



UNC Eshelman School of Pharmacy Impact Report



ESHELMAN SCHOOL
OF PHARMACY

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DEAN'S MESSAGE

GOING BEYOND EXCELLENCE

It is a great honor to be a part of the UNC Eshelman School of Pharmacy and I am thrilled to have the opportunity to build upon the School's success and culture of excellence in my new role as dean, beginning October 1.

The School is in an excellent position thanks to the tireless efforts of our faculty, staff, students, alumni, former Dean Bob Blouin and former Interim Dean Dhiren Thakker. Applications to all of our academic programs increased last year, we continue to innovate in our professional and graduate curricula, our research enterprise continues to grow and address major worldwide health issues, and our practice advancement initiatives are influencing the role pharmacists play in delivering quality care to patients.

Building on this significant momentum, we have a few goals to help us [Go Beyond Excellence](#).

- **For Our People:** Ensure faculty, staff, students and alumni feel engaged, connected and supported within the School by investing in leadership development, resilience and well-being initiatives, and expanding alumni outreach.
- **For Diversity and Inclusion:** Build on our culture of innovation by assembling a diverse and inclusive community of students, faculty, and staff that reflects the communities we serve.
- **For Operational Excellence and Sustainability:** Support a robust data process to inform decision making and drive change.
- **For Serving the State:** Invest in digital learning and rural health initiatives that provide access to state-of-the-art education and excellent care to all North Carolinians.
- **For Impactful Innovation:** Develop strategic partnerships within and outside campus to increase the impact of our research.
- **For Serving the Global Community:** Increase our global engagement by working with PharmAlliance, the UNC Institute for Global Health and Infectious Diseases, and other partners to enable our faculty, learners, and staff to impact pharmacy education and practice, expand research opportunities, and

improve human healthcare worldwide through meaningful global experiences.

We are preparing future healthcare leaders who will help people live longer, healthier lives. I truly look forward to working with our brilliant students, faculty, staff and alumni to keep us at the forefront of discovery and innovation in education, pharmacy practice and research.

Together, we will continue [Advancing Medicine for Life](#).

Angela Kashuba,
B.Sc.Pharm., Pharm.D., DABCP, FCP
Incoming Dean,
UNC Eshelman School of Pharmacy

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OUR SCHOOL

Everything we do begins and ends with a patient in mind.

In our research labs we are innovating to overcome sickness and disease. In our classrooms, we are preparing future leaders who will transform pharmacy practice and healthcare for all patients.

We are shaping the future of pharmacy and pharmaceutical sciences through a relentless pursuit of a healthier world.

We are Advancing Medicine for Life.

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OUR SCHOOL



The UNC Eshelman School of Pharmacy is an internationally recognized leader in pharmacy and pharmaceutical sciences education, pharmaceutical sciences research, and innovation in practice advancement. The School has built a reputation nationally and globally for its rigorous education and training programs, progressive pharmacy practices, and cutting-edge multidisciplinary translational research.

Mission

To develop leaders in pharmacy education, pharmacy practice and pharmaceutical sciences through innovation in teaching, practice and research.

Our Values

- Pursuing **excellence** in all that we do
- Inspiring a **culture of innovation**
- Seeking and valuing **collaboration**
- Upholding the values of **integrity, trust, honesty and accountability**
- Fostering **professional growth** for students, staff and faculty
- Embracing **diversity and inclusion**
- **Serving** students, patients and society with dedication and care

Strategic Plan

Our School is strategically positioned for continued growth and success as articulated in the 2018-20 Strategic Plan. The plan has seven key initiatives:

- Prepare future leaders who will transform health-care and make a positive difference in people's lives
- Optimize medication use, advance health care delivery and improve patient care
- Conduct cutting-edge research and translate inventions and discoveries into patient outcomes
- Achieve local and global impact through education, research, and service to the State of North Carolina and beyond
- Increase resources, improve operational efficiency, and enhance a world-class environment
- Ensure that the School has and nurtures the talent, leadership, and culture to execute our vision and mission
- Foster a culture of strategic planning and data-driven decision-making that results in positive impact

Fast Facts

No. 1

School of Pharmacy as ranked
by U.S. News & World Report

No. 3

Worldwide in
pharmacology and
toxicology as ranked by
U.S. News & World Report

No. 5

Worldwide in Pharmacy
and Pharmaceutical
Sciences - Shanghai
Rankings

No. 10

QS Global Rankings -
Pharmacy &
Pharmacology

599

Professional
Students

113

Graduate Students

128

Full-Time Faculty

\$79.2M

Annual Expenditures

\$103M

Endowment

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EDUCATION PROGRAMS

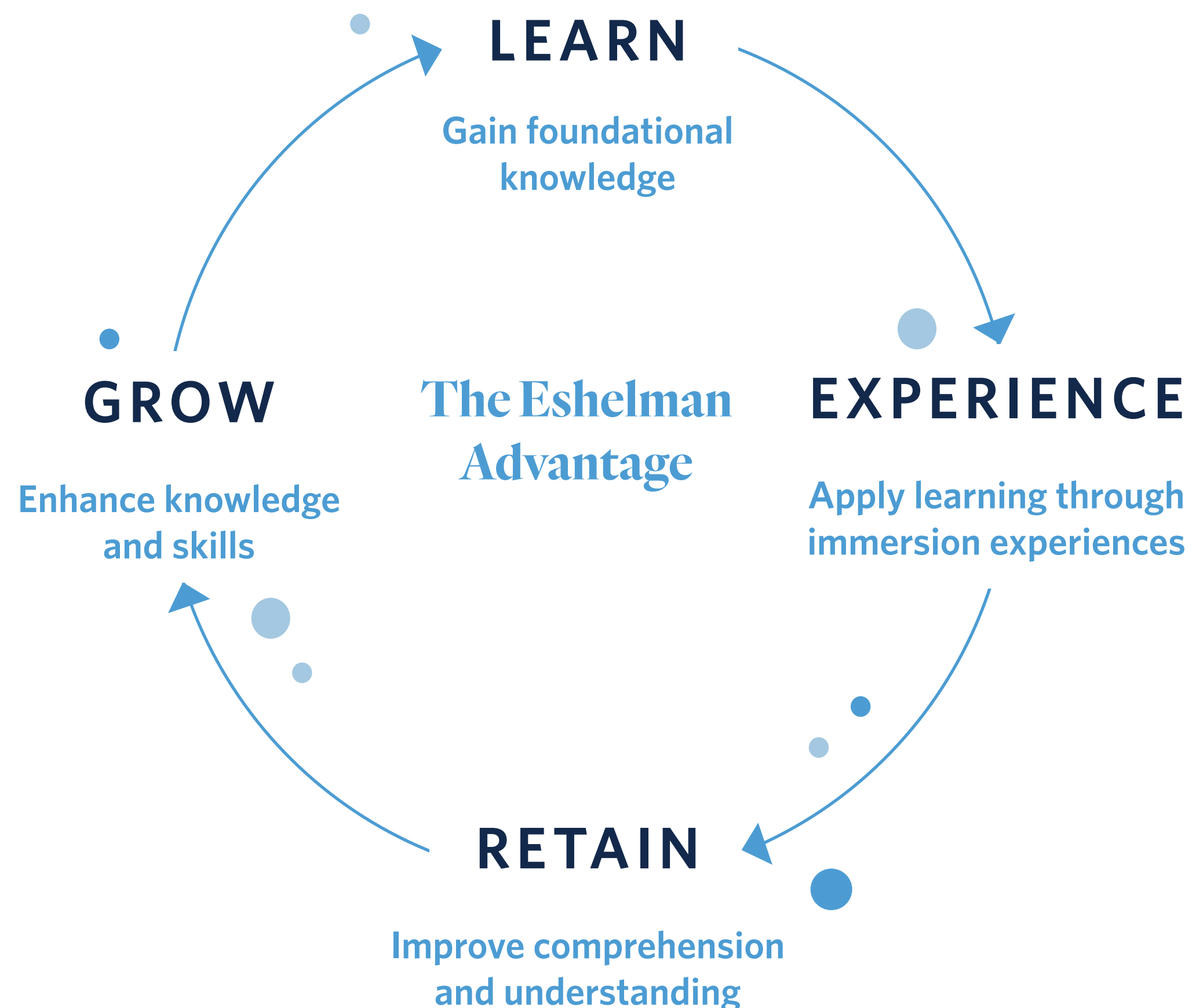
We are preparing the next generation of pharmacists, scientists and educators to care for patients and discover innovative solutions to the world's most challenging health care issues.

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EDUCATION PROGRAMS

Pharm.D. Program

In May 2019, the School graduated the inaugural class of students in our new, transformative Doctor of Pharmacy curriculum. With the new curriculum, students learn fundamental concepts *before* class, and are challenged to apply and extend those concepts in the classroom. Immersion in patient care in the experiential setting begins immediately after the first year and occurs continually through years two, three, and the entire fourth year. Students also have more opportunities to develop leadership skills and experience with increased emphasis on inquiry, research, innovation, and problem solving.



Fast Facts

No. 1

PGY1 Residency Match Rate - 2018

599

Professional Students

+12%

Applications over last year

2,400

Average immersion hours for a Pharm.D. graduate

8,224

Alumni in 49 states and 28 countries

75%

Complete postgraduate training

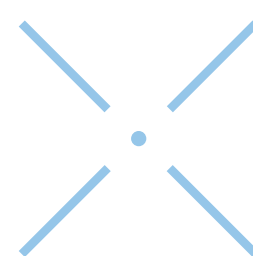
No. 1

School of Pharmacy as ranked by U.S. News & World Report

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EDUCATION PROGRAMS



Jeffery Seals, PY2 Pharm.D., Candidate, Class of 2021

"Before joining the ESOP community, I had only experienced the world of retail pharmacy. I knew there were more options for pharmacists than working in one of these settings; however, I did not understand or appreciate the ever advancing and broad scope of the pharmacy profession. All of our professors at the UNC Eshelman School of Pharmacy have been amazing in their own way and have worked tirelessly to provide each of us an unrivaled, world class education.



"I always knew that whatever career I found myself in, I wanted to be helping the most people possible. Once I decided that I was interested in becoming a pharmacist, I knew I had to find the best school that would allow me to make the largest impact on my community, local and global. There was no other option besides the UNC Eshelman School of Pharmacy. Even during my first few weeks at Carolina, I became witness to the countless ways that I could make an impact. Through student leadership, organizations, immersion experiences, and internships, it was evident that I had the unique opportunity to change patients' lives. I am extremely grateful for the opportunity to not only study at the number one pharmacy school in the nation, but more importantly, be trained by world-class pharmacists who will mold me to be a pharmacist of tomorrow who will have the capacity to directly impact all my future patients."

Jeffery is class president for the 2018-19 year, attending the Chapel Hill, N.C. campus. Jeffery is from Bedford, VA, and he completed his undergraduate in Microbiology and Biological Sciences at Virginia Tech.

Taylor Dennison, Pharm.D., Class of 2019

"I had a variety of immersion experiences that ranged from community pharmacy, inpatient medicine, a bone marrow transplant clinic, and a family medicine clinic. My favorite rotation was the bone marrow transplant clinic because it really honed my love of oncology. By the end of my rotation, I was able to see patients with limited preceptor involvement, which really allowed me to take ownership of my patients and the care that I was giving them.



"My early immersion experiences gave me an incredible baseline to work from. I learned how to interact and work with other members of a patient care team, how to navigate electronic health records and the correct processes for making medical decisions. This gave me a great springboard in my fourth year that allowed me to handle a larger patient capacity and provide better-enhanced care."

Taylor, '19, is a PGY1 resident at UNC Medical Center.

Sabree Burbage, Pharm.D., M.P.H., Class of 2019

"I decided to attend the UNC Eshelman School of Pharmacy because I felt that it was the best fit for me. This school had very friendly and knowledgeable professors and students, and each person that I encountered had great things to say about it. Also, the school offers a large amount of opportunities for students to explore several aspects of pharmacy, get experience in the field, and interact with the community. Because of my interest in public health, the Pharm.D./M.P.H. dual degree was also a very attractive option. Lastly, one of the major reasons was that this school emphasized the importance of patient-centered care and truly identifying and empathizing with the patient; they actually cared about the patient as a person and did not view them as just another medical condition. This goes full circle back to why I wanted to become a pharmacist. If that hadn't sold me, there is the additional bonus that UNC is the best pharmacy school in the country."



Sabree's pharmacy interests are still growing and expanding. Because she wants to interact with patients, she is currently interested in ambulatory care, patient education, care transitions and Medication Therapy Management.

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EDUCATION PROGRAMS

Ph.D. Program

The Ph.D. program in pharmaceutical sciences prepares tomorrow's scientists for basic, translational, or health outcomes research careers. Students concentrate in one of the stages in the drug development cycle corresponding to our academic divisions.

Drug Discovery

Chemical Biology and Medicinal Chemistry

Disease Targets
Drug Leads
Chemical Probes

Drug Delivery

Pharmacoengineering and Molecular Pharmaceutics

Formulation
Drug Delivery
Nanomedicine

Drug Optimization

Pharmacotherapy and Experimental Therapeutics

Clinical Pharmacology
Pharmacometrics
Precision Medicine

Patient Outcomes

Pharmaceutical Outcomes and Policy

Medication Risk/
Benefit Adherence
Pharmacoepidemiology

Industry Postdoctoral Fellowships

- Clinical Research and Drug Development
- Medical Affairs
- Global Drug Safety/Pharmacovigilance
- Pharmacokinetics/Pharmacodynamics/Pharmacometrics
- Global Regulatory Affairs
- Pharmaceutical Outcomes

NIH Postdoctoral Fellowships

- UNC-Duke Clinical Pharmacology T32 Postdoctoral Training Program
- Carolina Cancer Nanotechnology T32 Postdoctoral Training Program

Eshelman Innovation and Entrepreneurship Fellowship

Global Engagement Fellowship

Academic Research Fellowships

Fast Facts

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Worldwide in Pharmacology and Toxicology
as ranked by U.S. News & World Report

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Worldwide in
Pharmacy and
Pharmaceutical
Sciences - Shanghai
Rankings

89

Ph.D.
Students

No. 10

Worldwide in
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Pharmacology -
QS Global Rankings

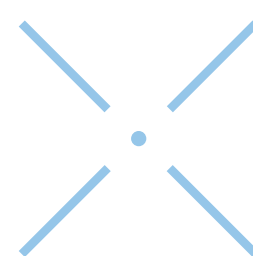
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Postdoctoral
Fellows

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EDUCATION PROGRAMS



Nader Moniri, Ph.D. **Division of Chemical Biology** **and Medicinal Chemistry, 2004**

*Associate Dean for Research
and Professor of Pharmaceutical
Sciences, College of Pharmacy,
Mercer University*

"My time as a graduate student at the UNC Eshelman School of Pharmacy was very memorable, both professionally and personally. The graduate program allowed me to take the seed of scientific curiosity that was within me and make it fruitful by providing technical training as well as developing higher order skills in order to solve real-world problems related to human health and disease."



Dylan Glatt, Ph.D. Division of **Pharmacoengineering and** **Molecular Pharmaceuticals, 2016**

*Research Scientist,
Formulation Process
Development, Gilead Sciences*

"The UNC Eshelman School of Pharmacy provided a wonderful environment and set of experiences to transition into the role I serve today. The facilities are exceptional, perhaps world-class, with access to technical equipment and highly trained experts. The didactic curriculum provided the fundamentals to understand problems often faced by a development scientist and speak the language of peers in my group at Gilead."



Julie Lauffenburger, Pharm.D., **Ph.D. Division of Pharmaceutical** **Outcomes and Policy, 2014**

*Instructor in Medicine at
Harvard Medical School*

*Instructor in the Department of
Epidemiology at Harvard School
of Public Health*

"My experiences at the UNC Eshelman School of Pharmacy afforded me innumerable opportunities for interdisciplinary collaboration, the best possible training in research, and experiences in teaching that have been instrumental for my career."



Jasmine Luzum, Pharm.D., Ph.D., **BCPS Division of** **Pharmacotherapy and** **Experimental Therapeutics, 2013**

*Assistant Professor,
University of Michigan
College of Pharmacy*

"The vast diversity of research expertise in the Division of Pharmacotherapy and Experimental Therapeutics and the UNC Eshelman School of Pharmacy exposed me to many different directions for my research career, in my coursework, lab rotations and collaborations. It allowed me to explore and then focus my research interests. I strongly believe that the quality and the rigor of earning a Ph.D. in the UNC Eshelman School of Pharmacy is widely recognized, regardless of whether your career path is academia, industry, or regulatory. It certainly helped me earn my current position, and it gives me confidence in the success of my independent research career."

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EDUCATION PROGRAMS

M.S. Program

The Master of Science Degree in Pharmaceutical Sciences with a specialization in health system pharmacy administration prepares pharmacists for leadership positions in health care. It combines classroom instruction with a two-year residency in a health system setting.

The degree is offered in collaboration with University of North Carolina Hospitals, Duke University Health System, Wake Forest Baptist Health, Mission Hospitals, BayCare and Massachusetts General Hospital.

During the residency, students:

- Engage in a rigorous and in-depth study of leadership in health system pharmacy administration and the principles of the medication use process
- Work within multiple health systems and practice settings and network with leaders across those places
- Conduct a meaningful project that develops skills in scientific inquiry, discovery and scholarship
- Become immersed in direct patient care, administration and real-world learning environments



Fast Facts

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M.S.
Students

+34%

Applications
over last year

+40%

Enrollment
over last year

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EDUCATION PROGRAMS

Felicia Britt, Pharm.D. PGY1 Health System Pharmacy Administration/MS

"The UNC Eshelman School of Pharmacy is known globally for innovation, research, leadership and dedication to enhancing patient care - four traits I sought in a master's program specializing in pharmacy administration. I chose this program because I wanted to be a part of a community that strives for excellence every day and is on the cutting edge of healthcare. The UNC program allows learners the opportunity to work alongside forward-thinking leaders who are supportive, creative and passionate in an environment that fosters collaboration with a diverse cohort across the state of North Carolina, Massachusetts and Florida. The expansive network of leaders, innovators and creators is beyond that of any master's program and to be a part of the UNC Eshelman School of Pharmacy master's degree is a humbling and rewarding privilege."



Gerald Offei-Nkansah, Pharm.D., MBA PGY2 Health System Pharmacy Administration/MS

"I chose to join the pharmaceutical sciences program at the UNC Eshelman School of Pharmacy over other high-caliber programs in the country because of how seamlessly integrated the School is with the medical center. It was important to me to learn at an institution that understands the practical needs and challenges its graduates will face in the real world. Through a close relationship with the UNC Medical Center and other healthcare institutions in the surrounding area, our curriculum greatly benefits by having visiting lecturers who are currently facing the challenges we are learning to handle. The vast network the School gives its students access to is invaluable and has enabled me to expand my personal network. The scope of the coursework gives me the confidence to engage with these local leaders in my industry so I can have a deeper understanding of what we learn in class. As I prepare for the next stage in my career, I am emboldened to pursue any number of opportunities I may be presented with."



Lindsey Amerine, Pharm.D., M.S. Interim Regional Director of Pharmacy, UNC Health Care System

"When looking at residency programs, one of the core aspects I valued was the master's degree and how well it would align with and integrate into the residency. The UNC Eshelman School of Pharmacy master's program was the top program in my evaluation for integrating the didactic elements with my learning experientially on rotation. I was able to learn from top pharmacy leaders who have the ability to teach the core principles in the classroom, while also carrying them out in practice. This was a differentiator as the real-world application is relevant and useful. Since my time in the program, UNC has only strengthened the degree offering which allows residents to continue learning from top pharmacy leaders who are progressing practice and understand the value in training future leaders of our profession."

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RESEARCH ENTERPRISE

Our researchers and scientists are working on the world's most challenging health issues ranging from cancer and cardiovascular disease to neurological disorders and medication management.

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RESEARCH ENTERPRISE

The UNC Eshelman School of Pharmacy has a robust collaborative, translational and patient-focused research enterprise.

Disciplines, Platforms and Technologies

Drug Discovery

Find and characterize new therapeutic targets and agents

Synthetic Chemistry	Medicinal Chemistry	Chemical Biology
Structural Biology	Assay Development	High-Throughput Screening
Neuropharmacology	Rational Drug Design	Cheminformatics
Computer-Aided Drug Design		

Drug Delivery

Deliver therapeutic agents for successful outcomes

Pharmacoengineering	Immunoengineering	Nanomedicine
Analytical & Polymer Chemistry	Gene Delivery	Pharmacokinetics
Cell-Based Therapies	Molecular Pharmaceutics	

Drug Optimization

Discover and evaluate the factors that influence how therapeutic agents work

Clinical Pharmacology	Clinical & Translational Research	Experimental Therapeutics
Pharmacometrics	Drug Metabolism & Transport	Drug Toxicity
Pharmacotherapy	Pharmacogenomics	Precision Dosing

Patient Outcomes

Identify the health outcomes and value of therapies, policies and practices

Pharmacoepidemiology	Implementation Science	Economics & Policy
Pharmacogenomics	Health Communication & Behavior	Precision Dosing
Health Services Research	Data Science	

Practice Advancement and Clinical Education

Advance education and the practice of pharmacy

Medication Optimization	Healthcare Policy
Implementation Science	Educational Research

Research Centers

- Integrative Chemical Biology and Drug Discovery
- Medication Optimization
- Nanotechnology in Drug Delivery
- Innovation in Pharmacy Education and Research

Fast Facts

No. 2

**in Total Research Funding,
U.S. Schools of Pharmacy**

No. 2

in NIH Funding, U.S.
schools of pharmacy

\$38M

in Research Grants
for FY 2017-18

\$100M

Eshelman
Innovation Fund

\$65M

Research Partnership
with Deerfield
Management

51

Startup Companies

563

Papers Published
in 2018

235

Issued Patents

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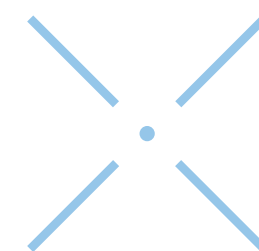
PRACTICE ADVANCEMENT

We are working across many settings of care to optimize medication use for patients, improve patient outcomes and transform the role of the pharmacist in providing patient-centered, team-based care.

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PRACTICE ADVANCEMENT



COMMUNITY

HOSPITAL

RESEARCH

Independent Pharmacy Ownership Residency (IPOR)

This postgraduate program prepares our graduates to be entrepreneurs and pharmacy owners. Our residents spend the majority of their time working at the primary residency site to gain experiences designed to prepare them for an evolving healthcare market.

Vakula Tummala 2019-20 Resident

"I am so excited to be a part of the IPOR program! I look forward to learning more about independent pharmacy ownership, creating new patient care services and networking."



Community Pharmacy Residency Program (CPRP)

This program prepares our graduates to be innovative clinical practitioners who can be leaders in the profession. They will have the skills, confidence and experience to create change and advance patient care services in community pharmacy practice. Our program has residency sites at independent and national chain pharmacies throughout North Carolina.

Partnership in Patient Care

The Partnership in Patient Care, launched in 2010, combines the resources of the School and the UNC Hospitals pharmacy department to increase pharmacy services available to patients at UNC Hospitals through enhanced engagement of students and residents, the quality and quantity of experiential education that the UNC Eshelman School of Pharmacy students receive, and the breadth and depth of point-of-care research being conducted. The pharmacists at UNC have become well-integrated into the School's teaching and point-of-care research mission.

Partnership outcomes to date have included:

- An increase in the number of pharmacists in pharmacotherapy intensive ambulatory care settings.
- Enabling the provision of comprehensive acute care pharmacy clinical services to all areas of UNC Hospitals.
- An increase in the number of pharmacy students completing their immersion experiences at UNC and the number of student months of precepted practice experiences. This is accomplished through implementation of the layered learning practice model.
- An increase in the number of co-published papers between both organizations.
- A palpable and true sense of collaboration between the School and the Hospital.

Current Studies

The School's faculty are engaged in research to advance the future of the profession while improving patient-centered, team-based care delivery. Studies are ongoing to address the opioid epidemic across a variety of care settings including care transitions, primary care, and community pharmacy. Additional efforts are underway to explore a number of practice transformation interventions, ranging from disease state management to reduce the risk of falls, cardiovascular risk, and diabetes; comprehensive medication management in primary care to optimize medication use and improve health; targeted interventions in the community pharmacy setting to improve patient care and build a sustainable business model; precision dosing to individualize and enhance patient care; and telehealth services to optimize medication use and care delivery in rural health care settings.

Center for Medication Optimization (CMO)

The Center for Medication Optimization at the UNC Eshelman School of Pharmacy was launched in 2015. The Center's mission is to collaborate with the pharmacy practice community, health care providers, patients, payers, policymakers and other key stakeholders to develop and evaluate evidence-based interventions that optimize medications and patient outcomes across care settings. Critical to this research is the need to integrate scalable interventions into emerging value-based payment models that enable a sustainable pathway to reimbursement.

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ACCELERATING INNOVATION

We are investing in high-risk, high-reward ideas in order to innovate from drug discovery to patient care, and translate these discoveries into improved health care for all.

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ACCELERATING INNOVATION

The [Eshelman Institute for Innovation](#) at the UNC Eshelman School of Pharmacy was established in 2014 with a \$100M commitment from Dr. Fred Eshelman. The Institute serves as an [Innovation Engine](#) enabling the School to pursue bold, new ways to move the mission forward and extend its position as a global leader through grant funding, commercialization and training.

Funding

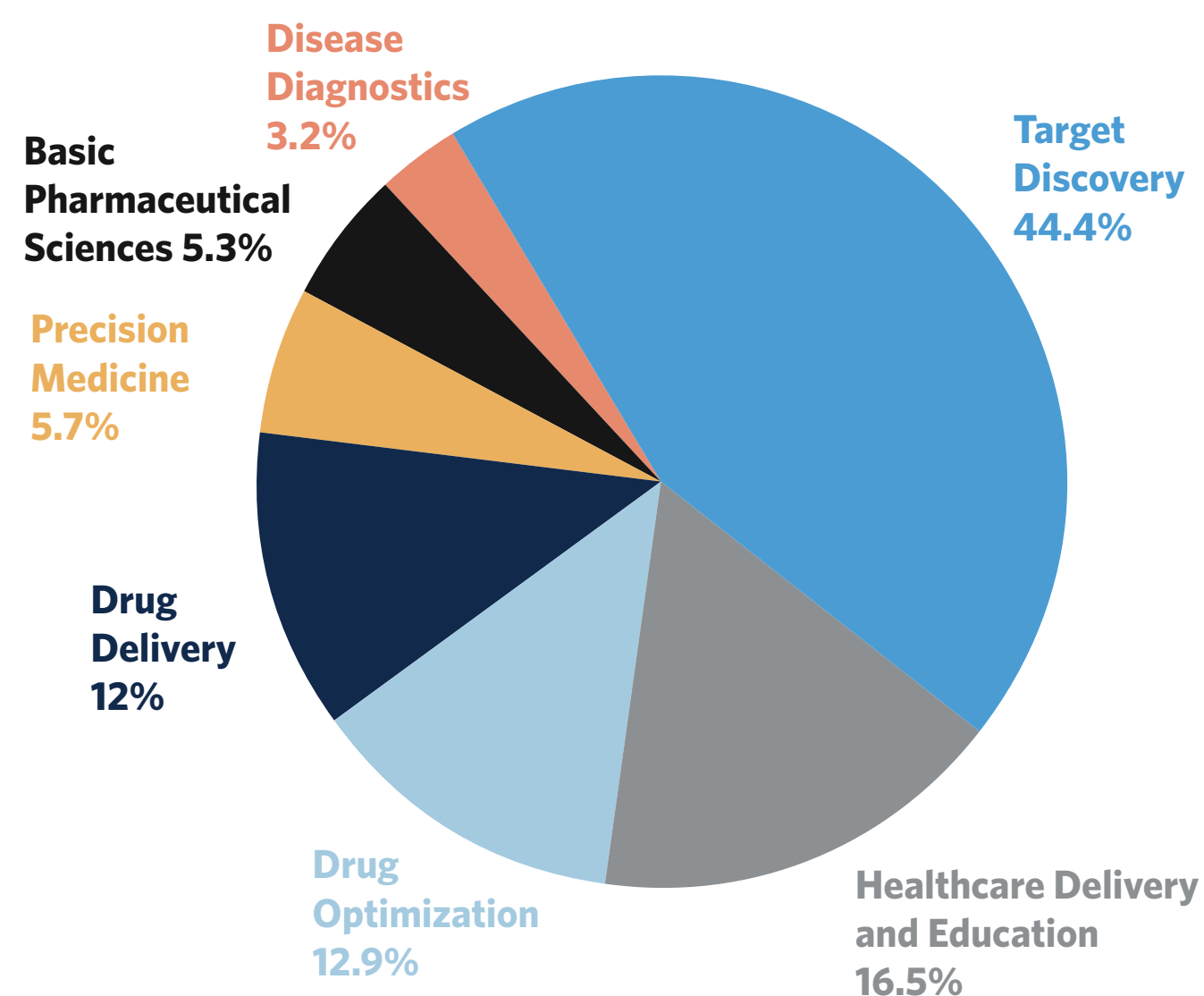
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Projects Funded

\$21.9M

Grants Awarded

Research Areas Funded



Commercialization

46

Invention Disclosures

10

Patent Applications

15

Technologies Licensed

11

Startup Companies

\$11M

Startup Funds Raised

9

Companies Incubated

Training

67

High School Students

128

Professional and Graduate Students

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Postdoctoral Fellows

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Interns

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ACCELERATING INNOVATION

Samuel Lai, Ph.D.

Associate Professor Sam Lai works to prevent the spread of infections in the body by using antibodies to trap infections in mucus matrices produced by the body. This allows scientists to engineer better antibodies to trap a variety of pathogens for prophylactic and therapeutic applications.

Lai's research has spun off a company, Mucommune, which is working to engineer antibodies that can be applied topically to prevent diseases at the infection site. Topical antibodies would protect a specific infection site. For example, swallowing a pill could protect the gut; a puff from an inhaler would protect the lungs. Nurses and doctors could get a daily nasal spray containing antibodies against a diverse array of flu strains.

"Biological gels like mucus are abundant in the body and protect every opening and exposed organ not covered by the skin. If we can trap pathogens in mucus and extracellular matrices, we can prevent them from getting to the cells they want to infect and, therefore, prevent infections from spreading or happening altogether."



Rahima Benhabbour, Ph.D.

Benhabbour's research focuses on the development of novel delivery platforms and polymer-based devices that can treat or prevent disease. Out of her research she created AnnelleO, the company that is developing the first 3-D printed intravaginal ring (IVR) designed to treat or prevent women's health conditions including cancer, STDs and HIV prevention.

"3D printing allows us to introduce geometric complexity to the rings that cannot be achieved with traditional injection molding and extrusion, which are the two technologies currently used to manufacture IVRs. The complex geometries within the ring allow us to precisely fine-tune the release kinetics of drugs and achieve 100 percent drug release in a controlled manner."



Companies Formed

Falcon Therapeutics, Inc.

Pharmacy Founder: Shawn Hingtgen, Ph.D.

Mucommune, LLC

Pharmacy Founder: Sam Lai, Ph.D.

OncoTrap, Inc.

Pharmacy Founder: Rihe Liu, Ph.D.

AnelleO, Inc.

Pharmacy Founder: Rahima Benhabbour, Ph.D.

Irex Pharma, LLC

Pharmacy Founder: Emily Hull-Ryde, Ph.D.

AI Tracking Solutions, LLC

Pharmacy Founder: Sam Lai, Ph.D.

Panacise Bio, Inc.

Pharmacy Founder: Rihe Liu, Ph.D.

Accunovo Biotechnologies, Inc.

Pharmacy Founder: Rihe Liu, Ph.D.

Co-Founder: Zibo Li, Ph.D.

Inhalon Biopharma, Inc.

Pharmacy Founder: Sam Lai, Ph.D.

Open4Meds

Pharmacy Founder: Tim Willson, Ph.D.

Epigenos Biosciences, Inc.

Pharmacy Founder: Nate Hathaway, Ph.D.

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FROM LOCAL TO GLOBAL

We are developing citizens of the world who will serve diverse patient populations in a variety of practice settings in local, national and global communities.

YIDZIWE CENTRE
UNC/KCH Research, Care & Training Centre

A collaboration between University of North Carolina at Chapel Hill
Kamuzu Central Hospital and Ministry of Health

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FROM LOCAL TO GLOBAL

Rural Health Scholars Program

The demand for pharmacists is often higher in rural communities where access to medical services may be limited by geography, distance and economic challenges. Our Rural Pharmacy Health Certificate program prepares student pharmacists for collaborative, interprofessional practices that serve the health care needs of North Carolinians living in rural and small communities.

Our Rural Pharmacy Scholars gain valuable skills in cultural competency and provide pharmacy solutions to populations that have limited access to health systems, difficulty understanding complicated treatment plans, limitations in access to, and affordability of, health care providers, and challenges with following and maintaining medication plans. Twelve graduates have completed the program since 2017.

Casey Hamon, Class of 2019

"The program has taught me how to think beyond drug therapy, consider a patient holistically, and factor in non-medicine related social determinants affecting their health and how to help patients overcome them. I have learned not only skills for communicating across cultural boundaries, but have also become more self-aware and able to evaluate myself for possible cultural biases."



Global Pharmacy Scholars

Our Global Pharmacy Scholars (GPS) program sends more than 50 students annually to one of nine international locations for a one-month Advanced Pharmacy Practice Experience rotation. Students are exposed to different health care systems, cultures, and may participate in research initiatives at select sites.

Our GPS locations

- Chisinau, Moldova
- London, U.K.
- Colomarigua, Honduras
- Addis Ababa, Ethiopia
- Lusaka, Zambia
- Lilongwe, Malawi
- Mysuru, India
- Tokyo, Japan
- Melbourne, Australia

PharmAlliance

PharmAlliance is a partnership among the pharmacy schools/faculty at UNC-Chapel Hill, USA, Monash University, Australia, and UCL, UK, which strives to address major global challenges in pharmacy profession and human healthcare through collaboration in advancing pharmacy/pharmaceutical sciences education and research, and pharmacy practice.



31

Funded Grant
Applications

54

Joint
Publications

44

Joint
Presentations

76

Student
Exchanges

\$1.3M

in Extramural Funding

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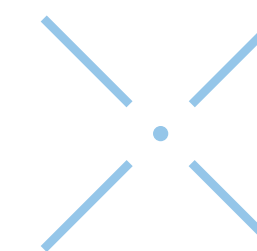
A CULTURE OF COLLABORATION

We value the talents and wisdom of others and embrace partnerships to advance common goals.

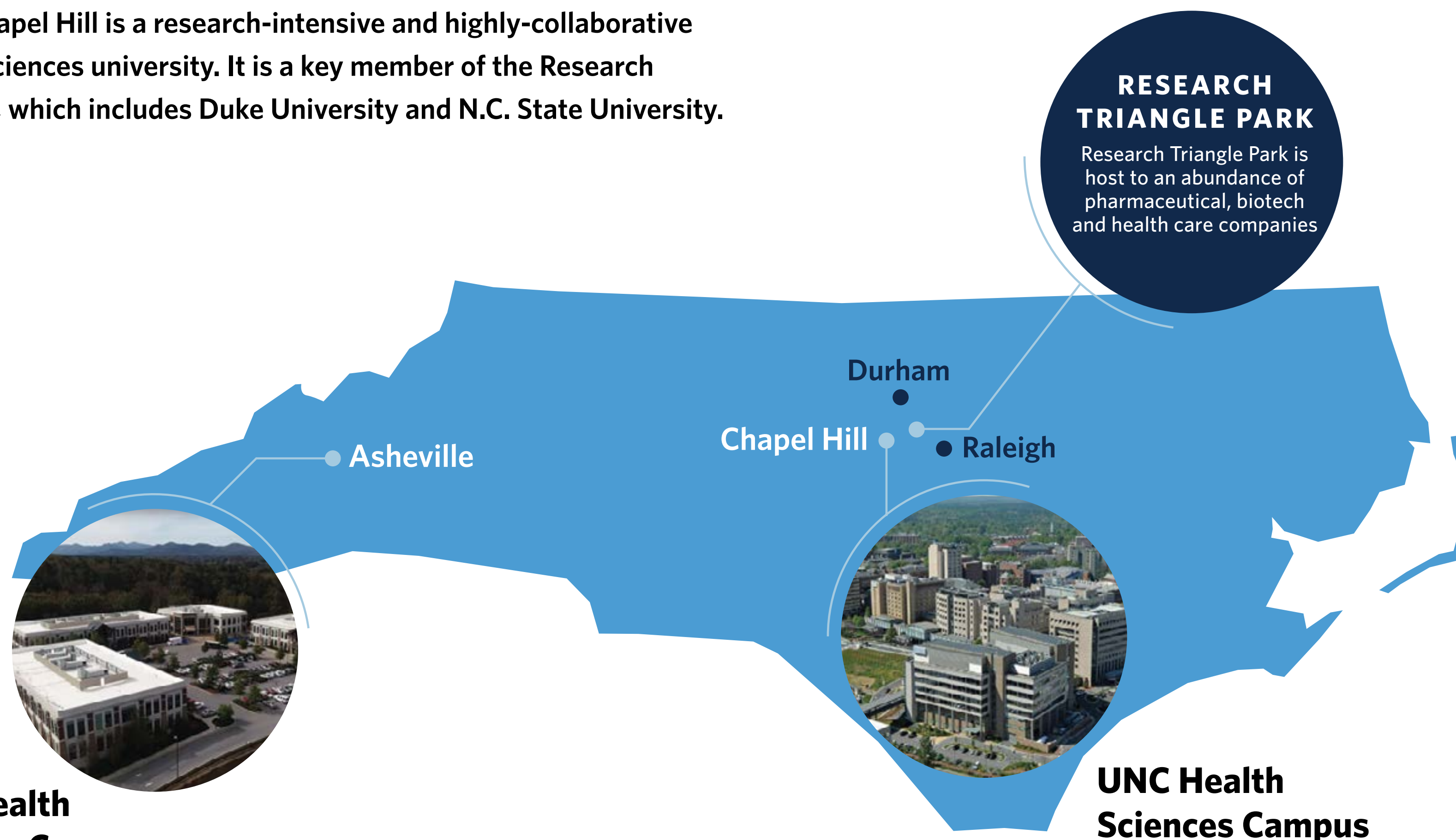
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A CULTURE OF COLLABORATION



UNC-Chapel Hill is a research-intensive and highly-collaborative health sciences university. It is a key member of the Research Triangle, which includes Duke University and N.C. State University.



**UNC Health
Sciences Campus
at Mountain Area
Health Education
Center**

**UNC Health
Sciences Campus**

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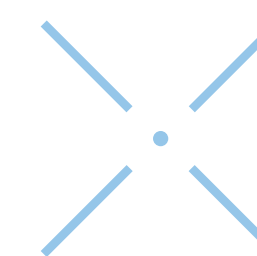
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A CULTURE OF COLLABORATION



We are actively partnering to advance research, education and practice across the campus, state, nation and around the world.

UNC Health Sciences Campus

Our research partners:

- School of Medicine
- Adams School of Dentistry
- Gillings School of Global Public Health
- School of Nursing
- School of Social Work
- UNC Hospitals
- UNC Lineberger Comprehensive Cancer Center

\$1.1B

in Sponsored
Research annually

No. 5

in Health Sciences
Research funding
nationally

Research Triangle Park

A triangle of pharmaceutical, biotech and healthcare talent anchored by three founding universities: UNC-Chapel Hill, Duke University, and N.C. State University.



No. 1

Largest Research
Park in the U.S.

250+

Businesses

3,000+

Patents Awarded to
RTP businesses

Strategic Partnerships

PINNACLE HILL

The University of North Carolina at Chapel Hill and Deerfield Management have created Pinnacle Hill, LLC, a company seeking to discover new medicines to address the significant unmet medical needs of our times. Deerfield has committed \$65M in targeted funding as part of the partnership.

“UNC is one of the leading research universities in the world. It is their ability to build interdisciplinary teams and utilize diverse perspectives to collaborate on healthcare challenges that attracted us. Carolina’s network of research centers and institutes, including the **Eshelman Institute for Innovation**, will play a crucial role in helping us collaborate to solve problems, discover new technologies and save lives.”

—James Flynn
Managing Partner, Deerfield

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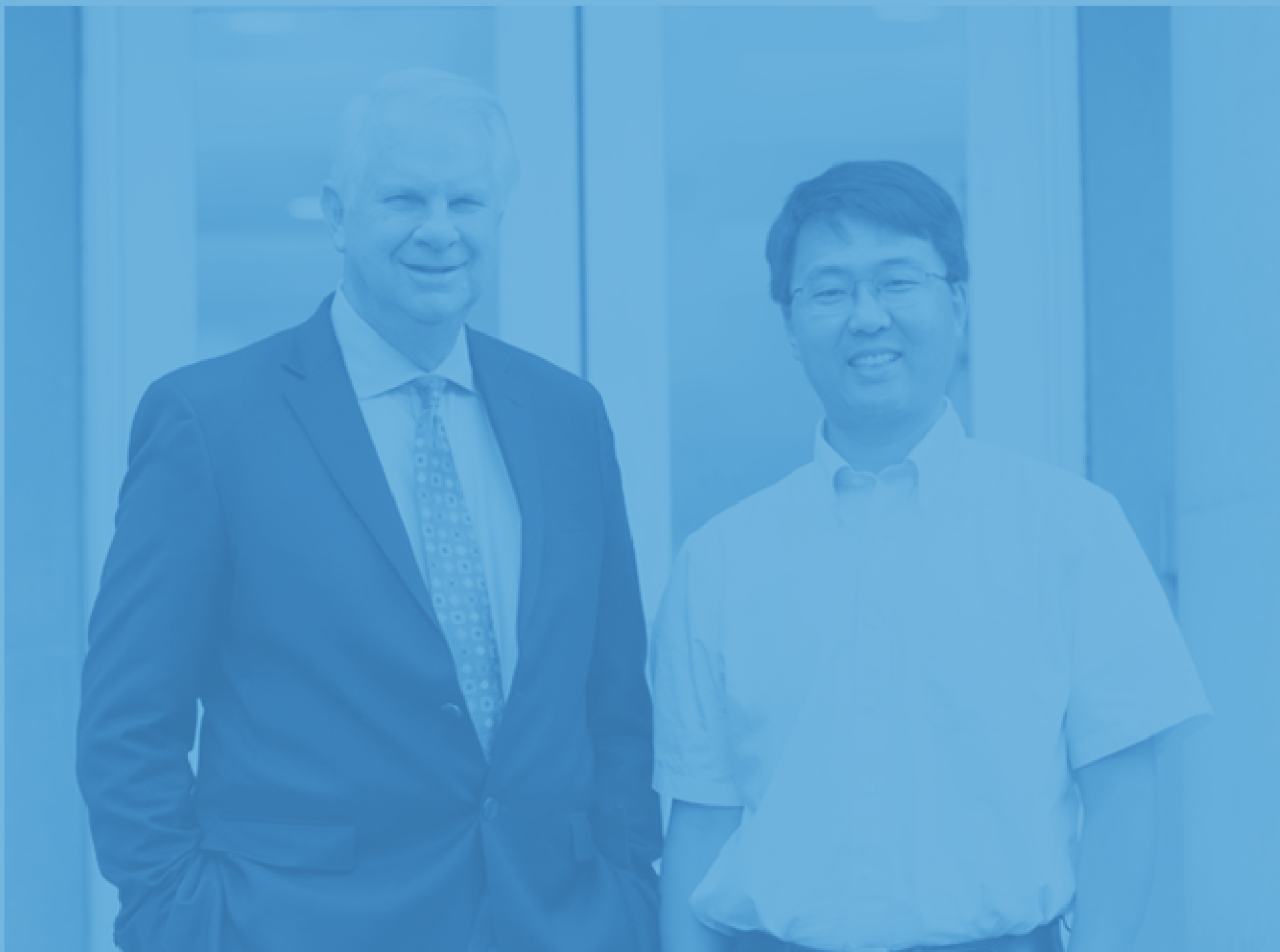
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OUR PEOPLE

We are committed to building a diverse and inclusive community of people who are excited to come to work every day in a positive, supportive environment that allows them to grow and develop.



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OUR PEOPLE

Diversity and Inclusion

The Office of Organizational Diversity and Inclusion is focused on the implementation of several strategic priorities in the areas of:

- Faculty, staff and student recruitment
- Culture and climate
- Curricula of professional and graduate programs.

Following are several ongoing initiatives focused on enhancing our commitment to diversity and inclusion:

- Recruitment Ambassadors Program
- Mentoring Future Leaders in Pharmacy
- Leadership Excellence and Development Program
- Pre-Pharmacy Club
- Undergraduate Students for Diversity in Pharmacy
- Leadership Academy
- International Hour
- Cross-Culture Leadership Development
- Inclusive Engagement Seminar Series
- Art and Science of Diversity and Inclusion
- Rapid Acts of Inclusion
- Culture Week

Rasheen O. Mohammed, Pharm.D., M.P.H., Class of 2019

"The School has continued to make great strides in creating a safe and welcoming environment for all students. The faculty and staff continue to be leaders who promote diversity and inclusion not only in the classroom, but also in practice."



Student Fast Facts

16%

URM* Pharm.D.
Students - 2019
Incoming Class

24%

URM Graduate
Students - 2019
Incoming Class

27%

of Students in the 2019
Incoming Pharm.D.
Class Speak Two or
More Languages

17%

of Students in the 2019
Incoming Pharm.D. Class
are First-Generation
College Graduates

33
States

Represented by
Our 2019 Incoming
Pharm.D. Class

5
Countries

Represented by
Our 2019 Incoming
Pharm.D. Class

99%

Graduation Rate for
URM Pharm.D.
Students

99%

Pharmacy Board
Pass Rate for URM
Pharm.D. Students

* URM - Underrepresented Minority

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Resilience and Well-Being

In 2018, the School formed a Resilience and Well-Being Task Force to develop strategies for preventing and managing mental health concerns, and lead the profession of pharmacy in the effort to create balanced and resilient health care leaders.

Vision

To serve as a model for the profession of pharmacy in the development of a resilient pharmacy workforce that is committed to embracing a whole person approach to education.

Mission

To create innovative organizational systems that support the resilience and well-being of our people.



Eshelman Care Team

A new resource that provides coordinated assistance and support to students who are struggling with well-being, academics, or professional issues through a centralized resource of outreach, referral and case management

Week of Wellness

A new annual event held in February to focus on the importance of wellness within our School

Mental Health First Aid

A new course activity as part of the Leadership and Professional Development Course Stream for all third-year Pharm.D. students

Resilience and Well-Being Endowment

An endowment established to support wellness initiatives at the School

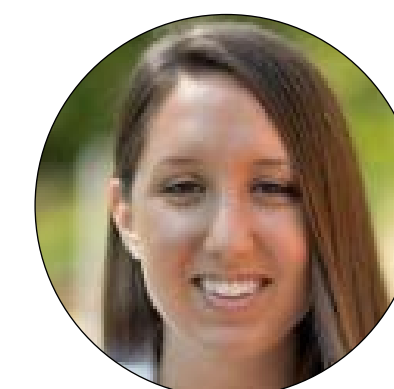
Well-Being and Resilience Student Award

A memorial award in honor of former student Michael Nam was established to recognize Pharm.D. students who have demonstrated a personal commitment to promoting resilience, well-being and mental health

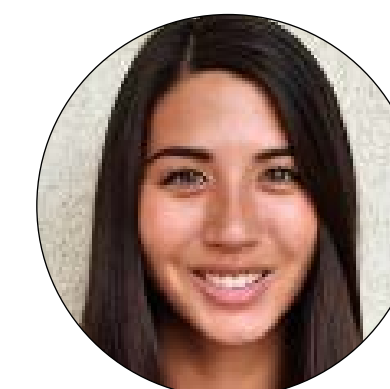
College of Psychiatric and Neurologic Pharmacists Foundation Grant

Awarded to Pharm.D. students Abby MacCauley and Ashley Kang under the mentorship of faculty members Suzie Harris and Heidi Anksorus to assess pharmacist and pharmacy student wellness in mental, physical and personal health.

Their project was selected as an award finalist for the CPNP Foundation Strategic Goals Award, which was presented at their Annual Meeting in April 2019 in Salt Lake City, Utah. Additionally, the project was submitted for an encore poster presentation at the AACP Annual Meeting in Chicago in July 2019.



Abby MacCauley,
PY4 Pharm.D.
Candidate



Ashley Kang,
PY3 Pharm.D.
Candidate

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INVESTING IN THE FUTURE

The Campaign for Carolina is a University-wide fundraising effort focused on continued excellence in teaching, research and service.

As part of the campaign, the UNC Eshelman School of Pharmacy is raising \$175 million to positively impact human health worldwide.

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INVESTING IN THE FUTURE

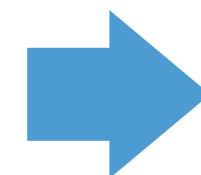
As of June 2019, we have raised more than \$152 million toward our campaign goal of \$175 million. More than 2,250 pharmacy alumni and friends have contributed to the campaign.

Five Key Strategic Investment Priorities:



Students

Attracting and training the next generation of healthcare leaders



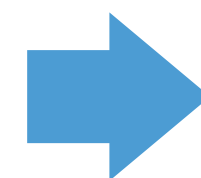
\$6.6M

Raised



Faculty

Recruiting, retaining and supporting intensely talented faculty and researchers



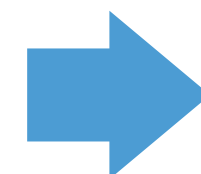
\$30.5M

Raised



Innovation

Funding big ideas in pharmacy education, research and practice



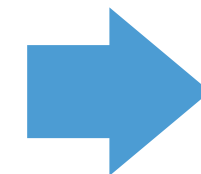
\$104M

Raised



Global

Transforming human health globally



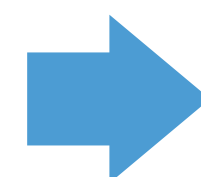
\$7.9M

Raised



Building

Creating a 21st-century environment for learning and discovery



\$3.4M

Raised

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MAKING A DIFFERENCE

Click on the links below to learn more about the School, our academic programs and innovation initiatives.



Pharm.D.



Click on the
Old Well to
learn more about
our Pharm.D.
program

Ph.D.



Click on the
Old Well to
learn more
about our Ph.D.
program

M.S.



Click on the
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learn more about
our M.S. program

Innovation



Click on the
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learn more about
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Giving



Click on the
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learn more about
our Fundraising
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