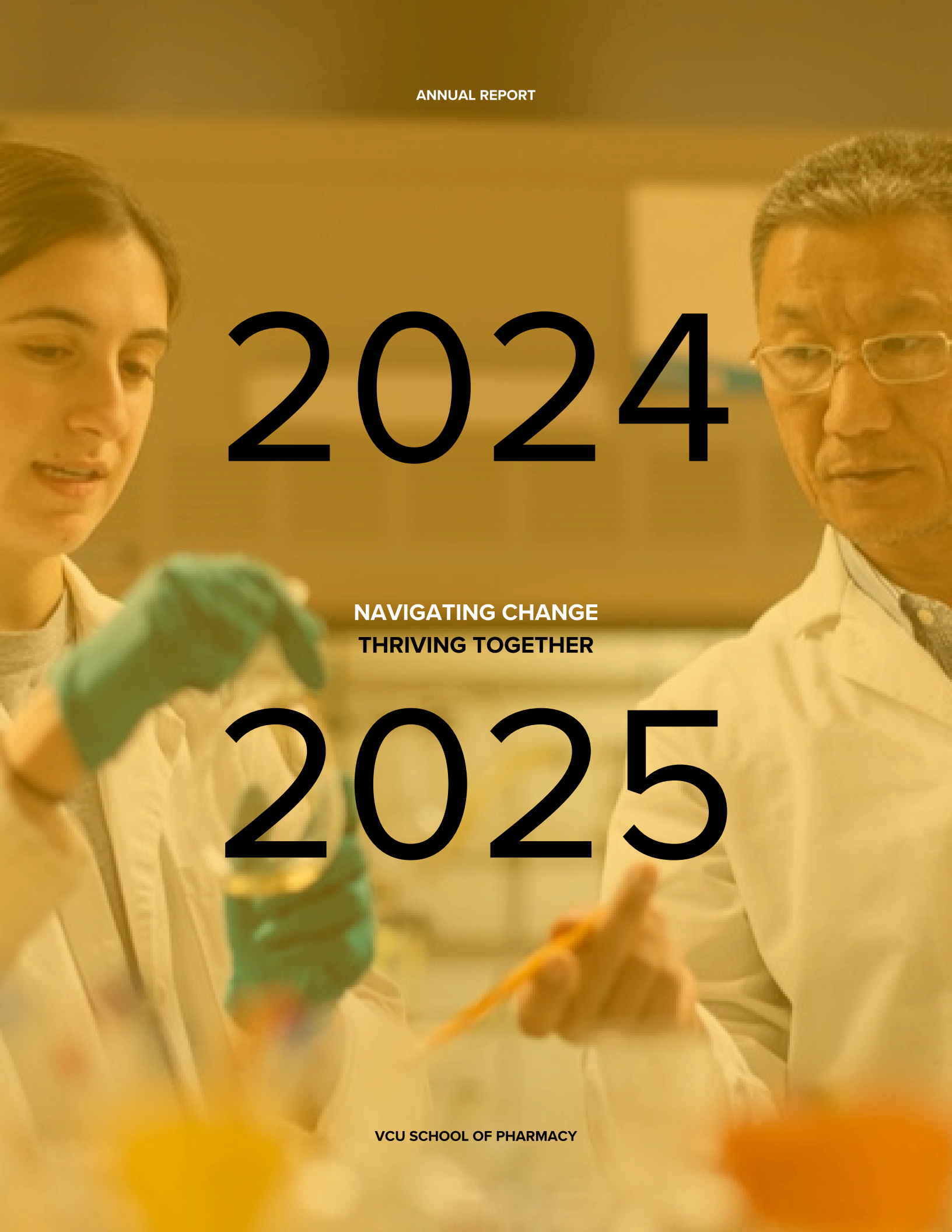
ANNUAL REPORT



2024

NAVIGATING CHANGE
THRIVING TOGETHER

2025

VCU SCHOOL OF PHARMACY

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Navigating change, **Thriving together**

The world around us is changing rapidly and so are we, in service to our students.

This year alone, we:

- opened a Pharmacy Technician Training Program to address staffing shortages, reduce pharmacy wait times and give high school graduates a chance to join a growing field in a program that takes less than a year
- welcomed our first class of B.S. in pharmaceutical sciences students who will bridge the gap of skilled workers in Virginia's and the nation's growing life sciences and pharmaceutical sciences industry
- launched our Next Generation Pharmacist curriculum, providing Pharm.D. students a more tailored approach, and announced new concentrations, enabling market differentiation and enhanced skill development in an increasingly competitive landscape
- graduated the nation's first students to earn a Ph.D. in Pharmaceutical Engineering, giving them new pathways to lead us into the future

We have shown ourselves to be adaptable in the face of change, but adaptability alone is not all we need if we want to persevere. We require connection, support and community, all of which our school offers students in abundance.

We don't have to face change alone. Each of us can find a path through changing tides on our own, but consider what we gain when we forge that path together.

The proverb, "If you want to go fast, go alone; if you want to go far, go together," rings especially true in moments of change. We weather the storm, move the needle, go the distance together. Whether we seek to make a lasting impact as a school community achieving our collective goals or as individuals in the day-to-day shaping the lives of others – students, trainees, patients, alumni, colleagues, friends, neighbors, family or even the broader public – we stand a far greater chance to succeed when we work together and can lean on one another.

I look forward to working with you to navigate our path forward together.

With best regards,

Kelechi C. Ogbonna, Pharm.D., M.S.H.A.
Dean & Archie O. McCalley Chair

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Staff representative

Our strategic plan outlines the key priorities, goals and initiatives that guide us toward achieving our objectives. This plan is a roadmap for our growth, innovation and commitment to excellence.

What guides us: **Strategic plan**

Mission

To achieve excellence in our Pharm.D., graduate, undergraduate and training programs through innovative education and leading-edge research. We achieve our mission by graduating outstanding future pharmacists and scientists who will improve human health, foster exemplary research and provide sustaining contributions to interprofessional patient care.

Vision

We will be a transformational leader in pharmacy education, clinical practice, and clinical and pharmaceutical research.

Strategic priorities

Student Success

We will build a comprehensive student support structure & academic progression plan within SoP that bolsters student recruitment, retention & job placement.

Research Excellence

We will develop a strategic approach to identify & resource key research areas to increase extramural funding & grow national & international prominence.

Entrepreneurship & Innovation

We will serve as the regional leader for pharmacy & pharmaceutical industry workforce development.

Culture & Community

We will foster a community of care through opportunities for connection & collaboration while providing sponsored professional development.

Uncommon resolve, **Unparalleled impact**

Delve into the facts and figures that demonstrate our performance as one of the nation's top schools of pharmacy.

An UNCOMMON approach

At VCU School of Pharmacy, we pride ourselves on excellence in pharmacy education, research and funding.

Here are some benchmarks using the latest reported data from 2024-25.

400+
B.S., Pharm.D., M.S. & Ph.D. students

65
faculty across three departments

82
grants submitted

$81m
total amount requested for grants submitted

77%
NAPLEX pass rate for first-time takers
National average: 78%

89%
MPJE pass rate for first-time takers
National average: 78%

Top 20
pharmacy school in the country

96%
of students agree our school is welcoming to those with diverse backgrounds

gets UNCOMMON results

24
invention disclosures
third-most of any VCU unit

84%
of graduates were employed or continuing their education within six months of graduation
Exceeds VCU average (77%)

93%
on-time graduation rate

98%
of graduates who reported securing a job within six months said their occupation was related to their career goals
Exceeds VCU average (88%)

91%
residency match rate
National average: 81%

100%
of graduates who reported securing a job within six months said they were satisfied with their outcome after graduation
Exceeds VCU average (84%)

$8.8m
in research funding

Top 25
in NIH research funding among pharmacy schools
Top 30% of schools ranked

New avenues with an accelerated program

By Mary Kate Brogan

Starting this fall, VCU School of Pharmacy will begin offering an accelerated program that will allow students to graduate with a bachelor's degree and a Doctor of Pharmacy degree in less time and enter their career sooner. While earning both degrees at VCU typically takes eight years, this offering will allow students to earn both their undergraduate and graduate professional degrees in just seven years.

The accelerated B.S. and Pharm.D. program is an offering of the school's Bachelor of Science in pharmaceutical sciences program, which opened to new students in 2024. Starting in fall 2025, students in this accelerated program can complete required bachelor's courses in their first three years to get a jump on their four-year pharmacy school journey in the Doctor of Pharmacy program at VCU.

"We recognize the need for students to have options to earn their degrees in the most efficient and cost-effective way without sacrificing quality," said **K.C. Ogbonna**, Pharm.D., dean of the VCU School of Pharmacy.

"Not only will this program help reduce students' potential debt," Ogbonna said, "but it will also help students become practicing pharmacists sooner, addressing health care professional shortages and the increase in pharmacy deserts, both in Virginia and across the country."

According to the U.S. Department of Health and Human Services, demand is outpacing the supply of pharmacists, and by 2037, the U.S. will face a shortage of 17,030 pharmacists. Giving students a more efficient path to a career in pharmacy will help them enter the workforce sooner, increasing the number of qualified practicing U.S. pharmacists.

This new seven-year accelerated B.S. and Pharm.D. program will be open to all VCU students majoring in pharmaceutical sciences. VCU's Honors College also offers a six-year guaranteed admission program to complete a Pharm.D. without a bachelor's.

"Some students know exactly what they want to do in their first year of college; others need more time to decide. This accelerated B.S. and Pharm.D. program caters to both these types of students," said **Laura Morgan Frankart**, Pharm.D., associate dean for academic and faculty affairs at VCU School of Pharmacy. "Students in this program will get ahead by completing their first year of pharmacy school before earning their bachelor's degree, and they will have new career opportunities available to them at the end of their fourth year when they graduate with a bachelor's in pharmaceutical sciences."

In VCU's accelerated B.S. and Pharm.D. program, students will complete their coursework in the B.S. program in their first three years at VCU and apply for pharmacy school in their third year. In their fourth year, accepted students start pharmacy school as first-year Pharm.D. students and, at the end of that

year, earn their B.S. degree. They then complete their remaining three years of pharmacy school.

"This new program is designed to balance giving students the flexibility they want with the skills they need to be successful in their lives and careers," said **Keith C. Ellis**, Ph.D., program director for the B.S. in pharmaceutical sciences at VCU School of Pharmacy. "If a student decides they'd like to pursue employment in pharmaceutical sciences after four years while they complete pharmacy school, they can do that without worrying whether they're qualified; they'll have the degree to prove it."

In addition to allowing students to pursue employment while they finish their degrees, the accelerated program will open up additional paths for students graduating with their Pharm.D. who are interested in careers as pharmacists in the pharmaceutical industry.

"Since the pandemic, pharmaceutical industry careers are one of the fastest-growing opportunities for pharmacists. Students are increasingly looking to learn about the education, training and fellowships necessary to pursue careers in pharmaceutical industry," Ellis said in a December 2024 interview with VCU School of Pharmacy. With the experiential learning from the bachelor's program and the clinical training of pharmacy school, this new accelerated B.S. and Pharm.D. program is one of several expanded offerings that will give students the best of both worlds, Ellis said.

Visit the accelerated B.S. and Pharm.D. program website for more information.

Student Success highlights

Dr. Ahmed nation's 1st Ph.D. in Pharmaceutical Engineering

While some may be reluctant to try something new, **Nadia Tasnim Ahmed**, Ph.D., doesn't shy away from the unknown. Instead, it's what motivates her. "I have the tendency to seek out new experiences, even if I don't know where it will take me," she said.

That tendency is what drove her to become the first student at VCU – and the country – to earn a Ph.D. in pharmaceutical engineering. She graduated from the program in December 2024.

Now an ORISE fellow at the Food and Drug Administration, Ahmed is using her skills in mass spectrometry to develop methods for profiling impurities and analyzing unintended structural variants, such as diastereomers, in siRNA oligonucleotide-based products used for therapeutics.

Read more about Dr. Ahmed's journey at VCU.

Dr. Sunny Makwana emerges from his shell at VCU SoP

When **Sunny Makwana** began his Pharm.D., he was a self-described introvert from a small town in Southwest Virginia. But he found his voice – and a higher profile – at VCU, where the student leader earned one degree in May and is now pursuing his doctorate.

Makwana, a first-generation college student whose family emigrated from India, had always been interested in math and science, and his parents originally encouraged him to study medicine. But at Virginia Tech, his pivot toward pharmacy developed from the chance to do lab work.

"The decision was really from getting a firsthand experience with research. It just clicked for me," he said. "After a couple of months of experience in the lab, it just felt like it was for me."

Now in the Pharm.D./Ph.D. dual degree program, Makwana plans to focus his doctoral research on respiratory pharmaceutics, including how inhaled medication affects the lungs and body.

Read more about Dr. Makwana's path to a Pharm.D./Ph.D.

Dr. Silas Contaifer delivers AI, VR solutions to the classroom

In a pandemic pivot, **Silas Contaifer** turned his expertise in VR from the outdoors to the OR.

Contaifer earned his Ph.D. in pharmaceutical sciences with a concentration in pharmacotherapy at VCU SoP, where his research and graduate teaching has focused on extended, mixed and virtual reality – and how they can be used in pharmacy education, orthopedic surgery guidance, dental and anatomical studies, and to boost student engagement.

Contaifer is continuing to explore how AI can help health care students and professionals – from creating faster 3D models of the human body to developing emergency room simulations so students can practice urgent patient care.

"Everyone leaves my lab with some system that they can use in their work, or, if someone wants to become a professor, can use it in their class," he said.

Read more about Dr. Contaifer's research while earning his Ph.D.

Training top technicians

By Mary Kate Brogan

In 2024, VCU launched a program to train entry-level pharmacy technicians, who play a vital role in medication management and whose entry into the workforce is poised to address high staffing demands and reduce wait times in pharmacies and hospitals across Virginia and the U.S.

The Pharmacy Technician Training Program, a part-time program that learners with a high school diploma can complete in as little as five months, uses self-paced online learning combined with hands-on training, virtual simulations and experiential rotations to educate career-ready pharmacy technicians, said **Barbara Exum**, Pharm.D., the Pharmacy Technician Training Program director. So far, 27 learners have completed the program.

"The demand for pharmacy technicians is growing as the role of pharmacists expands to include more direct patient care. Pharmacy technicians need broad knowledge and skills in preparing and dispensing prescriptions, managing medication inventory, processing insurance claims and more," said Exum, who also serves as director of the Center for Compounding Practice and Research at the VCU School of Pharmacy. "Learners in our program will go on to be valuable members of the healthcare team, supporting pharmacists to provide safe and effective medication therapy."

The Virginia Department of Workforce Development and Advancement predicts 8.7% projected job growth for qualified pharmacy technicians in Virginia through 2032, much faster than average according to the Bureau of Labor Statistics' analysis of projected job growth.

"When it comes down to it, this program is about access," said **K.C. Ogbonna**, Pharm.D., dean of the VCU School of Pharmacy. "Pharmacy technicians joining our health care workforce help our most vulnerable populations get timely access to their medication, which in some cases can be the difference between a normal day and a health emergency. This program also ensures we are cultivating the support personnel that enable pharmacists to focus on ailing aspects of our health care delivery system, such as chronic disease management. I am excited that our program will contribute to improving patients' quality of life by bridging the gaps that exist in health care."

Know an aspiring pharmacy technician? Applications are open at **go.vcu.edu/pharmtech**

The program's position within the Center for Compounding Practice and Research will allow learners to gain unique hands-on experience in VCU's state-of-the-art compounding facilities. In addition to the hands-on opportunities, Exum and her team bring perspective from their own careers working in community practice, infusion and long-term care pharmacies that will prepare individuals for careers as pharmacy technicians in a variety of settings.

"Well-trained pharmacy technicians are essential to fostering a safe environment and delivering quality care to our patients," Exum said. "This comprehensive program is designed to cultivate competent and confident pharmacy technicians who will contribute to the safe and effective use of medications, resulting in enhanced health care and well-being for members of communities across Virginia and beyond."

Three concentrations launch for Pharm.D.

VCU School of Pharmacy will begin offering three new concentrations for the Doctor of Pharmacy degree program in fall 2025. As part of the school's Next Generation Pharmacist curriculum, the concentrations in digital health, geriatrics and pharmaceutical industry will allow Pharm.D. students to gain specialized training for career paths in growing areas of the pharmacy profession.

"Pharmacists are paving the way for a future that balances a focus on patient-centered care with an eye toward solutions that can help the broader population," said **K.C. Ogbonna**, Pharm.D., dean of the VCU School of Pharmacy. "We encourage our students to be pharmacists that innovate and create change to empower the patients and communities they serve, and these concentrations are just one example of how we will help them make an impact as they enter their careers."

The drive behind these new concentrations stems from both job demand in these areas – as expressed to VCU School of Pharmacy by alumni and experts in the field – and by student interest, said **John Bucheit**, Pharm.D., an associate professor in the Department of Pharmacotherapy and Outcomes Science and chair of the school's Pharm.D. curriculum committee.

"These new concentrations prioritize students' success, preparing them for pharmacy careers in areas of increasing opportunity for our profession," Bucheit said. "Through the training they receive in these concentrations, our students will meet the current and future needs of the workforce while they hone their skills in the areas of pharmacy that appeal to them most."

These concentrations are optional additions to the Pharm.D. degree, with the traditional Pharm.D. degree still available, for the Class of 2028 and future classes.

New concentrations

Digital Health
This concentration will equip students to assess and deploy digital health solutions effectively, meeting the industry's move toward a technology-centric health care approach.

Geriatrics
This concentration aims to prepare pharmacy students to work with older adults in diverse pharmacy settings, such as community pharmacies, home health care, hospitals and long-term care facilities.

Pharmaceutical Industry
This concentration will offer students focused education and mentoring in areas, such as clinical trial design and operations, data analysis, lab research and scientific communication, so they are prepared to attain fellowships and jobs in industry.

Entrepreneurship & Innovation highlights

Dr. Gibson 1 of 4 in US to earn rising teaching scholar award

Cait Gibson, Pharm.D., an associate professor and interim director of international programs at the VCU School of Pharmacy, was recognized by the American Association of Colleges of Pharmacy for excellence in scholarly teaching.

At the AACP Pharmacy Education conference in Boston, Gibson earned the 2024 Emerging Teaching Scholar Award, one of four pharmacy educators in the nation to receive the 2024 award.

The award is given to educators engaged in scholarly teaching. These educators often excel in teaching, conduct research on teaching and learning, and use research and evidence to inform their practices as educators.

According to the award committee's notes, Gibson's recognition stems from her incorporation of active learning techniques, her publications and presentations and the other recognitions she has received, including an American College of Clinical Pharmacy Practice and Research Networks Teaching and Mentoring Award in 2023.

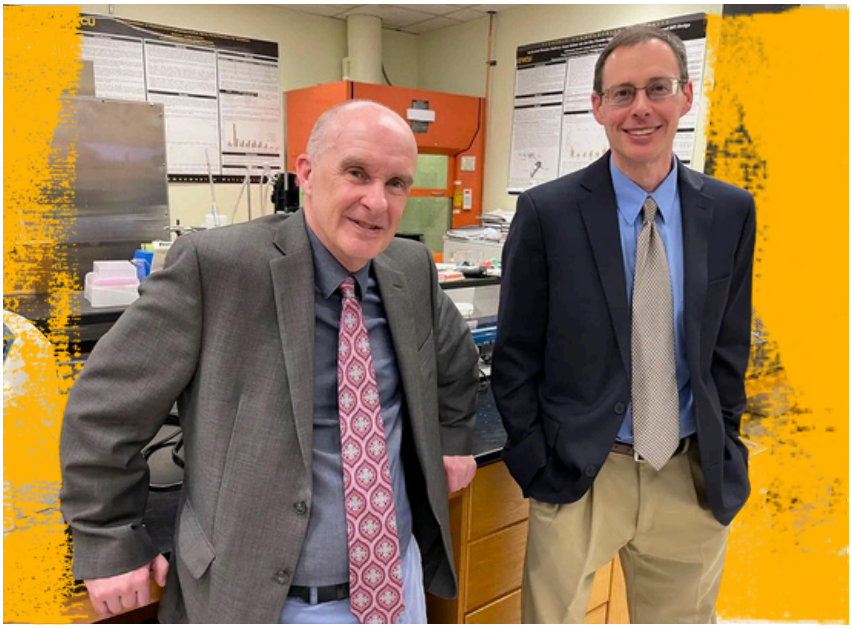
"This award affirms my efforts doing what I love most in my role – ensuring that my students receive the engaging, high-quality, transformative education that they deserve while attending VCU School of Pharmacy," Gibson said.

Joining colleagues **Lauren Caldas**, Pharm.D., and **Krista Donohoe**, Pharm.D., Gibson becomes VCU's third educator to earn the award.

Helping premature

By Dan Carrigan
VCU TechTransfer & Ventures

After multiple prototypes and more than a decade of collaboration, two VCU inventors are closer than ever to bringing a potentially lifesaving device to premature infants around the world.



The innovation – a handheld dry powder inhaler for newborns in respiratory distress – recently cleared a proof-of-concept milestone, with results published in a peer-reviewed journal. Now, inventors **Michael Hindle** and **Worth Longest** are focused on proceeding quickly toward clinical trials.

"Hopefully within one to two years, we could get this into babies and actually save some lives," said Hindle, Ph.D., the Peter R. Byron Distinguished Professor in the VCU School of Pharmacy's Department of Pharmaceutics. "We're trying to deliver something that babies need to be able to breathe."

Premature infants born with underdeveloped lungs lack surfactant, a naturally occurring substance that reduces surface tension and keeps airways open. In many parts of the world, particularly low- and middle-income countries, invasive delivery methods like intubation are not feasible, and the availability of physicians and ventilators is limited.

"So the idea that you could walk up to an infant in a fairly nontechnical setting and noninvasively give that surfactant is really going to be lifesaving for millions of babies who don't have access to treatment right now," Hindle said.

A story of time and talent

The project's origins go back 15 years, and while the solution may look simple, the engineering behind it is anything but.

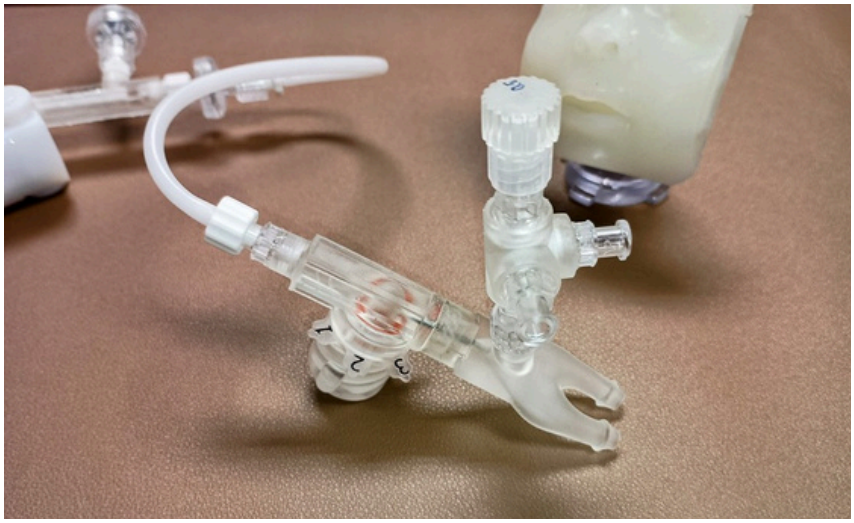
"We probably made maybe too many prototypes – [more] than we should have," joked Longest, Ph.D., the Alice T. and William H. Goodwin Jr. Endowed Professor in the VCU College of Engineering's Department of Mechanical and Nuclear Engineering. "But because we have the 3D-printing technology, we can come up with an idea, turn it around and test it the next day. Over the years, it's been hard to put a number on it, but we're probably in the thousands."

Their commitment has resulted in a low-cost, compact device that uses four simple squeezes to create a high-efficiency aerosol capable of reaching deep into a newborn's lungs – and without the need for electricity, intubation or a ventilator. That would allow health care providers to deliver lifesaving therapy quickly and noninvasively to premature babies.

Today, those treatments often begin with intubation – an urgent, difficult and high-stress procedure for providers and families – as well as the use of liquid surfactant.

"With our approach, we see really rapid response at doses that are unheard of for surfactants, because we're able to deliver such very small particles as an aerosol cloud right to that site of action,

babies breathe easier



Left: Drs. Michael Hindle (left) and Worth Longest in the lab. Above: The device sits next to a 3D model of an infant airway passage that is used to test the device.

deep in their lungs, that other people have not been able to do before," Hindle said.

A major step forward

Earlier this year, Hindle and Longest completed their first proof-of-concept study, with strong results for delivering aerosolized surfactant through a nose and into the lungs in preclinical models. In April, the team published its findings in the Journal of Aerosol Medicine and Pulmonary Drug Delivery, showing that its hand-actuated dry powder inhaler and surfactant formulation outperformed the current clinical standard in preclinical model testing.

"It's basically the complexity of a rocket engine without combustion," Longest said of the inhaler. "And we've embedded that into a device simple enough to squeeze by hand."

The targeted delivery of the surfactant therapy to the alveolar regions of the lungs – the tiny air sacs where oxygen enters the bloodstream – produced five to 12 times faster oxygenation recovery and provided double the improvement in lung compliance compared with the standard liquid method. Notably, these improvements were achieved with only one-tenth of the liquid dose and were delivered in less than five minutes.

"The next steps now are to think about commercialization," Hindle said. "We have to take what we're doing in the lab, where we've manufactured the powders and the devices on relatively small scales, and actually think about manufacturing at much larger scales."

That means galvanizing the teams to prepare for toxicology studies, formulation stability testing and the regulatory steps needed to bring the device out of the lab and into clinical use. The project has been supported by the National Institutes of Health, the Food and Drug Administration, the Bill and Melinda Gates Foundation and the pharmaceutical industry.

Supporting their journey

At VCU, Hindle and Longest have had ongoing support from TechTransfer and Ventures, which helps commercialize campus innovations through intellectual property protection, commercialization planning and licensing strategy.

The support has already led to licensing deals.

Some of the team's related particle and device technologies have been licensed for applications in chemotherapy, and more partnerships are in discussion. The team is working on scaling the platform for broader applications, including drug delivery for adults with COVID-19, sepsis and lung injury.

"We've really sought out unmet needs, clinical challenges where this high-efficiency delivery is really needed," Hindle said. "And we've kept the technology simple enough to move forward quickly."

With commercialization efforts in motion and support from key partners, both inventors say the ultimate reward is knowing what the device could mean for patients.

Read the full story on VCU News.

Dr. Safo seeks therapies for sickle cell disease

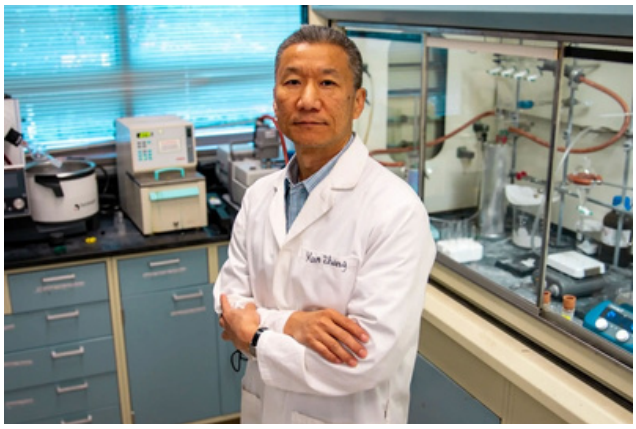
When the U.S. Food and Drug Administration approved two gene therapies for sickle cell disease in late 2023, **Martin Safo**, Ph.D., a professor in the Department of Medicinal Chemistry at VCU School of Pharmacy, called it "a dream come true." However, the news did not deter his quest for an impactful – and more affordable – treatment.

"When I started, my mentor and I, this is all we talked about — that one day there's going to be a gene therapy to treat this disease," said Safo, who has researched sickle cell disease for three decades. "But the question is the impact. Will this help millions of sickle cell patients all over the world? And my answer is: The impact is going to be minimal for the foreseeable future."

Sickle cell disease, a hereditary blood disorder, affects more than 75,000 people in the United States and millions of people worldwide. Safo and his research team are using structure-based drug design, including X-ray crystallography, molecular modeling, synthesis and biological evaluation to discover hemoglobin allosteric effectors and/or covalent modifiers that may be useful for treating sickle cell disease.

"Our drug, ILX-002, is currently in preclinical studies; we're planning early human trials in the near future," Safo told VCU Magazine in 2024. "This is going to be a once-daily pill. And it's going to be relatively cheap; the compound is easy to make. We believe it will be the holy grail for sickle cell disease. Gene therapy is very expensive. It's going to be difficult to make it cheaper. And you're talking about a lot of very poor people."

Hear from Dr. Safo about how this drug therapy has the potential to change lives.



Dr. Zhang leads Center for Drug Discovery

In the world of drug development, university researchers play a critical role in creating promising new therapies. Under the leadership of new director **Yan Zhang**, Ph.D., the VCU Center for Drug Discovery is undergoing a major transformation — aligning its structure in a way that mirrors the industry-standard drug development pipeline and expanding to become a true VCU-wide hub for translational research.

Historically, the center operated without a formally integrated infrastructure. But Zhang, who also earned VCU's 2024 Distinguished Scholarship Award, has rebuilt the center to mimic the full continuum of drug development — from target discovery and molecular design to preclinical testing and potentially early-stage clinical trials.

"The idea is to follow the proven model used by pharmaceutical companies and to leverage the talent and infrastructure we already have here at VCU," said Zhang, a professor in the Department of Medicinal Chemistry at the School of Pharmacy. The initiative is aimed at making VCU's research more competitive for industry partnerships, federal funding and eventual approval by the Food and Drug Administration.

VCU's Center for Drug Discovery is one of 17 research institutes and centers supported by the Office of the Vice President for Research and Innovation.

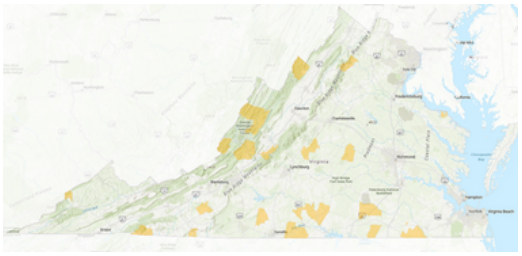
Read more about the Center for Drug Discovery.

Research Excellence highlights

If 44 locations add pharmacies, 10,000 Virginians may benefit

The addition of pharmacy services at 44 locations throughout Virginia could reduce the impact of pharmacy deserts for thousands of Virginians in each area, according to a February study published in the Journal of the American Pharmacists Association by researchers from VCU School of Pharmacy and the Virginia Board of Pharmacy.

Data from the Virginia Board of Pharmacy revealed that the number of pharmacies decreased by about 6% between June 2016 and May 2024, mirroring a recent national analysis that identified a 5.4% decrease in pharmacy rates from 2018 to 2021. Pharmacy closures have unseen ripple effects for public health among residents in those areas, according to corresponding author **Teresa M. Salgado**, Ph.D., director of the Center for Pharmacy Practice Innovation at the VCU School of Pharmacy.



"It's not just the ability to provide life-saving medications that goes away," Salgado said. "First of all, there's the loss of access to a pharmacist, to a health professional who provides care in areas where there may be limited access to other health care providers. Frankly, community-based pharmacies are the front door to health care and the hub and vitality of these communities."

Read more about what these findings mean for the community.

Long-acting medication for opioid addiction in the works

Researchers at VCU have reformulated an opioid use disorder medication in a way that could extend its therapeutic effect – and offer a longer-lasting pharmaceutical therapy for treating opioid addiction.

The team has reworked nor-levo-alpha-acetylmethadol (nor-LAAM), a metabolite of a previous FDA-approved opiate dependence medication, into a new formulation that could be used to help patients with opioid addiction. While existing medications require daily doses, this new formulation is designed to be a long-acting alternative, requiring doses only once a month or potentially at even longer intervals.

Their September 2024 Journal of Controlled Release study showed that the reformulated medication significantly reduced opioid use and withdrawal symptoms in rodent models. The researchers say these findings have promising implications for ultimately expanding the range of medicinal therapies available for treating opioid addiction.

"There is an urgent need to develop more therapeutic strategies for enhancing the effectiveness of our interventions and the overall well-being of patients with opioid use disorder. Our goal is to give physicians another tool in their toolbox to help patients overcome addiction," said **Qingguo Xu**, Ph.D., an associate professor in the VCU School of Pharmacy's Department of Pharmaceutics. He co-led the new study with **Matthew Banks**, Ph.D., a professor in the VCU School of Medicine's Department of Pharmacology and Toxicology.

Read more about nor-LAAM.

Solving the mysteries behind benzodiazepine's side effects

Researchers at VCU and Columbia University are trying to better understand the impact of benzodiazepines after extended use. Previous research has shown benzodiazepines may increase the risk of developing or worsening inflammatory conditions, like lung inflammation and inflammatory bowel disease.

A team co-led by **Youzhong Guo**, Ph.D., an associate professor in the Department of Medicinal Chemistry at VCU School of Pharmacy, has gained insights into a protein suspected to be involved in benzodiazepine-related inflammation. Their March study in The Proceedings of the National Academy of Sciences could inform strategies to improve drug design as well as open new opportunities for treating inflammation-related conditions, including certain cancers, arthritis, Alzheimer's disease and multiple sclerosis.

"Numerous attempts have been made to determine the structure and elucidate the function of this mysterious membrane protein family," Guo said. "After decades of research, we have promising evidence that resolves some of the mysteries around this protein and could be crucial for advancing benzodiazepine drug design."

Read more about this discovery.

Culture & Community highlights

How VCU's health sciences campus is unlike any other

VCU's premier health sciences campus is at the forefront of training the nation's next generation of caregivers, researchers and health leaders. Dean **K.C. Ogbonna**, Pharm.D., M.S.H.A., reflects on what makes our campus unlike any other.

What do you hear from students and faculty on why they chose VCU?

"Our culture is really what makes us stand out as a school. In health care settings, we often talk about the social determinants that shape a person's health. As educators, we like to talk about the social determinants of academic success – all the resources that a student needs in order to thrive, whether that is lodging, academic support or fiscal solvency through scholarships. We pride ourselves in thinking about our students holistically so that they can be agents of change and leaders in their field."

How important are these interprofessional opportunities?

"Health care is a team-based sport. How can we expect our students to work together in a health care environment if they don't learn together? VCU is very unique in that we have courses built into our curriculum where students engage with peers studying other professions, whether that is pharmacy, nursing, medicine, social work, physical therapy and more. This helps them critically think about how to tap into the expertise of the whole health care team in order to make the best choices for their patients."

Read the full interview with deans and leaders from across campus.

Celebrating the life and legacy of a pioneering pharmacist

In February, VCU School of Pharmacy and the Black Student Pharmacist Organization hosted "A Legacy of Firsts: The William S. Cooper Celebration." Speakers included **Clifton Peay**, M.D.; Dean **K.C. Ogbonna**, Pharm.D.; **Elvatrice Belsches**; BSPO co-founder and president **Erika Nixon-Lambert**; BSPO co-founder **Kiki Arthur**; and **William Cooper**'s son, **Bill Cooper Jr.** (pictured above), before a tour of the Black History Museum & Cultural Center of Virginia's "A Prescription for Change" exhibit.

William S. Cooper was the first Black graduate of the VCU School of Pharmacy.

In considering his father's legacy, Cooper Jr. shared stories about what he learned growing up in and around his father's pharmacy, and he reflected on the lasting impact his father has had on residents of the community.

View a gallery of photos from this event on Flickr.

White Coat 2024 | 'Remember that word: Community'

Before receiving their white coats onstage with the assistance of Bertha Rolfe Teacher of the Year **Yana Cen**, Ph.D., students heard reflections from keynote speaker **John Beckner**, R.Ph. (B.S. '78).

Dr. Beckner, senior director of strategic initiatives at the National Community Pharmacists Association, shared his experience as a pharmacist impacting the lives of patients and community members – and reflected on the importance of students seeking community, whether in national organizations or among their own peers.

"Today, you are starting a new path together with your colleagues," Beckner said. "You are part of a community, one that will become increasingly important as you progress through pharmacy school and begin practice. Remember that word: Community."

Read more about this year's White Coat Ceremony.

Offering a Resilient Smile

By Dina Weinstein

Buprenorphine is a well-known therapy for opioid use disorder in part for its convenience: In film or tablet form, it can dissolve under the tongue in a patient's mouth and ease the craving for heroin or other potent drugs. Less recognized is one of its side effects, and a group of VCU health sciences students has come together to address the issue.

Severe dental problems have been linked to buprenorphine, and those oral health issues on rare occasions can become life-threatening on their own. Led by VCU School of Pharmacy students, the Resilient Smile Project aims to both help patients maintain their oral health and educate health care providers about addressing side effects of buprenorphine.

Christian Moon, a third-year Pharm.D. candidate, led the effort as vice president of VCU's student chapter of the American Association of Psychiatric Pharmacists. The student group had been considering the buprenorphine issue with its advisor, **Ericka Crouse**, Pharm.D., an associate professor in the school's Department of Pharmacotherapy and Outcome Sciences, who specializes in psychiatric pharmacy and substance use disorders.

A team of students conducted an oral hygiene donation drive in February. The initiative resulted in 270 kits, 70 of which included pediatric oral health supplies to support patients with families in Richmond. The kits, which contained toothbrushes, floss, toothpaste, mouthwash, wipes and educational pamphlets, were distributed to five area pharmacies and clinics that serve individuals with opioid use disorders: Bremo Pharmacy, Daily Planet Health Services, Verity Psychiatry, Richmond Behavioral Health Authority via Westwood Pharmacy, and VCU Health's MOTIVATE Clinic.

Crouse and Moon secured an AAPP Collegiate Chapter Impact Grant and a donation from Verity Psychiatry to support Resilient Smile. Moon shared results of VCU's initiative at AAPP's national conference in April.

"My hope is to start facilitating further conversations," he said. "We'll be able to further put a light on the issue that is getting worse. … It's not just a pharmacist perspective that we should be tackling it from. It's the entire health care team."

Galen Society Dinner

Graduate Awards Reception

Snapshots of our pharmily

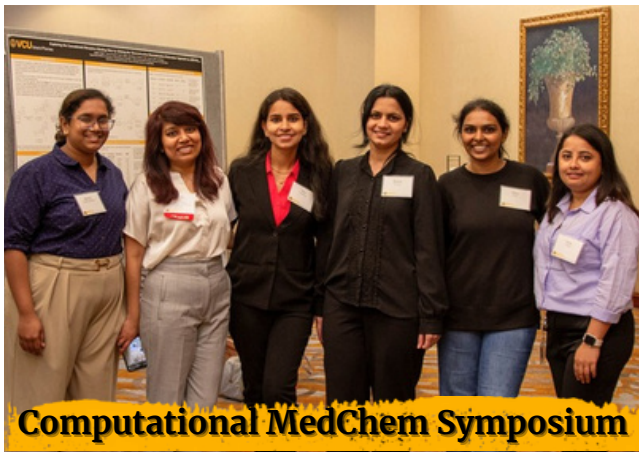
From our first pharmaceutical engineering graduates to our first class of undergraduates, from discoveries in the lab to learning in the classroom, from unbridled joy and to moments of quiet reflection, our 2024-25 school year came with so much to celebrate.

Take a look at some of our favorite photos of our pharmily from 2024-25 at VCU School of Pharmacy.

Our Class of 2025

Research Day at Haleon

White Coat Ceremony


Computational MedChem Symposium


Sankofa Ceremony


Hooding & Diploma Ceremony


White Coat Ceremony


Hooding & Diploma Ceremony


William S. Cooper Celebration


Burnside Watstein Awards

A global pharmacy gift

MCV Foundation Communications

For 2020 VCU School of Pharmacy graduate **Arzu F. Moosvi**, Pharm.D., going abroad during pharmacy school made a profound impact on her career, her life and her view of the field of pharmacy.

"It's always good to travel," Dr. Moosvi said. "It opens your mind; it expands your horizons in a very different scenario, and that professional expansion continues to benefit those around you after the fact."

Inspired by her experiences, she decided to give back by establishing the Arzu F. Moosvi Global Medicine Travel Award so future students can benefit from similar opportunities.

The opportunity to go abroad as part of her educational experience deepened Dr. Moosvi's already strong resolve to pursue a career focused on global health, particularly in Pakistan, her family's country of origin. Prior to pharmacy school, she volunteered with one of Pakistan's largest hospital systems, counseling patients about medications. She credits her faculty mentor **David Holdford**, Ph.D., with encouraging her to attend the FIP World Congress as a student in 2019 and seek funding to enable her travel to the conference.

Dr. Moosvi, who is currently working to open a nonprofit in Pakistan, credits her international engagement and interaction with people of different cultures with helping her become a better pharmacist.

Read more about Dr. Moosvi's decision to pay it forward.

2025 Outstanding Preceptor Awardees

This May, VCU School of Pharmacy recognized 10 preceptors who have gone above and beyond training our students.

Preceptor of the Year: **Dr. Tana Kaefer**, Director of Clinical Services at Bremo Pharmacy

Partner Recognition Award: **University of Virginia Health System**

Outstanding preceptor awardees:

- **Dr. John Huffman**, Pharmacy Director, Encompass Health at UVa
- **Dr. Markus Miller**, Pharmacy Manager at CVS/Target
- **Dr. Erin Zacholski**, VCUH Massey Cancer Center and VCU School of Pharmacy
- **Dr. Katie Smithwick**, Pharmacy Specialist in Psychiatry at VCU Health System
- **Dr. Trey Fuller**, Chief Pharmacist at the VA Dept of Corrections
- **Dr. Joshua Hildebrand**, Pharmacy Specialist in Solid Organ Transplant at Inova Fairfax Hospital
- **Dr. Juan Vargas**, Pharmacist in Charge at Kroger
- **Dr. Melissa West**, Pharmacy Specialist in Pediatric Oncology at Inova Fairfax Hospital

Engage with us

Sponsor research
Support our school by investing in new discoveries and talent through venture philanthropy, internships, scholarships and postdoctoral fellowships.

Start a conversation with our Development team by emailing **Louie A. Correa** at lacorrea@vcu.edu.

Host internships or hire a grad
Employ Virginia's brightest interns and best-trained new graduates to support your organization as you change the world.

Interested in hiring or training ...
- Undergraduates? Contact **pharmsci@vcu.edu**
- Graduate students? Contact **pharmgrad@vcu.edu**
- Pharm.D. students? Contact **pharmacy@vcu.edu**

Get involved as a preceptor
Give our Pharm.D. students hands-on experience in clinical practice.

Contact Director of Experiential Education, **Wanda Coffey**, M.A., at wcoffey2@vcu.edu.

Participate in an OSCE or as a guest lecturer
Get in the classroom through a faculty exchange, guest lecture or OSCE. Contact pharmacy@vcu.edu.

Make an impact with a gift
When you support our school, you shape the future of health care through innovation and excellence and prepare students to become leaders in the field.

Make a gift at **give.vcu.edu/pharmacy**.

Grads' unbreakable bond

By Joan Tupponce

Lesley and **Andrew Maggard** say their love story has come full circle. They had their first date at a Galen Society dinner as Virginia Commonwealth University pharmacy students, and now, 11 years of marriage later, they attend the annual dinner as donors.

Lesley asked Andrew if he would accompany her to the dinner, held each year for School of Pharmacy donors and alums who are members of the society, during their P3 year in 2011. As president of the Student Association of Consultant and Geriatric Pharmacists at the time, Lesley was invited to attend and bring a guest.

When she posed the question to Andrew, he agreed without hesitation.

Six months later they were engaged, and they married the following year in 2013 — the same year as their graduation.

The couple, who live in Lynchburg, had the opportunity to grow as friends and schoolmates during their P1 year after they were placed in the same project group during orientation week at the School of Pharmacy. Fast forward two years, and they were once again paired in a project group during their P3 year. Only this time around, they sat next to each other, and eventually their friendship turned into love.

"We would see each other every day and work on projects together," Lesley said. "Our roommates were in the same friend group. We would all get together to watch shows like 'The Office' and 'Parks and Recreation.' We would study together and go to various fundraisers and events like the Back-to-School Picnic, Winter Ball and the Chili Cook-Off."

Attending their first Galen Society dinner made a huge impression on the couple.

"We loved interacting with the alumni and donors," Lesley said. "One of our goals was to look back on our first date and attend the dinner as a donor."

And that's just what they have done. They have been instrumental in endowing a scholarship in memory of **Brittany Burnette Gibson**, a double graduate of VCU who passed away in 2024 from breast cancer. The Maggards worked with Gibson at Centra Lynchburg General Hospital.

"Brittany was one of the first pharmacists I met upon joining the team at Lynchburg General in 2019," said Lesley, who serves as pharmacy operations manager. "She was a trailblazer, modernizing clinical pharmacy at Centra as our first clinical pharmacist specifically assigned to the emergency department."

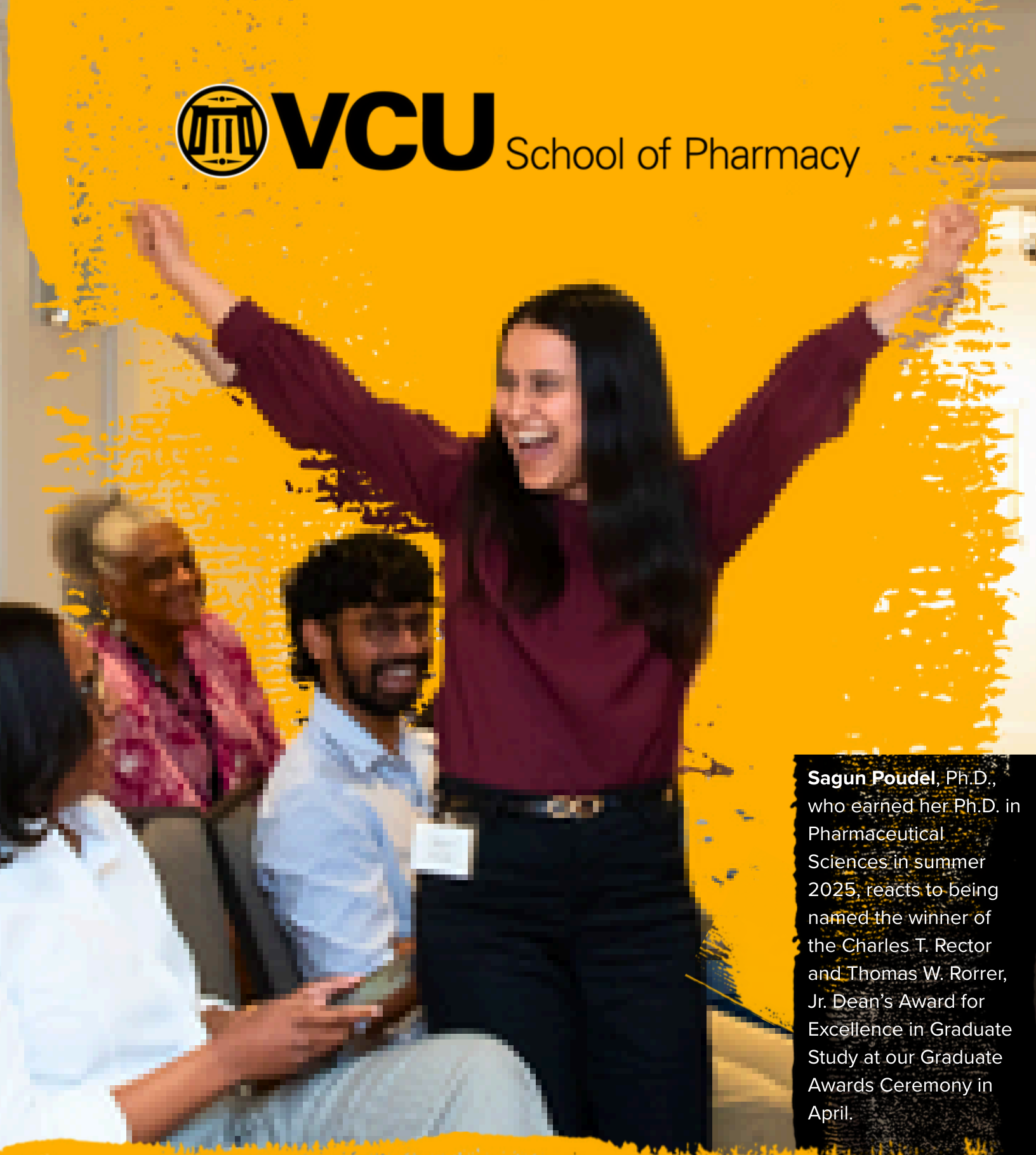
The Maggards were able to seed a scholarship fund with the help of a VCU alum who also worked closely with Gibson. To date, they have raised the $50,000 needed to endow the **Brittany Burnette Gibson Scholarship**.

"Andrew has always had a way of making me laugh through his wit and charm," Lesley said. "I realized early on that he was my other half, and I didn't want to go through life without him."

"I love Lesley's laugh," said Andrew, director of outpatient pharmacy at Centra Health. "She is fun, sincere and kind-hearted. She is a strong, intelligent person."

They are grateful to VCU and the Galen Society for bringing them together, Lesley said. "We have it to thank for our family."

VCU School of Pharmacy



Sagun Poudel, Ph.D., who earned her Ph.D. in Pharmaceutical Sciences in summer 2025, reacts to being named the winner of the Charles T. Rector and Thomas W. Rorrer, Jr. Dean's Award for Excellence in Graduate Study at our Graduate Awards Ceremony in April.

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