

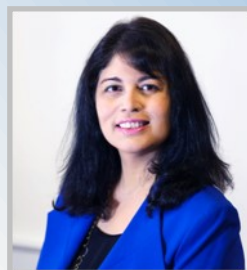
SOM Office of Research Newsletter

May 2018

OFFICE OF RESEARCH NEWSLETTER 2017-2018 HIGHLIGHTS

Message from the Vice Dean for Research

The School of Medicine (SOM) launched a new strategic planning process to assess needs and investments for the next 5 years in the areas of research, education, faculty development, and diversity and inclusion. The Strategic Plan provides a great opportunity to continue to grow stronger and maintain the prominence of our School. The SOM expects to make significant investments over the next 5 years to implement the strategic goals. Input from a faculty survey and stakeholder meetings have helped to identify priorities that will be further developed over the next several months in thematic working groups. Thank you all for your feedback and we look forward to further discussions.



SOM Researcher Appreciation Day—March 22, 2018

The SOM is very appreciative of the efforts of our faculty researchers and their technical staff that make UNC such a fantastic environment to do research. As a small token of recognition, the Offices of Research and Faculty Affairs & Leadership Development hosted a Researcher Appreciation Day on March 22, 2018 on the ground floor of MBRB. More than 140 attendees enjoyed refreshments and complimentary chair massages, short introductory sessions on meditation, and mind/body connections. A variety of gift certificates from local merchants were offered as door prizes. This event also highlighted the SOM Wellness Initiative and its resources. We hope to host another event next year to complement similar events that recognize the contributions of our physicians, graduate students and post docs.

OoR News

T32 Data Repository

The Office of Research is building a repository of biosketches, other support and trainee numbers from faculty who serve as mentors on NIH training grants. We are using a Qualtrix survey to collect the trainee numbers, biosketches and other support documents and make the data centrally available from our website. We will be sending an email request during the Spring 2018 semester to all faculty currently listed as a mentor on at least one UNC T32. This request will go out once a year, except for the other support collection, which will occur twice a year. This effort will substantially reduce the number of requests for this information throughout the year. In addition, T32 Administrators will be able to collect this information centrally rather than sending out individual requests. We hope this repository will make putting together T32 competitive renewals and new applications easier for all involved.

Research Investigator Database

In an effort to facilitate connections between basic and clinical researchers, the OoR is building a faculty database searchable by research interests. A brief survey was sent out in early April and the resource will be available soon on our website.

OoR Team

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Vice Dean for Research

Dr. Robert Duronio,
Associate Dean,
Research

Dr Jennifer Brennan,
Director,
Office of Research

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Dr. David Peden,
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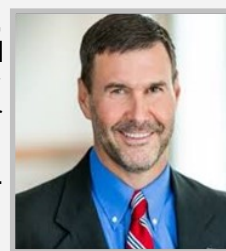
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New Appointments in the Dean's Office



Katie Eimers

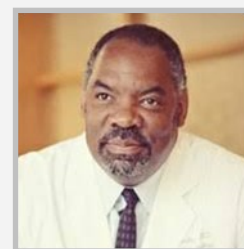
In 2017 the Dean's Office added some new positions. **Katie Eimers, MSEd**, is the new Associate Dean for Administration and works closely with **Michael Sledge, CPA**, the new CFO for the SOM and the UNC Faculty Physicians. They both intersect with Patsy Oliver, the Associate Dean for Finance & Business Operations, who has a wealth of experience with SOM operations. As Associate Dean for Administration, Katie oversees all administrative practices at the SOM including the SOM Offices of Human Resources, Information Technology and Space Planning, reporting to Executive Dean Wesley Burks. This position is an extension of her work as Senior Advisor to Executive Dean Burks, a position she has held since 2015. In the role of



Michael Sledge

CFO, Michael is responsible for financial oversight of the SOM and the Faculty Practice's education, research and clinical care missions. He reports directly to Executive Dean Burks and also works closely with Matt Mauro, MD, UNC Faculty Practice CEO and John Lewis, UNC Health Care's CFO. Michael has 25 years of financial management and leadership experience. Prior to coming to UNC, he served as CFO of the Duke Clinical Research and Translational Medicine Institutes.

Paul Godley, MD, PhD, MPP, became the inaugural Vice Dean for Diversity and Inclusion in February 2017. He is a Rush S. Dickson Distinguished Professor in the Division of Hematology/Oncology in the SOM Department of Medicine, Adjunct Professor of Epidemiology in the UNC Gillings School of Global Public Health, member of the UNC Lineberger Comprehensive Cancer Center, and a Senior Fellow at the UNC Sheps Center for Health Services Research. As Vice Dean for Diversity and Inclusion, Dr. Godley leads the newly created Office of Inclusive Excellence.



Paul Godley

New SOM Chairs and Directors

Department of Genetics—Fernando Pardo Manuel de Villena



Fernando Pardo Manuel

Fernando Pardo Manuel de Villena, PhD, was appointed Chair of the Department of Genetics on March 1, 2017, after serving as Interim Chair since July of 2016. Since joining the Genetics faculty in 2001, he has held several leadership roles. Since 2009 he has lead the program in systems genetics based on the Collaborative Cross at UNC. Prior to being named Interim Chair in 2016, he had served four years as Associate Chair for Research. As Chair, Dr. Pardo Manuel de Villena will continue his work of overseeing the department's research enterprise which includes multiple dedicated research centers, while also coordinating the educational programs aimed at training the next generation of scientists. An international leader in the field of genetics, Dr. Pardo Manuel de Villena has served as director of the Genetics Society of America and in the Secretariat of the International Mammalian Genome Society. He was elected a Fellow of the American Association for the Advancement of Science in 2011. He was named an UNC SOM Oliver Smith-

ies Investigator in 2015.

Department of Family Medicine—Cristen Page

In April 2017 **Cristen P. Page, MD, MPH**, was named the William B. Aycock Distinguished Professor and Chair of the Department of Family Medicine after serving as Interim Chair from April 2016-March 2017. A recognized innovator, clinician and educator, Dr. Page will continue to lead the department through a time of great growth and change while contributing to UNC's prominence as the #1 ranked medical school for primary care by US News and World Report. Dr. Page was instrumental in the extensive renovation and redesign of the care model at the UNC Family Medicine Center, which celebrated its grand re-opening in the summer of 2016. She has also developed innovative training programs for the next generation of family medicine physicians, including the Family Medicine Rural and Underserved Track in partnership with Piedmont Health Services, and the FIRST Scholars program, a UNC School of Medicine Initiative designed to accelerate and enhance the training of family physicians to serve our state's underserved populations. Since 2011, Dr. Page has directed the UNC Family Medicine Residency Program which is ranked 2nd in the country.



Cristen Page

Department of Pediatrics—Stephanie Davis



Stephanie Davis

Stephanie Davis, MD, has been appointed Chair of the Department of Pediatrics at the UNC School of Medicine and Physician in Chief of UNC Children's Hospital effective July 23, 2018. This move represents a return home for Dr. Davis, a North Carolina native, UNC graduate, and member of the UNC School of Medicine faculty from 1999 – 2011. She served as Division Chief of Pediatric Pulmonology from 2009 – 2011. In 2011, she left UNC for Indiana University where she has held several leadership roles, including her most recent appointments as Vice Chair for Clinical Affairs in the Department of Pediatrics, Division Chief for Pediatric Pulmonology, Allergy, and Sleep Medicine, and Director of Ambulatory Services at the Riley Children's Hospital, part of the Indiana University Medical Center. Dr. Davis' clinical specialty is pediatric pulmonology, with a particular focus on cystic fibrosis, primary ciliary dyskinesia and the impact of preterm birth on lung disease. A recognized leader in pediatric pulmonology, Davis has led International guideline development for the testing of lung function in young children. She has also served as Associate Editor of the journal *Pediatric Pulmonology* since 2013 and is active in multiple professional societies, including the American Thoracic Society, where she serves as Chair of the Pediatrics Assembly, and the American Board of Pediatrics, where she serves as a member of the Board of Directors.

Department of Physical Medicine & Rehabilitation—Joshua Alexander

Joshua Alexander, MD, was named the Chair of the Department of Physical Medicine and Rehabilitation. Dr. Alexander received his MD from Temple University in 1990 and did a combined Residency in Pediatrics and Physical Medicine & Rehabilitation from Baylor College of Medicine from 1990-95. He is an Associate Professor in PM&R, Medical Director for the UNC Center for Rehabilitation Care, Director of the Spina Bifida Clinic, Director of the UNC Cerebral Palsy Clinic, Director of the Pediatric Rehabilitation Program in NC Children's Hospital and Director of the TelAbility telehealth program. His areas of interest include: rehabilitation/care of children with disabilities, cerebral palsy, spina bifida, brain injury, spasticity management, telerehabilitation and transition/self-management.



Joshua Alexander

Lineberger Comprehensive Cancer Center—H. Shelton Earp



Shelley Earp

Shelley Earp, MD was named Director of the UNC Lineberger Comprehensive Cancer Center in March 2018 after serving as Interim Director since June 2017, a role he accepted after Ned Sharpless, MD, left UNC to become the Director of the National Cancer Institute. Earp has held leadership roles on the UNC Lineberger faculty for more than 40 years, including being the LCCC's Director from 1997- 2014. He will remain as Director of UNC Cancer Care, which coordinates cancer care and clinical research across SOM, UNC, and UNC Health Care System. In addition to his administrative work, Earp maintains an active NIH and foundation-funded laboratory effort exploring receptor kinase signaling in cancer cells and in the body's immune response to malignancy. He has co-led the NCI-funded UNC Breast Cancer SPORE (Specialized Program of Research Excellence) since 1992 and the UNC Lineberger-North Carolina Central University partnership to explore minority disparities in cancer outcomes.

Computational Medicine Program—Tim Elston & Charles Perou

In January 2018, the School of Medicine launched a new Computational Medicine Program (CMP), which aims to channel UNC's strength in computational biology, basic sciences and clinical research towards the goal of making significant advances in clinical care for patients. Co-directors of the new program are **Timothy Elston, PhD**, Professor of Pharmacology and Director of the Curriculum in Bioinformatics and Computational Biology, and **Charles M. Perou, PhD**, the May Goldman Shaw Distinguished Professor of Molecular Oncology at the UNC Lineberger Comprehensive Cancer Center and Professor in the Departments of Genetics and Pathology & Laboratory Medicine.



Tim Elston

Chuck Perou

Computational Medicine, a strategic area for the SOM, dovetails with strong support for Precision Medicine initiatives and forming better connections with basic scientists and clinicians. Recruitment efforts for up to five new faculty to join the program will start in the summer of 2018. The five-year goal for the program is to build up to approximately 30 members, consisting of existing UNC faculty and new hires. New offices and lab space designed specifically for the program are currently under construction in the Mary Ellen Jones Building. Move-in is tentatively scheduled for the first quarter of 2019.

Elston and Perou note that work in computational medicine has already been underway at UNC for many years. A recent well-known example of computational medicine at UNC is Lineberger's partnership with IBM Watson Health to accelerate DNA sequence analysis and inform personalized treatment options for patients. This work was featured on CBS's *60 Minutes* in October 2016. "We're going to use existing teams, we're going to build new teams, and we're going to continue to collect vast amounts of data and bring data analysts, methods developers, clinical researchers and computational scientists all together so that we can speed up discovery and predictive model building. We've got the tools, we've got the data, and we've got many of the people, we just need a few more. I very much expect our program to hit the ground running, in large part because of the preparedness of UNC in general," according to Perou.

New Chair for the SOM Conflict of Interest Committee—Alan Hinderliter

After 15 years of service, Colin Hall, MD, retired as Co-Chair of the SOM Conflict of Interest Committee (SOM COIC) in December 2017. **Alan Hinderliter, MD**, Associate Professor of Medicine, took over as Co-Chair of the SOM COIC in December 2017, joining Jennifer Brennan, PhD, Director of the SOM Office of Research and Co-Chair. The SOM COIC is comprised of SOM faculty investigators from both the basic science and clinical arenas and personnel from the SOM Office of Research and the UNC Compliance Office. The COIC is charged with reviewing COI submissions from UNC faculty, trainees and staff.



Alan Hinderliter

Dr. Hinderliter came to UNC in 1988 as an Assistant Professor in Medicine following his cardiology fellowship. His principal clinical interests are hypertension and echocardiography. He was fundamental in establishing a multidisciplinary Hypertension Clinic at UNC and serves as the director of the UNC Hospitals echocardiography laboratory. He collaborates with investigators in the Kidney Center studying the connection between kidney disease and cardiovascular disease and evaluating cardiovascular risk for transplant patients. Since 2010 he has

published over 50 articles related to his subspecialty field. In addition to his clinical, research and teaching duties at UNC, Dr. Hinderliter serves in a position of national importance as a member of the ACC/AHA.

SOM and NCTraCS Host Precision Medicine Symposium

Researchers at the University of North Carolina at Chapel Hill and other medical institutions are trying to operationalize a goal for Precision Medicine – to develop ways to target the right treatments to the right patient at the right time. To help formulate a plan for Precision Medicine, the SOM and NCTraCS organized a symposium on October 31, 2017, titled *Defining Precision Medicine at UNC: Charting the Path to Better Health Care*. The symposium brought together approximately 75 scientists, clinicians, and administrators, from more than 32 different departments across UNC-Chapel Hill. Vice Chancellor for Research Terry Magnuson and SOM Vice Dean for Research Blossom Damania provided opening remarks for the symposium and Sara Imhof, Sr. Director of Precision Health for the NC Biotechnology Center, provided perspective on regional collaborative efforts. An opening plenary session highlighted four exemplar precision medicine projects – on topics including asthma, sepsis, genomic screening, and drug efficacy -- and provided some information about potential funding. Working groups were convened to identify key strengths and resources and provide strategic recommendations related to 1) *Informatics, Environment and Health*; 2) *Health Care System and Informatics*; 3) *Genomics and Personalized Medicine*; and 4) *Drug Efficacy Determinants*. The SOM has identified Precision Medicine as a strategic focus.

OVCR Unveils new UNC Creativity Hubs

The OVCR has identified six strategic priorities reflecting UNC strengths: Brain, Cancer, Data Science, Environment, Opportunity, Well-Being & Culture, and Precision Health & Society. To foster multidisciplinary research in these areas, the Creativity Hubs Pilot Award was created and 4 teams featuring SOM faculty were selected as pre-proposal finalists. Teams utilized the \$5,000 award to fully develop work and sustainability plans and two teams will be awarded up to \$250,000/yr over a 2-year period. The preproposal teams include:

- Advancing Data Science to Generate Insights for Treatment of Chronic Diseases

Team: Roger Akers, John Buse, Tim Carey, Stephen Cole, Michael Emch, Sandra Greene, Michael Hudgens,

Michele Jonsson Funk, Alex Keil, Michael Kosorok, Ashok Krishnamurthy, Peter Leese, Alex Tropsha, and Til Stürmer

- Chemical Biology of the Epigenome Initiative

Team: **Ian Davis**, **Robert Duronio**, Stephen Frye, Lindsey James, Dmitri Kireev, Pengda Liu, **Gregory Matera**, Shaun McCullough, **Daniel McKay**, Samantha Pattenden, Ken Pearce, **John Sondek**, **Brian Strahl**, and Marcey Waters

- UNC Exposome Hub

Team: Stan Ahalt, Sarav Arunachalam, **Arlene Chung**, Lawrence Engel, Stephanie Engel, Barbara Entwisle, Elizabeth Frankenberg, Michel Gagné, Greg Gangi, Amelia Gibson, Kathleen Gray, Leslie Hicks, Ralph House, **Ilona Jaspers**, Jeffrey Johnson, Ashok Krishnamurthy, Matthew Lockett, Kun Lu, Gary Marchionini, Javed Mostafa, Shahriar Nirjon, **David Peden**, Cor Rademaker, Arcot Rajasekar, Matthew Redinbo, Lea Shanley, Sergei Sheiko, Melissa Troester, **Cyrus Vaziri**, and Marcey Waters

- Heterogeneity in Obesity

Team: Christy Avery, Anna Bardone-Cone, Silvana Barros, **Ethan Basch**, **Vicki Bautch**, Diane Berry, **John Buse**, **Ian Carroll**, Kimon Divaris, Elizabeth Frankenberg, **John E. French**, Rebecca Fry, **Penny Gordon-Larsen**, Annie Green Howard, **Stephen Hursting**, Michael Kosorok, Craig Lee, Jennifer Leeman, Leslie Lytle, **Sriram Machineni**, **Katie Meyer**, Kari North, Sally Stearns, **Susan Sumner**, Deborah Tate, and **Steve Zeisel**.

The “Heterogeneity in Obesity” project was selected for one of the 2 pilot awards. Congratulations!

2017 Office of Research Awards

TTSA

The SOM Office of Research sponsors the annual **Translational Team Science Award (TTSA)** in partnership with NC TraCS. This award is aimed at capitalizing on the ‘culture of collaboration’ at UNC to foster new synergistic interdisciplinary teams of basic science and clinical investigators. TTSA Phase I Feasibility grants provide a 12-month period to begin to fully engage team members in the development of a competitive continuation proposal for TTSA Phase II. The expectation is that these awards will provide the planning time and initial funds to support early stage *de novo* research teams that would otherwise not be possible.

In 2017, the OoR funded two TTSA Phase I awards:

- Kristalyn Gallagher, MD (Surgery) and Xian Chen, PhD (Biochemistry & Biophysics)
Proteogenomic discovery of patient-specific, phenotypic markers for early diagnosis of invasive lobular carcinoma.
- Timothy Gershon, MD (Neurology) and Kirk Wilhelmsen, MD (Genetics)
Analyzing clonal diversity to improve risk stratification and therapy for medulloblastoma.

Two Phase I teams were awarded Phase II awards:

- Rich Davis, MD (Ophthalmology), Matthew Hirsch, PhD (Ophthalmology), and Brian Gilger, DVM
Prevention of Cornea Graft Rejection using AAV Gene Therapy.
- Wesley Burks, MD (Pediatrics), Fernando Pardo-Manuel de Villena, PhD (Genetics), Michael Kulis, PhD (Pediatrics), and Martin Ferris, PhD (Genetics)
Development and genetic characterization of a translational model of peanut allergy.

ECBR

A second pilot award mechanism funded by the OoR is the **Emerging Challenges in Biomedical Research (ECBR)**. The intent of the award is to provide support for innovative, early stage research relevant to NIH priorities. The focus of the 2017 round of ECBRs was Alzheimer’s Disease and the following three teams received awards:

- Rick Meeker, PhD (Neurology) and Todd Cohen, PhD (Neurology)
Inflammation, Aging and Alzheimer’s Disease Vulnerability.
- Mohanish Deshmukh, PhD (Cell Biology & Physiology) and Todd Cohen, PhD (Neurology)
Strategies from the Healthy Brain for Alzheimer’s Disease: Focus on MiR-29.
- Aravid Asokan, PhD (Genetics) and Juan Song, PhD (Pharmacology)
Aquaporin gene therapy for Alzheimer’s Disease.

Bridge Funding

The SOM Bridge Funding program provides support for productive investigators that experience lapses in funding for R01 renewals. This effective program had a 90% success rate since 2007. Ten awards were given to faculty in 8 departments in 2017 totaling \$435,000.

This spring, the OoR initiated a parallel program (the “Boost” awards) to increase the chances of funding for a new NIH R01 grant that has been reviewed favorably but needs additional revisions and preliminary data in order to be funded on resubmission. Five Boost awards were provided to investigators in 4 departments totaling \$125,000.

SOM Faculty Awards and Recognition

2017-18 SOM Smithies Scholars—Jen Jen Yeh & Brian Strahl

The SOM announced the newest Smithies Investigators in January 2018, an annual award to honor senior faculty members who have made significant research contributions and achieved international recognition for their work. The SOM selected **Jen Jen Yeh, MD**, Associate Professor and Vice Chair of Research for the Departments of Surgery and Pharmacology, and **Brian Strahl, PhD**, Professor and Vice Chair of the Department of Biochemistry & Biophysics. The award was established in honor of the research achievements of UNC 2007 Nobel Prize Winner Oliver Smithies, DPhil, the Weatherspoon Eminent Distinguished Professor in the Department of Pathology and Laboratory Medicine. The Smithies Investigators receive \$75,000 for research over a five-year term, become members of the Oliver Smithies Society, and presented highlights of their research accomplishments at a special seminar.



Jen Jen Yeh

Dr. Yeh was recruited to the UNC School of Medicine in 2005 and has been one of the most successful surgeon-scientists at UNC. She has an active surgical oncology practice focused on endocrine and pancreatic cancers and serves as Vice Chair for Research for the Department of Surgery. Her research lab focuses on identifying and studying novel therapeutic targets for the treatment of colorectal and pancreatic cancer. Recently her group identified new subtypes for pancreatic cancer, research that was published in *Nature Genetics*. Using her surgical expertise, she also initiated a large Patient-Derived Xenograft Program with a major emphasis on the establishment of both primary and metastatic pancreatic tumors in order to use this platform for therapeutic and biomarker evaluation. She most recently led the UNC Pancreas Specialized Program of Research Excellence (SPORE) submission and is a co-investigator on many NIH grants focused on topics as diverse as biostatistics and microfluidics. Her work has resulted in three patents, and she is well-recognized in her field of surgical oncology. She has received multiple prestigious awards, including an American Surgical Foundation Research Fellowship, the Clinical Investigator Award from the Society of Surgical Oncology, and she was inducted into the American Society for Clinical Investigation, an honor society for physician-researchers.

Dr. Strahl is a leading researcher in his field and the faculty director of the UNC High-Throughput Peptide Synthesis and Array Facility. He started his lab in the Department of Biochemistry & Biophysics at UNC in 2001, where he now serves as Vice Chair. His lab is at the forefront of understanding how histones and their covalent modifications regulate chromatin structure and function, with a particular focus on how chromatin impacts gene regulation. His lab is also engaged in a high-throughput proteomics project involving histone peptide arrays to decipher how histone modifications -- and the histone codes they generate -- regulate the recruitment of chromatin-associated proteins that govern the diverse functions associated with DNA. In addition to mentoring a large group of students, postdocs, and research staff, he also co-founded UNC start-up company EpiCypher, which was selected as one of the two best start-ups by the US Congress in 2016. He is routinely invited to speak at universities for seminars, to attend major meetings and is a standing member on an NIH study section. He has received numerous awards and honors, including the Philip & Ruth Hettleman Prize, an NIH Eureka Award, and selection as a PEW Scholar.



Brian Strahl

Reuters Highly Cited Researchers

The annual list of Highly Cited Researchers from Thomson Reuters recognizes the impact of leading researchers around the world across 21 fields in the sciences and social science. The more than 3,000 researchers highlighted in the 2017 list represent the top 1 percent of cited authors in their respective research category.

This includes 11 faculty members from the UNC School of Medicine: Wesley Burks [Pediatrics], John Buse [Medicine], Edward Miao [Microbiology & Immunology], Karen Mohlke [Genetics], Diana Perkins [Psychiatry], Charles Perou [Genetics], Bryan Roth [Pharmacology], Sidney Smith [Medicine], Garret Stuber [Psychiatry], Jenny Ting [Genetics] and Ralph Baric [2nd appointment-Microbiology & Immunology].

Faculty Awards Received in 2017

Nancy Allbritton, MD, PhD, Professor and Chair of Biomedical Engineering and Professor of Chemistry, was honored as the 2017 UNC Chapel Hill Inventor of the Year.

<http://www.bme.unc.edu/nancy-allbritton-honored-as-2017-unc-chapel-hill-inventor-of-the-year/>

Mara Buchbinder, PhD, Associate Professor of Social Medicine received the 2017 Hettelman Prize for Artistic and Scholarly Achievement by Young Faculty.

<http://news.unchealthcare.org/news/2017/september/two-school-of-medicine-professors-earn-unc-hettelman-prizes>

Mauricio Castillo, MD, Professor of Radiology selected as one of two recipients of the American Society of Neuroradiology (ASNR)'s 2018 Gold Medal, given annually to distinguished neuroradiologists in recognition of outstanding service to the subspecialty.

<http://news.unchealthcare.org/som-vital-signs/2018/jan-11/castillo-named-2018-asnr-gold-medal-recipient>

Giselle Corbie-Smith, MD, MSc, Professor of Medicine and Social Medicine was elected President of the Society of General Internal Medicine.

<http://news.unchealthcare.org/som-vital-signs/2017/march-30/corbie-smith-elected-president-of-the-society-of-general-internal-medicine>

Blossom Damania, PhD, Professor of Microbiology & Immunology and Vice Dean for Research was elected as a Fellow of the American Association for the Advancement of Science (AAAS).

<http://news.unchealthcare.org/news/2017/november/unc-school-of-medicine-professors-elected-as-aaas-fellows>

Claire Dees, MD, Professor of Medicine [Heme/Onc] is one of the country's top 27 breast oncologists according to *Forbes* magazine.

<http://news.unchealthcare.org/som-vital-signs/2017/dec-7/forbes-names-dees-as-a-top-breast-cancer-expert-in-the-u-s>

H. Shelton Earp, MD, Professor of Medicine and Director of the Lineberger Comprehensive Cancer Center, was awarded the Hyman L. Battle Distinguished Cancer Research Award by the UNC School of Medicine.

<https://healthtalk.unchealthcare.org/earp-ting-recognized-for-career-achievements-in-cancer-research/>

Cam Enarson, MD, MBA, has been honored with the Liaison Committee on Medical Education (LCME) Distinguished Service Award.

<http://news.unchealthcare.org/som-vital-signs/2017/nov-9/enarson-receives-lcme-distinguished-service-award>

Joseph Eron, MD, Professor of Medicine (Infectious Diseases) was elected Vice Chair of the AIDS Clinical Trials Group (ACTG), the largest network of research sites in the world dedicated to finding a cure for HIV and the virus's opportunistic infections.

<http://news.unchealthcare.org/som-vital-signs/2017/july-6/eron-named-vice-chair-of-largest-nih-hiv-research-network>

Jim Evans, MD, PhD, Professor of Genetics, is Editor-in-Chief of the journal *Genetics in Medicine*, which ranked 10 out of 166 titles in the Genetics & Heredity category of journals and is the top-ranked of genetics journals that has a primarily clinical focus.

<http://news.unchealthcare.org/news/2017/june/journal-edited-by-unc-researcher-reaches-record-high-impact-factor>

Ronald J. Falk, MD, FASN, Professor and Chair of the Department of Medicine, has received the distinguished John P. Peters Award from the American Society of Nephrology (ASN) for his instrumental role in launching the ASN Foundation for Kidney Research and the Kidney Health Initiative.

<http://news.unchealthcare.org/som-vital-signs/2017/nov-30/ronald-j-falk-md-received-the-distinguished-john-p-peters-award-from-the-american-society-of-nephrology>

David Fleischman, MD, Assistant Professor of Ophthalmology, and a multidisciplinary team of colleagues was honored with the 2017 Young Clinician Scientist Award from the American Glaucoma Society.

<http://news.unchealthcare.org/som-vital-signs/2017/march-23/american-glaucoma-society-selects-dr-david-fleischman-and-multidisciplinary-team-for-the-2017-young-clinician-scientist-award>

Jennifer Flythe, MD, Assistant Professor of Medicine (Nephrology) selected as the 2017 James W. Woods Junior Faculty Award winner.

<http://news.unchealthcare.org/news/2018/january/flythe-earns-woods-junior-faculty-award>

Susan Girdler, PhD, Professor of Psychiatry and Psychology was honored as one of four recipients of UNC's University Award for the Advancement of Women.

<http://news.unchealthcare.org/som-vital-signs/2017/march-9/girdler-honored-with-university-award-for-the-advancement-of-women>

Zhen Gu, PhD, Professor of Biomedical Engineering, was named as a finalist in the US Department of State's 2017 APEC Science Prize for Innovation, Research and Education (ASPIRE) competition.

<http://news.unchealthcare.org/news/2017/june/biomedical-engineer-named-as-runner-up-in-u-s-state-department-research-education-award>

Joanne Jordan, MD, Professor of Medicine (Rheumatology, Allergy & Immunology) and Executive Associate Dean for Faculty Affairs & Leadership Development, was recognized by the AMA's Women Physicians Section as the recipient of the 2017 "Inspirational Physician" Award, which showcases the accomplishments of women physicians, and highlights advocacy needs related to professional concerns of women physicians and health issues affecting women patients.

http://news.unchealthcare.org/news/topics/awards?b_start:int=20

Melina Kibbe, MD, Professor and Chair of Surgery was honored with the prestigious 2017 Rodman L. Sheen and Thomas G. Sheen Award at the Annual Meeting of the NJ Chapter of the American College of Surgeons for her work advancing the study and science of medicine.

<http://news.unchealthcare.org/som-vital-signs/2017/dec-7/kibbe-receives-2017-dr-rodman-e-and-thomas-g-sheen-award>

M. Sue Kirkman, MD, Professor of Medicine and Medical Director of the UNC Diabetes Care Center's Clinical Trials Unit, has been appointed Chair of the National Diabetes Education Program.

<http://news.unchealthcare.org/news/2017/december/kirkman-to-chair-national-diabetes-education-program>

Nigel Mackman, PhD, Professor of Medicine (Heme/Onc) was selected by the AHA and Council on Arteriosclerosis, Thrombosis and Vascular Biology (ATVB) to receive the 2017 ATVB Distinguished Achievement Award.

http://news.unchealthcare.org/som-vital-signs/2017/april-27/mackman-delivers-macfarlane-biggs-lecture-at-the-british-society-for-haemostasis-and-thrombosis-annual-scientific-meeting?utm_source=vs-email&utm_medium=email&utm_campaign=17

Terry Magnuson, PhD, Sarah Graham Kenan Professor in the Department of Genetics and Vice Chancellor for Research at UNC-Chapel Hill, has been elected 2018 vice president and 2019 president of the Genetics Society of America.

<http://news.unchealthcare.org/som-vital-signs/2017/nov-9/magnuson-elected-vice-president-and-future-president-of-the-genetics-society-of-america>

Robert McGinty, MD, PhD, Assistant Professor in the Eshelman School of Pharmacy and the SOM Department of Biochemistry & Biophysics was selected as a 2017 Searle Scholar.

<http://news.unchealthcare.org/news/2017/april/uncrobert-mcginty-named-2017-searle-scholar>

Robert McGinty, MD, PhD, Assistant Professor in the Eshelman School of Pharmacy and the SOM Department of Biochemistry & Biophysics was selected as a 2017 Pew-Stewart Scholar for Cancer Research

<https://pharmacy.unc.edu/news/2017/06/15/mcginty-awarded-2017-pew-stewart-scholarship-pursue-cancer-research/>

Vicki Mercer, PT, PhD, Associate Professor of Allied Health Sciences (Physical Therapy), was named Outstanding Physical Therapist by the NC Physical Therapy Association for her exemplary work in clinical practice, education, research and service.

<http://news.unchealthcare.org/som-vital-signs/2017/nov-9/vicki-merc-er-pt-phd-named-outstanding-physical-therapist-by-the-north-carolina-physical-therapy-association-ncpta>

Amanda Nelson, MD, Assistant Professor of Medicine (Rheumatology, Allergy & Immunology), has received the Innovative Research Award from the Rheumatology Research Foundation.

<http://news.unchealthcare.org/som-vital-signs/2017/jan-5/dr-amanda-nelson-awarded-grant-to-evaluate-feasibility-and-reliability-of-using-ultrasound-technology-for-study-of-knee-osteoarthritis>

Warren Newton, MD, MPH, has been chosen as the next President and CEO of the American Board of Family Medicine. The American Board of Family Medicine is one of the 24 Member Boards of the American Board of Medical Specialties. Founded in 1969, it is a voluntary, not-for-profit, private organization whose objective is to encourage excellence in medical care.

Leslie Parise, PhD, Professor and Chair of Biochemistry & Biophysics elected UNC Faculty chair

<http://news.unchealthcare.org/news/2017/april/unc-school-of-medicines-leslie-parise-elected-unc-faculty-chair>

David Peden, MD, Professor Pediatrics (Allergy, Immunology & Rheumatology), Senior Associate Dean for Translational Research, and Director of the Center for Environmental Medicine & Lung Biology, was installed as the President of the American Academy of Allergy, Asthma & Immunology (AAAAI).

<http://news.unchealthcare.org/news/2017/march/aaaai-installs-new-president-at-2017-annual-meeting>

Li Qian, PhD, Assistant Professor of Pathology & Laboratory Medicine is the youngest faculty member to be honored with the annual Outstanding Mentor Award from the Office of Postdoctoral Affairs.

http://news.unchealthcare.org/news/2017/september/qian-meshnick-earn-mentorship-award-from-unc?utm_source=vs-email&utm_medium=email&utm_campaign=38

Angela Smith, MD; Assistant Professor of Urology [Urologic Oncology] received the Jefferson-Pilot Fellowship in Academic Medicine.

<http://news.unchealthcare.org/news/2018/february/the-right-note-at-the-right-time>

Spencer Smith, PhD, Associate Professor of Cell Biology & Physiology received the 2017 Hettleman Prize for Artistic and Scholarly Achievement by Young Faculty.

<http://news.unchealthcare.org/news/2017/september/two-school-of-medicine-professors-earn-unc-hettleman-prizes>

Sydney Smith, Jr., MD, FACC, Professor of Medicine (Cardiology), was recognized with the American College of Cardiology's top honor the 2017 Master of the ACC Award.

<https://healthtalk.unchealthcare.org/dr-sidney-c-smith-jr-recognized-with-american-college-of-cardiology-top-honor/>

Beat Steiner, MD, Professor of Family Medicine, was recognized by the NC chapter of The Albert Schweitzer Fellowship for his service to vulnerable people, particularly those living with severe mental illness and substance abuse issues.

<http://news.unchealthcare.org/news/2017/april/dr-beat-steiner-honored-with-schweitzer-leadership-award-from-north-carolina-program>

Garret Stuber, PhD, Associate Professor of Psychiatry and Cell Biology & Physiology, named co-recipient of the Jacob P. Waletzky Award, which is given by the Society for Neuroscience.

<http://news.unchealthcare.org/news/2017/november/garret-stuber-named-co-recipient-of-the-waletzky-award>

Jenny Ting, PhD; Professor of Genetics, was awarded the Hyman L. Battle Distinguished Cancer Research Award by the UNC School of Medicine.

<https://healthtalk.unchealthcare.org/earp-ting-recognized-for-career-achievements-in-cancer-research/>

John Thorp, MD, Professor of Obstetrics & Gynecology, was recognized for his research at the 2017 American College of Obstetricians and Gynecologists (ACOG) annual meeting.

<http://news.unchealthcare.org/news/2017/june/biomedical-engineer-named-as-runner-up-in-u-s-state-department-research-education-award>

Deborah Thorpe, PT, PhD, Professor of Allied Health Sciences (Physical Therapy), was recognized by *The Triangle Business Journal* as Allied Health Professional of the Year during its annual Health Care Heroes celebration.

<https://www.med.unc.edu/ahs/physical/news/deborah-thorpe-pt-phd-honored-as-health-care-hero-by-triangle-business-journal>

Richard Wardrop, III, MD, PhD, FACP named Governor-Elect of the NC Chapter of the American College of Physicians.

<http://news.unhealthcare.org/som-vital-signs/2018/jan-18/wardrop-selected-for-leadership-positions-in-american-college-of-physicians>

Monte Willis, PhD, Professor of Pathology & Laboratory Medicine, recognized by the Society of Endocrinology for excellence in endocrine research.

<http://news.unhealthcare.org/som-vital-signs/2017/june-15/willis-laboratory-has-been-recognized-by-the-society-of-endocrinology-for-excellence-in-endocrine-research>

Qi Zhang, PhD, Assistant Professor of Biochemistry & Biophysics received an NSF CAREER award.

<http://news.unhealthcare.org/som-vital-signs/2017/march-2/qi-zhang-receives-a-career-award-from-nsf>

Qing Zhang, PhD, Assistant Professor of Pathology & Laboratory Medicine—Jefferson Pilot Fellowship for work understanding oxygen's role in therapy-resistant tumors.

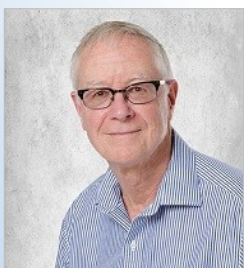
<http://news.unhealthcare.org/news/2018/february/envisioning-his-future>

Mark Zylka, PhD, Professor of Cell Biology & Physiology and Director of the Neuroscience Center, has been elected as a Fellow of the American Association for the Advancement of Science (AAAS).

<http://news.unhealthcare.org/news/2017/november/unc-school-of-medicine-professors-elected-as-aaas-fellows>

2018 Faculty Award

Jack Griffith Elected in National Academy of Sciences



Jack Griffith

This newsletter is focused on a wrap-up of 2017 news, but we want to take this opportunity to congratulate Dr. Griffith on this new honor. Dr. Griffith is a Kenan Distinguished Professor in the Departments of Microbiology & Immunology and Biochemistry & Biophysics. This spring he was elected into the National Academy of Sciences for his distinguished and continuing achievements in original research. Members are elected by their peers and NAS membership is one of the highest scientific honors conferred in the U.S. Dr. Griffith has conducted extensive research utilizing high-resolution electron microscopy to visualize protein-DNA interactions. His work seeks to answer basic questions of how DNA and proteins interact in cancer and other diseases. He has also been one of our expert consultants in bringing Cryo-EM technology to the SOM (see *below*).

Look for the next OoR Newsletter to see the many accolades given in SOM faculty in 2018.

Core Technologies News

CryoEM technology coming to UNC in Fall 2018

The SOM formed a coalition of campus stakeholders to finance the acquisition of a state-of-the-art Talos Arctica cryo transmission electron microscope. Renovations are underway in the Glaxo Building for a new facility that will function as part of a regional consortium (including Duke and NIEHS) to push the boundaries of structural biology. CryoEM was acknowledged by the 2017 Nobel Prize for Chemistry and named as “method of the year” by *Nature* in 2015 and will solidify the strong structural biology research program at UNC.

Cy-TOF technology available summer 2018

With support from the SOM Office of Research and Lineberger Cancer Center, UNC researchers will soon have access to a Fluidigm Helios CyTOF system. The Cy-TOF is a powerful new technology that uses flow cytometry coupled with mass spectrometry to enable high-throughput single-cell quantitative proteomics. 135 different detection channels allow investigators to use antibody panels that can quantify more than 40 proteins per cell in a single experiment. Because of the flow component, more than 10,000 cells may be evaluated in a given sample and experiments of multiple samples may be run from 96-well plates. As the cells are vaporized during the process, this approach can be used to characterize both *surface* and *intracellular* proteins. Because of the ability for high level discrimination using a small number of samples, the technology is particularly beneficial for the analysis of human immune cells in different disease and treatment conditions. The core will be housed adjacent to the Flow Cytometry Core in Marsico Hall and the equipment is expected to be available in early summer 2018.

2017 Instrumentation Grant Awards & Acquisitions

NIH SIG:

Zibo Li, *Small Animal PET/CT for Preclinical Imaging Research*

NCBC IDG:

Nancy Fischer, *Attune NxT4-laser acoustic focusing flow cytometer with autosampler*

Samantha Pattenden, *Advancement of cavitation-enhancing perfluorocarbon nanodroplets for DNA sample fragmentation in NGS applications*

Michael Miley, *JANSi high-throughput automated protein crystallization imaging system*

Nancy Fisher Appointed Assistant Director for Core Development



Nancy Fisher

Nancy Fisher, PhD, Director of the UNC Flow Facility Core was appointed the Assistant Director for Core Development. This is a new position in the Office of Research Technologies (ORT), which provides operational support to the University's core facilities. This position was created to assist the ORT's efforts in education/training. Dr. Fisher's new role involves:

- Working with Core Directors to incorporate NIH Rigor and Reproducibility requirements into their core SOPs and provide documentation for their users.
- Working with Core Directors to develop successful equipment proposals targeted at NCBC IDG and NIH SIG applications.
- Working with the Center for Faculty Excellence to develop mentoring for Fixed-Term Faculty that serve as Core Directors.

Entrepreneurial Efforts in the SOM

Research at UNC improves lives and creates tremendous social and economic value. Innovate Carolina is the pan-university network and ecosystem of support for innovation and with the Office of Commercialization and Economic Development (OCED) forms the Office for Innovation, Entrepreneurship and Economic Development. Faculty startups are sometimes the best way to bring a discovery out of the lab and make it available to other researchers (e.g. lab methodology) or patients (e.g. medical device or diagnostic). Some highlights from SOM faculty (current and former) startups in 2017:



- ◇ Cell Microsystems Expands Availability of CellRaft™ Products and Technology (Nancy Allbritton, BME)
- ◇ Capio Biosciences secured \$2.9M to develop blood test for circulating tumor cells (Andrew Wang, Radiation Oncology)
- ◇ GeneCentric Diagnostics doubles its headcount and Raises \$6.1M from investors for oncology diagnostics (Chuck Perou)
- ◇ Renovion receives FDA Orphan Designation and initiates Phase1 lung transplant study with Arina-1 nebulized therapy (Renovion, Med/Pulmonology)
- ◇ Target Pharmsolutions partners with Bristol Meyers Squibb and Allergan on studies targeting liver disease (Mike Fried, Med/GI)
- ◇ Spyryx Biosciences successfully completes Phase I clinical trial and plans Phase II trial for Cystic Fibrosis treatment (Rob Tarran, Cell Biology and Physiology)
- ◇ Bivarus raises \$4M Series B round to enhance data visualization and analytics for clinical performance (Seth Glickman, Emergency Med)
- ◇ StrideBio initiates collaboration with CRISPR Therapeutics and Casebia Therapeutics (Aravind Asokan, Genetics)
- ◇ Parion licenses potential dry-eye drug to Shire, could earn up to \$535M (Ric Boucher, Med/Pulmonology)
- ◇ Zenomics raises \$5.8 M for smart insulin technology (Zhen Gu, BME)
- ◇ AskBio launches Gene Therapy Company Viralgen (Jude Samulski, Pharmacology)

- ◇ Altis Bioystems receives NC IDEA seed grant ((Nancy Allbritton BME, Scott Magness, BME, Scott Bultman, Genetics)
- ◇ Triangle Business Journal names AskBio one of the 50 fastest growing private companies in the triangle (Jude Samulski, Pharmacology)

Three Startups received KickStart Commercialization Awards:

- ◇ Altis Biosystems (Nancy Allbritton, BME, Scott Magness/, BME, Scott Bultman, Genetics)
- ◇ EmpowerRT (Sha Chang, Radiation Oncology)
- ◇ Irex Pharma (Carla Ribeiro, Cell Biology and Physiology)

RESEARCH RANKINGS

The UNC SOM continues to be a national leader in NIH funded biomedical research, funding which increased by more than \$4M in 2017 for a total of ~\$273M, placing the UNC SOM at 16th in the nation and 6th among public institutions. The Blue Ridge Institute recently released FY17 rankings for NIH funding for medical schools. Below are SOM departments ranked in the top 25 for NIH funding according to Blue Ridge.

Basic Science Departments

Biochemistry & Biophysics (4th)
Biomedical Engineering (7th)
Cell Biology & Physiology (2nd)
Genetics (5th)
Microbiology & Immunology (8th)
Pharmacology (3rd)

Clinical Departments

Anesthesiology (8th)
Dermatology (22nd)
Family Medicine (12th)
Medicine (15th)
Obstetrics & Gynecology (5th)
Otolaryngology/Head & Neck Surgery (19th)
Pediatrics (25th)
Psychiatry (14th)
Physical Medicine & Rehabilitation (17th)
Radiology (22nd)



UNC-Chapel Hill was ranked 34th overall in the *U.S. News & World's* rankings of the “Best Global Universities”. This ranking is designed to provide international context for a university’s academic research and reputation. When compared to public universities in the US, UNC-Chapel Hill was ranked 9th. Surveys and metrics are used to rank the top 1,250 institutions spanning 74 countries and to assess the strengths of 22 subject areas. Several of the areas fall within the SOM:

Pharmacology/Toxicology—2nd overall [US public universities ranking—1st]

Microbiology—11th [US public universities ranking—5th]

Immunology—21st [US public universities ranking—tied for 3rd]

Psychiatry/Psychology—23rd [US public universities ranking—4th]

Clinical Medicine—26th [US public universities ranking—6th]

Molecular Biology/Genetics—27th [US public universities ranking—7th]

