools, nonprofit organizations and in higher education administrative roles.

Griggs is passionate about education and believes in providing holistic support to assist students in achieving their goals and aspirations.

COLLEGE OF MEDICINE

Rose Delores Gibbs, M.D., became the first African-American woman to obtain a medical degree from MUSC in 1973. She completed her residency in internal medicine at Howard University Hospital and went on to complete a fellowship in infectious and tropical diseases.

After earning a certificate in tropical medicine from the Walter Reed Army Institute of Research, Gibbs became a Peace Corps medical officer and served in Sierra Leone, Africa, for a decade.

She was a charter member and president of MUSC's Black Alumni Association and has served as secretary, treasurer and president of the College of Medicine Alumni Association.

COLLEGE OF NURSING

Felesia Bowen, DNP, RN, a nurse scientist with clinical expertise in pediatric asthma and health disparities, is an associate professor in the MUSC College of Nursing. She earned her Bachelor's of Science in nursing degree from Tuskegee University, a master's degree from Rutgers University, a doctorate from Columbia University and doctor of nursing practice degree from Fairleigh Dickinson University.

Bowen began her nursing career in the U.S. Army, serving in operations Desert Shield and Desert Storm.

COLLEGE OF PHARMACY

James Hodges, Pharm.D., was the first African-American to graduate from the MUSC College of Pharmacy. Hodges entered MUSC in 1967 amid racial tensions and the then-recent passage of both the Civil Rights Act of 1964 and Voting Rights Act of 1965. He persevered through the program by focusing on his schoolwork and graduated in 1971.



College of Dental Medicine honoree Dr. Isaiah Davis receives his award from dental student Jillian Broughton.

Photo by Chris Smith/Chris & Cami Photography

Hodges owned a pharmacy for over 30 years in St. George, South Carolina before selling it in 2014.

As part of the Black History Month Awards program, the MUSC Gospel Choir offered two choral selections and a video produced by students to celebrate the legacy of African-Americans in the evolution of medicine in the U.S. and at MUSC. Students offered a leadership

and diversity challenge to the audience, and leadership from each of the colleges talked about the importance of the event and diversity at MUSC.

MUSC students who contributed to the video included Alexandra Rice (medicine), Makayla Dudley (pharmacy), Malukah Christie (dental medicine) and Kimberly Mouzone (nursing).

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WHO: Students from all MUSC Colleges and Charleston School of Law

WHEN: Completed applications due Friday, March 1, 2019 by 5 p.m. EST

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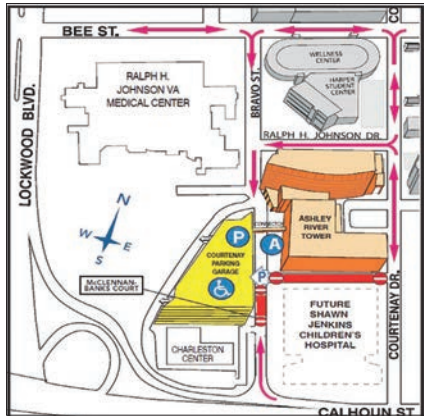
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Construction Update

Closure at McClennan-Banks Court thru May 31



Due to the ongoing construction for the MUSC Shawn Jenkins Children's Hospital, a portion of McClennan-Banks Court will be closed from 7 a.m. to 5 p.m., until Friday, May 31. No through traffic will be allowed during this phase of the construction. Access to the Charleston Center Building and Courtenay Parking Garage will remain fully operational.

Second MUSC Reads event focuses on "Dreamland," opioid crisis

Staff Report

In 2018, MUSC's Office of Humanities hosted its first "MUSC Reads" initiative to celebrate the 200th anniversary of Mary Wollstonecraft Shelley's "Frankenstein." This year, participants in the initiative are tackling another "monster," reading "Dreamland: The True Tale of America's Opiate Epidemic" by award-winning journalist Sam Quinones.

More than 100 students, faculty members and staff from across MUSC have formed small groups to discuss the book. These participants received free copies on a first-come, first-served basis.

UPDATE *Continued from Page two*

- A request to enter into a collaboration agreement with Clemson University. The agreement creates a framework to manage current and future projects between the two universities and establishes a board-level joint liaison group that will provide strategic guidance for the relationship between MUSC and Clemson. Together, the universities focus on serving the state through shared research acumen and delivery of innovative, solutions-oriented programs.
- The expansion and enhancement of 3,100 square feet of existing space in the Institute of Psychiatry, College of Medicine, to create a sleep study lab.
- The construction of a new 2,700-

square-foot mailroom at the Arco Lane warehouse, since the sale of Harborview Office Tower requires MUSC to vacate the building where the mailroom is currently located, by October.

- Increasing the budget from \$1.25 million to \$1.8 million for renovations at Ashley River Tower in order to relocate the Nuclear Medicine Service.

A welcome reception will begin at 5:30 p.m. in the lobby of the Basic Science Building Auditorium off Ashley Avenue. The program will run from 6 to 7:30 p.m. and is free and open to all.

For more information, contact Lisa Kerr at kerli@musc.edu.

The MUSC/MUHA Board of Trustees serve as separate bodies to govern the university and hospital, holding two days of committee and board meetings six times a year. For more information about the MUSC Board of Trustees, visit <http://academicdepartments.musc.edu/leadership/board/index.html>.

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