



Face shield
Protective Isolation Mask

DEPARTMENT OF MEDICINE

2021 ANNUAL REPORT

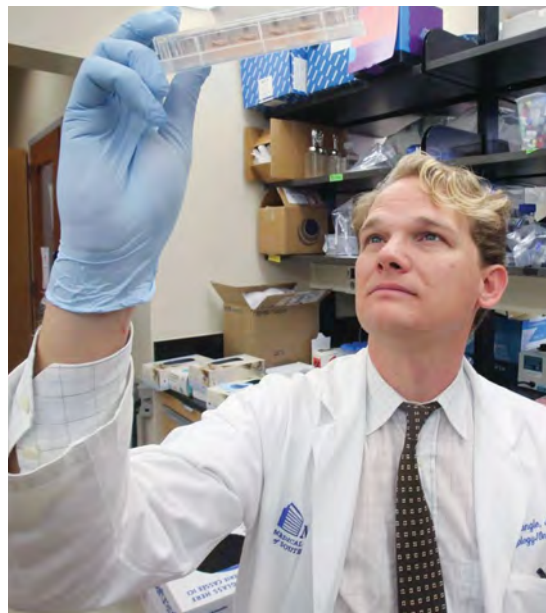


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COVER: *Left Image:* Bhavadharini Ramu, M.D., associate professor, Division of Cardiology with patient. ***Middle Image:*** John Wrangle, M.D., associate professor, Division of Hematology & Oncology. ***Right Image:*** Chief resident Jon Puchalla, M.D., leading Point-of-Care Ultrasound workshop for interns during academic half day.

Editor, Creative and Production Manager: Natalie Wilson

Photographers: Elizabeth Anne Thompson, Sarah Pack, Natalie Wilson

Acknowledgments:

The Department of Medicine would like to thank the many individuals, especially our leadership, including our division directors and division administrators, for their collective efforts in helping to complete this year's annual progress report. Additionally, we would like to thank those who are featured within these pages for their continued service to MUSC and contributions to this publication.

DEPARTMENTAL LEADERSHIP

As of Jan. 2022

Administration

E. Benjamin Clyburn, M.D.
Chair, Department of Medicine

Georgia Brogdon, MBA, DHSc,
FACHE, FACMPE
Vice Chair, Finance and Administration

Elisha Brownfield, M.D.
Vice Chair, Leadership Development

Kimberly Davis, M.D.
Vice Chair, Clinical Affairs

Marc Heincelman, M.D., MPH
Vice Chair, Quality Improvement

Aundrea Loftley, M.D.
Vice Chair, Diversity & Inclusion

Jim Oates, M.D.
Vice Chair, Research

Samuel Schumann, M.D.
Vice Chair, Quality Improvement

Richard Silver, M.D.
Vice Chair, Development

Gerard Silvestri, M.D.
*Senior Vice Chair, Faculty
Development*

Divisions

CARDIOLOGY:

Thomas Di Salvo, M.D., MBA, MPH
Division Director

Bill Stalvey, MHA
Division Administrator

ENDOCRINOLOGY:

Marc-Andre Cornier, M.D.
Division Director

Elizabeth Swan
Division Administrator

GASTROENTEROLOGY AND HEPATOLOGY:

Brenda Hoffman, M.D.
Interim Division Director

Richard "Mac" Houck, MBA
Interim Division Administrator

GENERAL INTERNAL MEDICINE:

Kimberly Davis, M.D.
Interim Division Director

Brian Collins, MHA
Division Administrator

HEMATOLOGY AND ONCOLOGY:

A. Craig Lockhart, M.D., MHS
Division Director

Lee Putney, MHA
Division Administrator

HOSPITAL MEDICINE:

Marc Heincelman, M.D., MPH
Interim Division Director

Austin Ambrose, MHA
Interim Division Administrator

INFECTIOUS DISEASES:

Cassandra Salgado, M.D., MS
Division Director

Lee Putney, MHA
Division Administrator

NEPHROLOGY:

Joshua Lipschutz, M.D.
Division Director

Susanne Jaques, MHA
Division Administrator

PULMONARY AND CRITICAL CARE:

Dee Ford, M.D., MSCR
Division Director

Richard "Mac" Houck, MBA
Division Administrator

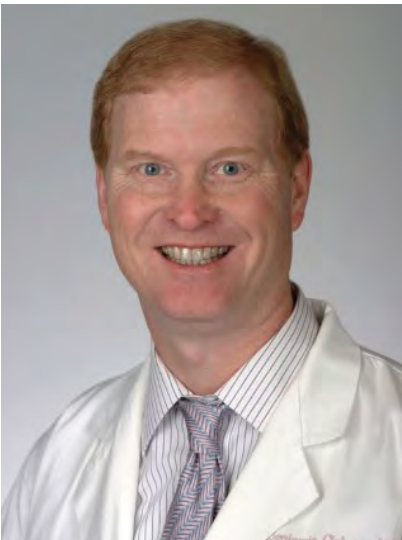
RHEUMATOLOGY AND IMMUNOLOGY:

Jim Oates, M.D.
Division Director

Elizabeth Swan
Division Administrator



MESSAGE FROM THE CHAIR



E. B. Clyburn, M.D.

Benjamin Clyburn, M.D.
Professor and Chair
Department of Medicine
Medical University of South Carolina

For the Department of Medicine, 2020-21 was a challenging and exceptional year. Despite the COVID-19 pandemic and its effect on all aspects of life, we have remained resolute in our commitment to find innovative solutions to care for our patients, mitigate disparities in health care, conduct research, and educate our residents and fellows.

Some particularly noteworthy departmental highlights from the past year include:

- Key contributions to pandemic planning and implementation for the medical center, the University and the state of South Carolina
- Expanded ICU and inpatient services to care for the influx of COVID patients
- Rapid implementation of telemedicine and training of faculty and trainees on the new platform
- Activation of several impactful clinical trials including remdesvir, Ivermectin, hydroxychloroquine for COVID treatment and participation in the NIH sponsored AstraZeneca, Janssen, Novavax, and Moderna vaccine trials
- Creation of the SCTR COVID-19 Biorepository, a “bank” of blood and saliva samples collected from COVID-19-positive patients that researchers around the state can study to learn more about the virus
- Managed the shutdown and safe reopening of our research laboratories
- New leadership positions to create a path forward for greater diversity, equity and inclusion, and leadership development programming
- Clinical growth across divisions
- Continued expansion of telehealth services and clinic locations throughout the state
- USNWR recognition for our clinical programs in Cancer (#39), Gastroenterology and Rheumatology (high-performing)
- Highly successful residency and fellowship match
- Record-high of \$75M in total research awards
- Appointment of three new division leaders: Marc-Andre Cornier, M.D., as director of the Division of Endocrinology; Dee Ford, M.D., as director of the Division of Pulmonary and Critical Care Medicine; and A. Craig Lockhart, M.D., as director of the Division of Hematology & Oncology

The past year’s extraordinary challenges have not defeated us. We have transformed the challenges into opportunities to develop innovative approaches to expand and enhance patient care, research, and education programs and to challenge the status quo of health equity, diversity, and what it means to be inclusive in our daily work. The future is exciting and bright, and we are ready. I could not be prouder to be a part of this incredible group and the work we have accomplished this year.

BY THE NUMBERS: FY2021

Our commitment to providing the highest level of compassionate patient care, best-in-class training for the next generation of physician leaders, and cutting-edge research are Changing What's Possible for our patients.



CLINICAL ACTIVITY



32,197

NEW PATIENTS



933,059

wRVU GENERATION



367,776

OUTPATIENT ENCOUNTERS



RESEARCH ACTIVITY



97

NEW AWARDS



\$75

MILLION

in research awards

(*\$35M in COVID-19 clinical trials)

49

PI's with Active Corporate Clinical Research

41

PI's with Active Federal Awards and Clinical Research



FACULTY, STAFF AND TRAINEES



271

Faculty



224

Trainees

106 Residents

103 Fellows

15 Post Docs



127

Research Staff

79

Management Support Staff

83

APPs



Ben Clyburn, M.D., was appointed Chair of the Department of Medicine in April 2021, after serving as interim chair since March 2020. In this role, Clyburn oversees the clinical, education, and research programs of the department, which consists of 10 divisions and is the largest at the MUSC College of Medicine.

“It has been a privilege to serve the MUSC Department of Medicine as interim chair and I am absolutely delighted and honored to be the Department of Medicine’s new chair. Having been in the department for over 20 years, I already knew that our people are outstanding for their brilliance, their compassion, and their drive. I am humbled and deeply honored to have the opportunity to serve as leader for such an outstanding group of people. There is literally no limit to the impact we can have as a department, and in collaboration across the institution, to lead advances in medicine. We are entering a tremendously exciting time in medical science, and we are positioned extremely well to effect changes that improve our understanding of human health and to develop personalized strategies to care for patients. My commitment to each of you is that I

“

I am humbled and deeply honored to have the opportunity to serve as leader for such an outstanding group of people. There is literally no limit to the impact we can have as a department, and in collaboration across the institution, to lead advances in medicine.

will work tirelessly to support all of our missions. My only agenda is our patients, our donors, our trainees, and our faculty and staff. This past year has been uniquely challenging, but we are stronger because of this challenge. I am looking forward to an exciting year ahead,” said Clyburn.

Clyburn joined MUSC in 1997 as the associate residency program director in Internal Medicine, and then assumed the role of program director two years later. During his career at MUSC, he has held numerous leadership positions, including secretary, vice president, and president of the Medical Staff; associate dean for GME-Faculty Development; senior associate dean for GME and CME; and designated institutional official (DIO) for Graduate Medical Education (current).

In 2021, several talented members of the Department of Medicine assumed important leadership roles. The Department also recruited three new faculty members to lead our Endocrinology, Hematology & Oncology, and Pulmonary Divisions. Each of these individuals is nationally recognized and brings to his/her new position valuable experience and extraordinary commitment.



Marc-Andre Cornier, M.D., was appointed director of the Division of Endocrinology, Diabetes, and Metabolic Diseases, succeeding interim director Kimberly Davis, M.D.

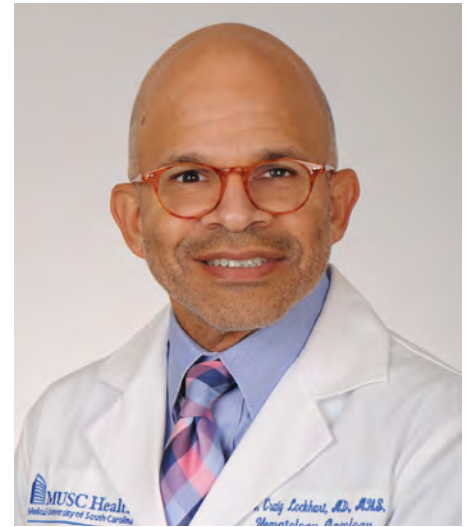
Cornier is an exceptional physician and researcher with expertise in diabetes, complex lipid disorders, metabolic syndrome, and obesity. Cornier comes to MUSC from the University of Colorado where he was a professor of medicine and associate division head of the Division of Endocrinology, Metabolism and Diabetes. He also served as the associate director of the Anschutz Health and Wellness Center, medical director of the Lipoprotein Apheresis Program, and director of the Lipid Disorders Clinic.

Cornier is an active clinical and translational investigator, with primary research interests focused on investigating obesity, food intake, regulation, neuroimaging, and insulin action. Cornier has been continuously funded by the National Institutes of Health for the past 20 years and he has published over 60 papers in scientific journals, edited textbooks and book chapters related to diabetes.



Dee Ford, M.D., MSCR, was appointed director of the Division of Division of Pulmonary, Critical Care, Allergy, and Sleep Medicine after serving as interim director since November 2019. Ford is a physician scientist and leader in critical care medicine with expertise in health services research, health professional education, and quality improvement. Her clinical and research interests are focused on different aspects of critical care, with an emphasis on telemedicine, health disparities, and implementation of best practices.

During her career at MUSC, Ford has held numerous leadership positions, including her current role as the medical director for MUSC's Tele-ICU and ICU Innovations Outreach Programs. She has developed a regional and national reputation as an outstanding researcher, mentor, and leader in the field of population health. Ford has maintained a track record of continuous extramural research funding from the NIH, the Health Resources and Services Administration (HRSA), and others, and currently serves as program director for MUSC's HRSA-Funded Telehealth Center of Excellence.



A. Craig Lockhart, M.D., MHS, was named director of the Division of Hematology and Oncology, succeeding interim director Michael Lilly, M.D. He also serves as associate director for clinical science at MUSC Hollings Cancer Center. Lockhart came to MUSC from the University of Miami (UM) Miller School of Medicine where he was a tenured professor and associate director for regional and strategic research affiliations for the UM Sylvester Comprehensive Cancer Center. He has a strong track record of building and growing a successful oncology division while also supporting research and scholarship. At UM SCCC, Lockhart served in several roles, including chief of the Division of Oncology. He also served as chief of service for Oncology as part of the University of Miami Medical Group. Prior to joining the University of Miami, Lockhart served on faculty and in leadership roles at Washington University, St. Louis, Mo. / Siteman Comprehensive Cancer Center, and at Vanderbilt University.

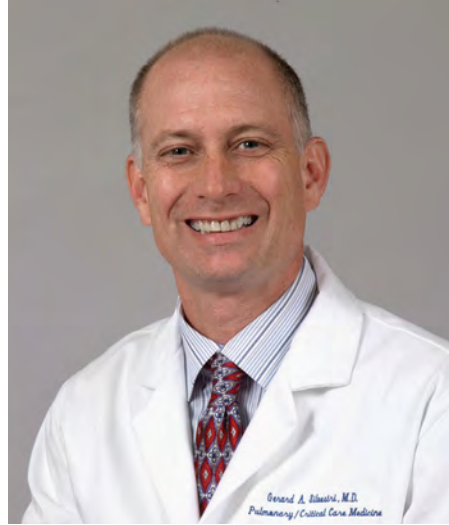
He has been conducting early phase clinical trials for over 20 years and has been a principal investigator on over 100 Phase I/II and III trials.



Aundrea Loftley, M.D., assistant professor, Division of Endocrinology, Diabetes, and Metabolic Disorders, was named the first Vice Chair for Diversity and Inclusion for the Department of Medicine. In this role, Loftley provides vision and leadership in promoting a departmental culture that values and honors diversity, equity, and inclusion.

Loftley completed her medical school training, internal medicine residency, and endocrinology fellowship at MUSC. In 2015, after completing her fellowship in endocrinology, she established the first outpatient endocrinology practice for McLeod Physician Associates at McLeod Regional Medical Center in Florence, South Carolina. In 2017, Loftley joined the MUSC faculty as assistant professor in the Division of Endocrinology, Diabetes, and Metabolic Diseases.

In 2018, she was awarded the Professional Research Consultants Excellence in Healthcare Top Performer Award for scoring at or above the 100th percentile for patient satisfaction. Loftley is board certified in both internal medicine and endocrinology.



Gerard Silvestri, M.D., MS, Distinguished University Professor, Division of Pulmonary and Critical Care Medicine, was named Senior Vice Chair for Faculty Development in the Department of Medicine. In this role, Silvestri's focus is on mentoring faculty members at all levels and in all tracks – clinician, research, and investigator. The goal is to maximize the impact of each faculty member's work, point out opportunities for leadership, and to aid in selection of career priorities that will facilitate promotion in the medical school.

A 30-year veteran of the department and former vice chair of faculty development, Silvestri is passionate about promoting the careers of DOM faculty and has mentored numerous trainees who became faculty and leaders at MUSC and other institutions. He has served on and chaired numerous MUSC committees that address faculty promotion and governance as well as education and research administration.

Silvestri is a professor of medicine and a lung cancer pulmonologist at MUSC with a career dedicated to the evaluation, management, and improvement of outcomes of patients with this most common of malignancies.



Patrick Flume, M.D., Distinguished University Professor, Division of Pulmonary and Critical Care Medicine, was named Associate Vice President for Clinical Research in the Office of the Vice President for Research (OVPR). In this role, Flume is responsible for managing all areas of clinical research as well as clinical trials for the academic health system. He is specifically focusing his efforts on leading the strategic growth of clinical research operations and participant recruitment for clinical trials at Hollings Cancer Center, across the MUSC enterprise, and at regional sites. Flume has served MUSC and the Department of Medicine with great distinction for nearly 30 years as a clinician, researcher, educator, and leader. Flume is an internationally recognized expert in the field of cystic fibrosis and leads a robust clinical research program within the Division of Pulmonary, Critical Care, Allergy, and Sleep Medicine.

His current leadership positions include serving as the director of the MUSC Cystic Fibrosis Center and director of the Cardiopulmonary Exercise Laboratory. In addition, he is the Powers-Huggins Endowed Chair for Cystic Fibrosis.

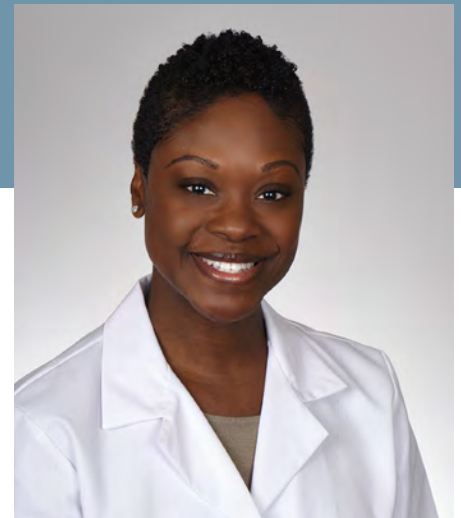
DIVERSITY & INCLUSION OVERVIEW

As the inaugural Vice Chair for Diversity and Inclusion for the Department of Medicine, I am delighted to provide vision and leadership in promoting a departmental culture that values and honors diversity, equity, and inclusion.

Our department is proud to have people from a wide range of backgrounds all working in pursuit of a common mission: to provide superior patient care, to educate the next generation of physicians, and to perform seminal discovery research. In light of the discussion the country is having around racial diversity, we acknowledge that we have a lot of work to do as well and we created this position in May 2021, to further our commitment to diversity. We believe that a more equitable department is more beneficial to everybody, and allows us to provide more excellent care, and continue to conduct top-notch research.

The Department of Medicine is proud to be the largest department at the Medical University of South Carolina. We are committed to excellence in patient care, education, and service to our community. In doing so, we recognize the importance of promoting an environment that honors and respects the differences that make us great so that we may best support the advancement and development of all our trainees, staff, and faculty. Our unique perspectives, experiences, and aptitudes bring added value to the environment and help create a culture that is authentic and well-equipped to meet the needs of the diverse population whom we serve.

Diversity, equity, and inclusion are not just concepts, they are the core values and principles that help create the foundation necessary for growth, development, and innovation. An inclusive environment recognizes the power of those attributes which make us unique.



AUNDREA LOFTLEY, M.D.

Assistant Professor

Division of Endocrinology

Vice Chair for Diversity and Inclusion

Department of Medicine

“ Diversity, equity, and inclusion are not just concepts, they are the core values and principles that help create the foundation necessary for growth, development, and innovation. ”

We are well-positioned to cultivate and promote this climate because of a unifying commitment to delivering exceptional care and service to others.

I am honored to work alongside my colleagues as we continue to move diversity and inclusion efforts forward within the Department of Medicine.

NEW FACULTY RECRUITS Hired in FY22



Yosra Alkabab, M.D.
Assistant Professor
Infectious Diseases



Prince Mohan Anand, M.D.
Associate Professor
Nephrology



Nnamdi Azih, M.D.
Assistant Professor
Hospital Medicine



John Corless, M.D.
Assistant Professor
Gastroenterology



Marc-Andre Cornier, M.D.
Professor
Endocrinology



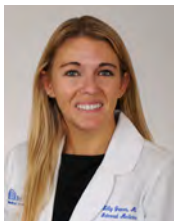
Parinita Dherange, M.D.
Assistant Professor
Cardiology



Bianca Farley, M.D.
Assistant Professor
Hospital Medicine



Adam Fox, M.D.
Instructor
Pulmonary & Critical Care



Kelly Graves, M.D.
Assistant Professor
General Internal Medicine



Kimberly Green, D.O.
Assistant Professor
Hematology & Oncology



Jan Griffin, M.D.
Assistant Professor
Cardiology



Carrie Herzke, M.D.
Associate Professor
Hospital Medicine



Alyson Honko, M.D.
Assistant Professor
Hospital Medicine



Nicholas Honko, M.D.
Assistant Professor
Hospital Medicine



Osagie Igiebor, M.D.
Assistant Professor
Hospital Medicine



Vasanthan Kuppuswamy, M.D.
Assistant Professor
Hospital Medicine



Albert Maniscalco, M.D.
Associate Professor
Nephrology



Kevin McElligott, M.D.
Assistant Professor
Cardiology



Lauren Mims, M.D.
Assistant Professor
General Internal Medicine



Christina Mingora, M.D.
Instructor
Pulmonary & Critical Care

NEW FACULTY RECRUITS *Hired in FY22*



Erik Palecek, M.D.
Associate Professor
General Internal Medicine



Oleg Palygin, Ph.D.
Associate Professor
Nephrology



Denise Sese, M.D.
Assistant Professor
Pulmonary & Critical Care



Rani Shayto, M.D.
Assistant Professor
Endocrinology



Barry Sigal, M.D.
Assistant Professor
Pulmonary & Critical Care



Daniel Silverman, M.D.
Assistant Professor
Cardiology



Michelle Spiegel, M.D.
Assistant Professor
Pulmonary & Critical Care



Harold Szerlip, M.D.
Professor
Nephrology



Charles Teixeira, M.D.
Assistant Professor
Infectious Diseases



Charles Terry, M.D.
Assistant Professor
Pulmonary & Critical Care



Mason Turner, M.D.
Assistant Professor
Hospital Medicine



Justin Van Beusecum, Ph.D.
Assistant Professor
Nephrology



Satya Villuri, M.D.
Assistant Professor
Hospital Medicine



Marianne Wilson, M.D.
Assistant Professor
Endocrinology

PROMOTIONS

PROMOTIONS JAN. 1, 2021:

Brian Houston, M.D.
Associate Professor, Cardiology

Tatsiana Beiko, M.D.
Associate Professor, Pulmonology

Carmelia Marculescu, M.D.
Professor, Infectious Diseases

PROMOTIONS JULY 1, 2021:

Bhavadharini Ramu, M.D.
Associate Professor, Cardiology

Jacqueline Angles, D.O.
Associate Professor, Pulmonology

Neal Axon, M.D.
Professor, General Internal Medicine

Andrew Brock, M.D.
Professor, Gastroenterology

Elisha Brownfield, M.D.
Professor, General Internal Medicine

Michael Casey, M.D.
Professor, Nephrology

Andrew Goodwin, M.D.
Professor, Pulmonology

Marc Heincelman, M.D.
Associate Professor, Hospital Medicine

Harsha Karanchi, M.D.
Associate Professor, Endocrinology

Chitra Lal, M.D.
Professor, Pulmonology

Eric Meissner, M.D., Ph.D.
Associate Professor, Infectious Diseases

Rachel Sturdivant, M.D.
Professor, Nephrology

Nichole Tanner, M.D.
Professor, Pulmonology

Leigh Vaughan, M.D.
Associate Professor, General Internal Medicine

David Zaas, M.D.
Professor, Pulmonology

2021 DEPARTMENT OF MEDICINE AWARDS

The 2021 Department of Medicine Awards Ceremony honors outstanding achievements by medicine faculty, staff, and trainees during the past year. In the COVID-19 era, we held our second virtual awards ceremony on May 27.

FELLOW AWARDS

Fellows of the Year:

Isaac Jaben, M.D.
Sam Friedman M.D.

DIVISION AWARDS

Division of the Year:

Division of Pulmonary, Critical Care, Allergy and Sleep Medicine

FACULTY AWARDS - CLINICAL CARE AND EDUCATION

Michael E. Assey Department of Medicine Attending Teaching Award: Thomas Rogers Kyle, M.D.

Ambulatory Teacher of the Year: Cara Litvin, M.D.

Consult Teacher of the Year: Natalie Freidin, M.D.

Education Mentoring Award: Gerard Silvestri, M.D., MS

Outstanding Junior Faculty Clinician Educator of the Year: Deeksha Jandhyala, M.D.

Outstanding Mid-Career Clinician Educator of the Year: Scott Curry, M.D.

Outstanding Established Faculty Clinician Educator of the Year: Susan Dorman, M.D.

Excellence in Medical Student Teaching:

Leon Walthall, M.D., *Faculty Winner*
Natalie Freidin, M.D., *Faculty Winner*
Henry Shiflett, D.O., PGY-5, *Fellow Winner*

Megan Veglia, M.D., PGY-3, *Resident Winner*
Rayphael Hardy, M.D., PGY- 2, *Resident Winner*

Excellence in Patient Satisfaction:

Deanna Baker Frost, M.D., Ph.D.
Frank Brescia, M.D., MA
Michael Craig, M.D.
Todd Gourdin, M.D.
Betsy Hopkins, MS, MPH, PA-C
Rochelle Judd, MSN
Daniel Judge, M.D.
Aundrea Loftley, M.D.
Aiken McNair, PA
Terrence O'Brien, M.D., MS
Lauren Pearce, FNP
Andrew Schreiner, M.D., MSCR
Gerard Silvestri, M.D., MS

The Doctor's Doctor Award: Elisha Brownfield, M.D.

Professionalism Award: James Glenn, M.D.

Hidden Gem Award: Ruth Adekunle, M.D.

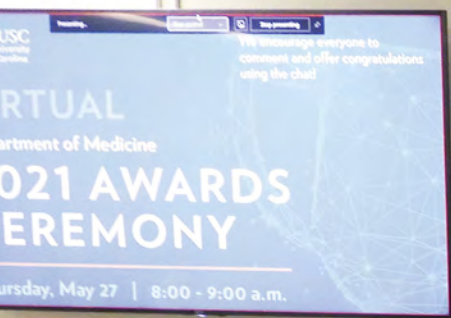
DOM Lifetime Clinician Educator Achievement Award: Alice Boylan, M.D.

FACULTY AWARDS - RESEARCH

Research Faculty Mentoring Award: Ryan Tedford, M.D.

New K Awards: Toros Dincman, M.D., Ph.D.

Outstanding Scientific Publication Award: Nichole Tanner, M.D., MSCR



Chairman Ben Clyburn, M.D. speaking at 2021 Virtual Awards Day

Outstanding Research Program:
Pulmonary Clinical Trials Program

Best Mentored Paper Award:
Don Rockey, M.D. (mentor)
Songling Liu, M.D. (mentee)

MilliPub Club Award:
Jan Basile, M.D.
Michael Gold, M.D., Ph.D.
Charlie Strange, M.D.
Richard Silver, M.D.

Top Ten Publishers Club Award (CY20):
Michael Zile, M.D.
Ryan Tedford, M.D.
Don Rockey, M.D.
Joseph Elmunzer, M.D.
Carol Feghali-Bostwick, Ph.D.
Diane Kamen, M.D.
Gregory Cote, M.D.
Gerard Silvestri, M.D., MS
Jingwen Zhang, MS
Nichole Tanner, M.D., MSCR

Outstanding Achievement in Early Career Research Award:
John Wrangle, M.D.

RESEARCH STAFF AWARDS

Outstanding Research Staff Member Award:
Kate Taylor
Ashley Warden

RESIDENT AWARDS

General Internal Medicine Ambulatory Resident of the Year:
Susan Evenhouse, M.D.

General Internal Medicine Ambulatory Intern of the Year:
Oliver Mithoefer, M.D.

General Internal Medicine Hospitalist Resident of the Year:
Hampton Sasser, M.D.

General Internal Medicine Hospitalist Intern of the Year:
Garrett Cole, M.D.

Resident Research Award:
Jacob Read, M.D.

Teaching and Education Award:
Meg Scott, M.D.

Leadership Award:
Hampton Sasser, M.D.

Triple Threat Award:
Nnamdi Azih, M.D.

Doctor's Doctor Award:
Kent Broussard, M.D.

Professionalism Award:
Nominated by residents:
Spenser Staub, M.D.
Nominated by faculty:
Chelsea Shepherd, D.O.

Intern of the Year:
Garrett Cole, M.D.

Resident of the Year:
Dena Blanding, M.D.

FACULTY AND TRAINEE AWARDS

Community Service Award:
Deeksha Jandhyala, M.D.



S. Ball



J. Bracey



P. Coyne



M. Cunningham



C. Feghali-Bostwick



P. Flume



D. Ford



E. Higgins



E. James



C. Lal



J. Oates



C. Salgado



A. Schreiner



G. Silvestri



R. Stuart



B. Tsao

AWARDS & DISTINCTIONS

- **Sarah Ball, PharmD**, received the 2021 MUSC Foundation Population Health Award
- **Jennifer Bracey, M.D.**, selected as recipient of the 2021 Leonard Tow Humanism in Medicine Faculty Award
- **Pat Coyne, MSN**, selected for Fulbright Specialist Roster
- **Melissa Cunningham, M.D., Ph.D.**, named the Mary Betty Stevens Young Investigator Prize award winner by the Lupus Foundation of America
- **Carol Feghali-Bostwick, Ph.D.**, named Distinguished University Professor
- **Patrick Flume, M.D.**, named Distinguished University Professor
- **Dee Ford, M.D.**, selected as one of the HIMSS Future50 global leaders
- **Elizabeth Higgins, M.D.**, appointed to United States Medical Licensing Examination (USMLE) committee
- **W. Ennis James, M.D.**, received 2021 MUSC Foundation Outstanding Clinician Award
- **Chitra Lal, M.D.**, named 2021 Distinguished CHEST Educator
- **Jim Oates, M.D.**, received the 2021 Lupus Innovation Award from the Lupus Research Alliance
- **Cassandra Salgado, M.D.**, received 2021 MUSC Values in Action Impact Award, presented by MUSC President David J. Cole, M.D., FACS, and first lady Kathy Cole
- **Andrew Schreiner, M.D., MSCR**, received the 2021 Southern Society for Clinical Investigation Research Scholar Award
- **Gerard Silvestri, M.D.**, named Distinguished University Professor
- **Robert Stuart, M.D.**, received the Order of the Palmetto, South Carolina's highest civilian honor presented for a lifetime of extraordinary achievement, service, and contributions
- **Betty Tsao, Ph.D.**, received the 2021 Lupus Innovation Award from the Lupus Research Alliance

EMPLOYEE RECOGNITION

The Department of Medicine Employee of the Quarter program was established to showcase employees who have shown exemplary strides in contributing to the Department of Medicine and to the MUSC community.

FY21 EMPLOYEE OF THE QUARTER WINNERS:

William Barry
General Internal Medicine

Katie Benfield, RN, MSN
Pulmonary and Critical Care

Kathy Clayton
Nephrology

Chloe Cooper
General Internal Medicine

Maria Hoffman, MHA
Pulmonary and Critical Care

Betsy Hopkins, MS, MPH, PA-C
Infectious Diseases

Mac Houck, MBA
Pulmonary and Critical Care

Joshua Inman
Gastroenterology and Hepatology

Casey Jenkins, MHA
Hematology and Oncology

Zakevia Lewis-Kendrick
Infectious Diseases

Angela Millare
Pulmonary and Critical Care

Cindy Peeples
Gastroenterology and Hepatology

Megan Slappe, MSN
Nephrology

Melissa Wimberly
Medicine Administration



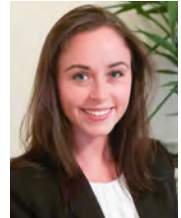
W. Barry



K. Benfield



K. Clayton



C. Cooper



M. Hoffman



B. Hopkins



M. Houck



J. Inman



C. Jenkins



Z. Lewis-Kendrick



A. Millare



C. Peeples



M. Slappe



M. Wimberly



Employee of the Year:
Betsy Hopkins, MS, MPH, PA-C
Physician Assistant, Infectious Diseases



Medicine Excellence Winner:
Megan Slappe, MSN
Nurse Practitioner, Nephrology

CLINICAL CARE HIGHLIGHTS

The Department of Medicine's clinical programs are recognized for excellence across a broad spectrum of subspecialty patient care services for the treatment of highly complex diseases and are comprised of dedicated clinical innovators who are committed to advancing discoveries that transform patient care and health outcomes.

RESPONSE TO COVID-19:

The Department of Medicine was pivotal to the innovative, collaborative, and clinically excellent response to the COVID-19 pandemic and its ever-changing demands during the 2020-2021 year. Through the dedication and determination of our faculty, trainees, and staff, the department assumed responsibility in every conceivable way to help the institution manage the influx and care of COVID patients while still fulfilling the needs of our other patients. Conditions changed almost daily, three new ICUs and one new hospital medicine service were opened, residents and fellows were redeployed, and many of our clinical faculty members were recruited from our ambulatory practices to serve as ward attendings. Additionally, an Urgent Care Clinic was set up outside the Emergency Department for COVID overflow patients supported by primary care. Their collective efforts were a model of selflessness, courage, and efficiency.



COVID ICU nurses coordinating clinical assignments during a team huddle.



Denise Sese, M.D. with patient.

Dramatic Expansion of Telehealth Activities:

With the onset of the pandemic, rapid changes to the way health care is delivered were needed to minimize the impact the virus had on patients and reduce staff exposure. In response, our faculty and staff across all 10 subspecialties rapidly transitioned from in-person outpatient visits to telehealth visits, with our providers seeing over 750 patients a day via virtual visits at the height of the pandemic (compared to almost no virtual visits pre-COVID-19). Telehealth has continued to be an important tool to interact with patients and has provided patients across the state better access to care.

MUSC Health – Lancaster Medical Center Launches Kidney Transplant Program



Located in the Lancaster Division, this program will allow us to provide exceptional care and innovative services closer to home for those in the communities we serve. **Prince Anand, M.D., FACP**, Director of Transplant

Services and Transplant Nephrologist, will lead the program in the Lancaster Division, along with other members of the Lancaster Division transplant team.

In 2021, MUSC Health surgeons performed **410 kidney transplants**, which placed MUSC Health in the top five programs in the country for volume. As part of the MUSC Health Transplant Team, the team in Lancaster will join some of the nation's leading transplant experts.



CLINICAL GROWTH

Despite the ongoing pandemic, the department is focused on strategic growth and recruitment activities. With 57 new faculty joining our team over the past two years and clinic expansion across the state, the department experienced significant clinical growth in nearly all divisions.

Over the past year, the department's clinical programs have continued to evolve to provide the best possible patient-centered approach. In FY21, our ambulatory services together cared for 352,243 outpatient encounters, representing a 25% increase over last fiscal year. Additionally, new patient visits increased 19% to approximately 32,197.

FY21 New Patient Visits Increased

19%
OVER FY20

to approximately

32,197

OUR REACH

Caring for South Carolinians

The Department of Medicine provides care in 13 locations throughout South Carolina

- Beaufort County
- Bluffton | Okatie
- Charleston Peninsula
- East Cooper
- Florence County
- Georgetown County
- Greenville County
- Horry County
- Hilton Head Island
- Nexton
- North Charleston
- West Ashley



Map design by Courtney Irvin Studio



MUSC ECMO Team (L-R): Monika Cardona MSN, RN, Jordan Andrews BSN, RN, Alichia Gibbs BSN, RN, Lucy Linkowski BSN, RN, Elise Wainwright BSN, RN, Erin Glikes BSN, RN, and Luca Paoletti, M.D.

MUSC Adult ECMO Program Receives ELSO Center of Excellence Platinum Award

Under the leadership of **Luca Paoletti, M.D.**, MUSC's Adult ECMO program received an ELSO Center of Excellence Platinum Award. This is the highest distinction within the ELSO organization. The MUSC Adult ECMO program now has joined the MUSC Pediatric ECMO program in this elite group of programs. There are over 300 ECMO programs worldwide and this award puts MUSC's program with a very small group of only 23 worldwide with this distinction. ELSO (Extracorporeal Life Support Organization) is the international non-profit consortium of health care institutions dedicated to novel therapies for support of failing organ systems and promotes broad multidisciplinary collaboration.



Dustin Parkhurst with girlfriend Victoria Kelehear as she holds their daughter Delaney for the first time on Aug. 31, 2021, outside of MUSC. Kelehear delivered while she had COVID-19, then was hospitalized for the first month of Delaney's life. She received MUSC's award-winning ECMO treatment - a final critical-care option for patients with severe lung injury. Not even a week later, on Sept. 5, Kelehear was discharged from the hospital. *Photo by Grace Beahm Alford (Post & Courier)*

REGIONAL PROJECT AIMS TO EXPAND LUNG CANCER SCREENING AND TREATMENT ACCESS AMONG VETERANS



Nichole Tanner, M.D.

With new funding from the Veterans Affairs VA Lung Precision Oncology Program, researchers from MUSC Hollings Cancer Center hope to expand access to lung cancer screening and precision oncology treatments among veterans in the Southeast. The project, which is being led by pulmonologist **Nichole Tanner, M.D.**, and oncologist and co-investigator **John Wrangle, M.D.**, will create a national network of sites with expertise in lung cancer screening and precision oncology clinical trials that can help facilitate similar research at smaller VA facilities, which are often located in rural areas. According to Tanner, the rate of lung cancer among veterans is almost double that of the general population due to higher rates of smoking and exposure to chemicals like tactical herbicides and burn pits, making it a critical health care problem in this population.

CLINICAL CARE HIGHLIGHTS

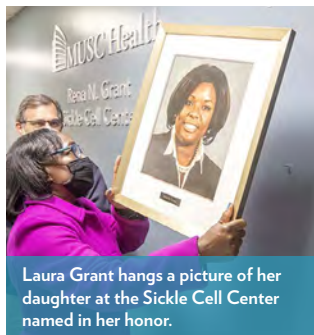
MUSC's National Telehealth Center of Excellence (COE) award renewed by the Health Resources and Service Administration (HRSA)

In Nov. 2021, MUSC's National Telehealth Center of Excellence (COE) award was renewed by the Health Resources and Service Administration (HRSA). The MUSC Center for Telehealth is one of two federally-recognized Telehealth COEs. The COE is led by Program Director **Dee Ford, M.D.**, and Associate Program Director **Katie King, M.D.**, and supports 54 faculty and staff who will be working on 16 subprojects over the next five years focused on the following:

- Telehealth economic evaluation
- Improving quality of care via telehealth
- Improving health system and provider experience with telehealth



Rena N. Grant Sickle Cell Center Opens at MUSC



In Jan. 2022, MUSC opened a new expanded Sickle Cell Center, named in honor of a remarkable woman who made her mark with the SC legislature. The namesake of MUSC's new Rena N. Grant Sickle Cell Center was known for being so dedicated to her job with the South Carolina House of Representatives' Ways and Means Committee that she kept working even when she was in the hospital being treated for pain crises caused by sickle cell disease (SCD).

After Grant's death, legislators allocated \$1 million to MUSC for the development of a comprehensive approach to SCD treatment in the state. The goal is to raise SCD awareness, study ways to cure the disease, and educate the state's health care providers about the inherited disorder and the pain it causes. The funding also will establish a Rena N. Grant Endowed Chair

for Hematology. Temeia Martin, M.D., director of the adult sickle cell clinic at MUSC Health, described changes already underway. "To this date, we have already increased our clinical space to allow for co-location of health care services, which improves care coordination and convenience. This central location for clinical services has room for additional infusion beds so that more patients can have access to curative and treatment therapies. And also, it helps to reach our future goals of adding a general therapies staff and more clinic hours."

MUSC and Helix launch In Our DNA SC, first-of-its-kind population genomics program to drive preventive, precision health care for South Carolinians



In Sept. 2021, MUSC and Helix announced a strategic collaboration to develop a first-of-its-kind population genomics initiative in South Carolina called In Our DNA SC. The program is designed to improve health care outcomes by integrating genetic insights into clinical care and research. Advances in genetic medicine make it easier than ever to screen your DNA and detect risks for many common diseases and conditions. The statewide initiative will enroll 100,000 patients in genetic testing over the next four years at no cost to the patient. The program will enable the use of genomic insights with an initial focus on actionable information regarding a patient's risk for certain forms of cancer and cardiovascular disease. This initiative is being led

by principal investigator **Daniel Judge, M.D.**, who is a professor of medicine and a translational scientist in the Division of Cardiology at MUSC who specializes in inherited cardiovascular disorders.

RESEARCH HIGHLIGHTS

Fostering Innovation

The Department of Medicine has a long tradition of conducting original and rigorous biomedical and clinical research of fundamental significance.

RESEARCH IN THE COVID-19 ERA

The coronavirus pandemic posed significant challenges for research progress this past year. Many clinical trials were temporarily halted as well as some animal studies.

Despite these challenges, our investigators and the South Carolina Clinical & Translational Research Institute (SCTR) showed great initiative and resiliency in the pivot to addressing the pandemic in meaningful ways. Our department continues to be one of the most productive departments in the College of Medicine. This is a testament to the important work being completed by our researchers. Some of our programs and highlights are described below.

-Jim Oates, M.D., Vice Chair for Research, DOM

RESEARCH FUNDING

FY21 was a record-breaking year due to the success of the faculty who competed for \$75 million* in external research funding (*\$35 million in COVID-19 clinical trials) and received 97 new awards to further advance that goal.

During the past academic year, the Department of Medicine's research portfolio totaled nearly \$24 million in federal awards, \$50 million in industry funded grants/clinical trial earnings, and over \$5 million in non-federal awards. In FY21, research expenses reached over \$56 million, a 76% increase compared to the previous year. It should be noted that this significant increase in expenses is due in part to COVID-related clinical trials.



Carol Feghali-Bostwick, Ph.D. in lab.

Novel Combination Immunotherapy Developed at Hollings Cancer Center to be Offered in Lung-MAP Trial

MUSC Hollings Cancer Center researcher and MUSC Health oncologist **John Wrangle, M.D.**, is bringing a novel combination immunotherapy treatment — pembrolizumab + N-803 — to NCI's Lung-MAP clinical trial. Lung-MAP, or the Lung Cancer Master Protocol, is open at more than 700 sites across the United States. The combination immunotherapy developed by Wrangle and colleague Mark Rubenstein, Ph.D., will be offered as a treatment in the unmatched arm, which comprises patients with tumors that do not have mutations targetable with a drug, as opposed to a treatment arm. The team anticipates that the unmatched arm will have hundreds of patients enrolled in it.

Plant-based production of antifibrotic peptides receives U.S. patent

Before coming to MUSC, **Carol Feghali-Bostwick, Ph.D.**, Kitty Trask Holt Endowed Chair for Scleroderma Research and a professor of medicine, identified antifibrotic properties of a peptide that not only stopped fibrosis but reversed it in mice and cultured human tissue.

The peptide was licensed to iBio Inc., a biologics company that develops therapeutics in plants. Since then, iBio has been producing the protein using a plant-based system. In November 2020, MUSC, iBio and Novici Biotech received a U.S. patent on plant-based production for the peptide that is being developed by iBio. This novel production method is inexpensive and should ensure an adequate supply of the peptide for clinical trials and later for clinical use.

RESEARCH MILESTONE

MUSC researcher awarded \$9.9M for tuberculosis treatment and prevention

Article by Cortney Gensemer

Susan Dorman, M.D., an infectious disease physician at the Medical University of South Carolina (MUSC), was recently awarded a 10-year, \$9.9 million contract by the Centers for Disease Control and Prevention to run trials for the Tuberculosis Trials Consortium (TBTC). The TBTC is a collaboration of researchers whose goal is to improve the diagnosis, management and prevention of tuberculosis (TB) around the world. Dorman, who has dedicated her career to studying the disease, serves as a TB medical consultant for the South Carolina Department of Health and Environmental Control and leads research efforts to improve TB treatment and prevention.

“In the U.S., we think of TB as a disease of the past, and we do have good TB control in this country,” Dorman explained. “However, in many other parts of the world, it is still a contemporary health problem that impacts people’s lives in terms of morbidity and mortality.”

According to the World Health Organization, TB is one of the top 10 leading causes of death in low-income countries. That’s why Dorman has a long-term collaboration with a research team at the University of Cape Town Lung Institute in South Africa, where TB is very common. For one of the TBTC projects, she will partner with the Cape Town team to test TB treatment interventions in an area where people are severely affected by the disease.

The leaders of the TBTC will set the research agenda for funded investigators and ensure it is relevant both globally and in the U.S. In this country, social disparities in health care are contributing factors to TB infection and transmission. People living in poverty and crowded living environments are at a higher risk for TB transmission. Lack of access to proper nutrition can increase disease susceptibility, and health care costs can negatively affect treatment outcomes. Future work from the TBTC will



Susan Dorman, M.D.

attempt to address strategies for better managing TB and latent TB in underserved populations in the U.S.

Although TB is curable, Dorman said, it is a challenging course of treatment that can involve six months of antibiotics, with more than one antibiotic often being taken at the same time. The treatment can be difficult for patients to complete and can lead to side effects. One component of this funded work would be to shorten the treatment duration to improve the likelihood of patients completing it.

Another hurdle to effective management of the disease is latent TB infection. The bacterium that causes TB can live inside people for years without causing any signs or symptoms. Later in life, they can ‘wake up’ and cause sickness, and so it is important that we have effective tools for preventing TB. The treatment for latent TB, much like that for active disease, involves an intense course of antibiotics that doesn’t foster patient adherence, especially in people who feel healthy.

The consortium will focus on improving the prevention of TB infection in individuals with latent TB. Ultimately, the efforts of Dorman and her team could vastly improve TB treatment and prevention and alter clinical guidelines for treating TB.

Dorman is driven by her passion to prevent and treat TB. “I really am motivated to try to help to do a better job of preventing people from getting TB, and, if they do get it, doing a better job at treating them so they survive it.”

FY21 EXTRAMURAL RESEARCH FUNDING HIGHLIGHTS

RESEARCH GRANT TITLE	PRINCIPAL INVESTIGATORS	EXTRAMURAL SPONSORS
Cardiology		
Cardiac Tauopathy: A Developmental Cilia Defect	Federica Del Monte, Ph.D.	American Heart Association
Red Blood Cells Shuttle Beta Amyloid between Brain and Heart: Implications for the Pathogenesis and the Progression of Alzheimer's and Cardiomyopathy	Federica Del Monte, Ph.D.	NIH/NHLBI
Reductive Stress Induces Proteotoxic Cardiac Disease	Federica Del Monte, Ph.D.	University of Alabama, Birmingham - UAB
Chronic Inflammation Induced Mediators of Cardiac Remodeling	Kristine DeLeon-Pennell, Ph.D.	University of California, San Diego - UCSD
X Inactivation Regulates Lymphocyte-Induced Cardiac Remodeling	Kristine DeLeon-Pennell, Ph.D.	American Heart Association
Algorithm using LINQ Sensors for Evaluation and Treatment of Heart Failure	Michael Field, M.D.	Medtronic, Inc.
Clinical Validation of the Vektor Computational ECG Mapping System (VMAP) for a Trial and Ventricular Arrhythmias/Pacing (Vektor VMAP Clinical Validation Study)	Michael Field, M.D.	Abbott Cardiovascular Systems, Inc.
SyncAV Post-Market Trial	Michael Gold, M.D.	Abbott Cardiovascular Systems, Inc.
A Phase 3 Global, Double-Blind, Randomized, Placebo-Controlled Study to Evaluate the Efficacy and Safety of ION-682884 in Patients with Transthyretin Mediated Amyloid Cardiomyopathy (ATTR CM)	Daniel Judge, M.D.	PRA International
A Retrospective Characterization of Patients with AmenableGLA Variants Being Treated for Fabry Disease	Daniel Judge, M.D.	Amicus Therapeutics, Inc.
Data Capture of 6 Minute Walk Test Performance by a Wearable Monitoring Device in Patients with Transthyretin Amyloid Cardiomyopathy and Heart Failure	Daniel Judge, M.D.	Eidos Therapeutics Inc.
An Exploratory, Open-Label, Proof-of-Concept Study of Mavacamten (MYK-461) in Patients with Heart Failure with Preserved Ejection Fraction and Chronic Elevation of Cardiac Troponin-I and/or NT-proBNT	Sheldon Litwin, M.D.	Iqvia
Endovascular Ablation of the Right Greater Splanchnic Nerve in Subjects Having Heart Failure with Preserved Ejection Fraction: Feasibility Study	Sheldon Litwin, M.D.	Axon Therapies
Randomized Clinical Evaluation of the AccuCinch Ventricular Repair System in Patients who Present with Symptomatic Heart Failure with Reduced Ejection Fraction (HRrEF)	Daniel Steinberg, M.D.	Ancora Heart, Inc.
Pivotal Investigation of Safety and Efficacy of BRS Treatment below the Knee	Thomas Toddoran, M.D.	Abbott Cardiovascular Systems, Inc.
A Multi-Center, Randomized, Double-Blind, Placebo-Controlled, Parallel Group Study on the Safety and Efficacy of Istaroxime for Pre-Cardiogenic Shock	Adrian VanBakel, M.D.	Momentum Research Inc
The Nanowear Wearable Heart Failure Management System MultipleSensor Algorithm Development and Validation Trial (NanoSense)	Adrian VanBakel, M.D.	Nanowear, Inc.
Biotronik EP Fellowship 2020-2021	John Wharton, M.D.	Biotronik, Inc.
AcQMap US Registry of Procedural and Long-Term Clinical Outcomes (Discover-US)	Jeffrey Winterfield, M.D.	Acutus Medical, Inc
Middleton Award 2019B	Michael Zile, M.D.	VAMC

FY21 EXTRAMURAL RESEARCH FUNDING HIGHLIGHTS

RESEARCH GRANT TITLE	PRINCIPAL INVESTIGATORS	EXTRAMURAL SPONSORS
Gastroenterology & Hepatology		
A Phase 3, Multi-Center, Open-Label Extension Study of Oral Ozanimod for Moderately to Severely Active Crohn's Disease	Erin Forster, M.D.	Icon Clinical Research (ICON)
A Phase 3, Multi-Center, Randomized, Double-Blind, Placebo-Controlled Study of Oral Ozanimod as Maintenance Therapy for Moderately to Severely Active Crohn's Disease	Erin Forster, M.D.	Icon Clinical Research (ICON)
A Phase 3B, Randomized, Double-Blind, Multi-Center Study to Evaluate the Safety and Efficacy of Intravenous Re-Induction Therapy with Ustekinumab in Patients with Moderately to Severely Active Crohn's Disease	Erin Forster, M.D.	Janssen Pharmaceutica
A Phase III, Randomized, Double-Blind, Parallel-Group, Placebo-Controlled, International, Multi-Center Study to Assess Efficacy and Safety of CX601, Adult Allogeneic Expanded Adipose-Derived Stem Cells (eASC), for the Treatment of Complex Perianal Fistula(s) in Patients with Crohn's Disease over a Period of 24 weeks	Erin Forster, M.D.	Parexel International, LLC
IBD Qorus: Improving the Quality of Care for Adults with Inflammatory Bowel Disease	Erin Forster, M.D.	Crohns Colitis Foundation of America
Induction Study #1 - A Phase 3, Multi-Center, Randomized, Double-Blind, Placebo-Controlled Study of Oral Ozanimod as Induction Therapy for Moderately to Severely Active Crohn's Disease	Erin Forster, M.D.	Icon Clinical Research (ICON)
A Multi-Center Case-Control Study of the Efficacy of EsoGuard on Samples Collected Using EsoCheck vs. Esophagogastroduodenoscopy, for the Diagnosis of Barrett's Esophagus with and without Dysplasia, and for Esophageal Adenocarcinoma	Brenda Hoffman, M.D.	Lucid Diagnostics, Inc.
A Phase II, Randomized, Controlled, Dose-Titration, Open-Label Study Evaluating the Safety and Efficacy of BIV201 in Addition to Standard of Care Compared to Standard of Care to Reduce the Recurrence of Ascites and Complications in Patients with Refractory Ascites Secondary to Decompensated Liver Cirrhosis	David Koch, M.D.	Alira Health Clinical, LLC
Novel Mechanisms of Hepatopulmonary Syndrome	David Koch, M.D.	University of Pennsylvania [^]
A Phase 2, Randomized, Double-Blind, Double-Dummy, Placebo-Controlled, Dose-Ranging, Dose-Finding, Parallel Group Study to Assess Efficacy and Safety of PF 06865571 (DGAT2i) Alone and When Co-Administered with PF 05221304 (ACCi) in Adult Participants with Biopsy-Confirmed Nonalcoholic Steatohepatitis and Fibrosis Stage 2 or 3	Don Rockey, M.D.	Icon Clinical Research (ICON)
A Seamless, Adaptive, Phase 2b/3, Double-Blind, Randomized, Placebo-controlled, Multicenter, International Study Evaluating the Efficacy and Safety of Belapectin (GR-MD-02) for the Prevention of Esophageal Varices in NASH Cirrhosis	Don Rockey, M.D.	Covance, Inc.
PREEMPT CRC: Prevention Employing a Multiomics Plasma-Based Test for Colorectal Cancer	Don Rockey, M.D.	Iqvia
Takeda Consulting Agreement	Don Rockey, M.D.	Takeda Development Center Americas
The Effect of Semaglutide in Subjects with Non-Cirrhotic Non-Alcoholic Steatohepatitis	Don Rockey, M.D.	Novo Nordisk Pharmaceuticals
VK2809 A Phase 2B, Randomized, Double-Blind, Placebo-Controlled, Multi-Center Study to Assess the Efficacy, Safety, and Tolerability of VK2809 Administered for 52 Weeks followed by a 4-Week Off-Drug Phase in Subjects with Biopsy Proven Non-Alcoholic Steatohepatitis with Fibrosis	Don Rockey, M.D.	Covance, Inc.

FY21 EXTRAMURAL RESEARCH FUNDING HIGHLIGHTS

RESEARCH GRANT TITLE	PRINCIPAL INVESTIGATORS	EXTRAMURAL SPONSORS
General Internal Medicine		
Improving the Diagnosis of Non-Alcoholic Fatty Liver Disease in Primary Care Patients Using Natural Language Processing	Andrew Schreiner, M.D.	Southern Society for Clinical Investigation (SSCI)
Hematology & Oncology		
CDK8/19 Inhibitors for Therapy of Advanced Prostate Cancer	Michael Lilly, M.D.	Senex Biotechnology, Inc.
Infectious Diseases		
Tuberculosis Trials Consortium	Susan Dorman, M.D.	Centers for Disease Control - CDC
A Phase 2A Multi-Center, Randomized, Open-Label, Three-Part Adaptive Design Study to Evaluate the Antiviral Effect, Safety and Tolerability of GSK3810109A, an HIV-1 Specific Broadly Neutralizing Human Monoclonal Antibody in Anti-Retroviral-Naive HIV-1-Infected Adults	Eric Meissner, Ph.D.	PPD Development
In Home vs. In Clinic Administration of Long-Acting Injectable Cabotegravir/ Rilpivirine in Coastal South Carolina	Eric Meissner, Ph.D.	ViiV Healthcare UK Limited
Nephrology		
The Role of the Exocyst in Podocyte Development and Disease	Josh Lipschutz, M.D.	Dialysis Clinics, Inc. - DCI
A Phase 2A, Open-Label, Single-Arm, 2-Part Study to Evaluate the Efficacy, Safety, and Pharmacokinetics of VX-147 in Adults APOL1-Mediated Focal Segmental Glomerulosclerosis	Roberto Pisoni, M.D.	Vertex Pharmaceuticals, Inc.
Pulmonary, Critical Care, Allergy & Sleep Medicine		
A Study to Assess the Safety, Tolerability, Pharmacokinetics, and Pharmacodynamics of Multiple Dose MK-5475 in Participants with Pulmonary Hypertension Associated with COPD	Rahul Argula, M.D.	Merck, Sharp and Dohme
An Open-Label, Clinical Study to Evaluate the Safety and Tolerability of Treprostinil Inhalation Powder (TreT) in Subjects with Pulmonary Arterial Hypertension Currently	Rahul Argula, M.D.	United Therapeutics
Randomized, Double Blind, Placebo-Controlled Study to Assess the Effect of Dupilumab on Airways, Lung Volumes, Mucus Plugging, and Other Regional Lung Parameters Using Different Modalities of Lung Imaging in Patients With Moderate to Severe Asthma	Jon Cox, M.D.	Sanofi US Services Inc.
A Phase 1B/2A, Multi-Center, Double-Blind, Randomized, Placebo-Controlled, Single and Multiple Ascending Dose Study to Evaluate the Safety and Tolerability of AP-PA02 Multi-Phase Therapeutic Candidate for Inhalation in Subjects with Cystic Fibrosis and and Chronic Pulmonary Pseudomonas aeruginosa (Pa) Infection	Patrick Flume, M.D.	Syneos Health, LLC
A Phase 3, Randomized, Double-Blind, Placebo-Controlled Study to Assess the Efficacy, Safety, and Tolerability of Brensocatib Administered Once Daily for 52 Weeks in Subjects with Non-Cystic Fibrosis Bronchiectasis - The ASPEN Study	Patrick Flume, M.D.	PPD Development
A Phase 3, Randomized, Observer-Blinded, Placebo-Controlled Study to Evaluate the Efficacy, Safety, and Immunogenicity of a SARS-COV-2 Recombinant Spike Protein Nanoparticle Vaccine (SARS-COV-2 RS) with Matrix-M1 Adjuvant in Adult Participants >	Patrick Flume, M.D.	Icon Clinical Research, Inc.

FY21 EXTRAMURAL RESEARCH FUNDING HIGHLIGHTS

RESEARCH GRANT TITLE	PRINCIPAL INVESTIGATORS	EXTRAMURAL SPONSORS
Pulmonary, Critical Care, Allergy & Sleep Medicine		
A Randomized, Double-Blind, Placebo-Controlled Phase 3 Study to Assess the Efficacy and Safety of Ad26.COV2.S for the Prevention of SARS-COV-2-Mediated COVID-19 in Adults Aged 18 Years and Older	Patrick Flume, M.D.	Iqvia
A Randomized, Partially-Blinded, Placebo-and Comparator-Controlled, Multi-Center, Phase 2a, Dose-Ranging, Proof-of-Concept Study to Evaluate the Safety, Tolerability, Pharmacokinetics, and Efficacy of SPR720 as Compared with Placebo or Standard of Care (SOC) for the treatment of Patients with Mycobacterium avium Complex (MAC) Pulmonary Disease	Patrick Flume, M.D.	Syneract, Inc.
An Observational Long-Term Safety Surveillance of Participants from Corbus Sponsored Lenabasum Pivotal Clinical Trials	Patrick Flume, M.D.	Corbus Pharmaceuticals
ARISE-A Randomized, Double-Blind, Placebo-Controlled, Active Comparator, Multi-Center Study to Validate Patient-Reported Outcome Instruments in Adult Subjects with Newly-Diagnosed Nontuberculous Mycobacterial (NTM) Lung Infection Caused by Mycobacterium avium Complex (MAC)	Patrick Flume, M.D.	PPD Development
CX-280-202: A Phase 1b Randomized, Double-Blind, Placebo-Controlled Trial to Evaluate the Safety of CB-280 in Patients with Cystic Fibrosis	Patrick Flume, M.D.	Calithera Biosciences, Inc.
ENCORE - A Randomized, Double-Blind, Placebo-Controlled, Active Comparator, Multi-Center Study to Evaluate the Efficacy and Safety of an Amikacin Liposome Inhalation Suspension (ALIS)-Based Regimen in Adult Subjects with Newly-Diagnosed Nontuberculous Mycobacterial (NTM) Lung Infection Caused by Mycobacterium	Patrick Flume, M.D.	PPD Development
Evaluation of Predictors of Maternal-Fetal Outcomes in Cystic Fibrosis	Patrick Flume, M.D.	University of Texas Southwestern Medical Center
Study of RHB-204 for the Treatment of Pulmonary Mycobacterium Avium Complex (MAC) Disease (CleaR-MAC Trial)	Patrick Flume, M.D.	Atlantic Research Group (ARG)
A Phase 3 Open-Label, Randomized, Controlled Study to Evaluate the Efficacy and Safety of Intravenously-Administered Ravulizumab Compared with Best Supportive Care in Patients with COVID-19 Severe Pneumonia, Acute Lung Injury, or Acute Respiratory Distress Syndrome	Patrick Flume, M.D.	Iqvia
A Study of Brexanolone for Acute Respiratory Distress Syndrome Due to COVID-19	Andrew Goodwin, M.D.	Sage Therapeutics, Inc.
Biology and Longitudinal Epidemiology of COVID-19 Observational Study, BLUE CORAL	Andrew Goodwin, M.D.	Wake Forest University
Outcomes Related to COVID-19 Treated with Hydroxychloroquine among In-Patients with Symptomatic Disease (ORCHID)	Andrew Goodwin, M.D.	Wake Forest University
PETAL Network International Coordinating Center for ACTIV-3 Trial Initiative	Andrew Goodwin, M.D.	Wake Forest University Health Sciences
A Phase III, Randomized, Double-Blind, Placebo-Controlled, Multi-Center Study in Adults to Determine the Safety, Efficacy, and Immunogenicity of AZD1222, a Non-Replicating ChAdOx1 Vector Vaccine, for the Prevention of COVID19	Gary Headden, M.D.	Iqvia
A Multi-Center, Randomized, Double-Blind, Placebo-Controlled, Phase 2 Study of the Efficacy and the Safety and Tolerability of BMS-986278 in Participants with Pulmonary Fibrosis	John Huggins, M.D.	Bristol Myers Squibb

FY21 EXTRAMURAL RESEARCH FUNDING HIGHLIGHTS

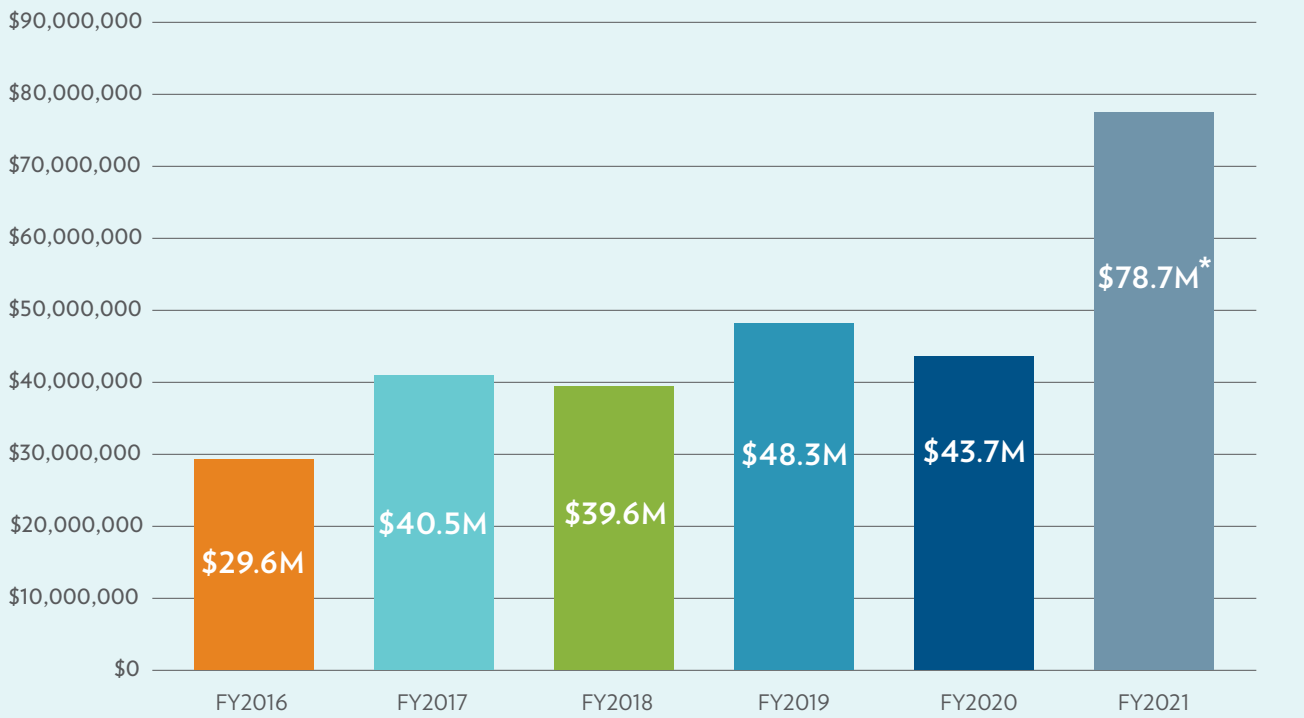
RESEARCH GRANT TITLE	PRINCIPAL INVESTIGATORS	EXTRAMURAL SPONSORS
Pulmonary, Critical Care, Allergy & Sleep Medicine		
The SPARC App: A Smartphone Application for Self-Management of Sarcoidosis-Associated Fatigue	Ennis James, M.D.	NIH/NIBIB
A Randomized, Double-Blind, Placebo-Controlled, Phase 3 Study of the Efficacy and Safety of Inhaled Treprostinil in Subjects with Idiopathic Pulmonary Fibrosis	Rachana Krishna, M.D.	United Therapeutics
Impact of Low Flow Nocturnal Oxygen Therapy on Hospital Readmission/Mortality in Patients with Heart Failure and Central Sleep Apnea (LOFT-HF)	Chitra Lal, M.D.	Ohio State University
A Master Protocol Assessing the Safety, Tolerability, and Efficacy of Anti-Spike (S) SARS-CoV-2 Monoclonal Antibodies for the Treatment of Ambulatory Patients with	Eric Meissner, Ph.D.	Parexel Intl. Corp.
A Phase 2 Study to Assess the Virologic Efficacy of REGN10933+REGN10987 across Different Dose Regimens in Outpatients with SARS-COV-2 Infection	Eric Meissner, Ph.D.	Parexel International, LLC
A Phase III, Randomized, Double-Blind, Placebo-Controlled Study Assessing the Efficacy and Safety of Anti-Spike SARS-COV-2 Monoclonal Antibodies in Preventing SARS-COV-2 Infection in Household Contacts of Individuals Infected with SARS-COV-2	Eric Meissner, Ph.D.	Parexel Intl. Corp.
Determinants of Nontuberculous Mycobacterial Infection in Cystic Fibrosis	Christina Mingora, M.D.	University of Michigan
A Comparison of Cell Populations Collected in Sputum Samples to Cell Populations in Bronchoalveolar Lavage Samples	Gerard Silvestri, M.D.	bioAffinity Technologies, Inc.
ACS Investigator Services Agreement	Gerard Silvestri, M.D.	American Cancer Society - ACS
Breath Test Feasibility Trial for Covid-19 Infection Diagnosis	Gerard Silvestri, M.D.	Ancon Technologies Ltd
Personalized Screening for Lung Cancer: The Importance of Co-Existing Chronic Conditions to Clinical Practice and Policy	Gerard Silvestri, M.D.	Georgetown University
Steering Committee Research Advisor	Gerard Silvestri, M.D.	Auris Surgical Robotics, Inc.
Tribally Engaged Approaches to Lung Screening (TEALS)	Gerard Silvestri, M.D.	Oklahoma University Health Sc. Center
A Phase II, Randomized, Double-Blind, Placebo-Controlled Study of the Efficacy and Safety of VX-864 in PiZZ Subjects	Charlton Strange, M.D.	Vertex Pharmaceuticals, Inc.
Alpha-1 Antitrypsin Disease Cohort: Longitudinal Biomarker Study of Disease	Charlton Strange, M.D.	Columbia University
CRC Biorepository Support	Charlton Strange, M.D.	Vertex Pharmaceuticals, Inc.
SEER-Lung: A Prospective Blood Sample Collection Study to Develop and Validate a Panel of Protein-Based Biomarkers in Patients with Pulmonary Nodules	Nichole Tanner, M.D.	Lowcountry Center for Veterans Research

FY21 EXTRAMURAL RESEARCH FUNDING HIGHLIGHTS

RESEARCH GRANT TITLE	PRINCIPAL INVESTIGATORS	EXTRAMURAL SPONSORS
Rheumatology & Immunology		
Participate as a Member of the Independent Data and Safety Monitoring Committee (IDSMC) for Protocol VIB7734.P1.S2	Melissa Cunningham, M.D., Ph.D.	Viela Bio
Pilot Trial of Belimumab in Early Lupus	Melissa Cunningham, M.D., Ph.D.	The Feinstein Institute for Medical Research
The Role of Estrogen Receptor Alpha Variant Size and Localization in Modulating TLR7-Induced Inflammation	Melissa Cunningham, M.D., Ph.D.	Rheumatology Research Foundation - RRF
Prospective Treatment Efficacy in IPF Using Genotype for Nac Selection (PRECISIONS) Trial and Molecular Endophenotyping in Idiopathic Pulmonary Fibrosis and Interstitial Lung Diseases Study	Timothy Whelan, M.D.	University of Michigan
Building NTC Effects on SSc Skin Biopsies and to Probe Effects of BI's Secretome Proteins SSc Lung Fibroblasts	Carol Feghali-Bostwick, Ph.D.	Boehringer Ingelheim Pharmaceuticals
Lassen Research Agreement	Carol Feghali-Bostwick, Ph.D.	Lassen Therapeutics 1, Inc.
Role of Pericytes in Scleroderma Skin and Lung Fibrosis	Carol Feghali-Bostwick, Ph.D.	University of Wisconsin-Madison
Demystifying Systemic Lupus Erythematosus: Signs and Symptoms for Early Recognition	Faye Hant, M.D.	American College of Rheumatology
Bioengineering Center for Regeneration and Formation of Tissues (SC BioCRAFT)	Stanley Hoffman, M.D.	Clemson University
Understanding Systemic Lupus Erythematosus Heterogeneity in a South Carolina Gullah African American Cohort Using Exposomics	Diane Kamen, M.D.	University of Florida
A Multi-Center Study to Characterize the Long-Term Safety and Efficacy of BMS-986165 in Subjects with Systemic Lupus Erythematosus	Jim Oates, M.D.	PRA International
Efficacy and Safety of AMG 570 in Subjects With Active Systemic Lupus Erythematosus (SLE) With Inadequate Response to Standard of Care (SOC) Therapy	Jim Oates, M.D.	Amgen
EHR-Based Longitudinal Cohort to Explore Pregnancy Outcomes in SLE (ELIPTCL)	Jim Oates, M.D.	Northwestern University
Lupus Research Alliance Consulting Agreement	Jim Oates, M.D.	Lupus Research Alliance
A Randomized, Multi-Center, Double-Blind, Placebo-Controlled, Phase 2 Study to Evaluate the Efficacy and Safety of IgPro10 (Intravenous Immunoglobulin Privigen for the Treatment of Adults with Systemic Sclerosis)	Richard Silver, M.D.	CSL Behring
Comparative Evaluation of Lung and Skin Myofibroblasts in Patients with Scleroderma Interstitial Lung Disease: Drawing Knowledge from Thrombin Inhibition	Richard Silver, M.D.	Boehringer Ingelheim Pharmaceuticals

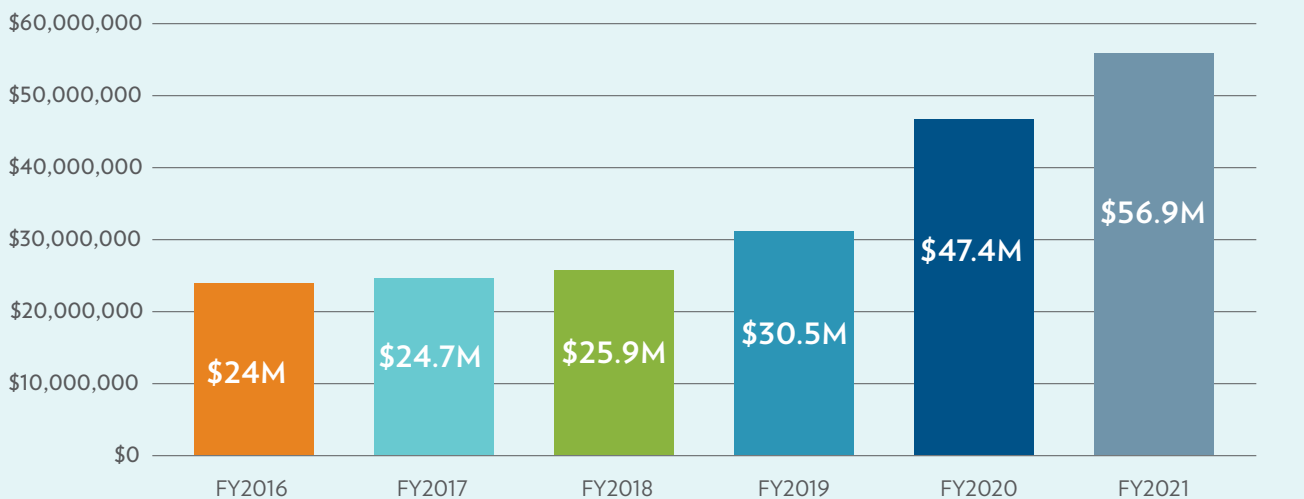
FY21 RESEARCH FUNDING HIGHLIGHTS

Department of Medicine FYTD Research Awards



*includes \$33.9M in COVID clinical trials

Department of Medicine FYTD Research Expenses



MEDICAL EDUCATION

The Department of Medicine continues its intensive investment in advancing educational programs at both the graduate and undergraduate levels. Department faculty contribute extensively to medical student education in both the basic science and clinical clerkship years and directly supervise the training of over 200 house officers and fellows each year.

UNDERGRADUATE MEDICAL EDUCATION

The Department of Medicine faculty remain strongly engaged in medical student training and serve as mentors and teachers, contributing countless hours of teaching time to over 300 third- and fourth-year medical students each year. **Marc Heincelman, M.D., MPH**, interim director of Hospital Medicine, serves as the clerkship director, and **Kathryn Anderson, M.D.**, serves as associate clerkship director.

There were many notable successes over the past academic year in undergraduate medical education, including the following:

- The internal medicine residency match was yet again incredibly successful with 18% of students choosing categorical internal medicine, med-peds, or med-psych specialties. Additionally, every student who applied to internal medicine successfully matched with several students matching into top programs nationally.
- A point-of-care-ultrasound pilot curriculum, under the leadership of **Maggie Thomas, M.D.**, was created within the IM Clerkship with high student praise.
- As part of the MUSC College of Medicine Anti-Racism Action Committee, a Racism in Medicine lectureship was created under the leadership of **Natalie Freidin, M.D.**, with a focus on race-based equations in medicine. Many Department of Medicine faculty members were instrumental in MUSC's adoption of the new eGFR equation that has removed race.

NEW INITIATIVES

Moving forward, the Department of Medicine has set goals to continue to increase the number of students entering internal medicine to meet the shortage of IM-trained physicians in primary care and certain subspecialties. Additionally, the Department of Medicine plans to expand the piloted point-of-care-ultrasound curriculum with weekly ultrasound rounds with students.

MEDICAL EDUCATION LEADERSHIP

Ashley Duckett, M.D.
Program Director, IM Residency

Benjamin Kalivas, M.D.
*Program Director, Medicine/
Psychiatry Residency*

Sarah Mennito, M.D., MSCR
*Program Director, Medicine/
Pediatrics Residency*

Marc Heincelman, M.D., MPH
Clerkship Director

Kathryn Anderson, M.D.
Associate Clerkship Director

Brad Keith, M.D.
Associate Program Director

Aundrea Loftley, M.D.
Associate Program Director

Chelsey Petz, M.D., FACP
Associate Program Director

Samuel Schumann, M.D.
Associate Program Director

William Shelley, M.D.
Associate Program Director



Medical students on their IM clerkship rotation attending resident-led Point-of-Care Ultrasound training workshop.

MEDICAL EDUCATION

GRADUATE MEDICAL EDUCATION

Despite great challenges to the training environment faced due to the ongoing COVID-19 pandemic, the MUSC Internal Medicine Residency program led by **Ashley Duckett, M.D.**, enjoyed many successes and continued to innovate during the 2020-2021 academic year. In FY21, the residency program trained 106 residents, including 16 medicine-pediatrics residents, 9 medicine-psychiatry residents, and one physician scientist training program resident. MUSC's Internal Medicine Residency (IM) program prioritizes collaboration, autonomy, and scholarship, and facilitates learning about highly diverse patients and diseases in a number of practice settings.

Our residents continue to succeed in academic careers, successfully competing for the most prestigious and rigorous fellowships or preparing for life as general internists. The 2020 fellowship match (for the July 2021 start) successfully matched 18 residents into many of the most competitive and premier fellowship programs in the country, including eight who continued their training at MUSC.

Throughout the pandemic, our IM residents have risen to challenge after challenge and have achieved what would previously have seemed unimaginable. They've taken on new responsibilities and roles, worked on the frontlines to deliver exemplary care to COVID-19 patients, learned new telehealth skills, and organized wellness initiatives to support each other and help prevent burnout from stress and fatigue. Yet despite this added work, they still managed a successful fellowship match, ABIM certification exam, and supported the ongoing medical needs across our IM subspecialties.



2021 GRADUATING IM RESIDENTS

100% Fellowship Match Rate

POST-RESIDENCY CAREER PATHS

(2020-2021 Graduating Class)



13 Entered Clinical Practice

7 Hospitalists/6 Primary Care

18 Entered Fellowships (8 at MUSC)



2020-2021 graduating class.

2020-2021 Successes and Highlights:

- Appointed new associate program director **Aundrea Loftley, M.D.**, who also serves as the vice chair for diversity and inclusion in the Department of Medicine. Dr. Loftley was instrumental in MUSC's residency recruitment during the 2021 interview season. Her efforts improved underrepresented minority (URM) faculty participation and placed increased emphasis on GME diversity recruitment sessions with a goal of matching a diverse group of students from MUSC and across the country.
- Chief residents re-instituted ACP High Value Care lectures into academic half day to improve education on cost conscious care.
- Chief residents developed more specific education on health care disparities and an anti-racism curriculum which were incorporated into academic half day.
- Formation of a resident-led wellness committee which coordinates social events, activities, and gathers resources for increased resident support.
- In FY21, the residency program welcomed an exceptional intern class of 36 trainees, including 24 categorical IM residents, four preliminary year residents, one physician scientist training program intern, four medicine-pediatrics interns, and two medicine-psychiatry interns.

RESIDENTS RECEIVE TOP RECOGNITIONS AT THE 2021 ACP SOUTH CAROLINA CHAPTER MEETING



At the 2021 ACP South Carolina Chapter Meeting, many of our IM residents presented posters and oral presentations and we received five awards:

Resident Clinical Vignette:

Samuel Adams, M.D., PGY-3, "Storm and STEMI" (1st place)

Monica Klaybor, M.D., PGY-2, "A 12 cm Infected Intracardiac Thrombus: To Anticoagulate or Not to Anticoagulate?" (2nd place)

Benjamin Bortner, M.D., PGY-2, "A Case of Extracutaneous Pyoderma Gangrenosum" (3rd place)

Resident Research, Best Overall and Best Resident Overall:

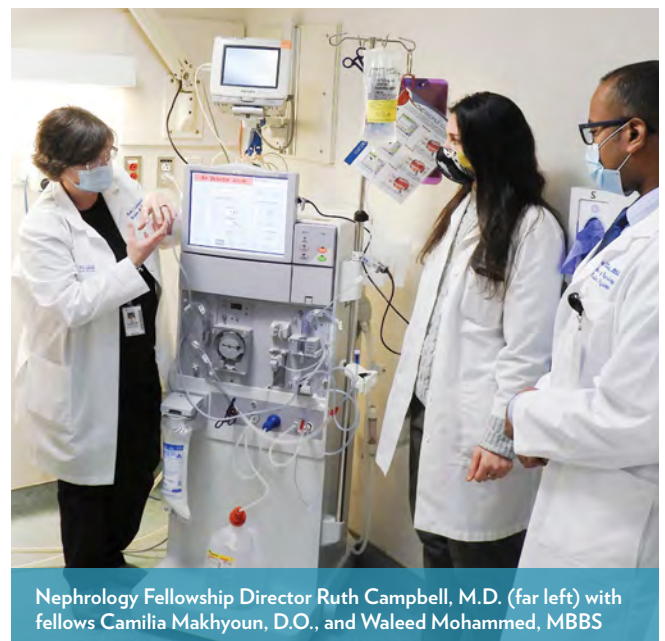
Ellen Nielsen, M.D., PGY-3, "NAFLD Under Diagnosis in Primary Care: What are we Missing?"

FELLOWSHIP TRAINING

The Department of Medicine offers fellowship programs across nine divisions to provide extraordinary subspecialty training with a focus for clinical, clinician-educator, and research careers. Department faculty trained 103 fellows in 16 accredited fellowship programs in FY21. Our fellows are trained as future opinion leaders who will advance clinical care and push the boundaries of scientific knowledge.

16

Accredited Fellowship Programs across 10 divisions



Nephrology Fellowship Director Ruth Campbell, M.D. (far left) with fellows Camilia Makhyoun, D.O., and Waleed Mohammed, MBBS

2020-2021 INTERNAL MEDICINE HOUSESTAFF



Internal Medicine Chief Residents (L-R):

Cameron Wilhoit, M.D.
Laurel Branch, M.D.
Jessica English, M.D.
Nishant Trivedi, M.D. (VA Chief)

PGY-1 Interns

George Adly, M.D.
Alanoud Alhadyani, M.D. (Prelim)
Matthew Alias, M.D.
Alexander Baradei, M.D. (Med-Psych)
John Bobo, M.D.
George Book, M.D. (Med-Psych)
Benjamin Bortner, M.D.
Dominique Bultsma, M.D.
Allison Cipriani, M.D.
Garrett Cole, M.D.
William Dungan, M.D.
Chelsea Eason, M.D. (Prelim)
Nancy Hagood, M.D. (Med-Peds)
Hallie Hahn, M.D. (Prelim)
Sarah Irvin, M.D.
Samiha Karim, M.D.
Afifah Khan, M.D.
Monica Klaybor, M.D.
Luana Kohnke, M.D.
Alexandra Lopez, M.D.
Brandon Miller, M.D.
Oliver Mithoefer, M.D.
Joshua Mixson, M.D.
Rosemary Moak, M.D.
Joseph Moore, M.D.
Alexandra Moreira, M.D. (Prelim)
Andres Ospina, M.D.
Nelson Reed, M.D. (Med-Peds)
Maggie Roth, M.D. (Med-Peds)
Jake Seltman, M.D. (Med-Peds)
John Thiele, M.D.
Robert Tyler, M.D.
Nicole Ufkes, M.D. (Prelim)
Rashi Vora, M.D.
Rachael Werner, M.D., Ph.D. (PSTP)
William Wheless, M.D.

PGY-2 Residents

Samuel Adams, M.D.
Jake Altier, M.D.
Emily Amador, D.O. (Med-Psych)
Fatmata Bah, M.D.
Dena Blanding, M.D.
John Bowman, IV, M.D. (Med-Peds)
Alexander Bray, M.D.
Matthew Bruner, M.D.
Avery Chisholm, M.D.
Kimberly Cichelli, M.D.
Anurag Deeconda, M.D.
Erin Fankhanel, M.D.
Rayphael Hardy, M.D.
Prarthana Jain, D.O.
Robert James, M.D. (Med-Psych)
Ethan Joseph, M.D.
Umakanthan Kavim, M.D. (Med-Peds)
Christina Kearse, M.D.
Denise Kimbrough, M.D., Ph.D.
(Med-Peds)
Ellen Nielsen, M.D.
Jacob Read, M.D.
Ashley Reluzco, M.D.
Scott Sands, M.D.
Meg Scott, M.D.
Shenia Singleton, M.D., Ph.D.
Abigail Southard, M.D.
Romik Srivastava, M.D.
Spenser Staub, M.D.
Michael Sutton, D.O.
Victoria Sweetnam
Elena Vlachos, D.O.
Laurel Wolf, M.D. (Med-Peds)

PGY-3 Residents

Nnamdi Azih, M.D.
Keegan Bakos, M.D.
Emily Bay, M.D. (Med-Psych)
Kent Broussard, M.D.
Charish Buffa, M.D. (Med-Peds)
Jensie Harley Burton, M.D.
Giordano Cittolin Santos, M.D., Ph.D.
Bradley Collins, M.D.
Kelly Engle, M.D.
Bianca Farley, M.D.
Erickson Galvan, M.D.
Mona Haj, M.D.
Sarah Huse, D.O.
Maya Malaab, M.D.
Kristen Miller, M.D.
Shaurya Prakash, M.D.
Jon Puchalla, M.D.
Taylor Remillard, M.D.
Regan Roat, M.D., Ph.D.
Colin Russell, M.D.
Hampton Sasser, M.D.
Daniel Schumacher, D.O.
Laura Smallcomb, M.D. (Med-Peds)
Jordan Spencer, D.O. (Med-Psych)
John Stewart, D.O.
Molly Stone, M.D. (Med-Peds)
Patrick Strickland, M.D.
Connor Sweetnam, M.D.
Sophia Urban, M.D. (Med-Peds)
Megan Veglia, M.D.
Haily Vora, M.D.

PGY-4 Residents

Leah Broadhurst, M.D. (Med-Peds)
Laura Brown, M.D. (Med-Peds)
Susan Evenhouse, M.D. (Med-Peds)
Chelsea Shepherd, D.O. (Med-Psych)
Patricia Smith, M.D. (Med-Peds)

PGY-5 Residents

Camilo Mateus, M.D. (Med-Psych)
Mike Norred, M.D. (Med-Psych)

2020-2021 SUBSPECIALTY FELLOWS

Cardiology

Jessica Atkins, M.D.
Katrina Bidwell, M.D.
Devin Blankinship, M.D.
Matthew Evans, M.D.
Zain Gowani, M.D.
Emily Hodskins, M.D.
Carson Keck, M.D.
Jasjeet Khural, M.D.
John LeCluyse, M.D.
Steven Maurides, M.D.
Prabodh Mishra, M.D.
William (Tripp) Mostertz, M.D.
C. Anderson Obi, M.D.
Sam Powell, M.D.
Shane Reighard, M.D.
Ryan Sandoval, M.D.
Ishan Shah, M.D.
Shailee Shah, M.D.
Daniel Silverman, M.D.
Brett Tomashitis, M.D.

Adult Congenital Heart Disease

Stephanie Gaydos, M.D.

Advanced Heart Failure & Transplant Cardiology

Daniel Silverman, M.D.

Electrophysiology Cardiology

Adam Baaney, D.O.
Leah John, M.D.
Ahmadreza Karimianpour, D.O.
Andin Mullis, M.D.

Interventional Cardiology

Rasikh Ajmal, M.D.
Urooj Fatima, M.D.
David Tadin, M.D.

Endocrinology

Malek Mushref, M.D.
Rani Shayto, M.D.
Kathrin Tofil, M.D.
Marianne Wilson, M.D.

Gastroenterology & Hepatology

Kevin Douglass, M.D.
Isaac Jaben, M.D.
Sebastian Larion, M.D.
Briana Lewis, M.D.
Tasnia Matin, M.D.
Margaret Morrison, M.D.
Sagar Patel, M.D.
Matthew Rolfsen, M.D.
John Romano, M.D.
Nelson Seabrook, M.D.
Faith Villanueva M.D.
Charles Welden IV, M.D.

Geriatric Medicine

Dwight Blair, M.D.
Mark Ledbetter, M.D.

Hematology/Oncology

Zaheer Ahmed, M.B.B.S
Jonathan Alexander, M.D.
Gregory Haidemenos, M.D.
James Kalmuk, M.D.
Sarah Mushtaq, M.D.
Reena Patel, M.D.
Mal Prophet, M.D.
Christopher Rangel, M.D.
Shalin Shah, M.D.
McKenzie Sorrell, D.O.
Maggie Stafford, M.D.
Kiran Uppaluru, M.B.B.S.

Infectious Diseases

Jessica Klesmith, D.O.
Kurt Myers, M.D.
Henry Shiflett, D.O.
Charles Teixeira, D.O.

Nephrology

Maria Browne, M.D.
Megan Goff, D.O.
Joshua Harbaugh, D.O.
Dariush Liske-Doorandish, M.D.
Camilia Makhyoun, D.O.
Samar Medani, M.D.
Waleed Elsheikh Mohammed, MBBS
Sammy Nassri, M.D.
Adam Price, M.D.
Syed Quadri, M.D.
Genta Uehara, M.D.

Palliative Care

Julia West, M.D.
Susan Ezemenari, M.D.

Pulmonary & Critical Care

Jonathan Angotti, M.D.
Brent Bermingham, M.D.
George Carter, M.D.
D. Jameson Dennis, M.D.
Travis Ferguson, M.D.
Adam Fox, M.D.
Samuel Friedman, M.D.
Margaret Hay, M.D.
Sarah Knapp, M.D.
Jessica Lozier, M.D.
Royce Miller, Jr, M.D.
Christina Mingora, M.D.
Tejaswi Nadig, MBBS
Nihar Shah, MBBS
Michelle Spiegel, M.D.
Harrison Smith, M.D.
Mohamad Zetir, M.D.

Rheumatology & Immunology

Sarah Compton, M.D.
Whitney Elg-Salsman, D.O.
Samantha Minkin, M.D.
Sonia Savani, M.D. (Med-Peds)
Jennifer Schmidt, M.D.
Ana Tucker, M.D.



PHILANTHROPY NEWS

Donation supports continuing education for doctors and nurses during COVID-19

Longtime MUSC supporter and graduate of the MUSC James B. Edwards College of Dental Medicine, Isabel Driggers, D.M.D., along with her husband, Jacob, recently decided to further invest in our community of critical care doctors and nurses with a generous gift, creating the Kambis Ghowanlu Endowed Education Fund in Pulmonology.

The fund will be used to support the continuing education of doctors, nurses and staff in the Division of Pulmonary and Critical Care at MUSC.

The Driggers' gift has a deep personal connection. They dedicated it in memory of Isabel's late father, Kambis Ghowanlu, who lost a tough battle with COVID-19. A native of Tehran, Iran, Kambis studied mechanical engineering in Hannover, Germany, where he met and married his beloved wife, Ruth. The two eventually settled in Spartanburg, South Carolina, and started Technico, Inc., a manufacturing business that their son, Sasha Ghowanlu, currently runs.

Kambis was 76 years old with no known pre-existing conditions when he contracted the virus. After experiencing low levels of oxygen for several days, he was taken to the emergency room in Spartanburg. Kambis' condition continued to worsen, and Isabel began reaching out to other pulmonologists in the state. She eventually connected with Gerard Silvestri, M.D., professor of medicine and lung cancer pulmonologist at MUSC, who helped to consult with the doctors in Spartanburg. Eventually, after three weeks, Isabel

L-R: The late Kambis Ghowanlu and his surviving wife Ruth Ghowanlu, daughter Isabel Driggers, DMD, and her husband, Jacob Driggers, daughter-in-law, Lee Wilson Ghowanlu, and son, Sasha Ghowanlu.

and her family decided to transfer Kambis to MUSC. Kambis passed away on Nov. 28, 2020, four weeks after initially contracting the virus.

Two days after their father's passing, Isabel and her brother Sasha, along with their spouses, Jacob Driggers and Lee Wilson Ghowanlu, were inspired to start a Facebook fundraiser for the MUSC Foundation to support the continuing education of nurses and doctors in the Pulmonary Division at MUSC. The fundraiser quickly took off and in just two weeks, 280 donors contributed over \$41,000, making it the foundation's most successful Facebook fundraiser to date.

Isabel and her family were "amazed" by the generous support from friends and family. "It's a testament of how many people my father has impacted," Isabel said.

Isabel and her husband decided to contribute an additional leadership gift to establish the Kambis Ghowanlu Endowed Education Fund in Pulmonology.

"During our experience with my father, I found there was a lot of mixed information among the different medical providers across the state on the best treatment methods for the virus, likely because it is still so new," said Isabel. "As the leading academic health system in the state, we felt MUSC was uniquely positioned to overcome COVID-19 and to spread education throughout the state."

"We want to make a difference in somebody's life, give somebody the chance my father didn't have," said Isabel. "It is our hope that MUSC will use our gift to educate top doctors and nurses, and improve health care quality and safety for patients across the state, especially during this critical time of the COVID-19 pandemic."

Alumnus honors time at MUSC with an investment



Edwin Rogers, M.D., and wife, Teresa, with former Dean Raymond DuBois, M.D.

Cardiologist **Edwin Rogers, M.D.**, '74, did more than earn a medical degree during his time at MUSC. While in Charleston, he and his wife, Teresa, also collected friends and memories that have remained with them since he completed his residency there in 1976.

“MUSC is just such a wonderful place in our hearts,” said Rogers. “Those were really fantastic years that we spent there – some of the best of our life. Not only did we find the friendships and the community experience of being there, but also, my dream was to be a physician. I have been fortunate to practice cardiology, and this was made possible by all the people who taught me.”

After his medicine residency, Rogers enjoyed pursuing a cardiology fellowship at the University of Indiana. Later, he served on the faculty of the University of Alabama-Birmingham. In 1981, he joined a cardiology group in Pensacola, Florida, where he practiced until retiring in 2018.

“ This chair empowers us to look further upstream, to see how these problems might be addressed much earlier, or maybe even prevented altogether. This has the potential to revolutionize the way we approach patient care. ”

Throughout the years, the couple remained deeply connected to their roots at MUSC. During a class reunion in Charleston, they decided to make a deeper commitment to the institution that had meant so much to them.

“We’d been thinking about it for some time,” he said. “One day we were walking along the Battery and counting our blessings, and we just decided to stop by (the MUSC

Foundation’s office). I said, ‘We want to do something, and we aren’t sure what it is we want to do.’ Fortunately, there are good folks there who have ideas.”

The Rogerses ultimately decided to make a gift establishing a new endowed chair for cardiovascular research, which will reside in the MUSC Health Heart & Vascular Center.

An endowed chair is an elite faculty appointment that comes with a stable source of funding to support the chairholder’s work. It is among the highest, most prestigious credential a faculty member can attain. As such, chairs are highly effective in attracting world-class investigators and building the top research programs.

“They’re talent magnets,” said Cardiology Chairman **Thomas Di Salvo, M.D.** “The best part is, they exist in perpetuity, so rather than give your program a one-time surge, they lay the foundation for sustained excellence.”



D. Judge

The Edwin W. and Teresa H. Rogers Endowed Chair in Cardiovascular Research will be held by **Daniel Judge, M.D.**, who directs MUSC’s Cardiovascular Genetics Program and its fellowship in cardiovascular disease.

The chair will support Judge’s research into inherited cardiovascular conditions, with an emphasis on genetic causes for cardiomyopathy, amyloidosis, aortic aneurysms, and mitral valve abnormalities. Di Salvo said the Rogers’ chair will enable MUSC to begin filling a critical gap in the care of heart and vascular patients.

“A lot of our investigations have been focused on the crisis end of the disease state, which is important; it saves lives,” said Di Salvo. “This chair empowers us to look further upstream, to see how these problems might be addressed much earlier, or maybe even prevented altogether. This has the potential to revolutionize the way we approach patient care.”

GIFT FUNDS ANNUAL AWARD TO HONOR LEGACY, EXCELLENCE IN RESIDENT EDUCATION

Valerie Assey, RN, MSN, a long-time champion of MUSC's Ryan White program and invaluable member of the MUSC Division of Infectious Diseases for the past 30 years, made a generous gift to the Department of Medicine in honor of her late husband, Michael E. Assey, M.D., former MUSC faculty member and director of the Division of Cardiology.

The generous gift—being matched by the Department of Medicine—will provide an annual monetary award to the recipient of the Michael E. Assey Department of Medicine Attending Teaching Award. The award recognizes a Department of Medicine faculty member who has demonstrated sustained excellence in educating residents in the inpatient setting. The award, consisting of a commemorative plaque and monetary prize, will be presented at the annual Department of Medicine Awards Ceremony held each June, beginning in 2021.

The award replaces the previous Attending of the Year Award (Dr. Michael Assey Award) which was established by the department in 2007, but did not include a monetary award.

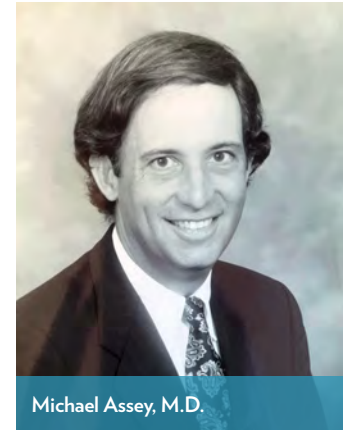
Valerie said her recent gift was spurred by her deep respect for physicians and her desire to honor faculty members who have made significant contributions to advancing patient care and training future physicians.

“Doctors give so much to their profession and I felt this gift in Michael's honor would be a meaningful

and appropriate way to recognize and promote excellence in resident education at the bedside,” said Valerie.

“Dr. Assey established a legacy as an outstanding physician whose teaching influenced the careers of countless residents,” said Ben Clyburn, M.D., professor and chair of the Department of Medicine.

“We are grateful to Valerie Assey for her generosity toward the Department of Medicine and commitment to recognizing clinical teaching excellence.”



Michael Assey, M.D.

“Doctors give so much to their profession and I felt this gift in Michael's honor would be a meaningful and appropriate way to recognize and promote excellence in resident education at the bedside.”

SUPPORT THE DEPARTMENT OF MEDICINE

There are many philanthropic opportunities to support our mission, and each gift to the department makes an impact on our daily efforts. We hope that you will partner with us to advance education, expand research, and improve excellence in patient care.

Nat Howe

Director of Development
Department of Medicine
Office: 843-792-4280
Email: howen@musc.edu

Leslie Brady, MSW

Director of Development
MUSC Health Heart & Vascular Center & MUSC Medical Center
Office: 843-876-5190 | Cell: 843-637-5640
Email: bradyl@musc.edu

FY21 SELECTED PUBLICATIONS

Cardiology:

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MEDICINE FACULTY

Cardiology

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