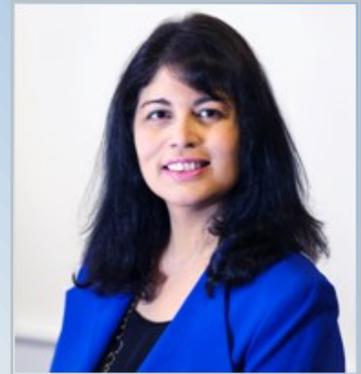


UNC School of Medicine Office of Research Bi-Annual Report Spring 2022

Message from the Vice Dean for Research

The last year has required some adjustments as the School of Medicine has worked towards a new normal while continuing to live with the COVID-19 pandemic. 2021 was also a year of action as we addressed new challenges that we faced. We resumed our operations by safely bringing our staff back to campus, employed much needed efforts to recognize and address issues surrounding diversity, equity, and inclusion, closely examined our infrastructure and space needs and the potential for some remote work for specific units. In response to some of these challenges, the School of Medicine initiated the Rising Star Program to Increase Faculty Diversity, and has communicated the need for mechanisms to better compensate and retain our workforce with campus leadership. I have been impressed by how our School has continued to advance our research missions while navigating this challenging landscape.



*Blossom Damania, PhD
Vice Dean for Research*

In Fiscal Year 2021 the total amount of research funding was \$583,976,865, an increase of \$46 million from Fiscal Year 2020. This increase included an additional \$14 million in NIH funding. These are incredibly impressive numbers which are a testament to the hard work of our researchers across the School. This year, we look to pursue new efforts to improve our community and scientific infrastructure that will bolster our research portfolio. Thank you for your continued commitment in advancing our research mission.

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

Audrea Caesar—UNC Health Chief Diversity, Equity and Inclusion Officer

Audrea Caesar, PhD, joined UNC Health on September 13, 2021 as the first Chief Diversity, Equity and Inclusion Officer for UNC Health. In this new role, she is responsible for managing existing Diversity, Equity, and Inclusion efforts that are already underway at UNC Health and expanding efforts to integrate with the UNC School of Medicine and across the healthcare system. Prior to taking this role, Caesar created and led the City of Raleigh’s first Office of Diversity, Equity and Inclusion, and served as an advisor to the Mayor and City Council on DEI issues. Caesar has significant experience helping organizations understand the social determinants of inequity, such as serving as Director of Community Outreach and Support for Union County’s Department of Health and Human Services, and founding the Union Health Equity Collaborative.



Shakira Henderson—Vice President Research Officer for UNC Health

Shakira Henderson, PhD, DNP, MPH is the Vice President Research Officer for UNC Health and the Clinical Research Integration Officer for UNC School of Medicine. In this role, Henderson works with the leadership of both UNC Health and the UNC School of Medicine to unite the research efforts across both entities with the goal of creating a system-wide research strategy that will incorporate basic, clinical, and translational research. Henderson joined UNC from Vidant Health where she served in various roles including Senior Systems Administrator for Research and Grants, and the Director of Nursing and Health Research. She was also a faculty member in the Chamberlain College of Nursing, and a research administrator and nurse scientist at Baptist Health in Miami, Florida.



Bryant Murphy—Senior Associate Dean for Leadership Development

Bryant Murphy, MD, MBA was named Senior Associate Dean for Leadership Development in October of 2020. In this role, he works to facilitate comprehensive and coordinated leadership development and training opportunities across the School of Medicine. Murphy joined the Department of Anesthesiology in 2012, and has had multiple leadership positions such as Division Chief for Specialty Anesthesia Care and Vice Chair for Clinical Operations. He has also served as President of the North Carolina Society of Anesthesiologists and on the North Carolina Medical Board.



Donita Robinson—Associate Dean for Graduate Education

Effective August 1, 2021, **Donita Robinson, PhD**, transitioned from Assistant Dean to Associate Dean for Graduate Education, a position charged with the leadership and oversight of the School of Medicine’s Biological and Biomedical Sciences Program and other programs that support PhD student professional development and diversity and inclusion efforts. Donita was named Assistant Dean for Graduate Education in July of 2020, and has been a big proponent of graduate education throughout her tenure at UNC since 2000. She serves as co-PI of the UNC PREP program and has been heavily involved in the BBSP program, recently serving as the BBSP Faculty Director. Robinson succeeds Jean Cook, PhD, who served in this role since 2013.



Michael Steiner—Associate Dean for Outreach Initiatives

Michael Steiner, MD, MPH, assumed a new role as Associate Dean for Outreach Initiatives. Steiner is tasked with the academic integration of UNC, Novant, New Hanover and South East Area Health Education Center (SEAHEC) in the southeastern part of the state, and leads the development of UNC Health Sciences at SEAHEC by supporting the training of health professionals and advancing partnerships on projects to improve health and wellbeing. Steiner will retain his position as Pediatrician in Chief for the N.C. Children’s Hospital.



Jennifer Wu—Vice Dean for Academic Affairs



Jennifer Wu, MD, MPH, was named Interim Vice Dean for Academic Affairs in February of 2021 and was appointed Vice Dean for Faculty Affairs as of January 1, 2022. Wu brings to this role exceptional leadership experience from her service as Senior Vice Chair and Associate Clinical Service Chief for Women’s Health in the Department of Obstetrics and Gynecology, and her service as the Department’s interim chair from July 2019 through April 2020. She is on the Medical Center Improvement Council and the Academic and Promotions for Full Professors committee. As Vice Dean for Faculty Affairs, Wu oversees the School of Medicine’s educational efforts, chairs the Education Leadership Committee as part of the Academic Council and leads the Office of Faculty Affairs and Leadership Development. She also participates on the Academic Advisory Council for the Novant-New Hanover Regional Medical Center-UNC partnership.

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

Arlene Davis—Director of the UNC Center for Bioethics

Starting July 1, 2021, **Arlene Davis, JD**, succeeded Eric Juengst, PhD, as the director of the UNC Center for Bioethics. Davis is Professor of Social Medicine, Director of the Clinical Ethics Service at UNC Hospitals, an attorney, and is also a member of the North Carolina State Bar. She is also a member of the UNC Academy of Educators and co-directs the Hospital Ethics Committee. Davis’ service, scholarship and teaching focuses on practical ethics in the clinical and research settings and ethics and healthcare law.



Maureen Kohi—Chair of the Department of Radiology



Maureen Kohi, MD, FSIR, FCIRSE, FAHA, assumed the role of Chair of the Department of Radiology on December 31, 2020. Prior to coming to UNC, Kohi served as Associate Professor and Chief of Vascular and Interventional Radiology at the University of California, San Francisco. Kohi’s clinical and research focus is women’s health and interventions, and she is a national leader in the field with many leadership roles. She is an Executive Council Member of the Society for Interventional Radiology, Development Division Chair of the Society of Interventional Radiology’s Annual Meeting, Associate Editor for the *Journal of Vascular and Interventional Radiology*, Chair of the Women in Interventional Radiology Governing Council, member of the Vascular Interventional Advances Physician Board, and serves as the President of the Western Angiographic and Interventional Society.

Matt Mauro—Interim Chair of the Department of Surgery

Matt Mauro, MD, FACR, FSIR, FAHA, began his position as Interim Chair of the Department of Surgery effective August 23, 2021. Mauro is currently the President of UNC Faculty Physicians and Senior Executive, Revenue Cycle for UNC Health, and previously served as Chair of the Department of Radiology from 2007 to 2019. Mauro holds professorships in both the Department of Radiology and the Department of Surgery, and his interests include interventional oncology, uterine artery embolization, the management



of vascular malformations, angioplasty and stenting, biliary drainage procedures, and stent grafts. In addition to his prestigious leadership positions within UNC, Mauro has held other appointments including President of the Society of Interventional Radiology, Chairman of the Scientific Program Committee of the Radiologic Society of North America, and has served on the Board of Governors and Trustees in the American Board of Radiology.

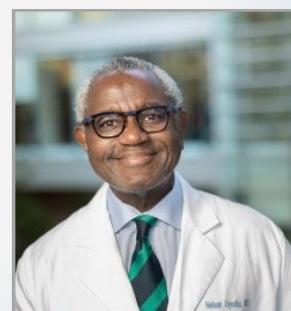


Matt Nielsen—Chair of the Department of Urology

After serving as Interim Chair of the Department since January of 2020, **Matt Nielsen, MD, MS, FACS** was named Chair on November 5, 2020. Nielsen has been part of the UNC faculty since 2009, and has had an impressive tenure. He is a clinical investigator at Kaiser Permanente Center for Health Research and chairs the Quality Improvement and Patient Safety committee for the American Urological Association. His leadership with the American Urological Association has led to the development of strategic priorities dedicated to advancing performance measurement, quality improvement education and implementation, and patient safety.

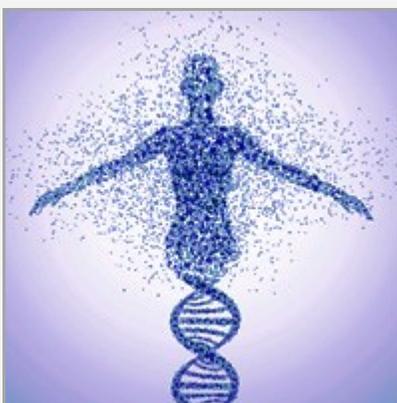
Nelson Oyesiku—Chair of the Department of Neurosurgery

Nelson Oyesiku, MD, PhD, FACS, joined the UNC faculty from Emory University to assume the role of Chair of the Department of Neurosurgery in March of 2021. Oyesiku is nationally recognized for his expertise in the surgical treatment and molecular biology of pituitary tumors. He has performed over 3,000 pituitary tumor operations, and his research has led to the discovery and development of a new imaging technique and potential targeted therapy for pituitary tumors. Oyesiku also serves as Editor-in-Chief of *Neurosurgery*, *Operative Neurosurgery* and *Neurosurgery Open* and has published more than 180 articles and book chapters. Oyesiku has held many leadership positions, including Chairman of the American Board of Neurological Surgery, President of the Congress of Neurological Surgeons, and currently serves as President of the International Society of Pituitary Surgeons and President of the World Federation of Neurological Surgeons.



Strategic Plan Spotlight—Program for Precision Medicine in Health Care

The Strategic Plan Spotlight features a single SOM Forward Together initiative in each newsletter.



The Program for Precision Medicine Health Care (PPMH) began in the Fall 2018 as part of the *Forward Together* Strategic Plan and under the Directorship of **Jonathan Berg, MD, PhD**, Professor in the Department of Genetics. PPMH's leadership team also includes Associate Director **Laura Milko, PhD**, Assistant Professor in the Department of Genetics, and a steering committee comprised of members representing multiple departments across the School of Medicine, representatives from UNC Health Care System, and members of the College of Arts and Sciences and the School of Public Health. The program aims to advance evidence-based precision medicine approaches by cultivating a program of clinical, educational, and research initiatives to create a roadmap for precision medicine at UNC.

There are currently three ongoing programs within PPMH that are already impacting the lives of North Carolinians. The *Precision Health Genetic Screen* offers a blood test to screen for genes with well-known implications for certain conditions in order to help doctors and patients receive the best possible care, while the *Age-Based Genomic Screening* initiative offers genomic screening of children for certain actionable conditions that appear in childhood. PPMH is part of the *Implementing Genomics in Practice (IGNITE)* projects funded by the NHGRI, which incorporates genomic information into the electronic medical record and provides clinical decision support for interventions and clinical advice. The various sites at different institutions collaborate to develop methods and projects to help the community understand how to use genomic information in patient care.

PPMH provides a number of educational resources that provide the fundamentals of precision medicine to the

community. There are a number of resources targeted towards undergraduate students, such as *EDGE Genomics* – a 2-year summer program supported by an R25 NIH grant for undergraduate students interested in careers in genomics, as well as those targeted for researchers, like the *Clinical Data Literacy Series: Electronic Health Data Basics Workshops*. This is a virtual workshop that introduces UNC researchers and clinicians to techniques for working with patient and clinical data. PPMH also convenes *quarterly mini-symposia* addressing themes in precision medicine research. The most recent mini-symposia was held on February 23, 2022 and the topic was “Precision Medicine Approaches to Addressing COVID-19”.

PPMH also partners with NC TraCS to provide pilot funding for projects that would generate evidence for implementation of precision medicine approaches in the UNC Health system and beyond. In the most recent round (February 2020), six investigators received pilot awards:

- **Claire Doerschuk, MD**, “*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**, “*Development of [18F]-labeled Amino Acids for Positron Emission Tomography (PET)*”
- **Timothy Vece, MD**, and **James Hagood, MD**, “*A Pilot Study of Precision Medicine for Children’s Interstitial Lung Disease (chILD)*”
- **Neeta Vora, MD**, “*Expanding the Utility of Non-Invasive Prenatal Genetic Testing*”

The Program for Precision Medicine in Health Care provides a home to researchers conducting, or who are interested in pursuing, work in the field of precision medicine. PPMH has grown into an invaluable resource to UNC and the North Carolina community. More information [can be found on their website](#) and any questions regarding the program can be sent to Jonathan Berg.

Office of Research and School of Medicine Highlights

Sharon Jones – Office of Research Business Service Coordinator

In March of 2021, Carol Herion retired after 12 years of work with both the Office of Research and the MD / PhD program. Shortly after her departure, **Sharon Jones, MS**, joined the team as Business Service Coordinator. Jones received her Masters of Business Administration from North Carolina Central University (NCCU) and joined UNC from NCCU where she was a student services specialist. Jones brings a wealth of knowledge in marketing, management, and administration to this role, and we are fortunate to have her as part of our team.



Kara Clissold- Office of Research Technologies Associate Director

On November 1, 2021, **Kara Clissold, MA** was brought onboard as the new Associate Director of the Office of Research Technologies. This position is part of the Office of Research team reporting to ORT Director **Chris Gregory, PhD**. Kara will help support and expand ORT efforts to provide resources and advocate for our core facilities. These efforts include organizing quarterly core director meetings and monthly CFAC meetings; serving as point of contact for core assistance with advertising, web development, and user surveys; aiding cores in the rate review process; and metrics collection and tracking to support core efficiency and sustainability. Kara is well versed in the functions and needs of core facilities at UNC, with six years of experience in the Histology Research Core Facility.

Rising Star Program to Increase Faculty Diversity

The School of Medicine **Rising Star Program to Increase Faculty Diversity** aims to increase diversity among faculty in the Basic Sciences. The program provides training to postdoctoral fellows from historically minoritized groups to help them excel during the faculty interview process. Postdocs who are admitted to the program will

spend two days at UNC, and will complete a job talk, chalk talk, and multiple one-on-one faculty interviews. They will also participate in workshops on the faculty environment and negotiating hiring packages. [More information about the program can be found here](#) and we are excited that the first round of applications were received on February 28, 2022.



SOM Representation at UNC Research Week

In both 2020 and 2021, faculty, staff, and students from the School of Medicine participated heavily in UNC Research Week. Although a breadth of disciplines was showcased in 2020, there was a strong emphasis on research to combat the COVID-19 pandemic across campus. Many School of Medicine researchers were featured when discussing UNC'S pandemic research, including **Antoine Baillard, PhD, OTR/L**, **Erica Brenner, MD**, **Erin Fraher, PhD, MPP**, **Jacquie Halladay, MD, MPH**, **Clare Harrop, PhD**, and **Melissa Miller, PhD**. Other faculty highlights from the 2020 Research Week include **Angie Smith, MD, MS**, receiving a Hettleman Prize, **Bryan Roth, PhD**, giving a keynote seminar to celebrate the PharmAlliance strategic partnership, a panel discussion about CRISPR research that included **Terry Magnuson, PhD**, and **Eric Juengst, PhD**. Recipients of the Jefferson-Pilot and James Woods awards, **Jimena Giudice, PhD**, **Zoe McElligott, PhD**, and **Jackie Patterson, MD, MPH**, presented their work at a symposium celebrating the awards, **Carmen Samuel-Hodge, PhD, RD**, received the Gillings Health Equity Faculty Research Award and **Lauren Brinkley-Rubinstein, PhD** presented in a session "Advancing Health Equity Solutions at UNC".

The 2021 UNC Research Week took place from November 8th – November 12th and members from the School of Medicine did a remarkable job demonstrating the breadth of the research performed, and importantly showing that despite the difficulties of the last two years *Research Perseveres*, which was this year's theme. The Office of Research sponsored the 2021 Art in Science Competition and displayed the winning images from the laboratories of **Dirk Dittmer, PhD**, **Doug Fitzpatrick, PhD**, and **Li Qian, PhD** in Bondurant Hall. The Office of Research and the Office of Research Technologies hosted a Core Facility Showcase that highlighted six School of Medicine cores: The Pathology Services Core, Histology Research Core Facility, the CGIBD Histology Core, Neuroscience Microscopy Core Facility, the Microscopy Services Laboratory, and the Hooker Imaging Core. ORT also created and showcased the first [Core Facility Showcase Video](#) featuring more than 20 SOM cores. Other School of Medicine faculty and staff featured during the 2021 Research Week were **Samantha Meltzer-Brody, MD, MPH**, **Jose Rodriguez-Romaguera, PhD**, and **Crystal Schiller, PhD**, who discussed the impact of the pandemic on stress and mental health, **Susan Sumner, PhD**, discussed undergraduate research opportunities with the Nutrition Research Institute, and the Jefferson-Pilot / James Woods award seminar was presented by the 2021-2022 recipients **Janelle Arthur, PhD**, **Pengda Liu, PhD**, and **Ray Tan, MD, MSHPM**. **Rahima Benhabbour, PhD**, was part of the Innovation Road Trip: From Science to Startup panel discussion and **Nat Moorman, PhD**, and colleagues discussed the new Rapidly

Emerging Antiviral Drug Development Initiative (READDI). **Stephen Hursting, PhD**, was present at a town hall at the Atrium Health Ballpark at Kannapolis to discuss the Nutrition Research Institute and **David Carroll, PhD**, discussed how NC TraCS can help connect basic and clinical scientists. **Alice Ammerman, PhD**, accepted the Department of Nutrition's Departmental Distinguished Alumni Award and demonstrated a recipe from her Med-South diet, and **Emily Olsson, CCRP**, discussed engagement and development opportunities offered by NC TraCS.

9th Annual Oliver Smithies Nobel Laureate Symposium

With support from the North Carolina Biotechnology Center, the School of Medicine held the 9th Annual Oliver Smithies Nobel Laureate Symposium virtually on Friday, September 11, 2020. The symposium hosted [William Moerner, PhD, recipient of the 2014 Nobel Prize in Chemistry](#), and featured a panel discussion entitled “*Being an Effective Expert when Expertise is Refused*” at 1:00pm, and the keynote lecture “*The Story of Light and Single Molecules: From Early FM Spectroscopy in Solids, to Super-Resolution Nanoscopy in Cells and Beyond*” at 3:30pm. Despite holding this event virtually, it was a resounding success and we grateful to everyone who could attend.

Burroughs Wellcome Fund Visit

On November 12, 2020, the School of Medicine Office of Research and the Office of Corporate and Foundation Relations hosted a virtual seminar to introduce the community to **Louis Muglia, MD, PhD**, President and CEO of the Burroughs Wellcome Fund. Muglia discussed his vision for the Burroughs Wellcome Fund along with funding opportunities and research programs that may benefit UNC faculty. After the seminar, Muglia met with School of Medicine leadership and representatives from specific areas of interest, including pathogenesis and infectious disease, environment and neuroscience and reproductive science. This was a very productive event and a great opportunity for our researchers to learn more about how the Burroughs Wellcome Fund can support their work. For a recording of the seminar, [please visit the website linked here](#).

School of Medicine Construction Project Updates

Medical Education Building / Roper Hall Updates

When the UNC School of Medicine's new Medical Education Building is completed in 2023, it will be named in honor of Dr. Bill Roper, former dean of the UNC School of Medicine and CEO of UNC Health. Roper's visionary leadership helped move the UNC School of Medicine closer to its goal of becoming the nation's top public school of medicine and established UNC Health as one of the nation's leading academic health systems, significantly expanding the reach of the system across the state. The honor was announced at a celebration in September 2021, featuring leaders from across UNC Health, the UNC School of Medicine and the University of North Carolina.



In 2021, the structural steel for the building was completed, concrete slab poured, installation of underground electrical and plumbing occurred, and other interior structural work took place. In 2022, the focus will be on installing the building façade, dry-in, and build out of the interior floors.

Updates from the Office of Graduate Education (OGE)

The mission of the OGE is to support the development of future biomedical science leaders. OGE promotes innovative recruitment and training, stimulates purposeful career development, removes barriers to success, and fosters a collaborative, inclusive research community. To accomplish these broad goals, the OGE runs many programs to support the research training community in the School of Medicine. Some highlights from 2021:

Current BBSP class.

Over the course of the Fall semester, our 94 first-year students were highly engaged; research rotations and classes were largely in person and went smoothly. On November 1, Bryan Rogers, our 95th BBSP student, died unexpectedly but peacefully. The BBSP community mourned this tragic loss and rallied around Bryan's family with support. The fall semester concluded with a Memorial Walk in Bryan's honor on the Bolin Creek Trail.

BBSP admissions

We received 1673 completed applications for the next class that will matriculate in August of 2022. Our faculty involvement continues to increase as 103 faculty participated in admission committees this year, which breaks last year's record. We also added a team of diversity advocates, which included 5 current students and 4 OGE directors to review all of our underrepresented applicants and advocate for them in these committees. The OGE admissions team will host interviews virtually in January and February 2022 and continue to build on the successful format from last year. We plan to add an in-person element to admissions this year in March for those who receive an offer to UNC. A post offer, in-person campus visit will be a great opportunity to recruit our top candidates to UNC.

OGE training programs to promote diversity in the biomedical workforce

Our NIH-funded [IMSD \(Initiative for Maximizing Student Development\)](#) program is a community of over 130 PhD graduate students largely from ethnic and socioeconomic backgrounds traditionally under-represented in the sciences. In 2021, 17 IMSD students completed their PhDs! We launched PEERS, a robust peer mentor program with training and leadership opportunities, to support students in summer research programs [SOLAR](#) and [SURE](#) (funded by NSF). [UNC PREP](#), our NIH-funded post-baccalaureate research program to prepare students from groups traditionally under-represented in the sciences for competitive graduate programs, sent 9 scholars to top biomedical PhD programs across the USA, and welcomed a new group of 9 scholars. We provided Culturally Aware Mentoring training for School of Medicine training faculty in partnership with the Center for the Improvement of Mentored Experiences in Research ([CIMER](#)). We held the first "[NC HBCU Day](#)" to recruit students from minority-serving institutions in the region and Puerto Rico to our summer (SOLAR, SURE), post-baccalaureate (PREP), and BBSP graduate programs.

Career programming

The [Training Initiatives in Biomedical & Biological Sciences \(TIBBS\)](#) program serves the career exploration and professional development needs of the SOM graduate students. TIBBS supports several Career Cohorts for graduate students and postdocs to explore and prepare for various career paths, as well as Affinity Groups to support holistic student development across a number of social identities. In addition, TIBBS placed 12 ImPACT interns in internships at local businesses and non-profits in 2021. These internships helped trainees to develop essential career skills and experience the different cultures of other employment sectors.

OGE staff changes

After 8 years of exemplary leadership, **Jean Cook, PhD**, stepped down as Associate Dean for Graduate Education, and **Donita Robinson, PhD**, took on that role. **Jeff Steinbach** became Director of BBSP Admissions after the departure of the former director **Josh Hall, PhD**. **Rob Nicholas, PhD**, was appointed as Faculty Director of BBSP Admissions, and **Stephanie Gupton, PhD**, was appointed as Assistant Faculty Director of Graduate and Training Programs. Kaitlin Blakemore joined OGE as the BBSP Student Services manager, and Morgan Church joined as Administrative Assistant.

OGE scholarship

OGE Directors actively collect and analyze data on graduate education and disseminate it through peer-reviewed and other publications. We now have an [Innovations & Impact webpage](#) to track this scholarship.

SOM Dean's Office Research Award Recipients

Jefferson-Pilot Fellowships in Academic Medicine

The Jefferson-Pilot Fellowships in Academic Medicine are given to talented junior faculty across all disciplines in the School of Medicine, and both the 2020-2021, and 2021-2022 recipients represent the highest caliber of research conducted by SOM junior faculty.

Jimena Giudice, PhD, and **Zoe McElligott, PhD** were the 2020-2021 recipients of the awards and presented



their work virtually on October 21, 2020. Giudice joined the Department of Cell Biology and Physiology in 2016, and her work focuses on the physiological functions of alternative splicing and the molecular mechanisms behind splicing regulation. Giudice is also a member of the McAllister Heart Institute, and an additional focus of her research is on how misregulation in alternative splicing, membrane dynamics, and cellular trafficking impact heart and skeletal muscles. Giudice's highly innovative work has made her a leader of the field in cell biology.

McElligott joined UNC in 2009 as a postdoctoral researcher in the Department of Chemistry, and became an assistant professor in the Bowles Center for Alcohol Studies in the Department of Psychiatry in 2013. She also has a secondary appointment in the Department of Pharmacology. McElligott is known world-wide for her state-of-the art neuroscience research in the area of addiction, and more specifically in research on brain circuits and plasticity that govern drug abuse, alcohol usage, and anxiety, and her efforts to understand neural circuitry behind opioid-seeking behavior. [Read the official announcement here.](#)



The 2021-2022 recipients were **Janelle Arthur, PhD**, and **Pengda Liu, PhD** and they provided a virtual seminar on November 10, 2021 during University Research Week. Arthur joined the faculty of the Department of Microbiology and Immunology in 2016, and her internationally recognized research program is focused on how features of microbes impact colonization, inflammatory bowel diseases and other inflammation-associated diseases with the hopes of developing therapeutic tools to manipulate the intestinal microbiota and alleviate human digestive diseases. Liu joined the faculty in the Department of

Biochemistry and Biophysics in 2016 and is also a member of the UNC Lineberger Comprehensive Cancer Center along with Arthur. Liu's research interest is in cancer signaling, metabolism, and epigenetics with the hopes of developing new targeted therapies. Liu's remarkable research has led to many high impact findings and impressive publications. [More about the 2020-2021 recipients can be found here.](#)

James W. Woods Junior Faculty Award

The James W. Woods Junior Faculty Award is given to extremely talented members of the School of Medicine clinical faculty. Recipients of the awards present at the same seminar as the Jefferson-Pilot Award recipients in a joint celebration of our school's outstanding junior faculty.

Jackie Knupp Patterson, MD, MPH was the 2020-2021 James W. Woods Junior Faculty Award recipient. Patterson is an Assistant Professor in the Division of Neonatal-Perinatal Medicine in the Department of Pediatrics. Patterson joined the faculty in 2017, and is an expert in technology-based interventions to improve perinatal mortality in low and lower-middle income countries. Patterson is developing a mobile health application to educate providers about newborn resuscitation, and is also an investigator for the Limiting Adverse Birth Outcomes in Resource-Limited Settings (LABOR) study. [Read more about Patterson and her work here.](#)



The 2021-2022 recipient was **Hung-Jui (Ray) Tan, MD, MSHPM**, Assistant Professor and Director of the Urologic Oncology Fellowship Program in the Department of Urology. Tan is interested in the quality and safety of cancer care delivery, and specifically aims to develop new tools to help clinicians and patients make better decisions about surgery for cancer. In fact, a prototype for such a decision support will be tested in the North Carolina community. More about Tan's receipt of the James Woods award can be found [in the article linked here.](#)

2020-21 Yang Family Biomedical Scholars



[Three outstanding researchers were recipients of the 5th Annual Yang Family Biomedical Scholars Award:](#)

Yueh Lee, MD, PhD, Jiandong Liu, PhD, and Angela Smith, MD. These awards were made possible through donations from Yuanqing Yang, Chairman and CEO of Lenovo with additional support from Mr. To Hing Wu – associate to Mr. Yang. These awards are given to the brightest and most promising recently tenured faculty who have made outstanding scholarly

contributions and received national recognition for their research. The newest class of Scholars certainly exemplifies these criteria.

Yueh Lee is an Associate Professor in the Department of Radiology and member of the Lineberger Comprehensive Cancer Center, and his research is translating new imaging devices for diagnosis and treatment of both benign and malignant diseases. He has been responsible for many first-in-human device trials such as the development of imaging devices for breast tomosynthesis and lung tomosynthesis using a carbon nanotube x-ray source. Jiandong Liu is an Associate Professor in the Department of Pathology and Laboratory Medicine and member of the McAllister Heart Institute. Liu uses cell biology, molecular, and genetic techniques to study cardiac development and function and aims to develop new therapies for heart diseases using the zebrafish model. Angela Smith is an Associate Professor and Vice Chair for Academic Affairs in the Department of Urology, Director of Urologic Oncology, and member of the Lineberger Comprehensive Cancer Center. Smith is known for her patient-centered outcomes research, and she has led key studies of patients and caregivers to illuminate the need for improvement of care based on high bladder cancer surgery patient hospital readmission and barriers to patient and caregiver communication and education.

2020-2021 SOM Office of Research Award Recipients

Emerging Challenges in Biomedical Research

The Emerging Challenges in Biomedical Research (ECBR) awards provide support for innovative, early-stage research relevant to external strategic funding priorities (e.g. NIH). In 2021, the Office of Research partnered with the North Carolina Translational and Clinical Sciences Institute (NC TraCS) and the UNC Center for Health Equity Research (CHER) to provide pilot funding for projects that broadly address strategies for reducing health disparities and promoting equity for historically marginalized populations. Two teams received 2021 ECBR Awards:

- **Joseph Piven, MD**, Department of Psychiatry: *“Identifying Barriers to Participation in Prospective Autism Infant Sibling Research for Black Families: A Quantitative and Qualitative Approach”*
- **Evan Raff, MD**, Department of Medicine, and **Lauren Raff, MD**, Department of Surgery: *“Reducing Health Inequities in the Rapid Response System for Hospitalized Patients that Self-Identify their Primary Language as Spanish”*

Forward Together Initiative to Support Clinician Scientists

As part of the Forward Together Strategic Plan, the School of Medicine Initiative to Support Clinician Scientists aims to bolster the engagement of junior clinician scientists in research. The Office of Research allocated funds to clinical departments with externally funded K awardees to help alleviate the clinical coverage burden to allow clinical departments to expand their support for early career physician scientists. In fiscal year 2022 we provided \$372,500 to departments with K awardees. The following departments received awards: Department of Psychiatry, Department of Obstetrics & Gynecology, Department of Pediatrics, the Department of Medicine, Department of Pathology and Laboratory Medicine, Department of Urology, and Department of Otolaryngology.

Bridge and Boost Awards

Two of OoR's most popular funding mechanisms are the Bridge and Boost Awards. 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 grant (or similar) that has been reviewed favorably but needs additional revisions and preliminary data in order to be funded on resubmission. Both of these mechanisms are wildly successful, as there is a greater than 90% success rate for renewals for proposals provided Bridge funds, which leads to a return on investment (ROI) of 35:1. 57% of resubmissions that received Boost funds have been funded, and the return on investment is 17:1. [More information can be found here.](#)

NeuroSpark Research Awards

The goal of the NeuroSpark Research Awards, funded by the SOM *Forward Together* Strategic Plan, is to foster collaborations in the neurosciences and support the collection of pilot data that can be used for to apply for grants from external funding agencies. In 2021 four teams received pilot grants:

- **Jason Stein, PhD**, Department of Genetics, and **Rose Mary Xavier, PhD**, School of Nursing: "*CLOZIPS: Mechanisms of Clozapine Response Using iPSC-derived Organoids*"
- **Morika Williams, PhD**, Department of Pathology and Laboratory Medicine, and **Matt Laughon, MD, MPH**, Department of Pediatrics, **Guorong Wu, PhD**, Department of Psychiatry, and **Michael O'Shea, MD, MPH**, Department of Pediatrics: "*Advancing a Computational Tool to Measure Facial Grimacing Associated with Spontaneous Pain*"
- **Adam Hantman, PhD**, Department of Cell Biology and Physiology, **Ian Yen-Yu Shih, PhD**, Department of Neurology: "*Measuring Brain-wide Responses to Neural Circuit Perturbations During Movement*"
- **Jose Rodriguez-Romaguera, PhD**, Department of Psychiatry, **Nicolas Pegard, PhD**, Professor of Applied Physical Sciences, **Rebecca Grzadzinski, PhD**, Department of Psychiatry, **Anthony Zannas, MD, PhD**, Department of Psychiatry "*Tracking Arousal Responses with BOP (Biometric Ocular Photometer)*"

[Read more about the awards here.](#)

School of Medicine Faculty Recipients of Prestigious Awards

Below is a comprehensive list of the awards received by SOM faculty and featured in Vital Signs from August 2020 to December 2021. For a complete list of grants received by our faculty, please look for our bi-weekly "Latest Awards from SOM Faculty" in Vital Signs.

2020 Beckman Young Investigator Award: **Andrea Giovannucci, PhD**, was one of ten scientists who received a 2020 Beckman Young Investigator Award from the Arnold and Mabel Beckman Foundation. This prestigious award is given to the most promising young faculty members in the early stages of their academic careers.

<https://bit.ly/3pZvDKi>

2020 Clinical Educator of the Year: **Adaora Adimora, MD, MPH**, received this honor from the HIV Medicine Association with its 2020 Clinical Educator Award. Adimora received this award in recognition of her extraordinary contribution to advancing clinical education, with a focus on disseminating her research on the drivers of HIV-related racial disparities. <https://unc.live/3pTPNFI>

2020 H. Fleming Fuller Award: **Keisha Gibson, MD**, and **Benny Joyner, MD, MPH**, were the co-honorees of the 2020 H. Fleming Fuller Award. This award is awarded to the physician who best embodies H. Fleming Fuller's lifelong commitment to patient care, teaching and community. <https://bit.ly/3rWy2aN>

2020 Investigator in the Pathogenesis of Infectious Disease Award: **Brian Conlon, PhD**, was one of the nine recipients of the Investigators in the Pathogenesis of Infectious Disease Awards provided by the Burroughs Wellcome Fund in October of 2020. These prestigious awards are provided to accomplished early-career investigators to study pathogenesis and understand the interplay between human and microbial biology.

<https://bit.ly/3pVVO4F>

2020 Philip and Ruth Hettleman Prize: **Angela Smith, MD, MS**, was one of the recipients of the 2020 Phillip and Ruth Hettleman Prizes for Artistic and Scholarly Achievement. This award recognizes the achievements of outstanding junior faculty, and Smith received this prestigious award for her groundbreaking and innovative research on healthcare for patients with invasive bladder cancer. <https://bit.ly/3hQnaXI>

2020 Rita Allen Pain Scholar: **Sarah Linnstaedt, PhD**, was part of the 2020 class of Award in Pain Scholars from the Rita Allen Foundation. This recognition celebrates four early-career leaders in the biomedical sciences whose research holds exceptional promise for revealing new pathways to understand and treat chronic pain. <https://bit.ly/2JV0CrQ>

2021 Distinguished Teaching Award Winner: **Kenya McNeal-Trice, MD**, received the prestigious 2021 Distinguished Teaching Award for Post-Baccalaureate Instruction for her exemplary excellence in inspirational teaching of undergraduate students. <https://bit.ly/3bcUtT2>

2021 Expertscape-recognized Faculty: Expertscape assesses and ranks the expertise and contributions of physicians and medical institutions worldwide. Multiple School of Medicine faculty were recognized in 2021: **Ada Adimora, MD, MPH; Wesley Burks, MD; Cynthia Bulik, PhD, FAED; John Buse, MD, PhD; Lisa Carey, MD, FASOC; Myron Cohen, MD; Blossom Damania, PhD; Stephanie Davis, MD; Evan Dellon, MD, MPH; Dirk Dittmer, PhD; Joseph Eron, MD; William Fischer, MD; Hendreé Jones, PhD; Matthew Judson, PhD; Nigel Mackman, PhD; Samantha Meltzer-Brody, MD, MPH; Matthew Milowsky, MD; Ben Philpot, PhD; Bryan Roth, MD, PhD; Nicholas Shaheen, MD; Jude Samulski, PhD, Joseph Tucker, MD, PhD; Mark Zylka, PhD** <https://bit.ly/3z2W6P8>

2021 Neurobiology of Brain Disorders Award: **Greg Scherrer, PhD**, was one of three recipients of the 2021 Neurobiology of Brain Disorders Awards from the McKnight Endowment Fund for Neuroscience. The award encourages collaboration between basic and clinical neuroscience to improve human health, and Scherrer will use his award to study the neural basis of pain. <https://bit.ly/38l4bkf>

2021 North Carolina's Community Star: **Gayle Thomas, MD**, was named the 2021 community star by the National Organization of the State Offices of Rural Health for her work as Medical Director of the NCDHHS Office of Rural Health's NC Farmworker Health Program. <https://bit.ly/3wIAn2B>

2021-2022 James Woods Award Recipient: **Hung-Jui (Ray) Tan, MD**, received the 2021-2022 James W. Woods Junior Faculty Award which is given to promising young members of the School of Medicine's clinical faculty. <https://bit.ly/3KJHruz>

2021-2022 Jefferson-Pilot Fellowships in Academic Medicine: **Janelle Arthur, PhD**, and **Pengda Liu, PhD**, received the 2021-2022 Jefferson-Pilot Fellowships in Academic Medicine, which are given to talented junior faculty in the School of Medicine. <https://bit.ly/3q1WHvf>

2022 American Pediatric Society Members: **Misty Good, MD, MS, Matthew Laughon, MD, MPH, and Michael Steiner, MD, MPH** are part of the new class of American Pediatric Society members for 2022. Membership is given to individuals who are deemed by their peers as child health leaders, teachers, scholars, policymakers and/or clinicians. <https://bit.ly/3i72omY>

2022 Gold Cystoscope Award: **Angela Smith, MD, MS**, won the 2022 Cystoscope Award from the American Urological Association for her remarkable bladder cancer outcomes research and leadership in her field. This annual award is only given to one person internationally. <https://bit.ly/36jlp3b>

ACS/Pfizer International Surgical Volunteerism Award: **Brent Senior, MD, FACS, FARS**, received this prestigious award from the American College of Surgeons / Pfizer for his decades of work providing otolaryngologic surgery and services to local surgeons in Southeast Asia. <https://bit.ly/3wElaKI>

American Pediatric Society Membership: **James Hagood, MD**, was named among 55 child-health leaders across the United States as one of the American Pediatric Society's newest members for 2021. Members of this society are those who have distinguished themselves as academic leaders, teachers and researchers and whose work have received national and international recognition. <https://bit.ly/2XjgozS>

American Psychiatric Association's 2022 Health Services Research Award: **Bradley Gaynes, MD, MPH**, was the recipient of the American Psychiatric Association's 2022 Health Services Research Award, which recognizes research accomplishments in mental health. <https://bit.ly/37IUW5n>

American Society for Biochemistry and Molecular Biology Fellows: **Suzanne Barbour, PhD**, and **Henrik Dohlman, PhD**, were both selected to be members of ASBMB's inaugural class of fellows in recognition of their sustained efforts to advance the molecular life sciences through research, education, mentorship, commitment to diversity and service to the society and scientific community. <https://bit.ly/3LHwI4a>

American Society for Biochemistry and Molecular Biology Young Investigator Award: **Greg Wang, PhD**, received the 2022 ASBMB Young Investigator Award, which recognizes outstanding contributions in research to the field of biochemistry and molecular biology, as well as contribution to the scientific community. <https://bit.ly/3MPwHqk>

ASM Award for Research and Leadership in Clinical Microbiology: **Melissa Miller, PhD**, was recognized by the American Society for Microbiology with the ASM Award for Research and Leadership in Clinical Microbiology. This award recognizes an outstanding scientist/clinical microbiologist with distinguished research achievements and a record of innovation and advancement of clinical microbiology. <https://bit.ly/2XiJ100>

Association of American Medical Colleges Board of Directors: **Catherine Coe, MD**, was named to the AAMC Board of Directors for 2021-2022. Coe will hold the junior faculty seat on the board. <https://bit.ly/3w3ZHen>

Awards for Excellence in Basic Science Mentoring: **Blossom Damania, PhD**, **Amy Gladfelter, PhD**, **Brian Kuhlman, PhD**, **Karen Mohlke, PhD**, **Natasha Snider, PhD**, and **Mark Zylka, PhD**, received Awards for Excellence in Basic Science Mentoring from the SOM Office of Graduate Education. These BBSP-affiliated faculty embody innovative and student-centered training, and an excellence in mentoring graduate students. <https://bit.ly/3bgN70Y>

Chair of AUA Science and Quality Council: **Matthew Nielsen, MD, MS, FACS**, was selected as the Chair of the American Urological Association's Science and Quality Council. In this role Nielsen will lead the Council and provide strategic oversight to shape the agenda of the AUA. <https://bit.ly/38aNAm0>

Chair of the Radiological Society of North America Board of Directors: **Matthew Mauro, MD, FACR, FSIR, FAHA**, received this new leadership position in December of 2020. In this new role, Maura will lead the Board of Directors in advancing patient care through educational programs, supporting scientific discovery through the Research and Education Foundation and providing the premier forum for scientific dissemination. <https://bit.ly/38Iq6P9>

Charles van der Horst Humanitarian Award: **David Wohl, MD**, received the first Charles van der Horst Humanitarian Award from the national AIDS Clinical Trials Group. This award named after the late UNC faculty member is given to the member who exemplifies the ideals that informed Charles' life as a social justice advocate who dedicated his career to promoting universal access to HIV research, treatment and care. <https://unc.live/2LwNqKg>

Chief of Education and Academic Affairs for ACOG **AnnaMarie Connolly, MD, FACOG**, was elected to this prestigious position of the American College of Obstetrics and Gynecologists. In this role, Connolly will ensure the quality of educational programs that enhance professional development of ACOG members. <https://bit.ly/3IFU1kg>

Congress of Neurological Surgeons' Distinguished Service Award: **Nelson Oyesiku, MD, PhD**, received this distinguished award that is one of the highest honors in neurosurgery in recognition of his accomplishments and leadership within the society and profession. <https://bit.ly/3GfNohR>

Defense Meritorious Service Medal: **David Gerber, MD**, was awarded the Defense Meritorious Service Medal by the United States Secretary of Defense in August of 2020. Gerber received this award for his meritorious service as General and Transplant Surgeon in the Department of Surgery at Uniformed Services University from March 2009 to April 2020. <https://bit.ly/3oowAeV>

Diversity Speaker Award: **J. Victor Garcia, PhD**, was the 2022 recipient of the International Society for Antiviral Research Diversity Speaker Award, which honors a remarkable scientist of any group historically underrepresented in the society. <https://bit.ly/3wlcYJd>

Established Investigator Award: **Li Qian, PhD**, and **Jiandong Liu, PhD**, each received prestigious Established Investigator Awards from the American Heart Association for their separate research on how to repair damaged heart tissue. These awards are meant to support investigators whose careers are in a rapid growth phase, have unusual promise and show established records of accomplishments. <https://bit.ly/2MCi5WR>

Governor's Award for Excellence in Public Service: **Melissa Miller, PhD**, received the Governor's Award for Excellence in Public Service, the highest honor a state employee can receive for service to the state and the people of North Carolina. <https://bit.ly/3tWmV38>

Hastings Center Fellows: **Jill Fisher, PhD**, and **Rebecca Walker, PhD**, were amongst the 24 new Hastings Center fellows. This is a group of more than 200 individuals of outstanding accomplishment whose work has informed scholarship and understanding of ethical issues, health and healthcare, science, and technology. <https://bit.ly/3wIMVRb>

ICIS-Pfizer Award for Excellence in Interferon and Cytokine Research: **Jenny Ting, PhD**, received the 2021 ICIS-Pfizer Award in recognition of her outstanding discoveries in the fields of immunology, molecular biology, genomics, and microbiology. <https://bit.ly/3ac3f57>

IEEE Carl Hellmuth Hertz Ultrasonics Award: **Paul Dayton, PhD**, won the 2020 IEEE Ultrasonics Carl Hellmuth Hertz Award for his contributions to the study of microbubbles and phase change contrast agents in ultrasound imaging and therapeutics. This international award is presented to a single recipient each year by the IEEE Ultrasonics, Ferroelectrics, and Frequency Control Society. <https://unc.live/35f6h3g>

Illinois State University Distinguished Alumni Award: **Jenny Ting, PhD**, received the Illinois State University Distinguished Alumni Award for her outstanding work in immunology. The award recognizes Illinois State University alumni who have exceptional achievements in one's chosen field. <https://bit.ly/3l8FbeV>

Cell Mentor Community of Scholars Inspiring Black Scientists : The Community of Scholars at the Cell Mentor website formed a list of inspiring Black scientists which includes 11 SOM faculty and postdoctoral researchers, and four UNC alumni. The following SOM faculty members were featured in this list: **Suzanne, Barbour, PhD**, **Craig Cameron, PhD**, **Folami Ideraabdullah, PhD**, **Marian Cecelia Johnson-Thompson, PhD**, **Genevieve Neal-Perry, MD, PhD**, and **Tessa-Jonne Ropp, PhD**. <https://bit.ly/2LBI7ZG>

National Academy of Sciences: **Ralph Baric, PhD**, is one of the four UNC faculty elected to the National Academy of Sciences in recognition of his distinguished and continuing original research contributions. <https://bit.ly/3Gfc4qj>

NIAMS Advisory Council: **Leigh Callahan, PhD**, was appointed to the NIAMS Advisory Council for a 3-Year Term beginning in 2021. She will assist the Council regarding issues of research, science policy, and provide secondary review for specific grant applications. <https://bit.ly/3LF9aNh>

O. Max Gardner Award: **Ralph Baric, PhD**, received the 2021 Oliver Max Gardner Award which recognizes faculty who have made the greatest contribution to the welfare of the human race. Baric received this award for his ground-breaking COVID-19 work. <https://unc.live/3akl4PH>

Sherman Emerging Leader Prize: **Edward Barnes, MD, PhD**, received the 2021 Sherman Prizes and Sherman Emerging Leader Prize which recognize his excellence in the field of Crohn's disease and ulcerative colitis. <https://unc.live/3wKpVBa>

Simon Ramo Founders Award: **Frances Ligler, PhD**, received the Simon Ramo Founders Award from the National Academy of Engineering (NAE) in October of 2020. This award is given to an outstanding NAE member who has upheld the ideals and principles of the NAE through professional, educational, and personal achievement and accomplishment. <https://bit.ly/3s0xaSe>

Tar Heel of the Month: **David Wohl, MD**, was named the News and Observer's November Tar Heel of the Month, which honors those who have made significant contributions to North Carolina and the region. Wohl received this recognition for his years of infectious disease work and his role in helping North Carolina health professionals and residents respond to the COVID-19 pandemic. <https://bit.ly/39akXBU>

Thomas Jefferson Award: **Adaora Adimora, MD, PhD**, received the 2020 Thomas Jefferson Award. Adimora was nominated by UNC faculty members for this prestigious award that recognizes a faculty member who through personal influence and performance of teaching, writing and scholarship best exemplifies the ideals and objectives of Thomas Jefferson. <https://bit.ly/35jush1>

UNC Broyhill Research Award in Child Neurology: **Senyene Hunter, MD, PhD**, and **Diana Cejas, MD, MPH**, are the 2020 recipients of the Broyhill Research Awards in Child Neurology. These annual awards support novel studies of the developing nervous system or the impact of diseases on the developing nervous system. <https://bit.ly/3hNct2O>

Yang Family Biomedical Scholars: **Yueh Lee, MD, PhD**, **Jiandong Liu, PhD**, and **Angela Smith, MD**, were the recipients of the 5th annual Yang Family Biomedical Scholars Awards. The award recognizes faculty that have made significantly contributions to their field while also receiving national recognition for their research. <https://bit.ly/3NEKSnX>

School of Medicine Research Rankings

NIH Rankings

In FY20, the School of Medicine continued to fare well in the Blue Ridge Institute for Medical Research rankings. Our School ranked 17th in the country in total NIH dollars and 5th among peer public institutions. Importantly, the total dollar amount increased by more than \$29 million from FY19! All six basic science departments rank in the top 10 for NIH funding, and twelve clinical departments rank in the top 30! To see more about the FY20 NIH rankings, [visit the Vital Signs article linked here](#).



Highly Cited Research

The School of Medicine has had many faculty members listed on the 2021 list of highly cited researchers. The faculty who were named are: **Wesley Burks** (Pediatrics), **John Buse** (Medicine), **Aravinda de Silva** (Microbiology and Immunology), **Gianpietro Dotti** (Microbiology and Immunology), **Katherine Hoadley** (Genetics), **Xi-Ping Huang** (Pharmacology), **Terry Kenakin** (Pharmacology), **Helen Lazear** (Microbiology and Immunology), **Diana Perkins** (Psychiatry), **Chuck Perou** (Genetics), **Barry Popkin** (Nutrition), **Bryan Roth** (Pharmacology), **Barbara Savoldo** (Microbiology and Immunology), **Sidney Smith** (Medicine), **Patrick Sullivan** (Psychiatry), **Jenny Ting** (Genetics), and **David Weber** (Medicine).



Innovation and Commercialization in the School of Medicine

School of Medicine investigators have continued to expand entrepreneurial activities and commercialization. Our researchers have been responsible for over 200 startup companies and over \$7.9 Billion dollars startup funding, which includes of \$174 Million dollars in SBIR/STTR grants to date.

Although 2020 and 2021 had many outstanding innovation and commercialization events, perhaps one of the most publicized and exciting happenings was the announcement of [Bayer AG's acquisition of Asklepios Biopharmaceutical, Inc](#) – the adeno-associated virus gene therapy company started by **Jude Samulski, PhD**, for \$4 Billion dollars in order to complement Bayer's growing interest in gene therapy. Below are some additional commercialization and innovation highlights featured in Innovate Carolina's Newsletter:

- In 2020, Asklepios Biopharmaceutical, Inc, started by **Jude Samulski, PhD**, partnered with a School of Medicine team led by **Mark Zylka, PhD**, and **Ben Philpot, PhD**, [for the development and commercialization of a gene therapy for Angelman syndrome](#) – a rare disorder that causes symptoms such as speech and motor deficits and epilepsy.
- In 2021, **Devin Hubbard, PhD**, [launched a technology company Aerem Innovations](#) to design solutions for health care and commercial applications. The company is responsible for AerFrame – a device designed to improve the fit of surgical masks.
- [410 Medical received FDA clearance for its LifeFlow device](#) – a rapid infuser that can deliver one liter of fluid in five minutes for treatment of patients needing urgent fluid delivery (**Mark Piehl, MD, MPH**).
- [GeneVentiv Therapeutics licenses technology for gene therapy for hemophilia](#) – this would offer a cure for all types of hemophilia patients with or without inhibitors to their missing clotting factors (**Chengwen Li, PhD**).
- [Reveal Genomics born to develop innovative diagnostic tests in oncology](#) – this new company is developing new and innovative tests of high complexity with easy-to-interpret results, and will initially focus on advanced or metastatic breast cancer.



Thank you for everything you do for our research enterprise!