



Department of Medicine

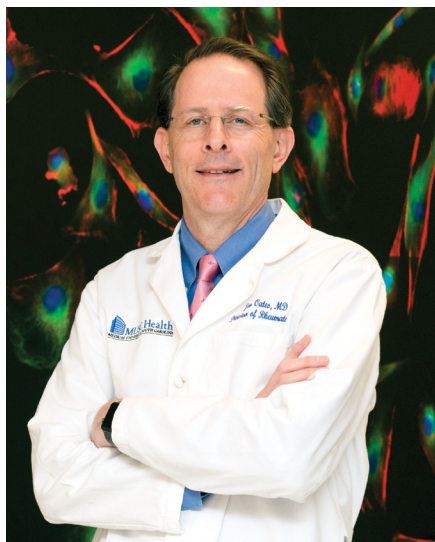
2023 RESEARCH SYMPOSIUM

Friday, April 21, 2023 | Virtual via Teams



FOR MORE INFORMATION VISIT
musc.edu/researchsymposium

From the Vice Chair for Research



We would like to thank all of the participants for sharing their innovative research, as well as those who coordinated and attended this event. Your support for our research mission is greatly appreciated.

Many thanks to the judges who contributed their time and effort to make the 16th Annual Department of Medicine Research Symposium a successful event.

Prince Anand, M.D., FACP

Galina Bogatkevich, M.D., Ph.D.

Scott Curry, M.D.

Thomas Di Salvo, M.D., MBA

Susan Dorman, M.D.

Justin Durland, M.D.

Wayne Fitzgibbon, Ph.D.

Gary Gilkeson, M.D.

Kyu-Ho Lee, M.D.

Diane Kamen, M.D., MSCR

Harsha Karanchi, M.D.

Joshua Lipschutz, M.D.

Tammy Nowling, Ph.D.

John McKinnon, M.D.

Cassandra Salgado, M.D., MS

Zengdun Shi, M.D.

Xian Zhang, Ph.D.

Sincerely,

Jim Oates, M.D.

Professor and Director

Division of Rheumatology & Immunology

Vice Chair for Research, Department of Medicine

Medical University of South Carolina

Schedule of Events

2023 VIRTUAL RESEARCH SYMPOSIUM

Friday, April 21 | Live Streaming: Microsoft Teams

8:00 AM - 8:30 AM

Welcome and Opening Remarks

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

Ben Clyburn, M.D., Chair, Department of Medicine

8:30 AM - 11:00 AM

Poster Presentations

11:30 AM - 12:30 PM

Oral Abstract Presentations

12:30 PM - 1:15 PM

Keynote Presentation by Cynthia Ma, M.D., Ph.D.

Professor and Clinical Director,

Breast Cancer Center, Oncology Division

Washington University School of Medicine in St. Louis

1:15 PM - 1:45 PM

Research Day Poster Award Ceremony

Awards recognizing the best research day presentations

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

Ben Clyburn, M.D., Chair, Department of Medicine

Oral Abstract Presenters



Adegboyega (Tim) Adewale

Ph.D. Candidate, MUSC College of Graduate Studies

Category: Graduate Student

Mentor: Carol Feghali-Bostwick, Ph.D.

Title: The Role of the IL-6-IGF-II Axis in Systemic Sclerosis-Associated Lung Fibrosis



Camilla Bacchin

Medical Student, MUSC College of Medicine

Category: Medical Student

Mentor: Federica del Monte, M.D., Ph.D.

Title: Red Blood Cells shuttle beta amyloid between brain and heart: implications for the pathogenesis and the progression of Alzheimer Disease and Cardiomyopathy



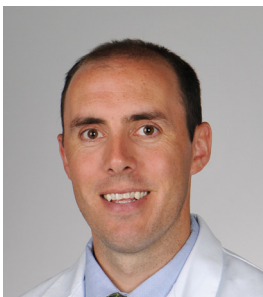
Helen (Jensie) Burton, M.D.

Infectious Diseases Fellow, PGY-5

Category: Resident/Fellow

Mentors: Scott Curry, M.D., Cassandra Salgado, M.D., Yorsa Alkabab, M.D., Susan Dorman, M.D.

Title: Mycobacterium avium-intracellulare Infections in Cardiothoracic Surgery Patients Exposed to Heater-Cooler Devices Despite Control Measures



Benjamin Kalivas, M.D.

Assistant Professor, Division of Hospital Medicine; Program Director, Med-Peds Resident Program; Medical Director, GME Quality and Safety

Category: Junior Faculty

Mentors: Marc Heincelman, M.D., MPH, William Moran, M.D.

Title: BEERS Criteria Prescribing and Delirium at a Large Academic Hospital

Poster Participants

Junior Faculty Category

Yotam Papo, M.D., MPH

Mentor: Marc Heincelman, M.D., MPH
Title: Virtual Rural-ality: Creation of a Tele-Hospitalist Program to Reduce Outmigration at a Rural Hospital

Michelle Spiegel, M.D.

Mentor: Andrew Goodwin, M.D.
Title: A Cost Effectiveness Analysis of a Quality Improvement Intervention to Increase Preferential Balanced Fluid Prescribing

Charles Terry, M.D.

Mentors: Dee Ford, M.D., Andrew Goodwin, M.D., Annie Simpson, Ph.D.
Title: Elevated Driving Pressure and Elastance Does Not Increase In-Hospital Mortality Among Obese and Severely Obese Patients with Ventilator Dependent Respiratory Failure

Resident/Fellow Category

Ahmed Abdelkader, M.D.

Mentors: Michael Ullian, M.D., Susan Dorman, M.D.
Title: Peritoneal dialysis-related Mycobacterium abscessus infections: a case series

Jake Altier, M.D.

Mentor: Jim Oates, M.D.
Title: Hydroxychloroquine use and heart failure with preserved ejection fraction in patients with systemic lupus erythematosus and rheumatoid arthritis

Ruth Bishop, M.D.

Mentor: Allison Smith, M.D.
Title: Impact of a brief educational intervention on internal medicine resident attitudes and knowledge in prescribing buprenorphine

Sean Carter, M.D.

Mentor: James Oates, M.D.
Title: Associations and Disparities in Mortality in Black South Carolina SLE Patients

Justin Durland, M.D.

Mentor: Gregory Jackson, M.D.
Title: Heart failure patients and robust obstructive sleep apnea treatment

Jessica English, M.D.

Mentor: Diane Kamen, M.D.
Title: Performance of the 2019 EULAR/ACR Classification Criteria for Systemic Lupus Erythematosus in a Predominantly African American Cohort

Adero Francis, M.D.

Mentors: Yosra Alkabab, M.D., Susan Dorman, M.D., Jesse Ellis, MBA, Amy Painter RN, BSN
Title: Impact of COVID-19 on TB and TB Services in South Carolina

Samuel Friedman, M.D.

Mentor: Rahul Argula, M.D., MPH
Title: Impact of baseline pulmonary vascular resistance on outcomes in systemic sclerosis-associated pulmonary arterial hypertension

Gowtham Gannamani, M.D.

Mentor: Harsha Karanchi, M.D.
Title: Screening for Diabetes – Investigating gaps between recommendations and clinical practice

Nancy Hagood, M.D.

Mentor: Maggie Thomas, M.D.
Title: Resident-Led Workshops Enhance Medical Student Point-of-Care Ultrasound Education

Samiha Karim, M.D.

Mentors: Diane Kamen, M.D., Gary Link MS, Dulaney Wilson, Ph.D., Jim Oates, M.D., Gary Gilkeson, M.D., Jasvinder Singh, M.D., MPH
Title: Lupus Patient Navigator Program for Improving Healthcare Barriers for Minority Patients

Ilgizar Khairutdinov, M.D.

Mentor: Valerian Fernandes, M.D.
Title: Incidence of ST Elevation Myocardial Infarction Among Patients with Previous Coronary Artery Bypass Grafting

Monica Klaybor, M.D.

Mentor: Amanda Northup, M.D.
Title: Expedited Triage for Outpatients Referred to Cardiology for Chest Pain: A Model to Improve Access

Kathryn Long, M.D.

Mentor: Gerard Silvestri, M.D., MS
Title: Utilizing a blood biomarker to distinguish benign from malignant pulmonary nodules: A subgroup analysis comparing screen detection, sex, smoking history and nodule size

Rosemary Moak, M.D.

Mentor: Kelli Williams, M.D., MPH
Title: Educational Video and Logic Driven Surveys Increase Delabeling Penicillin Allergy in Pregnancy: A Comparative Analysis of Pre and Post Intervention

Poster Participants

Resident/Fellow Category

Jessica Newman, Pharm.D.

Mentor: Yosra Alkabab, M.D.
Title: Preliminary Real-World Experience with Maribavir for Treatment of Refractory or Resistant CMV in Solid Organ Transplant

Saloni Patolia, M.D.

Mentors: Diane Kamen, M.D., Dulaney Wilson, Ph.D., Jim Oates, M.D.
Title: Risk Factors for Cardiovascular Outcomes among Patients with Systemic Lupus Erythematosus

Myra Quiroga, M.D.

Mentor: Andrew Schreiner, M.D.
Title: Factors associated with progression from low to high-risk for advanced fibrosis in patients with nonalcoholic fatty liver disease (NAFLD)

Nihar Shah, MBBS

Mentors: Andrew Goodwin, M.D., Alyssa Rheingold, Ph.D.
Title: A Telehealth Approach to Addressing ICU Healthcare Worker Mental Health Distress: Initial Data and Uptake of Resiliency Services

Sarah Smith, M.D.

Mentors: Paula Ramos, Ph.D., Bethany Wolf, Ph.D.
Title: Influence of Social Support on Systemic Lupus Erythematosus (SLE) Outcomes in a Health Disparity Population

Jameson Sorrels, M.D.

Mentor: Brian Houston, M.D.
Title: Role of Cardiac MRI versus PET CT in Predicting Severity of Heart Failure and Exercise Tolerance in Patients with Cardiac Sarcoidosis

Faith Villanueva, M.D.

Mentor: Don Rockey, M.D.
Title: The Diagnostic Yield and Clinical Role of Wireless Capsule Endoscopy in Investigating Iron Deficiency Anemia

Graduate Student Category

Rachel Biggs

Mentor: Amy Bradshaw, Ph.D.
Title: Characterizing Human Cardiac Fibroblast Responsiveness to Hemodynamic Unloading in Heart Failure with Reduced Ejection Fraction

Helen Butler, MS

Mentor: Federica del Monte, M.D., Ph.D.
Title: Gene and Environmental Interaction for the Pathogenesis of Cardiac Alzheimer's

Julie Dickerson

Mentors: Toros Dincman, M.D., Ph.D., David Long, Ph.D.
Title: Determining predictors of outcomes and treatment response in resectable pancreatic cancer at MUSC

Lily Neff

Mentor: Amy Bradshaw, Ph.D.
Title: Role of Macrophages in Regression of Myocardial Fibrosis Following Alleviation of Left Ventricular Pressure Overload

Brennan Winkler

Mentor: Josh Lipschutz, M.D.
Title: Assessing Formoterol Treatment in a Mouse Model of Autosomal Dominant Polycystic Kidney Disease

Staff Scientist, Research Specialist, or Program Coordinator

Leah Benn, MPH

Mentor: Charlie Strange, M.D., Hongjun Wang, Ph.D.
Title: Recruitment Strategies for a Cellular Therapy Study for Type 1 Diabetes using Mesenchymal Stromal/Stem Cells (MSCs)

Kennedy Hawkins

Mentor: Justin Van Beusecum, Ph.D.
Title: Systemic Lupus Induces Cardiac and Endothelial Dysfunction in Female B6.Nba2 Mice

Laura Novotny, Ph.D.

Mentor: Eric Meissner, M.D., Ph.D.
Title: Differential influence of distinct interferon lambda receptor-1 (IFNLR1) isoforms on gene expression and hepatitis B virus replication in stem-cell derived hepatocytes treated with lambda interferons

Poster Participants

Medical Student Category

Sameer Abrol

Mentor: Akos Varga-Szemesm, M.D., Ph.D.
Title: Myocardial characterization with extracellular volume mapping on a first-generation, photon-counting detector CT with MRI reference

Thomas Agostini

Mentors: Harsha Karanchi, M.D., Marc-Andre Cornier, M.D.
Title: Pilot Project Investigating Disparities in Type 2 Diabetes Mellitus Care within a Health Care Organization

Michael Attanasi

Mentor: Don Rockey, M.D.
Title: Racial Differences in Liver Fibrosis – Biology or Environment?

Noah Blaker

Mentor: Valerian Fernandes, M.D.
Title: Change in Body Mass Index 6 months and One Year After Alcohol Septal Ablation in Patients with Hypertrophic Obstructive Cardiomyopathy

Caroline Brailsford

Mentors: Patrick Flume, M.D., Christina Mingora, M.D., Lillian Christon, Ph.D., Paul Nietert, Ph.D.
Title: The Association of Mental Health and Treatment Outcomes in Patients with Non-Tuberculosis Mycobacterial Lung Disease

Hayden Braun

Mentor: Valerian Fernandes, M.D.
Title: Early Mortality and Length of Stay for Different STEMI Activation Criteria

Victoria Delk

Mentor: Diane Kamen, M.D.
Title: Differences in Health-Related Quality of Life Between Black and Non-Black Patients with Systemic Lupus Erythematosus

Sophia Emetu

Mentor: Cristin Adams, D.O., MPH
Title: Should Student Run Free Clinics be Codified into Medical School Curriculum?

Jason Erno

Mentor: Don Rockey, M.D.
Title: The diagnostic utility of CT angiography in gastrointestinal hemorrhage

Ashley Golbus

Mentor: Blaithin McMahon, Ph.D., MBBCr
Title: Futility of Dialysis in Patients with Tumor Lysis Syndrome in Advanced Hematological Malignancy: A Case Series

Qi Guo

Mentor: Jezabel Rodriguez-Blanco, Ph.D.
Title: Bromodomain 1 Inhibition Attenuates SHH Signaling and Medulloblastoma Growth

Penny Huebsch

Mentor: Kristine Deleon-Pennell, Ph.D.
Title: Immune Markers in Mice with Chemically Induced Menopause

Kacey Idouchi

Mentor: Don Rockey, M.D.
Title: Appropriateness of Recommendations for Surveillance Colonoscopy After Polypectomy – an observational analysis of 2012 and 2020 USMSTF guidelines

Madison Ladines

Mentors: Salem Vilayet, M.D., Tibor Fulop, M.D., Ph.D.
Title: Insatiable Bone: A Case of Hungry Bone Syndrome Post Laryngectomy

Phuong Nhi (Jaylynn) Le

Mentor: Valerian Fernandes, M.D.
Title: Contemporary patterns of MI from MUSC STEMI-Activation database during the COVID pandemic

Chanbormey Leatheng

Mentors: Jezabel Rodriguez-Blanco, Ph.D., April Salvador
Title: An inhibitor of the binding of UHRF1/DNMT1 attenuates SHH signaling and medulloblastoma growth

Kasey Lerner

Mentor: Josh Lipschutz, M.D.
Title: A metabolomics screen in cilia-deficient cells identifies abnormalities in tryptophan metabolism

William (Garrison) Moore

Mentor: Akos Varga-Szemesm, M.D., Ph.D.
Title: Ultra-high resolution photon-counting coronary CT angiography improves coronary stenosis quantification over a wide range of heart rates – A dynamic phantom study

Poster Participants

Stephanie Munie

Mentors: Ken Catchpole, Ph.D.,
Connor Lusk, Ph.D.
Title: Retained Foreign Objects: An
Observational Study Exploring Barriers
to an Efficient Count

Katherine (Quinn) Newman

Mentors: Natalie Freidin, M.D., Kevin
Bodker, D.O.
Title: A case of acute tubular injury
following fludarabine conditioning

Gabrielle Rauls

Mentors: Christopher Gross, M.D.,
Daniel Scott, M.D.
Title: Patient Perceptions of Inpatient
Versus Outpatient Total Ankle
Arthroplasty

Nodia Robinson

Mentor: Valerian Fernandes, M.D.
Title: Outcomes of Rotational
Atherectomy and/or Percutaneous
Interventions of Left Main Coronary
Artery in High-Risk patients who were
not Candidates for Coronary Artery
Bypass Surgery- A 10-year Veterans
Affairs Experience

Henry Ross

Mentor: Eric Powers, M.D.
Title: Needs Assessment for MUSC
Global Health ACCESS Program
Among Residency Applicants

Carter Smith

Mentors: Ismail Kabakus, M.D., Ph.D.,
Jordan Chamberlin, M.D.
Title: Artificial Intelligence Enabled
Detection of Incidental Findings in
Nuclear Medicine Images

Eric Taylor

Mentor: Valerian Fernandes, M.D.
Title: STEMI Incidence and Outcomes
During the COVID-19 Pandemic

Taylor Vincent

Mentor: Harsha Karanchi, M.D.
Title: Investigating Gaps in Metformin
Utilization for Prediabetes –
Opportunities for Diabetes Prevention

**Poster Participants listed by category in alphabetical order.*



DEPARTMENT OF MEDICINE

As the largest Department in the MUSC College of Medicine, the Department of Medicine provides essential leadership to numerous programs across the university, MUSC Health, and South Carolina.

Our Department—made up of ten divisions engaged in care at two hospital systems and multiple ambulatory practices—is guided by our vision to provide superior patient care, to educate the next generation of physicians, and to perform seminal discovery research. Our divisions are home to numerous NIH-funded, internationally renowned investigators, master clinicians, and award-winning educators who are leaders in their specialized fields of medicine:

- > Cardiology
- > Endocrinology, Diabetes & Metabolic Diseases
- > Gastroenterology & Hepatology
- > General Internal Medicine
- > Hematology & Oncology
- > Hospital Medicine
- > Infectious Diseases
- > Nephrology
- > Pulmonary, Critical Care, Allergy & Sleep Medicine
- > Rheumatology & Immunology

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