



# Changing What's Possible

## THE MEDICAL UNIVERSITY OF SOUTH CAROLINA



# **About MUSC**

David J. Cole, M.D., FACS
President, Medical University of South Carolina

The Medical University of South Carolina (MUSC) is South Carolina's only comprehensive academic health science center. Our purpose is to preserve and optimize human life in South Carolina through our vision to lead health innovation for the lives we touch. MUSC provides an interprofessional environment for learning, discovery and healing through our tripartite mission of education, research and patient care.

The MUSC values of compassion, collaboration, respect, integrity and innovation are nurtured every day by people who believe in each other and in Charleston, South Carolina and our global community.

Founded in 1824 as the first medical institution in the southern United States, MUSC's main campus is

located on more than 50 acres in the city of Charleston. Since its founding, the university has awarded more than 36,000 degrees and grown from a small medical school to an academic health science center comprised of a 700-bed referral and teaching hospital and six colleges with more than 1,700 faculty educating approximately

3,000 students annually. As the largest non-federal employer in Charleston, the university and its affiliates have collective annual budgets in excess of \$2.3 billion, with an annual economic impact of more than \$3.8 billion and annual research funding in excess of \$250 million.

Chartered in 1966, the MUSC Foundation is an independent charitable education foundation dedicated to supporting MUSC and its tripartite mission. Over more than 50 years, the foundation has fully leveraged its assets, now more than \$600 million, to invest, manage, and disperse private resources that help meet priority but unfunded university initiatives.

## **Economic Impact**



Total economic impact



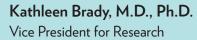
Total labor economic impact



Total economic impact

- With more than 14,000 employees, MUSC is the largest non-federal employer in Charleston.
- Nearly 20,000 of more than 31,000 MUSC alumni continue to live in and contribute to the Palmetto State.
- MUSC accounts for 12 percent of the Charleston area economy, being directly or indirectly responsible for one in every 12 jobs.
- MUSC Health providers deliver topquality care through more than one million patient encounters every year.

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Willette Burnham-Williams, Ph.D. Chief Diversity Officer, University

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Chief Information Officer

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Darlene L. Shaw, Ph.D.
Chief Institutional Strategy Officer



























# SIX COLLEGES - ONE UNIVERSITY

Sarandeep Huja, DDS, Ph.D.
Dean, James B. Edwards College of Dental Medicine

Zoher Kapasi, PT, Ph.D., MBA Dean, College of Health Professions

**Linda S. Weglicki, Ph.D., RN** Dean, College of Nursing



Paula Traktman, Ph.D.
Dean, College of Graduate Studies



Raymond N. DuBois, M.D., Ph.D. Dean, College of Medicine



Philip Hall, Pharm.D. Dean, College of Pharmacy



In fiscal year 2016, MUSC graduated more students than ever before in our history. Counting all MUSC graduates from June 1, 2015 through May 20, 2016, 978 students earned MUSC health care degrees that academic year. Ninety-seven percent of those students agree that they received a high-quality education. The Medical University of South Carolina is home to six colleges, 3,000 students and a diverse student body, staff, and faculty. The colleges of Dental Medicine, Graduate Studies, Health Professions, Medicine, Nursing, and Pharmacy comprise the education arm of MUSC. Students earn degrees at the baccalaureate, master's, doctoral, and other professional levels.









1,425

Full-time Faculty



Part-time Faculty



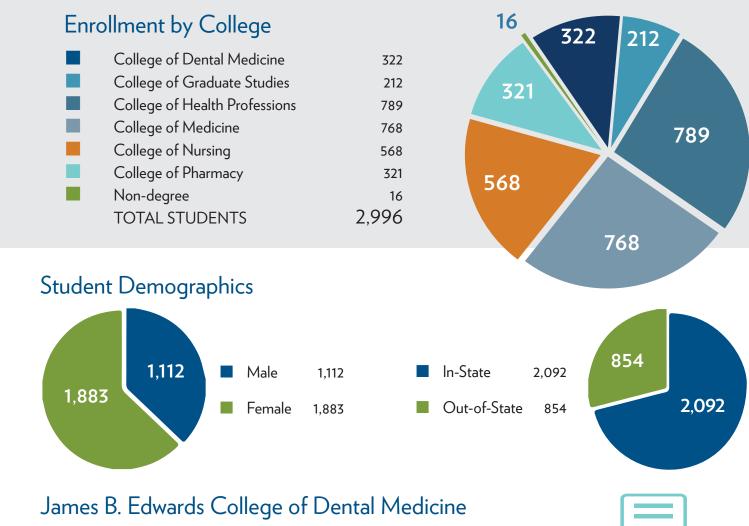
Residency training for more than 750 graduate health professionals



Hours of student volunteer service to local organizations



65% of all living alumni remain in the state and contribute to state's economy



- Founded in 1967, the James B. Edwards College of Dental Medicine is the state's only College of Dental Medicine. With more than 2,275 alumni, it offers one of the most respected programs of its kind in the country. Students are educated and trained in Oral Health Sciences, Oral Rehabilitation, Oral and Maxillofacial Surgery, Pediatric Dentistry and Orthodontics, and Stomatology.
- Graduate residency programs accept an additional 41 trainees every year in Endodontics, General Dentistry, Orthodontics, Oral Surgery, Pediatric Dentistry and Periodontics.
- > Ranked among the top 20 dental colleges in the nation for research funding, students also participate in training and clinical programs in collaboration with health care partners in locations throughout the state and provide care in seven outreach clinics across South Carolina.





#### College of Graduate Studies

- Founded in 1965, the College of Graduate Studies educates highly sought-after biomedical and behavioral scientists at master's, doctoral and postdoctoral levels.
- > Students are exposed to innovative research through a number of collaborative programs including Master's of Science or Doctor of Philosophy degrees in the biomedical sciences, an NIH-funded M.D./Ph.D. program with the College of Medicine, a D.M.D./Ph.D. program with the College of Dental Medicine, and a Pharm.D./Ph.D. with the College of Pharmacy.



College of Graduate Studies alumni employing advanced degrees as leaders in academia, government, and research

- Summer Undergraduate Research Program that hosts undergraduate students from institutions across the country
- Research opportunities for students underrepresented in the sciences such as an NIH-funded Post-baccalaureate Research Education Program
- An NIH-funded Initiative for Maximizing Student Development.

#### College of Health Professions

- > Founded in 1966, the college marked its 50th anniversary in 2016, celebrating with its more than 10,961 alumni. With more than a dozen different degree programs, the College of Health Professions is a national leader in education, intellectual discovery, and research.
- Offering bachelor's, master's and doctoral degree programs in the areas of cardiovascular perfusion, health administration, health informatics, health science and rehabilitation, health care studies, nurse anesthesia, occupational therapy, physician assistant studies, and physical therapy, the college's academic programs have consistently received high rankings in national and industry polls.



College of Health Professions awarded more than \$10.3 million in total research grants

Ranked third nationally in NIH funding among other colleges of health professions nationwide.

## College of Medicine

- > Founded in 1824, the College of Medicine was the first medical school in the southern U.S. and the 10th medical school in the nation. It is the largest medical school in the state, educating and training the majority of its physicians.
- > The College of Medicine was awarded more than \$228 million in 2016 for extramural research funding.



- A national leader on many fronts, the college boasts a diverse student body – 19 percent diversity versus the 15 percent national average. The American Association of Medical Colleges ranks the college in the 96th percentile for medical schools with the most African-American students.
- Rigorous clinical training coupled with community engagement allows medical students to volunteer with local organizations that serve the homeless, underserved and underinsured. The college has more than 8,500 alumni throughout the state, around the country and beyond.
- > 13% of all residents and fellows in the college are considered underrepresented in medicine, the largest number in the history of the college. Underrepresented in medicine residents currently reside in 90% of the college's departments. 19% of the college's student body is comprised of underrepresented in medicine individuals.
- > The college has more than 8,500 alumni throughout the state, around the country and beyond. .





99%

College of Medicine students matched to residency opportunities

## College of Nursing

- > With a diploma program dating back to 1919, the college offered its first baccalaureate degree in 1966 and has graduated 7,742 alumni. Ninety percent of graduates remain in South Carolina.
- Roughly 46 percent received their education and training entirely through its academically and technologically advanced online program in 2015-2016.
- > U.S. News & World Report has ranked the online graduate nursing program as one of the country's top two schools four years in a row, and ranks 17th in NIH funding among colleges of nursing across the country.



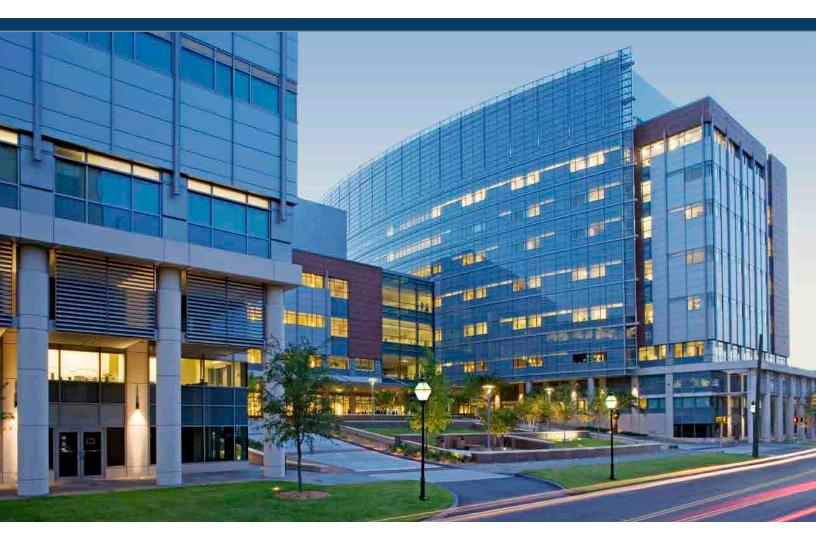
The College of Nursing educates more than 570 students each year.

## College of Pharmacy

- > Founded in 1881, the College of Pharmacy is home to two research centers with renowned endowed chairs. MUSC College of Pharmacy boasts one of the oldest and largest residency programs in the country, having trained approximately 360 residents during its long history.
- The college provides a premier pharmacy education by uniting nationally recognized faculty and high-achieving students with the innovative, interprofessional learning opportunities offered at MUSC's academic medical center.



# **MUSC HEALTH**



#### MUSC Health

MUSC Health is the clinical enterprise of the Medical University of South Carolina (MUSC), is dedicated to the pursuit of changing what's possible in health care.

The innovations and leadership of this integrated health care system are evident, not only in the four hospitals on the downtown Charleston Medical Center campus, but shared through more than 100 outreach locations, formal clinical affiliations with other hospitals and health systems across South Carolina, and a robust telehealth network.

The MUSC Medical Center is South Carolina's #1 and most preferred hospital (as ranked by *U.S. News & World Report* on its Best Hospitals 2016-2017 list and the National Research Corporation, respectively).



1,000,000

MUSC Health engages in more than 1,000,000 patient encounters annually.

#### MUSC Children's Health

- > MUSC Children's Health is South Carolina's most comprehensive system of preventive and clinical care devoted exclusively to the well-being of children.
- > The system delivers the most advanced, evidence-based pediatric health services from fetal stage through the teen years. Six pediatric specialties cardiology & heart surgery, cancer, nephrology, urology, gastroenterology & GI surgery, and diabetes & endocrinology are ranked in the top 50 in the country.
- > The state's only nationally recognized MUSC Children's Hospital is located on the MUSC campus in downtown Charleston. MUSC Children's Health is expanding access to specialized pediatric care through a growing network of outreach locations across the state and through the South Carolina Telehealth Alliance.
- In August 2016, ground was broken on the new MUSC Shawn Jenkins Children's Hospital and Pearl Tourville Women's Pavilion located on peninsular Charleston. This \$385 million facility is scheduled to open in late 2019.

### MUSC Hollings Cancer Center (HCC)

- > MUSC Hollings Cancer Center is one of fewer than 70 National Cancer Institute-designated cancer centers and the largest academic-based cancer research program in South Carolina.
- > Hollings is comprised of more than 120 faculty cancer scientists with an annual research funding portfolio of \$44 million and a dedication to reducing the cancer burden in our state and beyond.
- An interprofessional team of more than 60 cancer specialists works together to deliver the highest level of care, offering state-of-the-art diagnostic capabilities, surgical techniques and therapies, including more than 200 clinical trials.
  - This nationally ranked cancer program is expanding its reach across the state through cancer prevention and screening initiatives, outreach and education programs, and a growing list of cancer care locations and community partnerships.

#### MUSC Neurosciences

- > MUSC Neuroscience ranks first in the Southeast and second in the country in National Institutes of Health neuroscience research funding. The department places researchers and clinicians at each other's side in an effort to realize the clinical promise of cutting-edge research.
- As a consistent leader in neuroscience advances, MUSC is the first Joint Commission Certified Comprehensive Stroke Center in South Carolina; the only Neurosciences Intensive Care Unit in the region; the leading center in the southeast for treatment and research of movement disorders; and the first Level 4 Epilepsy Center in South Carolina, the highest designation given by the National Association of Epilepsy Centers.

#### MUSC Heart and Vascular Center (HVC)

- MUSC Heart and Vascular Center offers more heart disease treatment options than any other hospital in South Carolina.
- HVC cardiologists and heart surgeons provide the highest level of specialization for all types of heart problems, including in heart failure, heart valve problems, arrhythmias and interventional and surgical procedures, and treat complex cases – often referred from other area hospitals – with lower rates of complications and readmissions than national averages.
- As South Carolina's only medical research and training institution, MUSC offers clinical trials of new drugs, devices and approaches to heart disease.
- As a trusted partner with international device makers in testing new devices, MUSC pioneers more devices than any other heart center in South Carolina.

#### MUSC Health Center for Telehealth

MUSC Center for Telehealth has been the leader in offering telehealth services in South Carolina, offering patients increased access to quality medical services - regardless of where they live - through technological advances

and initiatives.

Beginning with the telestroke program over a decade ago, MUSC and its partners now see that over 96 percent of the South Carolina population is within a 60-minute drive of expert stroke care. MUSC and its partner institutions represent approximately 220 distinct sites, expanding services that include teleICU, maternal-fetal, mental health and school-based programs, among others.

# GREENVILLE GREENWOOD **FLORENCE** COLUMBIA **ORANGEBURG** MYRTLE BEACH **GEORGETOWN SUMMERVILLE** CHARLESTON

Service Delivery

Specialty

School

Primary Care

Telemedicine

Research Affiliate

Research Partner

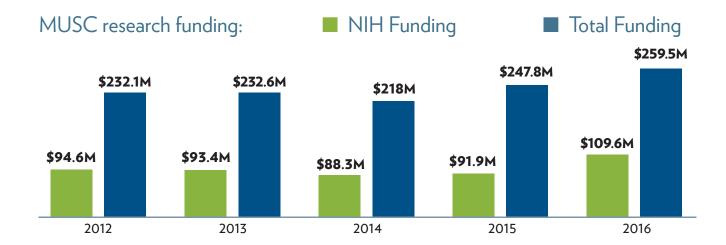
#### PROVIDING CARE ACROSS THE STATE

MUSC's clinical outreach allows us to serve the citizens of our state, no matter where they are. From primary and specialty care, to doctor's visits in schools via telemedicine, with numerous clinical and research affiliations across the region, we are leading health innovation for the lives we touch.

# **MUSC RESEARCH**

MUSC leads the state in biomedical research funding with more than \$259 million in extramural grant funding, 589 principal investigators and is home to one of only 62 Clinical and Translational Science Award (CTSA) hubs in the nation and home to the state's only NCI-designated cancer center. In fiscal year 2016, MUSC was awarded \$109 million in funding from the National Institutes of Health (NIH). Another point of pride is the ranking of three College of Medicine departments among the top 10 in the nation for NIH funding: Neurosciences (8th); Otolaryngology (8th); and Psychiatry (8th).

The CTSA program aims to advance clinical and translational science to catalyze innovation and increase the speed at which new treatments become available to patients and reshape biomedical research in South Carolina. During fiscal year 2016, MUSC was involved in approximately 1,330 clinical trials. Key areas of research at MUSC include cancer, community health, drug discovery, health disparities, inflammation and fibrosis, neuroscience, oral health, rehabilitation and stroke.



#### Recent Research Highlights

- Hollings Cancer Center leads \$15M studies in tobacco policies, e-cig use
- \$44M Hollings Cancer Center annual research portfolio
- \$8.9M grant funds for research on treatment of liver cancer
- \$8M grant to improve cancer outcomes in minority men
- \$7M from the NIH for alcohol research center funds innovative treatments

- \$11.1M NIH aphasia study to help stroke patients
- MUSC launched the first clinical trial combining two powerful drugs for lung cancer
- > \$3.8M to test transplant drug
- \$1.68M in NIH funding research to help patients with pancreatitis, diabetes
- \$1.11M from the NIH to study how mobile technology can help kidney transplant patients

# Medical University of South Carolina

## Contact Us

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musc.edu

#### THE MEDICAL UNIVERSITY OF SOUTH CAROLINA

Founded in 1824 in Charleston, The Medical University of South Carolina is the oldest medical school in the South. Today, MUSC continues the tradition of excellence in education, research, and patient care. MUSC educates and trains more than 3,000 students and 700 residents in six colleges (Dental Medicine, Graduate Studies, Health Professions, Medicine, Nursing, and Pharmacy), and has nearly 14,000 employees, including approximately 1,500 faculty members.

As the largest non-federal employer in Charleston, the university and its affiliates have collective annual budgets in excess of \$2.4 billion, with an annual economic impact of more than \$3.8 billion and annual research funding in excess of \$250 million. MUSC operates a 700-bed medical center, which includes a nationally recognized children's hospital, the Ashley River Tower (cardiovascular, digestive disease, and surgical oncology), Hollings Cancer Center (a National Cancer Institute-designated center), Level I trauma center, Institute of Psychiatry, and the state's only transplant center. In 2017, for the third consecutive year, U.S. News & World Report named MUSC Health the number one hospital in South Carolina.

For more information on academic programs or clinical services, visit musc.edu.

For more information on hospital patient services, visit muschealth.org.

