

# UNC School of Medicine Office of Research

## 2020 Academic Year Bi-Annual Report

February 2020—July 2020

### *Message from the Vice Dean for Research*

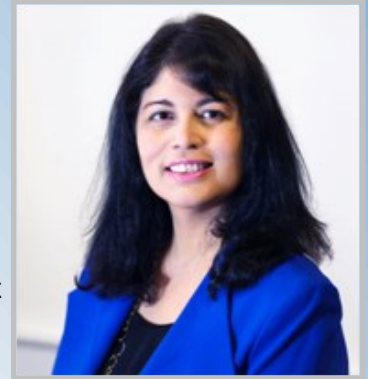
There has been no other factor that has shaped 2020 for the School of Medicine more than the COVID-19 pandemic. In the face of COVID-related reduced operations earlier this year, our School showed remarkable resilience. We rose up to the challenge of these times and helped fight the COVID-19 epidemic at every level. Our researchers have been involved in wide scale testing efforts as well as discovering new antivirals, vaccines, and treatments for COVID-19. Our physicians have been caring for many of these patients in the hospital and the ICU. We have been continually impressed by the ways in which our faculty, staff, and trainees that make up our research enterprise have rose to the challenge of fighting this virus.

The Office of Research has focused on helping our researchers navigate the rapidly changing guidance during the COVID-19 pandemic and coordinating with the Vice Chancellor for Research, Provost, EHS and other Schools to support research infrastructure during the pandemic. We met weekly with Department Chairs and Center Directors from mid-March through early June to provide up-to-date communications and provide support to units. We also developed the reopening guidelines that allowed our research labs to open safely in June, and are pleased to say that there were no reported incidences of SARS-CoV-2 transmission in the laboratory settings. With the help of the Department Chairs and Center Directors, we revised our guidelines on August 1 to allow more flexibility for researchers. We are also proud of how the Clinical Research Support Office (CRSO), an office established through the *Forward Together* Strategic Plan, managed the reopening of human subjects research in the School of Medicine. The CRSO created the guidelines for human subject researchers to address the additional challenges of working with patients during the pandemic. This included the establishment of the Clinical Research Review Committee to oversee the approval process for human subject research plans, and they made sure that this process was efficient and ensured the integrity of human subjects research.

Navigating the constantly changing regulations, research preparedness notices, and funding opportunities related to COVID-19 was, and continues to be, a challenge. To ameliorate this, our office has collected research preparedness information and funding opportunities relevant to the School of Medicine to provide as a weekly email to the Department Chairs and Center Directors.

In addition to the challenges presented by the pandemic, it has also provided opportunities for our SOM researchers to apply their expertise and contribute to the basic understanding and clinical treatment of COVID-19 and SARS-CoV-2. UNC recently ranked as the Top Research University for Coronaviruses by Microsoft Analytics, and we have been at the forefront of ground-breaking research and leadership at the state and national level. Our Infectious Disease team has been working with Operation Warp Speed and will be serving as a site for five vaccine clinical trials, as well as monoclonal antibody treatment trials, as highlighted in the COVID-19 Research Recap in this issue. We are grateful to our investigators for their magnanimous efforts to combat the pandemic.

Due to the financial impact and uncertainties of the pandemic, the Office of Research needed to pause some of our strategic initiatives. However, in addition to our Basic Science ECRB awards issued in February, we offered a special round of ECRB funding to support COVID-19 pilot projects, and inducted the first cohort for the School of Medicine Physician Scientist Training Program. We will also be able to offer our Bridge and Boost funding



*Blossom Damania, PhD  
Vice Dean for Research*

mechanisms this year, which are critically important to our faculty especially during these uncertain times. We have also been incredibly grateful to have Nate Thomas, the new Vice Dean for Diversity, Equity and Inclusion, on our campus lead conversations throughout our School about racial disparities. Nate held a Town Hall for the SOM that illuminated many problems in our infrastructure but importantly was the start of a plan for change. Overseen by the Office of Inclusive Excellence, each Department is creating actionable items that can be addressed and we look forward to the improvements that will make our School more equitable, welcoming, and allow members of historically underrepresented populations to thrive.

Finally, we look forward to slowly getting back to normal as the campus begins to open in the Fall. The SOM total research funding for FY20 has increased by \$24 million and NIH funding specifically has increased by \$14 million. We are proud of our faculty and their accomplishments during this difficult time, and look forward to the 2020-21 academic year.

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**New Leadership in the School of Medicine—UNC Health System and Dean’s Office**

**Crystal Cené—UNC Health System Executive Director for Health Equity**



UNC Health created a new role and appointed **Crystal Cené, MD, MPH, FAHA** as the organization’s first Executive Director for Health Equity on July 24, 2020. In her role, Cené will lead a multidisciplinary effort to put in place science-based strategies and interventions to address structures, policies, and practices that perpetuate health disparities and impede health equity in North Carolina. Cené is an Associate Professor in the Division of General Medicine and Clinical Epidemiology, serves as Director of the Program on Health Disparities at the Cecil G. Sheps Center for Health Services Research, and her nationally-recognized research focuses on reducing disparities in health and health care access, and studying ways to address the social determinants of health.



## **Nathan Thomas—Vice Dean for Diversity, Equity, and Inclusion**

**Nathan (Nate) Thomas, PhD**, was named Vice Dean for Diversity, Equity, and Inclusion of the UNC School of Medicine effective March 16, 2020. Thomas joins us from The University of Missouri Kansas City School of Medicine where he served as the Associate Dean for Diversity and Inclusion. He also previously served as Vice Provost for Diversity and Equity at the University of Kansas. Thomas has over 25 years of experience in higher education, health, and government, and has an exemplary track record in developing and implementing diversity, mentoring, and leadership initiatives. In his new role, Thomas will work closely with leaders and administrators to promote and advance diversity in the school by overseeing the Office of Inclusive Excellence and helping to implement the diversity initiatives of the *Forward Together* Strategic Plan. Thomas succeeds the late Paul Godley, MD, PhD, MPP.



## **Kim Boggess—Senior Associate Dean for Faculty Affairs**



On July 16, 2020, **Kim Boggess, MD**, assumed the role of the Senior Associate Dean for Faculty Affairs. Boggess will report to Julie Byerley, MD, MPH, Vice Dean for Academic Affairs, and will be responsible for oversight of the appointments, promotion and tenure process, recruitment and retention of key faculty, the development and implementation of career development programming, and the execution of the SOM *Forward Together* Strategic Plan within her new leadership role in the Office of Faculty Affairs and Leadership Development. Boggess has been part of UNC since 1999 and focuses her clinical work and research on high risk pregnancy and critical care obstetrics. Boggess is also the program director for two NIH K-level training programs and serves as a UNC IRB Chairperson.

## **Donita Robinson—Assistant Dean for Graduate Education**

On July 15, 2020, **Donita Robinson, PhD**, was named the Assistant Dean for Graduate Education. In her new role, Robinson will oversee the operations and mission of the Office of Graduate Education (OGE) which is led by Jean Cook, PhD, Associate Dean for Graduate Education and reports up to the Vice Dean for Research. Robinson joined the School of Medicine in 2002 and was promoted to associate professor in 2015. During her time at UNC, Robinson has taken many steps to improve trainee education, including serving as co-PI of the UNC PREP program, providing improvements to the BBSP curriculum, and spearheading new programming and funding for the OGE.



## **New Leadership in the School of Medicine—Department Chairs and Center Directors**

### **Ada Adimora—Co-Director of the Center for AIDS Research**



**Ada Adimora, MD, MPH**, took on the role of co-Director of the Center for AIDS Research (CFAR) on July 1, 2020. Adimora is a Sarah Graham Kenan Distinguished Professor of Medicine and is the Principal Investigator of the UNC site of the Multicenter AIDS Cohort Study-Women's Interagency HIV Study Combined Cohort Study. Adimora has led a variety of studies focusing on the epidemiology of HIV and STDs in minority populations, and has held multiple leadership positions including serving as the Chair of the HIV Medicine Association.

### **Margaret Helton—Interim Chair of the Department of Family Medicine**

**Margaret Helton, MD**, has been serving as the Interim Chair of the Department of Family Medicine since June 1, 2019. Within the department, Helton's additional administrative appointments include Vice Chair for Clinical Excellence, Associate Chair of Faculty Affairs, Director of Career Development Fellowship, Director of Operations, and Director of Maternal and Child Health. Helton is also the medical director for Carol Woods Retirement Community.





**Ilona Jaspers—Director of the Center for Environmental Medicine, Asthma, and Lung Biology**

**Ilona Jaspers, PhD**, assumed the role of Director of the Center for Environmental Medicine, Asthma, and Lung Biology on May 31, 2020. Jaspers has extensive expertise on exposure to environmental oxidants and its impact on human immune responses. She is nationally recognized for her research on the health effects of air pollution on human antiviral host defense, and is a regarded expert on the dangers of e-cigarettes and vaping. Jaspers succeeds Dave Peden, MD, who has held this position since 2002.

**Genevieve S. Neal-Perry – Chair of the Department of Obstetrics and Gynecology**

Effective April 15, 2020, **Genevieve Neal-Perry, MD, PhD**, assumed the role of Chair of the Department of Obstetrics and Gynecology. Neal-Perry came to UNC from the University of Washington, where she served as Director of the Division of Reproductive Endocrinology and Infertility, and Director of the Cancer and Reproduction Clinic at the Seattle Cancer Care Alliance. Neal-Perry holds multiple national leadership roles including Vice President of Basic Science for the Endocrine Society. She has published more than 50 publications in the field of reproductive science and her research aims to understand how nutrition, aging, and ovarian hormones regulate fertility and brain function.



**Nicholas Shaheen – co-PI of the North Carolina Translational and Clinical Sciences (NC TraCS) Institute**



**Nicholas Shaheen, MD, MPH**, a world-renowned gastroenterologist and epidemiologist will take over the leadership role held by Tim Carey, MD, MPH, since 2015 starting on July 1, 2020. Shaheen joined the UNC faculty in 1998 and became Division Chief of Gastroenterology in 2014. Until recently Shaheen served as Director of the NC TraCS Collaboration and Team Science Program and is known for his research on Barrett's esophagus. He has served as the PI on several multi-center trials and is a member of several national consortia.

**Brian Strahl – Interim Chair of the Department of Biochemistry and Biophysics**

Effective May 18, 2020, **Brian Strahl, PhD** assumed the role of Interim Chair succeeding Leslie Parise, PhD, who was appointed Dean of the University of Vermont's College of Agriculture and Life Sciences. Strahl's research is focused on understanding how histones contribute to human biology and disease, and is a renowned leader in his field. Strahl is an Oliver Smithies Investigator and has served as Vice Chair of the Department since 2016.



**COVID-19 Research Recap**

Our School of Medicine researchers have been at the forefront of the pandemic, and we are so thankful to have many experts conducting critical research on SARS-CoV-2 and COVID-19. Although this list is not nearly complete, we want to briefly highlight some of the many studies that capitalize on our key strengths in immunology and infectious disease. A more comprehensive description of some of the studies below can be found in our [Meet UNC School of Medicine's COVID-19 Research Heroes](#) Vital Signs article.

COVID-19 Basic Science Discovery Research and Diagnostics:

- **Ralph Baric, PhD**, is working on almost every aspect of SARS-CoV-2 including model development, mechanistic biology, and identification of potential antivirals and vaccine formulations. He will also serve as a driving force behind the vaccine clinical trials that are arriving at UNC.
- **Craig Cameron, PhD**, and **Jamie Arnold, PhD**, partnered with Riboscience, LLC to screen their library of nucleotide analogues to identify those with efficacy against SARS-CoV-2.

- **Paul Dayton, PhD**, is coordinating teams of engineers to make smaller masks to fit pediatric patients at NC Children's Hospital.
- **Kristina De Paris, PhD**, is working with **Sallie Permar, MD, PhD**, from Duke University to test Moderna's mRNA vaccine and a protein vaccine developed by Kizzy Corbett and Barney Graham in infant Rhesus Macaques. **Dirk Dittmer, PhD, Ralph Baric, PhD**, and **Michael Hudgens, PhD**, will also be involved in this study.
- **Aravinda de Silva, PhD**, and **Prem Lakshmanane, PhD**, are developing assays for specific detection of SARS-CoV-2 IgG and IgM antibodies, and are working with Baric's group to characterize vaccine responses.
- **Dirk Dittmer, PhD**, has set up high-throughput, high-sensitivity COVID-19 viral load assays to augment hospital operations, and support clinical trials and pre-clinical studies, and has implemented next generation sequencing assays to characterize COVID-19 strains in clinical research studies. **Blossom Damania, PhD**, is also involved in these studies, and these systems are being used in the [ReCCAP UNC: Return to Campus COVID-19 Assessment Project for UNC-CH Employees and Trainees](#).
- **J. Victor Garcia-Martinez, PhD, Angela Wahl, PhD**, and **Mark Heise, PhD**, are all working on developing novel animal models of SARS-CoV-2 to help with the testing of antivirals and vaccines.
- **Gaorav Gupta, MD, PhD**, and his laboratory have been collaborating with Dittmer's group to develop ultra-sensitive COVID-19 detection assays. Gupta and his team are benchmarking the assays in clinical samples.
- **Yueh Lee, MD**, and his research team are creating an open-source ventilator that has the potential to help fill a critical equipment gap that can easily emerge when case surges occur.
- **Rob Maile, PhD, Matthew Wolfgang, PhD**, and **Shannon Wallet, PhD**, from the Adams School of Dentistry have set up an EHS/IBC approved BSL2+ facility, pipelines, and standard operating procedures for the collection, processing, and tracking of the SARS-CoV-2 samples from patients.
- **Nathanial Moorman, PhD**, is working with Baric and Heise to screen new antiviral agents against SARS-CoV-2.
- **Bryan Roth, PhD**, is profiling candidate drugs to determine mechanisms of action that may contribute to the therapeutic activity for COVID-19 and are beginning screens of approved medications to determine if they may inhibit viral interactions with host receptors.
- **Ron Swanstrom, PhD**, is working with Baric's team to test a candidate therapeutic NHC/EIDD-2801: a ribonucleoside with broad-spectrum antiviral activity.

#### COVID-19 Clinical Research:

- **Ross Boyce, MD, MSc**, is studying healthcare worker exposure to COVID-19 as the pandemic progresses, and is also working with **Allison Aiello, PhD**, from the Gillings School of Global Public Health, to understand how widespread cases of COVID-19 with mild or no symptoms are in the state.
- **Arlene Chung, MD, MHA, MMCi**, designed and developed chatbot software to help extend resources across UNC Health.
- **Mike Cohen, MD** leads one of the two new NIH funded COVID-19 Prevention Network (CoVPN) Operations Centers that are working to address the pressing need for vaccines and monoclonal antibodies (mAbs) against SARS-CoV-2.
- **Mike Cohen, MD, Joe Eron, MD, David Wohl, MD, Cindy Gay, MD, MPH, William Fisher, MD** and the SOM ID team are leading several current and future COVID-19 vaccine and monoclonal antibody trials.
- **Cindy Gay, MD, MPH**, is leading the Moderna vaccine trial at UNC Hospitals.



- **Jessica Lin, MD, MSCR**, is working with a team of researchers to launch a trial looking at whether treating COVID-19+ individuals with mild or moderate symptoms can prevent them from needing to go to the hospital and prevent spread to their household members.
- The Heroes Health Initiative App was founded by **Samuel McLean, MD** to help support the mental health of first responders and healthcare workers during the COVID-19 global pandemic.
- **Dave Peden, MD, MS** and **Dirk Dittmer, PhD**, have established the ScreenNC study, to determine the seroprevalence of IgG antibodies to SARS-CoV-2 in persons who are asymptomatic for COVID-19 at UNC, Nash and Rex. The study will also be partnering with North Carolina Central University and University of North Carolina – Pembroke to assist in COVID-19 testing of their populations
- **Subhashini Sellers, MD, MSc**, and **William Fischer, MD**, are working with Dittmer in the testing of COVID-19 samples, and Fischer has helped launch an international observational study of people hospitalized with COVID-19.
- **David Wohl, MD**, and **Natalie Bowman, MD, MPH**, are tracking COVID-19 patients in the hospitals and local community to help reduce the spread of SARS-CoV-2 infection and Wohl is also working with **Joseph Eron, MD**, on a randomized trial that will test therapeutics for early COVID-19.

Eight COVID-19 Projects led by SOM faculty were selected for more than \$7M in funding by the NC Collaboratory. SOM projects include:

#### [Convalescent Plasma Trial](#)

*Lead Researcher: Luther Bartelt, MD*

#### [Therapeutics I: Transitioning/Optimizing New Drugs for Pulmonary Delivery](#)

*Lead Researcher: Richard Boucher, MD*

#### [Therapeutics II: Preclinical Studies of Novel Therapeutic Agents in Mouse Models for Target/Drug Validation, Pharmacokinetic Studies, and Efficacy Using Mouse-Adapted SARS-COV-2 Virus](#)

*Lead Researcher: Richard Boucher, MD*

#### [COVID-19 Mountaire Processing Plant Study](#)

*Lead Researcher: Natalie Bowman*

#### [A Vaccine Against COVID-19 that Strongly Induces Three Branches of Immunity](#)

*Lead Researcher: Jenny Ting, PhD*

#### [BRAVE: Respiratory Virus Tracking \(including SARS-COV2\) in NC](#)

*Lead Researcher: Dirk Dittmer, PhD*

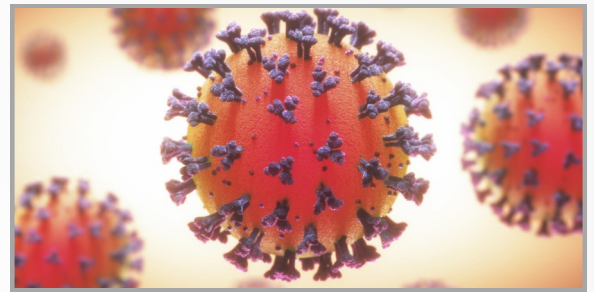
#### [Vector or Victim: SARS-CoV-2 Infection in Healthcare Workers and Their Household Contacts at the UNC Medical Center](#)

*Lead Researcher: Ross Boyce, MD, MSc*

#### [Rapidly Emerging Antiviral Drug Discovery Initiative \(READDI\)](#)

*Lead Researchers: Three multidisciplinary projects led by Ralph Baric, PhD, Nat Moorman, PhD, and Mark Heise, PhD*

We also thank the many members of the **HIV Cure Center** that have pivoted their work to accelerate the research and testing of COVID-19 samples, including clinical trials to treat patients. Researchers within the **Marsico Lung Institute / UNC Cystic Fibrosis Center** are working as a team to map the entry sites for SARS-CoV-2 in the respiratory tract and explore the risk / benefit aspects of drugs commonly used to treat respiratory disease for COVID-19.



**NC TraCS** has been involved in supporting several COVID-19 clinical research projects in the School of Medicine, including prophylactic trials on healthcare workers. They have also helped fund many COVID-19 pilot projects and have been instrumental in managing UNC presence in the National COVID Cohort Collaborative (N3C) that allows for the analysis of demographic and clinical data of COVID cases and patients (for more information about N3C, please contact John Buse ([jbuse@med.unc.edu](mailto:jbuse@med.unc.edu))).

It is critically important to remember that none of the work described above would be possible without the dedicated support of groups that remained working during the pandemic, as profiled in our [Thank You For Keeping our Research Infrastructure Going](#) Vital Signs article. We thank these exceptional groups for their steadfastness during the pandemic: The SOM Planning Office, UNC Facilities, the Office of the Vice Chancellor for Research, UNC Health Communications, SOM Sponsored Programs Office, the SOM Clinical Research Support Office, research trainees, research staff, core facilities, and administrators. We also thank Dr. Samantha Meltzer-Brody for spearheading numerous wellness initiatives, programs, and resources for our School and community. We are grateful for the resilience of our School of Medicine research community, and thank you all again for staying positive in the midst of a pandemic.

## **Strategic Plan Highlights**

The Message from the Vice Dean for Research in the [February 2020 issue of the Office of Research Newsletter](#) discussed the new initiatives from the *Forward Together* School of Medicine Strategic Plan. Unfortunately, due to the COVID-19 shutdown we have paused some of these programs. However, we still were able to recruit our first cohort of scholars to the School of Medicine Physician Scientist Training Program, fund new core facility pilot projects, saw growth of the Bioinformatics and Analytics Research Collaborative, and successfully recruited a new faculty member, Robert Wirka, identified through the *Forward Together* Research Initiative for Basic and Clinical Joint Faculty Hires.

### **Physician Scientist Training Program**

The goal of the Physician Scientist Training Program directed by **Alex Duncan, MD, PhD**, is to enhance the career development of physician scientists by creating a pipeline to recruit, train, and retain the most promising individuals to clinical training programs where they will receive mentorship and support to foster their research careers. After a rigorous review by an advisory committee from ten clinical departments, four clinician-scientists were accepted into this program.

**Alena Markmann, MS, MD, PhD**, clinical fellow in the Division of Infectious Diseases in the Department of Medicine and **Erin Steinbach, MD, PhD**, clinical fellow in Allergy and Immunology, a joint fellowship between the Departments of Pediatrics and Medicine were given awards at the resident/fellowship level. Using this support, Markmann will study the molecular properties of different subsets of protective human antibodies that develop after Zika infection, and Steinbach will look at how peanut proteins and the intestinal epithelium interact in normal health and peanut allergy.

**Tessa Andermann, MD, MPH**, assistant professor in the Department of Medicine and **Peyton Thompson, MD, MSCR**, assistant professor in the Department of Pediatrics received support at the early stage faculty level. Andermann will identify and track the presence of antimicrobial resistance in the gut microbiomes during hematopoietic stem cell transplant, and Thompson will use modeling analyses to enhance knowledge of childhood Hepatitis B in Africa.

### **Bioinformatics and Analytics Research Collaborative**

The Bioinformatics and Analytics Research Collaborative (BARC), spearheaded by Corbin Jones, PhD, and Chris Gregory, PhD, is a new effort that addresses the growing need for bioinformatics and analytical support by providing consultations, bioinformatics analysis, data analysis, application development, image analysis, and training services. After connecting with Departments and Centers who indicated their interest during the 2019 OoR Retreat, BARC embarked on a soft launch during the Spring and has completed three projects thus far with faculty from IBGS, the Department of Cell Biology and Physiology, and the Department of Microbiology and Immunology. An additional eleven projects are underway and the BARC is preparing for an official launch later

this year. More information about the BARC can be found on the [website linked here](#). You can also reach out to [Corbin Jones](#), or [Paul Grant](#), the project manager for BARC with any questions.

### **Forward Together Research Initiative for Basic and Clinical Joint Faculty Hires**

This initiative is intended to bolster research collaboration and integration of basic and clinical scientists by providing up to \$300,000 to support joint recruitments between Basic Science and Clinical Departments. In the initial round of funding, we provided support for two recruitment efforts, one of which successfully recruited **Robert Wirka, MD**, who will join UNC from Stanford University this fall. Wirka's lab will study cardiovascular disease and atherosclerosis using innovative single cell approaches. Wirka was jointly recruited between the Departments of Medicine and Cell Biology and Physiology and will also be a member of the McAllister Heart Institute.

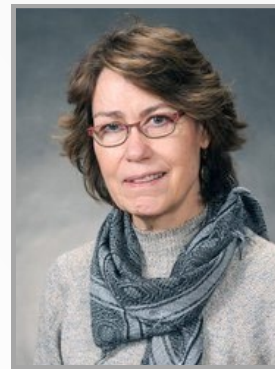


### **Office of Research and School of Medicine Highlights**

#### **Office of Research Technologies – Retirement of Annabelle Stein and Nancy Fisher**

The Office of Research Technologies (ORT) would not be able to provide exceptional support for the Core Facilities in the SOM without the dedication of its staff. This spring, both **Annabelle Stein** and **Nancy Fisher** retired. We thank them for their many years of service.

Annabelle Stein was the Associate Director of the ORT where she worked side-by-side with the ORT Director to develop and maintain the ORT/Core facilities website, help the cores develop their recharge rates, balance the core and CFAC finances, and was in charge of the communications that have been so helpful to display the excellence of our cores. She was at UNC for 20 years, 12 of these providing support for the cores, contributing significantly to their success.



Nancy Fisher, PhD, was the Assistant Director of Core Development in the Office of Research Technologies, and in this role she was responsible for mentoring core directors to help them enhance their operations. Fisher was also a professor in the Department of Microbiology and Immunology and the Director of the UNC Flow Cytometry Facility. In her many roles, Fisher was a passionate advocate for faculty and the cores and will be missed by many. Nancy's role as director of the UNC Flow Cytometry Facility has been filled by **Ramiro Diz, PhD**.

The OoR and ORT are actively engaged in a strategic planning process for delivering these functions to the core facility community.

#### **Accepting Applications for Bridge and Boost Awards**

The Bridge and Boost funding mechanisms provide critical support for faculty research programs, and are traditionally offered three times a year (Bridge) and 1-2 times a year (Boost). Bridge funding provides continued support for successful research projects that suffer a lapse in funding, while Boost funding is designed to increase the chances of funding for an NIH R01 (or similar) grant that has been reviewed favorably but needs additional revisions and preliminary data in order to be funded on resubmission. We are able to offer the first round of Bridge and Boost funding for FY21, and applications for both mechanisms are due by **5pm on Friday, October 2, 2020**. More information about the mechanisms, eligibility, and application process [can be found on our website](#).





## Accepting Applications for the 2020-2021 Jefferson-Pilot / James Woods Awards

The Jefferson-Pilot Fellowships in Academic Medicine and the James W. Woods Junior Faculty Award are prestigious awards that recognize exceptional junior faculty. The purpose of the Jefferson-Pilot Fellowship Awards is to retain promising junior faculty within the SOM, while the James W. Woods award is specifically to retain and support promising members of the SOM clinical faculty.

This year, the research of award recipients will be highlighted in a special seminar as part of UNC Research Week that will take place from October 19, 2020 – October 23, 2020.

The Office of Research is accepting nominations for both awards by **5pm on Friday, September 25, 2020**. The RFA for the [Jefferson-Pilot Fellowships can be found here](#), and the RFA for the [James W. Woods awards is linked here](#).

## School of Medicine Construction Project Updates

### Space Master Plan for the School of Medicine

UNC SOM has been working to expand on the recent campus master plan for space, and assembled a team to evaluate the SOM space utilization and how we need to grow our space footprint over the near and long term to provide for expanding research, education, and administration needs. The Dean's Office and the Planning Office has recently concluded the planning exercise which included input from units across the school. The outcomes will be shared with school leaders as we plan for the next stages of growth.

### Medical Education Building Updates

The new Medical Education Building (MEB) will replace Berryhill Hall and will provide updated and flexible space for medical student education. The demolition, site and utility work is currently underway, and the concrete frame structure demolition will be completed in the next five to six weeks. The new 170,000 gross square foot building is anticipated to be completed during the summer of 2022. A camera view of the [current status of MEB can be found here](#).



### Translational Research Building Updates

The Translational Research Building (TRB) project was developed to provide new space to expand our animal research programs in the School of Medicine. Stakeholders across the school have provided invaluable input into program priorities that should be taken into account when designing the building. However, due to changes in budget requirements, design firm, and COVID-19, this project is currently on hold pending assessment of COVID-19 financial impacts and authorization from the state to resume the project.

## Updates from the Office of Graduate Education

Despite the challenges of reduced operations that disrupted the spring rotation, BBSP students had little trouble selecting thesis labs in April (only one 4<sup>th</sup> rotation out of 93). Their primary factors in choosing a lab were the advisor's mentoring style, lab culture, and the research topic; 83% had multiple thesis lab options. BBSP admissions faculty (n=67) reviewed an all-time high of 1903 applications. Recruiting in early 2020 was highly successful thanks to the outstanding work of staff and the interactions applicants had with faculty and current students. Forty percent of the offers extended were accepted yielding an incoming class that is both highly talented and very diverse. The matriculating first year class has 107 students with 10 deferrals (the unusually high number of deferrals were caused by visa complications). Incoming students will joint labs or rotations

under the same research guidelines as current students, and fall semester classes will be a mix of online and in-person formats.

In June, the Office of Graduate Education welcomed **Debra Ragland, PhD**, as the new Assistant Director of Diversity Affairs. Her responsibilities focus on supporting students and their mentors through the challenges of PhD training, fostering an inclusive training environment, recruiting a diverse pool of applicants to UNC biomedical programs, and leading summer research internship programming for undergraduates from under-represented groups. OGE also celebrates the appointment of **Donita Robinson, PhD**, (UNC Psychiatry, Bowles Center for Alcohol Studies, Neuroscience Curriculum) as the inaugural Assistant Dean for Graduate Education. Robinson's new leadership role will coordinate the major programming and scholarship activities in partnership with OGE Directors, the Associate Dean for Graduate Education (Jean Cook, PhD) and the broader training community. She has contributed to recent OGE funding success: two supplements to existing grants and a new grant jointly funded by the NSF and NIH "Graduate Research Training and Career Outcomes."

## 2020 Office of Research Award Recipients

### Emerging Challenges in Biomedical Research Grants

The Emerging Challenges in Biomedical Research (ECBR) Awards provide pilot funding for early stage projects relevant to NIH priorities. The Fall 2019 round for the ECBR awards recognized the importance and impact of basic science research that can lead to new discoveries or technologies, and also considered basic research related to vaping as a high-priority. Five teams conducting research in the fields of machine-learning, flaviviruses, vaping, and LPL trafficking received awards in February of 2020.

- **Qi Zhang, PhD**, (Biochemistry and Biophysics) and **Helen Lazear, PhD**, (Microbiology and Immunology)  
*Defining the Role of Xrn1-Resistant Viral RNA Stability in Replication of Mosquito-Borne and Tick-Borne Flaviviruses*
- **Corbin Jones, PhD**, (iBGS, Biology) **Ross Boyce, MD, Msc**, (Medicine) **Dan Schrider, PhD**, (Genetics) **Daniel Matute, PhD**, (Biology) **Jeremy Wang, PhD**, (Genetics) and **Kara Moser, PhD** (Medicine)  
*AAI- Assessing Aedes Adaptation and Introgression using Machine Learning and Population Genomics*
- **Melissa Herman, PhD**, (Pharmacology) and **Robert Tarran, PhD** (Cell Biology and Physiology)  
*Peripheral and Central Immune Pathology Following Electronic Vaporization of Vitamin E Acetate in Male and Female Mice*
- **Samir Kelada, PhD**, (Genetics, Medicine), **Ilona Jaspers, PhD**, (Pediatrics), and **Timothy Moran, MD, PhD** (Pediatrics)  
*A Mouse Genetics Approach to Understand E-cigarette or Vaping Associated Lung Injury (EVALI)*
- **Saskia Neher, PhD**, (Biochemistry and Biophysics) and **Stephanie Gupton, PhD** (Cell Biology and Physiology).  
*New insights into insulin-responsive LPL trafficking*

In the wake of the COVID-19 pandemic, the School of Medicine Office of Research partnered with NC TraCS to launch an additional round of pilot funding to support the efforts of School of Medicine faculty conducting critical research on COVID-19 to combat the current and future pandemics. For this Spring 2020 competition, three teams received ECBR awards. The first two projects were co-funded by NC TraCS.

- **Victoria Baxter, DVM, PhD** (Pathology and Laboratory Medicine), **Mark Heise, PhD** (Genetics and Microbiology and Immunology), **Martin Ferris, PhD** (Genetics)

*Effect of Prior Pathogen Exposure on SARS-CoV-2 Pathogenesis and Immunity in Mice*

- **Nigel Mackman, PhD, FAHA** (Medicine), **Nigel Key, MB, ChB, FRCP** (Medicine), **Yohei Hisada, PhD** (Medicine), **Anton Ilich, MD** (Medicine), **C. Adrian Austin, MD, MSCR** (Medicine), **Robert Hagan, MD, PhD** (Medicine), **Jason Mock, MD, PhD** (Medicine), **William Fischer, MD** (Medicine), **Claire Doerschuk, MD** (Medicine and Pathology and Laboratory Medicine)

*Measurement of Plasma Biomarkers to Determine the Mechanism of Coagulopathy in COVID-19 Patients*

- **Martina Gentzsch, PhD** (Cell Biology and Physiology), **Andrei Aleksandrov, PhD** (Biochemistry and Biophysics), **Raymond Pickles, PhD** (Microbiology and Immunology)

*Targeting the Coronavirus Envelope Protein (CoV E) for Development of Novel Treatments for COVID-19*

### Computational Medicine Program 2020 Pilot Award Winners

The Computational Medicine Program Pilot Awards encourage the development of new collaborative biomedical research projects that utilize modern computational approaches with cutting edge techniques, and are co-funded by the Office of Research and the University Cancer Research Fund. In March 2020, three teams received awards as part of the second annual cycle.

- **Daniel Schrider, PhD**, (Genetics) and **J. Mauro Calabrese, PhD** (Pharmacology)

*Uncovering Function in Long Noncoding RNAs Through a New Paradigm in Evolutionary Analysis*

- **Jeremy Purvis, PhD** (Genetics) and **Channing Der, PhD** (Pharmacology)

*A Topical Model of the Cell Cycle in KRAS-driven Cancers*

- **Di Wu, PhD** (Adams School of Dentistry) and **Lishan Su, PhD** (Microbiology and Immunology)

*A Novel Computational Pipeline for Single-Cell RNA-seq Analysis to Reveal the Role of Type-I IFN in HIV-induced Immune Dysfunction and Viral Persistence*

### UNC Program for Precision Medicine in Health Care 2020 Pilot Grant Awardees

The UNC Program for Precision Medicine in Health Care (PPMH) aims to transform patient care through precision medicine, and has co-funded four pilot grants with NC TraCS that will have direct clinical or human translational impact and are focused on the implementation of precision medicine approaches in the UNC Health system and North Carolina.

- **Claire Doerschuk, MD** (Medicine)

*A Precision Medicine Approach to DNase Therapy in Patients with ARDS or Pneumonia: Which Patients May Benefit from DNase?*

- **Zibo Li, PhD** and **Jorge Oldan, MD** (both in Radiology)

*Development of [18F]-labeled Amino Acids for Positron Emission Tomography (PET)*

- **Timothy Vece, MD** and **James Hagood, MD** (both in Pediatrics)

*A Pilot Study of Precision Medicine for Children's Interstitial Lung Disease (chILD)*

- **Neeta Vora, MD** (Obstetrics and Gynecology)

*Expanding the Utility of Non-Invasive Prenatal Genetic Testing*



## 2020 SOM Dean's Office Research Award Recipients

### 2019-2020 Jefferson-Pilot Fellowships in Academic Medicine



Provided by the Jefferson-Pilot Corporation, the Jefferson-Pilot Fellowships in Academic Medicine honor promising junior faculty researchers in the School of Medicine. In May of 2020, it was announced that **William Fischer, MD**, assistant professor in the Division of Pulmonary Diseases and Critical Medicine in the Department of Medicine, and **Helen Lazear, PhD**, assistant professor in the Department of Microbiology and Immunology were named the recipients of the 2019-2020 awards. The award is accompanied by funding to support their research and scholarly endeavors.

Fischer has published more than forty manuscripts during his seven years at UNC and was recruited to work with the World Health Organization to assist with outbreaks of influenza, MERS, and Ebola, and served as a lead writer for the optimized supportive care protocol for Ebola. He has earned numerous awards and research grants, and is recognized as an international expert on Ebola virus disease, Lassa Fever, and Influenza. Fischer is now heavily involved in COVID-19 research.

Lazear was one of the first researchers to have the tools and expertise to study Zika virus in mouse models and throughout her career has become a leader in this field. Lazear helped to develop a mouse pathogenesis model that is now widely used to study Zika virus pathogenic mechanisms and assess candidate vaccines and antivirals. She also conducts research on flavivirus pathogenesis, and looks at how changes in the envelope protein among Zika virus strains impact mechanisms that control Zika transmission and congenital infections.



### 2019-2020 Dr. James W. Woods Junior Faculty Award



The goal of this award established by the late Dr. James W. Woods is to retain and support promising young members of the medical school clinical faculty, and provide funds to support the recipient's research and scholarship endeavors. In May of 2020, **Andrea Knittel, MD, PhD**, assistant professor in the Department of Obstetrics and Gynecology and program director for Incarcerated Women's Health received this prestigious award.

Knittel joined the faculty in 2018 and her practice includes office gynecology, gynecologic surgery, prenatal care, and labor and delivery. Both her research and clinical work are specially focused on reproductive transitions for women involved in the criminal justice system, and she is a regarded expert in health disparities for women in the criminal justice system. Knittel is currently focused on incarceration and substance use in a study of women living with HIV and at risk for HIV infection.

## School of Medicine Faculty Recipients of Prestigious Awards

*We would like to congratulate Samantha Meltzer Brody and Blossom Damania, recipients of two of the most prestigious awards received by faculty from February 2020 through July 2020.*

### Samantha Meltzer-Brody Received the 2020 O. Max Gardner Award

The Oliver Max Gardner Award is the highest honor conferred by The University of North Carolina system, and we are honored that **Samantha Meltzer-Brody, MD, MPH**, Chair of the Department of Psychiatry, is the recipient of the 2020 award that recognizes faculty who have made the greatest contribution to the welfare of the human race. Meltzer-Brody was nominated by Wesley Burks, MD, and Blossom Damania, PhD, for her decades

of achievement and commitment to improving the mental health of women as well as her key role in the FDA-approval of ZULRESSO, the first treatment specifically for postpartum depression. Meltzer-Brody has established herself as a champion for women's health nationally, and founded the Perinatal Psychiatry Program in the UNC Center for Women's Mood Disorders – the nation's first hospital unit for women who need inpatient treatment. She is also a widely published and cited author, and received the American Psychiatric Association's 2019 Alexandra Symonds Award for her outstanding contributions to women's mental health.



## **Blossom Damania Elected to the American Academy of Arts and Sciences**



**Blossom Damania, PhD**, Cary C. Boshamer

Distinguished Professor of Microbiology and Immunology and Vice Dean for Research at the School of Medicine was selected as one of the new members of the American Academy of Arts and Sciences (AAAS) – the oldest honorary society in the United States. AAAS was founded in 1780 and recognizes the artistic and scientific excellence of researchers from various areas and professions. Damania is an exceptional scientist and leader, and is known for her efforts to understand the pathogenesis of viruses involved in cancer, including Kaposi's sarcoma-associated herpesvirus. Damania's leadership is highly recognized across campus, as she co-leads the UNC Global Oncology Program and has launched the UNC Program for Precision Medicine in Healthcare, the Computational Medicine program, the Physician Scientists Training Program, and many other initiatives to strengthen the basic science

and clinical research endeavors in the School of Medicine in her role as Vice Dean for Research. She is also a Kavli Fellow of the US National Academy of Sciences and an American Association for Cancer Research Gertrude B. Elion Research Scholar.

*Below is a comprehensive list of the awards received by SOM faculty and featured in Vital Signs from February 2020 to July 2020. For a complete list of grants received by our faculty, please look for our bi-weekly "Latest Awards from SOM Faculty" in Vital Signs.*

**100 Inspiring Black Scientists in America:** **Craig Cameron, PhD, Folami Ideraabdullah, PhD, and Genevieve Neal-Perry, MD, PhD**, were all highlighted in a list of 100 Inspiring Black Scientists in America published by Cell Press.

**2019-2020 Faculty LGBTIQA+ Advocacy Award:** **Brad Figler, MD, FACS**, received the faculty LGBTIQA+ Advocacy Award for his work on creating the UNC Transgender Health Program as a way to support the coordination and quality of care for transgender patients.

**2020 American Association for Cancer Research Team Science Award:** During the AACR virtual annual meetings, the project team associated with The Cancer Genome Atlas received the AACR Team Science Award that recognizes an interdisciplinary team of researchers for their innovative and meritorious science that has advanced or may advanced fundamental knowledge of cancer. The awardees were **Charles Perou PhD, Katherine Hoadley, PhD, Joel Parker, PhD, Benjamin Vincent, MD and Jen Jen Yeh, MD**.

**2020 Diversity Award Winners:** **Echo Meyer, PhD**, was a faculty winner of the 12<sup>th</sup> Annual Diversity Awards provided by the University Office for Diversity and Inclusion. These awards recognize those who have furthered diversity, equity and inclusion at Carolina and in our surrounding community.

**2020 Innovation Pilot Award Winners:** Two teams received pilot awards from the UNC Center for Health Innovation. The first team was comprised of **Shahzad Ali, MD** and **Robert McClure, MD**, and the second team included **Jane Little, MD**, and **William Scheidler, MD**. Their proposals are for innovations across a spectrum of areas including care delivery, new technology, advanced analytics, and more.



**2020 Outstanding Physician-Clinician in Diabetes Award:** Sue Kirkman, MD, received this award from the American Diabetes Association in recognition of her outstanding achievements in improving diabetes clinical practice.

**2020 Triangle Business Journal Health Care Hero Awards:** The Triangle Business Journal selected seven winners from the UNC Medical Center, the UNC School of Medicine and UNC REX Healthcare. This list recognizes five UNC School of Medicine faculty members: **Catherine Coe, MD** was selected in the Rising Star category, The **Dementia Friendly Hospital Initiative** was selected in the Community Outreach category, and the award was received by **Jan Busby-Whitehead, MD** on behalf of participating hospitals, **Stuart Gold, MD**, **Andrea Hayes-Jordan, MD**, and **Mahesh Sharma, MD**, all received awards in the Physician/Physician Practice Groups category.

**2020 UNC Diversity Awards:** Echo Meyer, PhD, and Team ADVANCE led by **Erin Malloy, MD**, received 2020 UNC Diversity Awards, which recognize the significant contributions of people and teams dedicated to making our University community a welcoming home to all.

**2020 UNC School of Medicine Well-Being Pilot Awards:** The Well-Being Pilot Awards sought proposals aimed at promoting the well-being of faculty, staff, and/or students in the SOM and medical trainees serving within the UNC Health system. **Terry Noah, PhD**, and **Suzanne Kennedy, PhD**, were the first team receiving an award, and **Alice Ammerman, DrPhD**, and **Thomas Keyserling, MD**, received the second award.

**2020 Uniting to Care & Cure Award:** Michael Kappelman, MD, MPH, received this prestigious award from the Crohn's and Colitis Foundation. This award recognizes members of the Inflammatory Bowel Disease professional community who go above and beyond to support the Foundation's mission to improve patient quality of life and find cures.

**2020 Young Investigator Grant:** Pengda Liu, PhD, received this prestigious award from the Breast Cancer Alliance to investigate a specific therapeutic target in basal-like breast cancer, an aggressive breast cancer type.

**2020-2021 Junior Investigator Intensive Awardee:** Joshua Niznik, PharmD, PhD, has been named a 2020-2021 Junior Investigator Intensive Awardee by the US Deprescribing Research Network. Awardees help advance research to optimize medication use among older adults.

**2020-2021 Research Fellows of the Lung Cancer Initiative of North Carolina:** Shetal Patel, MD, PhD, was among five recipients of the 2020-2021 Research Fellows Grant. The purpose of the Research Fellows program is to further the development of local lung cancer care and research programs across the state of NC.

**Alpha Omega Alpha Honor Medical Society Inductees:** Arielle Perez, Carolyn Quinsey, Christina Shenvi, Elizabeth Acquista, Ira Sloan, Kathy Meacham, Kim Nichols, Luigi Pascarella, Neva Howard, Stephen Riggs, are the SOM faculty inducted into the Alpha Omega Alpha honor medical society, a national organization that recognizes those in the medical profession that demonstrate exceptional leadership, service, research, teaching, and professionalism.

**American College of Cardiology Leadership Academy:** Matthew Cavender, MD, MPH, has been selected for the ACC Leadership Academy – a two-year program launched in 2015 to address leadership competencies and ensures the participants are highly qualified to lead in their respective organizations.

**American Gastroenterological Association's Distinguished Achievement Award in Basic Science:** R. Balfour Sartor, MD, received this award for accomplishments that have significantly contributed to the understanding of pathogenesis of inflammatory bowel diseases (IBD). Seminal observations throughout his career have led to the recognition that the microbiome is a key to IBD and other disorders.

**American Society of Clinical Oncology's Allen S. Lichter Visionary Leader Award:** Hyman Muss, MD, FASCO, received the 2020 Allen S. Lichter Visionary Leader Award for his career-long dedication to improving the care of older patients with cancer.



**C. Felix Harvey Award to Advance Institutional Priorities:** **Laura Klinger, PhD**, received the 2020 Felix award from the University of North Carolina at Chapel Hill for her projects aimed at helping employers support workers with autism and improving North Carolina residents' ability to test private well water. This award recognizes exemplary faculty who reflect the university's commitment to engagement and outreach.

**Carolyn Jewell "Steel Magnolia" Scholarship:** **Elisabeth Johnson, PhD, NP**, was selected as this year's recipient of the Carolyn Jewell "Steel Magnolia" Scholarship by the Addictions Nursing Certification Board. This award was given to honor Johnson's dedication and widely recognized efforts to support those who experience substance disorders.

**Chair of NIDCD Institute Board of Scientific Counselors:** **Paul Manis, PhD**, was selected by NIDCD to serve as the Chairman of the Board of Scientific Counselors beginning in Fall of 2019-2021. The Board evaluates the performance of NIDCD Intramural program investigators and laboratories. As part of his appointment as Chair of the NIDCD Board of Scientific Counselors, Manis will chair this panel which conducts a review of the NIDCD Intramural program on the NIH campus in Bethesda.

**Cohort of the National Academy of Distinguished Educators in Pediatrics:** **Julie Byerley, MD, MPH**, was selected as a member of the Inaugural Cohort of the National Academy of Distinguished Educators in Pediatrics (NADEP). NADEP recognize elite medical educators, foster exchange and dissemination of innovative ideas, and accelerates the development of junior and mid-career educators.

**Community Health Partnership Award:** **Meghan McCann** and **Laura Hanson, MD, MPH**, worked together to protect patients and staff in nursing homes and assisted-living communities early during the COVID-19 pandemic, and because of their efforts the Chatham County Board of Health awarded UNC Health its Community Health Partnership Award.

**Craver Medical Student Teaching Award:** **Luigi Pascarella, MD**, was chosen by the Academy of Educators as the recipient of the 2019-2020 Craver Medical Student Teaching Award. This award recognizes an outstanding teacher who inspires and changes the lives of medical students through their teaching.

**Election into the American Academy of Microbiology:** **Robert Bourret, PhD** and **Miriam Braunstein, PhD**, were part of the 2020 Academy Fellows inducted into the American Academy of Microbiology. Fellows of this honorific leadership group are elected annually through a highly selective peer-reviewed process based on their scientific achievements and original contributions that have advanced microbiology.

**ELSO Excellence in Life Support Award:** **Anthony Charles, MD, MPH**, Director of the UNC's ECMO Program, received the ELSO Excellence in Life Support Award which recognizes centers that demonstrate an exceptional commitment to evidence-based processes and quality measures, staff training and continuing education, patient satisfaction and ongoing clinical care.

**FCN Discovery Center of Distinction:** The UNC Allergy and Immunology Clinic was selected to become an FCN Discovery Center of Distinction, and with this new designation **Edwin Kim, MD, MS**, will help develop critical infrastructure to deliver optimal clinical care and leadership in the community for patients with food allergy.

**Fulbright Scholarship:** **Christine Kistler, MD, MASc**, was awarded a Fulbright Scholarship for "Improving Primary Care Clinicians' Communication Skills in Advance Care Planning for Patients with Dementia". Kistler will travel to Japan for 3 months of intensive research.

**Leonard Tow Humanism in Medicine Award:** **Luigi Pascarella, MD**, has been selected for Leonard Tow Humanism in Medicine Award presented by The Arnold P. Gold Foundation. This award recognizes those who demonstrate both clinical excellence and outstanding compassion in the delivery of care.

**Lung Cancer Initiative Outstanding Fellow Applicant:** **Shatel Patel, MD, PhD**, was the recipient of this year's Lung Cancer Initiative Outstanding Fellow Applicant for her research project, "Combination Strategies Targeting Myeloid Cells in Squamous Lung Cancer".

**Outstanding District Service Award:** **M. Kathryn Menard, MD, MPH**, received this award from the American College of Obstetricians and Gynecologists in recognition of her leadership and contributions she has made to District IV to advance women's healthcare.

**Photographic Society of America's Progress Award:** **Jack Griffith, PhD**, received the Progress in Photography Award from the Photographic Society of America for his work using photo-microscopy with the electron microscope to reveal details of DNA mechanics and organization.

**President of the American Association of Immunologists:** **Jenny Ting, PhD**, was selected as the 2020-2021 President of the American Association of Immunologists, an organization that has become the most prestigious association of immunologists in the world with nearly 8,000 scientists in 71 countries.

**President of the American Glaucoma Society:** **Donald Budenz, MD, MPH**, was named the 2020 President of the American Glaucoma Society in March. The mission of the organization is to maintain and improve the quality of patient care primarily through improvement, exchange and dissemination of scientific knowledge pertinent to glaucoma and related diseases.

**President of the American Society of Virology:** **Craig E. Cameron, PhD**, became the President of the American Society of Virology, a prestigious organization that promotes the exchange of information and stimulates discussion and collaboration among virologists.

**President of the Society for Pediatric Research:** **Stephanie Duggins Davis, MD**, is the society's new president for the 2020-2021 term. In her role she will work to strengthen the pediatric research community and focus on developing the next generation of pediatric investigators.

**President of the Society of Black Academic Surgeons:** **Andrea Hayes-Jordan, MD**, is the President-elect of the Society of Black Academic Surgeons. In her role she will advance the mission of the organization to improve health, advance science, and foster the careers of African American and other underrepresented minority surgeons.

**President-Elect of the U.S. Bone and Joint Initiative:** **Leigh Callahan, PhD**, was voted to be the President of the United States Bone and Joint Initiative, a U.S. National Action network of the Global Alliance for Musculoskeletal Health.

**Robert H. Heptinstall Lifetime Achievement Award:** **J. Charles Jennette, MD**, received this prestigious award from the Renal Pathology Society in February of 2020. This award recognizes his exemplary service, teaching and research activities focused on kidney disease.

**Secretary-Treasurer, President, of the American Thoracic Society:** **Patricia Rivera, MD, ATSF**, has been elected the secretary-treasurer of the American Thoracic Society and will serve as president of the organization in 2023.

**UNC Mentor Award for Lifetime Achievement:** **Adrienne Cox, PhD**, received this prestigious award in March of 2020. The award is given to those who have devoted a significant part of their academic careers to mentoring and helping students achieve their full potentials both during their training at UNC and beyond.

**UNC's Order of the Golden Fleece:** **Wesley Fowler, MD**, and **Myron Cohen, MD**, were both inducted into the Order of the Golden Fleece, which is UNC's oldest and most prestigious honor society.

**University Award for the Advancement of Women:** **Amelia Drake, MD, FACS**, was the 2020 faculty recipient of the University Award for the Advancement of Women. This award is given by the Offices of the Chancellor, Executive Vice Chancellor, and Provost, in collaboration with the Carolina Women's Center.

## ***School of Medicine Research Rankings***

### **NIH Rankings**

The FY2019 data from the Blue Ridge Institute for Medical Research was released in February, with the UNC School of Medicine ranked 17<sup>th</sup> in the country in total NIH funding and 6<sup>th</sup> among public universities. The total

dollar amount of FY19 from NIH was \$316,414,052, and six basic science departments ranked in the top 10, and twelve clinical departments ranked in the top 30 for NIH funding (the numbers in parentheses reflect the rank among public schools of medicine):

#### Basic Science Departments

Biochemistry and Biophysics, 5<sup>th</sup> (3<sup>rd</sup>)  
 Biomedical Engineering 3<sup>rd</sup> (1<sup>st</sup>)  
 Cell Biology and Physiology, 4<sup>th</sup> (3<sup>rd</sup>)  
 Genetics, 6<sup>th</sup> (1<sup>st</sup>)  
 Microbiology and Immunology, 3<sup>rd</sup> (2<sup>nd</sup>)  
 Pharmacology, 5<sup>th</sup> (4<sup>th</sup>)



#### Clinical Departments

Anesthesiology, 14<sup>th</sup> (7<sup>th</sup>)  
 Dermatology, 22<sup>nd</sup> (9<sup>th</sup>)  
 Emergency Medicine, 8<sup>th</sup> (4<sup>th</sup>)  
 Family Medicine, 6<sup>th</sup> (6<sup>th</sup>)  
 Medicine, 12<sup>th</sup> (4<sup>th</sup>)  
 Obstetrics and Gynecology, 3<sup>rd</sup> (2<sup>nd</sup>)  
 Otolaryngology/Head and Neck Surgery, 26<sup>th</sup> (11<sup>th</sup>)  
 Pathology and Laboratory Medicine, 18<sup>th</sup> (9<sup>th</sup>)  
 Pediatrics, 22<sup>nd</sup> (11<sup>th</sup>)  
 Physical Medicine and Rehabilitation, 16<sup>th</sup> (7<sup>th</sup>)  
 Psychiatry, 16<sup>th</sup> (7<sup>th</sup>)  
 Radiology (includes radiation oncology), 22<sup>nd</sup> (8<sup>th</sup>)

### US News Rankings

UNC ranks 33<sup>rd</sup> overall in the *U.S. News and World's* rankings of the “Best Global Universities” and 5<sup>th</sup> among “Top Public Schools”. The School of Medicine is still ranked #1 Best Medical Schools for Primary Care, and ranks 23<sup>rd</sup> for overall research.

Additionally, the UNC Medical Center in Chapel Hill is cited as the number two hospital in the state and in the Triangle according to the *U.S News and World Report's* annual “Best Hospitals” report,

and has been nationally ranked in three specialties. Furthermore, UNC Children’s was nationally ranked in seven pediatric specialties in the *US News “Best Children’s Hospitals 2020-2021”* report. To be ranked in a specialty, a facility must be rated among the top 50 hospitals in the nation for that specialty.



### ***Innovation and Commercialization in the School of Medicine***

The School of Medicine has seen impressive accomplishments in commercialization by faculty. In FY20, the School of Medicine reported 192 Startup Companies that brought in **\$416.0 million dollars** by the end of 2020. Overall all years, startup companies founded by School of Medicine faculty has raised **\$5.9 billion** dollars.

At the end of 2019, Pinnacle Hill, a research and development partnership between UNC and the Deerfield Management Company began funding proposals, and **Ben Philpot, PhD**, Department of Cell Biology and Physiology and co-Director of the Neuroscience Center, was the first SOM faculty to lead a partnership with Deerfield and Pinnacle Hill to advance his work towards a new therapeutic for Angelman Syndrome.

Additionally, so far in 2020, four SOM faculty have received new NIH STTR or SBIR awards from their startups to



further commercialize UNC IP: **Paul Dayton, PhD** (SBIR, Triangle Biotechnology), **Flavio Frohlich, PhD**, (SBIR, Pulvinar), **Haiyan Fu, PhD**, (STTR, NeuroGT), **Rahima Benhabbour, PhD**, (STTR, Anelleo).

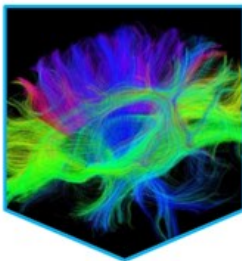
Below are some additional notable events that took place between February and July 2020 from commercial efforts of former and current faculty that were highlighted in Innovate Carolina's Newsletter:

- [\*\*Epizyme Announced that it had received accelerated FDA approval of TAZVERIK \(tazemetostat\) for the treatment of patients epithelioid sarcoma.\*\*](#) (Yi Zhang, PhD, formerly of Biochemistry and Biophysics)
- [\*\*NIH Phase II SBIR Grant Awarded to EpiCypher and UNC Physicians.\*\*](#) (Saira Sheikh, MD, Medicine and Nigel Key, MD, Medicine).
- [\*\*ViiV Healthcare, UNC-Chapel Hill announce five-year renewal of HIV-cure partnership\*\*](#) (Dave Margolis, MD, Medicine and J. Victor Garcia-Martinez, PhD, Medicine)
- [\*\*This coin-sized insulin patch could improve diabetes treatment\*\*](#) (Zhen Gu, PhD, formerly of Biomedical Engineering and John Buse, MD, PhD)
- [\*\*AskBio Enters Research Collaboration and Licensing Agreement with University of North Carolina for Angelman Syndrome\*\*](#) (Jude Samulski, PhD, Pharmacology, Mark Zylka, PhD, Cell Biology and Physiology, and Ben Philpot, PhD, Cell Biology and Physiology)
- [\*\*3D Printing for COVID-19: Face Shields, Masks, Safety Goggles, Swabs and Coalitions, Carbon Inc\*\*](#) (Joseph Desimone, Chemistry, Pharmacology)



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*Bridging the Basic and Clinical Sciences to Foster Collaborations that  
Translate into Next Generation Cures*



- \$500M+ in Research Funding
- #6 Public Medical School for NIH Funding
- All Basic Departments- Top 10 for NIH Funding
- 8 Clinical Departments - Top 25 for NIH Funding



- 1814 Full-Time Faculty
- 2 Nobel Prize Winners
- 17 National Academy Members
- 475 Graduate Students
- 417 Postdoctoral Scholars
- 844 Medical Students



- 40+ Core Facilities  
*World Class Facilities in Immunotherapy, Imaging, Structural Biology & Genomics*
- 57 Interdisciplinary Centers, Institutes & Programs
- 34 NIH Training Programs
- 265 Active US Patents
- 150+ Startup Companies

*As of January 2020*

***Thank you for everything you do for our research enterprise!***