

# 2021 ANNUAL REPORT

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**Research** Center for  
Transforming Health



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## OUR MISSION

To support investigators and their teams as they move from concept to fulfillment, making transformative and innovative research possible.

## OUR VISION

To create a culture of possibility to accelerate translational research and foster collaborations.

# WELCOME

The year 2021 represented a step forward in what the Research Center for Transforming Health (RCTH) can provide to the School of Medicine. While we continued to struggle with the on again, off again pandemic, I could not be more pleased with how this team worked to accomplish our mission of enhancing research within the school of medicine.

Through our ongoing programs and services, the RCTH successfully assisted with more than thirty grant application submissions this year, with partners across the University and the state.

In addition to the successful programs we already offer, the RCTH launched a new SEED grant program that links UofSC researchers with co-investigators within the Prisma health system. These grants were a collaborative effort across campus, and represent great potential for future, larger submission from these partners.

We were also able to strengthen our partnerships with external partners, including the Columbia VA, Prisma Health, and the UofSC School of Medicine-Greenville by expanding services and fostering collaborations. These collaborations will further the mission of enhancing and expanding research activities in South Carolina.

The RCTH also gained a new member to our team, Ms. Samantha Y. White, this year. Ms. White, who has taken on the role of Program Manager for Educational Initiatives, has enhanced our already strong summer research experience (SOAR) for our medical students. She is a great addition to our team and an asset to the educational initiatives and growing needs of the RCTH.

As you will read, what follows in this report not only highlights the RCTH's accomplishments for 2021 but demonstrates the great potential of our school. I am pleased to work with this great team in continuing our mission and step forward.

**KEVIN J. BENNETT, PhD**  
**DIRECTOR**



# WHO WE ARE

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**KEVIN J. BENNETT, PhD**  
**DIRECTOR**



**SHALON HOWARD, MS**  
**ASSOCIATE DIRECTOR OF RESEARCH  
DEVELOPMENT & STRATEGIC INITIATIVES**



**JESSICA BURCHETT, MS**  
**GRANTS OPERATIONS ADMINISTRATOR**



**SAMANTHA WHITE, M.Ed.**  
**PROGRAM MANAGER FOR  
EDUCATIONAL INITIATIVES**

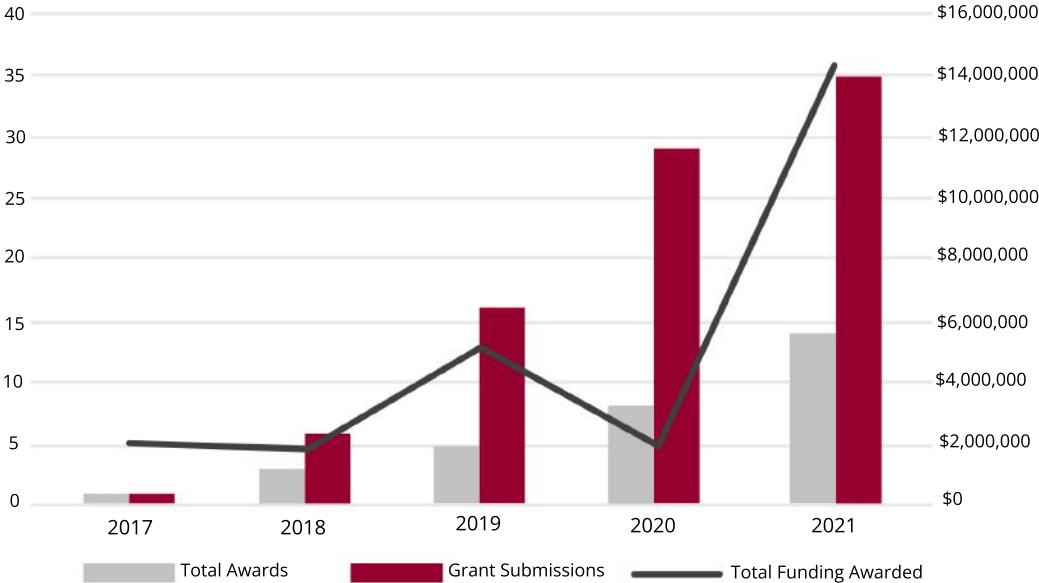
# PATHWAYS TO SUCCESS

The RCTH remains committed to supporting investigators and making research possible. Our support model offers a hands-on approach, providing levels of support based on investigator and project needs. Whether someone needs help with identifying funding opportunities, developing their study design, or coordinating with collaborators, we are here to help.

The RCTH team is continually adapting programs and services for the 'new normal' and the growing needs of research. Through leveraging virtual tools, harnessing resources, and further developing a collaborative network, we continue to help create pathways to success for investigators.



# ACHIEVEMENTS



In 2021, the RCTH provided support to numerous investigators and assisted with 35 grant submissions, with over 60% awarded, resulting in over 7 million dollars in grant funding. Through our many programs, highlighted throughout this report, we worked with over 120 investigators and/or learners, and facilitated the awarding of over \$250,000 in stipends and pilot/seed grant funding.

**FOR MORE INFORMATION ABOUT OUR PROGRAMS AND SERVICES, VISIT US ONLINE AT [SC.EDU/MEDICINE/RCTH](https://sc.edu/medicine/rcth)**



# EMERGING PHYSICIAN SCIENTIST PROGRAM

Developing research and navigating research processes can be challenging for early physician scientists. To address this need, the RCTH launched the Emerging Physician Scientist program (EPS) in 2018. The EPS program is a 15-month faculty fellowship for physicians to gain the experience and mentorship needed to develop their research. The program includes research education and training, along with pilot project funding, intended to inform a successful extramural grant application by the end of program. Applications for the 2022 program were released in the fall of 2021, offering up to \$30,000 in pilot grant funding. The RCTH is pleased to share our newest EPS fellows:

**SUSAN M. LAMB, M.D.**  
DEPARTMENT OF PEDIATRICS



**SUMIT SARAF, M.D.**  
DEPARTMENT OF OBSTETRICS  
AND GYNECOLOGY





## SUPPORTING TEAM SCIENCE



The RCTH team recognizes that interdisciplinary collaborative efforts are key to a team science approach. Our team remains dedicated to connecting investigators and helping build investigative partnerships to further our common translational research goals. The RCTH continues to cultivate relationships across disciplines at UofSC and with our clinical partners at Prisma Health and the Columbia VA.



"Faculty in the Cardiovascular Translational Research Center (CTRC) interact with programs in the Research Center for Transforming Health (RCTH) in several ways. The RCTH provides outstanding support on grant submissions, and it helps to identify possible collaborations across the UofSC campus. The RCTH has provided an efficient mechanism for obtaining and uploading multi-PI documents to funding agencies. As the CTCRC develops, we will clearly utilize the proposal development services of the RCTH and "just-in-time" requests to the National Institutes of Health (NIH) and other funding agencies. Additionally, we will work closely with the RCTH to take advantage of pilot grant programs identified by the Transformative Research Seed Grant Initiative of the RCTH."

**- R. CLINTON WEBB**

**DIRECTOR, CARDIOVASCULAR TRANSLATIONAL RESEARCH CENTER  
PROFESSOR, DEPARTMENT OF CELL BIOLOGY AND ANATOMY**



# ROADMAP *to a Successful* GRANT SUBMISSION



## CONTACT THE RCTH

Our team can help you at every stage of the grant development and submission process

1



2

## STRATEGIC GRANT PLANNING

- Research opportunities
- Identify collaborators
- Create RFA specific submission checklist
- Establish a detailed timeline
- Plan and develop your budget

## PROPOSAL DEVELOPMENT

- Solicit and track supplemental documentation
- Provide constructive critique of proposal
- Evaluate specific aims
- Assist with technical document drafting

3



4

## SUBMITTING SUPPORT

- Upload submission documents to required system
- Assist with internal routing requirements
- Assist with "Just-in-Time" requests



# RESEARCH SPOTLIGHT



"I have a great regard for the leadership (Dr. Kevin Bennett) and administrative team (Ms. Jessica Burchett and Ms. Shalon Howard) of the RCTH. They have significant impact on my research program. Briefly, they helped me expand my research program by providing professional support for the NIH R01 grants submission forms, budgets, biosketches, other support pages, subcontracts with other institutions (such as Clemson Univ. and Univ. of Pittsburgh), letters of support etc. This takes a lot of pressure off my shoulder, and I could spend more time focusing on the scientific aspect of my grant applications. The highly qualified and experienced RCTH team has also assisted me in successfully applying and receiving many Industry Grants and NIH R01 subcontracts. Dr. Bennett and RCTH Team also provided consultation for my industry grants and finding the right clinical collaborators. The RCTH has provided direct funding to support my research through their highly successful Transformative Seed Grant Program, which allowed me to initiate a formal and successful collaboration with both the VA Medical Center and Prisma Health clinicians. The Transformative Research Seed Grant resulted in strong preliminary data for future NIH R01s, Biotech/Pharma Industry Grants, and Private Foundation Grants (e.g., American Heart Association, The Marfan Foundation). Finally, the RCTH team is extremely professional, experienced, very kind and generous with their time, and always available to help. I congratulate the RCTH team for their continued success in accelerating translational research and foster collaborations, and making transformative research possible at the University of South Carolina."



## - MOHAMAD AZHAR, PHD

ASSOCIATE PROFESSOR CELL BIOLOGY AND ANATOMY,  
SCHOOL OF MEDICINE COLUMBIA

# TRANSFORMATIVE RESEARCH SEED GRANT INITIATIVE

This seed grant initiative was created to facilitate collaborative research projects between UofSC and Prisma Health investigators that focus on improvement of health system performance, population health, or biomedical science that translates to clinical practice and improved patient outcomes. To encourage these collaborations, funded projects must include an investigative partnership between a UofSC-Columbia faculty member and a clinical collaborator from Prisma Health-Midlands. For 2021, investigators who received an award, were awarded up-to \$20,000 for their projects. This funding was jointly supported by the UofSC Office of the Vice President for Research, the UofSC School of Medicine Columbia, the UofSC College of Pharmacy, the UofSC College of Nursing and the UofSC College of Engineering and Computing.



# CONGRATULATIONS

to the 2021 Transformative Research  
Seed Grant Initiative recipients:

## **MOHAMAD AZHAR, Ph.D., ASSOCIATE PROFESSOR**

**DEPARTMENT OF CELL BIOLOGY & ANATOMY, U of SC SCHOOL OF MEDICINE COLUMBIA**

Collaborators: Daniel G. Clair, M.D. and Roy Mathew, M.D.

## **CHAO CAI, Ph.D., CLINICAL ASSISTANT PROFESSOR**

**CLINICAL PHARMACY AND OUTCOMES SCIENCES, U of SC COLLEGE OF PHARMACY**

Collaborators: Michael Scalese, PharmD, Minou Khazan, PharmD, Ph.D., and Jenna Cox, PharmD

## **CIARAN FAIRMAN, Ph.D., ASSISTANT PROFESSOR**

**DEPARTMENT OF EXERCISE SCIENCE, U of SC ARNOLD SCHOOL OF PUBLIC HEALTH**

Collaborators: Julian Kim, M.D., Shana Harrington, Ph.D., and Mary Kennedy, Ph.D.

## **SHAMIA HOQUE, Ph.D., ASSOCIATE PROFESSOR,**

**CIVIL AND ENVIRONMENTAL ENGINEERING, U of SC COLLEGE OF ENGINEERING & COMPUTING**

Collaborators: Phillip Moschella, M.D. Ph.D., Qian Wang, Ph.D., and Charles Bennett, M.D., Ph.D.

## **ABBI LANE-CORDOVA, Ph.D., ASSISTANT PROFESSOR**

**DEPARTMENT OF EXERCISE SCIENCE, U of SC ARNOLD SCHOOL OF PUBLIC HEALTH**

Collaborators: James Cook, M.D., and Christine Pellegrini, Ph.D.

## **MATTHEW J. LENHARD, M.D., CLINICAL ASSISTANT PROFESSOR**

**DEPARTMENT OF OBSTETRICS & GYNECOLOGY**

**U of SC SCHOOL OF MEDICINE COLUMBIA AND PRISMA HEALTH**

"Use of Vaginal Iodine Preparation in High-risk Pregnant Population to Reduce Risk of Post-Cesarean Endometritis"

## **KAREN MCDONNELL, Ph.D., RN, ASSOCIATE PROFESSOR**

**U of SC COLLEGE OF NURSING**

"Enabling Remote Access to Breathe Easier: A Novel Approach to Improve Symptom Self-Management and Wellness for Survivors of Lung Cancer and their Family Members"

## **MICHAEL SHTUTMAN, Ph.D., ASSOCIATE PROFESSOR**

**DRUG DISCOVERY & BIOMEDICAL SCIENCES, U of SC COLLEGE OF PHARMACY**

"The microbiome profiling of HIV-infected patients. Correlation with the Ethnicity, and the HAART treatment"



# 2021 SOAR COHORT



## 67 MD STUDENTS APPLIED FOR SOAR 2021

88%

**OF STUDENTS PLAN TO CONTINUE RESEARCH WITH THEIR FACULTY MENTORS BEYOND THE SOAR EXPERIENCE**

10

**STUDENTS PARTICIPATED IN BASIC SCIENCE RESEARCH**

24

**STUDENTS PARTICIPATED IN CLINICAL RESEARCH**

1

**STUDENT PARTICIPATED IN A COMBINED CLINICAL AND BASIC SCIENCE RESEARCH PROJECT**

In 2021, the SOAR program welcomed its largest cohort to-date, of 35 MD students. This is a 150% increase from 2014 when the program was first launched. This increase reflects the growing demand for comprehensive research experiences in graduate medical education. It is also a testament to the SOAR students and faculty that the successes experienced are the result of efforts to focus on research creativity and not pandemic induced constraints. Many thanks to the faculty mentors for their resiliency and willingness to partner with SOAR interns.

## STUDENT SPOTLIGHT

### ASHLEY FELLERS



2020 SOAR Participant – Faculty Mentors  
Dr. Turner-McGrievy & Dr. John Bernhart



“Being a part of the NEW Soul Lab through the SOAR program allowed me to take the ideas and concepts from my first year of medical school and see how they could impact and benefit my local community. Social determinants of health have always been an interest of mine, and the NEW Soul Lab was so encouraging, showing me that the role of a physician does not have to end at the hospital doors. We can get involved in research or advocacy and have the skills to make a genuine difference in our community. The SOAR program structure helped teach us all how to create and take ownership of a project from start to finish, so that we can continue to stay involved in research throughout medical school, residency and beyond.”

**- ASHLEY FELLERS**

## GRANT PEER REVIEW

A key component of successful grant submissions is obtaining feedback on your proposal prior to submission. The RCTH provides this opportunity to UofSC School of Medicine faculty and Columbia VA investigators through the RCTH Grant Peer Review program. Peer Grant Review gives investigators a chance to obtain useful pre-submission proposal review by experienced researchers. Investigators are asked to submit at a minimum a draft of their research plan/strategy and can submit additional grant sections to enrich their overall submission. Requests for peer review can be made by completing the online Grant Peer Review form or by emailing the RCTH at [rcth@uscmed.sc.edu](mailto:rcth@uscmed.sc.edu).



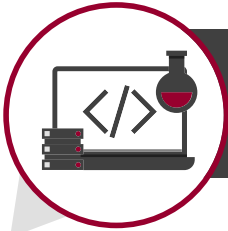
## PEER COORDINATORS FORUM

The Peer Exchange and Education for Research (PEER) forum, hosted by the RCTH, is an opportunity for research coordinators and support staff to network with their peers. The PEER meetings are a chance to come together to discuss topics of interest and share best practices with those in similar positions in the research community. The PEER meetings are open to research coordinators/support staff at the UofSC School of Medicine, Prisma Health and the Columbia VA. In 2021, this group included over 30 members across these institutions.





# FUTURE DIRECTIONS



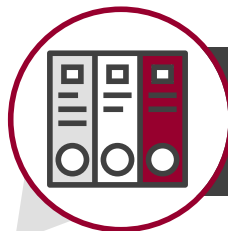
## EXPAND RESEARCH CAPACITY FOR THE SCHOOL OF MEDICINE

- Provide pre- and post-award biostatistical services for research and grant submission
- Continue to provide SEED funding for new projects and collaborations
- Develop a model for a collaborative post-award grant administration process with Prisma Health



## CONTINUE TO EXPAND OUR EXTERNAL PARTNERSHIPS

- Utilize our biostatistical capacity to enhance Columbia VA research initiatives
- Develop a partnership with other UofSC units to facilitate joint research efforts



## INCREASE EDUCATIONAL OPPORTUNITIES AND RESEARCH SUPPORT

- Establish a mentoring program for faculty interested in research
- Increase awareness and investigator use of the Grant Peer Review program



# Research Center for Transforming Health



## EMAIL

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## WEB

[SC.edu/Medicine/RCTH](http://SC.edu/Medicine/RCTH)

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