

THE PURDUE PHARMACIST

ISSUE ONE SPRING / 2020

OUR FUTURE:
\$90M Building Planned

BRAIN FLOWER:
Shining Spotlight on Opioid Crisis

DEFINING STUDENT SUCCESS:
In Harmony with Pharmacy



04

ADDRESSING OPIOID CRISIS

08

ALUMNI IN LEADERSHIP

14

THE FUTURE OF PHARMACY AT PURDUE

20
EXCELLING IN
ENGAGEMENT

24
GROUNDBREAKING
RESEARCH

28
ALUMNI: TAKING
GIANT LEAPS

32
DEFINING STUDENT
SUCCESS

Jim and Tom (BS Pharm '66) ▶
Marcotte give each other high-fives during the 23rd annual BoileRx Golf Classic at Purdue's Birck Boilermaker Golf Complex in 2019. See details about this year's event on page 19 and find out how you can support Pharmacy Alumni Scholarships.



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FROM THE DEAN



2019 was an exciting year as we celebrated the 135th anniversary of our College and the 150th anniversary of Purdue University. A few highlights from 2019 include:

- The PharmD program successfully completed the reaccreditation process by the Accreditation Council for Pharmacy Education with a full eight-year accreditation.
- We announced a \$36 million collaboration with Indiana University School of Medicine to develop treatments for Alzheimer's Disease.
- Recently, we became the first College of Pharmacy in the nation to partner with Apreece, the leading commercial innovator in 3D printing of pharmaceuticals. Faculty within the College will be working with Apreece scientists to catalyze the expanded use of this manufacturing innovation.
- Our Pharmacy Practice faculty have been leaders in Indiana working to expand the scope of practice. One effort by our faculty has led to trained Indiana pharmacists now having prescribing rights for anti-smoking medications.
- Through your generosity, the Ever True: The Campaign for Purdue University raised just over \$82 million in support of our students and various programs. Thank you! The College remains steadfast in our commitment to be the most affordable Top 10 pharmacy program in the nation. This year with record scholarship support, we awarded over \$1 million in student support.

Looking ahead, a major goal in 2020 is to begin replacing our aging facilities. The Heine Pharmacy Building is now 50 years old and does not have the education facilities for a cutting-edge clinical program.

The University is moving forward with planning for a new Active Clinical Learning Building for Pharmacy and Nursing. By combining these two clinical programs into a single educational facility, we have conceived a highly innovative learning environment that will be an exemplar for interprofessional education. More information about this exciting new facility can be found in this magazine.

Again, thank you for your continued and loyal support of the Purdue College of Pharmacy. Your engagement with the College continues to have a positive impact on our students and faculty, further enabling the College's efforts in our persistent pursuit of the next Giant Leap.

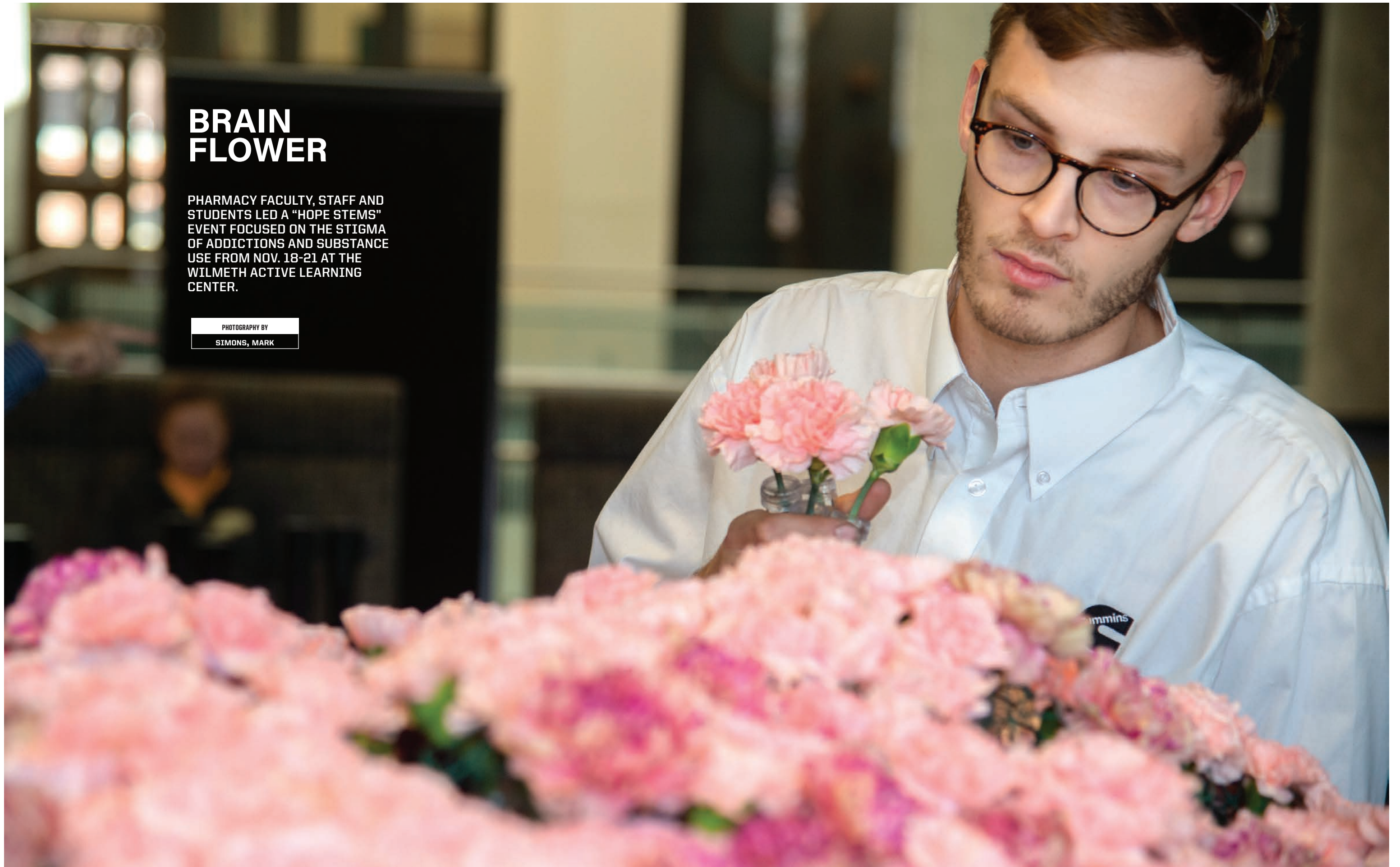
Hail Purdue!

Eric L. Barker, PhD
Dean and Professor

BRAIN FLOWER

PHARMACY FACULTY, STAFF AND STUDENTS LED A "HOPE STEMS" EVENT FOCUSED ON THE STIGMA OF ADDICTIONS AND SUBSTANCE USE FROM NOV. 18-21 AT THE WILMETH ACTIVE LEARNING CENTER.

PHOTOGRAPHY BY
SIMONS, MARK



HOPE STEMS

BRAIN FLOWER SCULPTURE PUTS PURDUE'S SPOTLIGHT ON OPIOID CRISIS

On average, 130 people in the United States die each day from an opioid overdose, according to the Centers for Disease Control and Prevention. In fact, a person in the U.S. is now more likely to die from an opioid overdose than a car accident, the National Safety Council reports.

And the victims leave behind grieving families — often wondering what happened and if they could have done just one thing more to help — who fill funeral homes and churches to say their final goodbyes.

Such scenes, with their floral bouquets paying tribute to lives lost, are the inspiration behind a giant flower display brought to Purdue's campus last fall. Florists, who despaired at creating the bouquets for lives lost to overdoses, combined two flowers: The celosia or brain flower being changed by black poppies represent opioids. Their message: Opioids change the brain.

COMBATING THE STIGMA

The "Hope Stems" Brain Flower sculpture on display in November at Purdue was in the shape of a brain and made of 9,000 pink carnations and 300 black poppies. The black poppies symbolize the opioids' damage to the brain.

VADM Jerome M. Adams, U.S. Surgeon General, spoke to those gathered during the Hope Stem's unveiling. His talk, titled "The Road to Recovery: Combating the Opioid Crisis," drew from personal and professional experiences. From 2014-17, Dr. Adams served as commissioner for the Indiana State Department of Health, where he worked with state and county public health and elected officials to address Indiana's opioid epidemic, especially in Scott County.

"Addiction is a chronic disease and not a moral failing," says Adams, a practicing anesthesiologist. "No one got out of bed and said, 'Today, I'm going to become addicted to heroin.'"

Adams says the opioid epidemic, and trying to lower the stigma around addiction, is the defining issue of his tenure as the nation's top medical doctor. He's made it a priority to provide resources on alternatives to opioids to help health care professionals across the nation.

"I often will say that I think stigma is the biggest killer out there," Adams says. "Stigma is what keeps people in the shadows. That's what makes us feel like we can judge other people in their worthiness to receive help."

Hope Stems, originally developed by Shatterproof and McCann Health NYC, was created as a visual starting

point for conversations to break the stigma of addictions and substance abuse. Volunteers from Purdue student organizations placed the flowers in the installation at the Wilmeth Active Learning Center.

In addition to the floral brain, four campus locations connected — via QR codes — to information about opioids and personal stories of opioid use and recovery. Training also was provided on using naloxone, a medication designed to rapidly reverse opioid overdose.

Walmart was a corporate sponsor of the Hope Stems installation at Purdue, valuing the importance of training, education and awareness in the recovery of communities facing the opioid epidemic.

HOPE THROUGH TRAGEDY

"Our prayer is that no other family experiences the pain and grief we have gone through as a family with the loss of our Curt."

Those were sobering words from Lori and David Swan, who lost their 22-year-old son Curtis to an accidental drug overdose on Feb. 9,

2015. Curt's mother discovered him unconscious in their home's hallway.

"He was a senior at Purdue that semester," Lori says. "We knew he struggled with depression and that he was having trouble managing life and the demands of college. We never imagined that our child would seek drugs as pain relief or to cope. Only after we lost him did we begin to learn of the struggles during the last months of his life."

Since Curt's death, the Swans have participated in initiatives across Indiana and the country to share the story of Curt's life, death and the pain they live with daily.

"We want to take a message of hope but also a warning to families that this overdose epidemic can happen to anyone and turn your world upside down so quickly," David says. "Our hope is to turn this tragedy into some good and save other lives and spare families from this immeasurable grief. We will always wonder what Curt's life could have been." 🌱



130
AVERAGE DEATHS EACH DAY
FROM OPIOID OVERDOSES



ANDERSON'S LIFE OF FIRSTS TAKES HER TO THE TOP AT UM EASTERN SHORE



Heidi Milia Anderson will never forget when Richard Weaver visited her hometown. Weaver, a Purdue alumnus (BS '70) and a Purdue recruiter at the time, came to Gary, Indiana, recruiting minority students to study in a summer pharmacy program.

Anderson applied and was accepted.

"Dick took time to come to inner-city urban areas to recruit those of us who probably would not have gotten a chance at an education at Purdue University," Anderson says. "And as they say, 'The rest is history.'"

It is a remarkable history. A first-generation college graduate, Anderson is the 16th president of the University of Maryland Eastern Shore (UMES), where she continues in the path of mentors she admires — like Weaver — dedicating her lifework to making educational opportunities accessible.

Little did Anderson know her education at a land-grant university would be so formative. As the president of UMES, a historically black doctoral granting land-grant institution founded in 1886, Anderson leads a campus focused on teaching, research and outreach with an emphasis on stewardship of the land, sea and environment.

UMES is one of 12 institutions in the University System of Maryland. UMES offers bachelor's degrees in 37 areas, spanning physical and biological sciences, social and behavioral sciences, engineering, education, mathematics, information technology, humanities, visual and performing arts, hospitality management, and golf management.

Cybersecurity and pharmaceutical sciences are among the 15 master's degree programs and eight doctoral degrees in fields ranging from educational leadership, food science and technology, marine-estuarine environmental sciences, pharmacy practice and pharmaceutical science, physical therapy, and toxicology.

The Purdue College of Pharmacy has played a major hand in shaping the academic careers of thousands of alumni, few more notable game changers than Heidi Milia Anderson and Renee Coffman.

Anderson earned her PhD in pharmacy administration, an MS in education and a BS in pharmacy from Purdue. Coffman gained her PhD in industrial and physical pharmacy from Purdue.

HERE ARE THEIR STORIES.

GAME CHANGERS
AT PLAY

TWO DECADES OF CREATING OPPORTUNITIES

“I am driven by helping people achieve their life dream of a college education,” says Anderson, whose mother encouraged her to go to college and expand her horizons beyond Gary. She earned three degrees, all from Purdue — a PhD in pharmacy administration, an MS in education and a BS in pharmacy.

She has nearly two decades of leadership experience in higher education, and many productive initiatives under her belt that help students gain access to college — and help them thrive when they get there. Her many roles in university leadership include chief academic

policymaker and special advisor to the president at Texas A&M University-Kingsville. She has held faculty and administrative posts at the University of Kentucky, Auburn University, the University of Tennessee, and the University of the Sciences in Philadelphia.

But one of her proudest achievements is becoming president of the University of Maryland Eastern Shore, a role she assumed in September 2018. “It has been a lifelong dream of mine. It’s really an honor to serve the community on the Eastern Shore of Maryland and to be able to share my Hawk Pride as I go about my work,” she says.

Anderson is leading vital new initiatives at the public university, which sits on 745 acres in a rural setting and has an enrollment of over 3,000 students. Like many higher education institutions, UMES has seen enrollment decline over the past few years. She and her team are working on strategies that will grow enrollment and improve retention.

BE MORE THAN YOU THINK YOU CAN BE

As a historically black land-grant university, the core mission of UMES is providing access and quality educational opportunities to everyone who dreams of obtaining a college education. UMES appealed to Anderson as a place where she could work with truly dedicated faculty and staff members who support and enhance student learning. And she understands very clearly what students need.

“Students need a village to help them succeed,” Anderson says. “They need faculty, advisors, mentors, and family and friends who believe in them and encourage them. They also need to be challenged to think critically and to be able to communicate well, verbally and in writing. They need to be prepared to be flexible throughout their career, and be willing to take risks that will challenge them to be more than they think they can be.”

While her tenure as UMES president has been brief, her impact has already been significant. She immediately established access, quality and opportunity as key areas of emphasis. She also focused on positioning UMES for both physical and intellectual growth, an effort that is yielding results. Construction of a \$95 million academic building for UMES’ School of Pharmacy and Health Professions is underway, having received authorization from the 2019 Maryland General Assembly.

Under her leadership, UMES’ well-regarded Hospitality and Tourism Management program has been expanded to the University System of Maryland at Hagerstown (USMH) regional higher education center.

In addition, UMES became the nation’s first historically black institution to launch a Massive Open Online Course — Introduction to Hospitality and Tourism Industry — on the Open edX platform in partnership with the University System of Maryland’s Kirwan Center for Academic Innovation. And the university’s six-year graduation rate has already increased to a level higher than in the past 20 years.

PAYING IT FORWARD

Honoring her mentors by supporting the next generations of students is Anderson’s morning mantra. Her motivation is to “pay it forward,” as others did for her, years ago. “Paying it forward gets me up in the morning,” she says.

“I owe a huge thanks to my mentors at Purdue University: Richard Weaver, Holly Mason, the late Jerry Blank, the late Robert Chalmers and the late Stan Shaw. I appreciate their patience and many, many words of wisdom and advice.”

Anderson learned early on how much it means to be a visible part of the community. She participated in Leadership Maryland, a statewide diversity, leadership, educational and networking program. And she made it a point to eat with students in the campus cafeteria at least once a week, supporting the Hawk athletes and attending as many gallery openings, talks and musical performances as her busy schedule permits.

“Since leaving Purdue, my mentors expanded to include Kumble Subbaswamy (chancellor at UMass-Amherst), Helen Giles-Gee (former president of University of the Sciences), and Linda Bleicken (former president at Armstrong State University). I am grateful to each of them for encouraging me to pursue a university presidency.”

The 2010 Distinguished Purdue Alumna is also grateful to Purdue for an education that molded her into a leader.



“Purdue taught me to be strategic, resilient, reflective, a critical thinker and a transformative problem solver. These characteristics guided me as a student, and they still do today.”



A LONG LIST OF FIRSTS

Anderson’s impressive career in academia is filled with many milestones:

- First female pharmacist to serve as executive director of the Student National Pharmaceutical Association.
- First African American female to hold the position of secretary of the Council of Faculties of the American Association of Colleges of Pharmacy (AACCP), and first African American female pharmacist to serve as secretary and chair of the Section of Teachers of Social and Administrative Sciences of AACCP.
- First African American faculty member in the College of Pharmacy at the University of Tennessee when she started in 1986, and at Auburn University in 1989 where she was also department chair.
- At the University of Kentucky, Anderson was the first African American female to serve as assistant dean of the College of Pharmacy, as associate provost for faculty affairs, and as vice president for institutional effectiveness.
- First African American to serve as president of the Accreditation Council for Pharmacy Education (ACPE), a role she held twice. ACPE’s International Services Program (ISP) was established under her leadership as president.
- First African American to serve as provost at the University of the Sciences in Philadelphia.
- First African American provost at Texas A&M University-Kingsville, a public Hispanic-serving research university in South Texas.

COFFMAN LEADS AT ROSEMAN UNIVERSITY OF HEALTH SCIENCES



Renee Coffman laughs when she tells you she put the “man” in Roseman. And her husband, Harry Rosenberg, “is the rose.” Together, they are two-thirds of the co-founders of Roseman University of Health Sciences, where Coffman now leads as president.

Roseman celebrated its 20th anniversary in 2019, and it has come a long way since Coffman, Rosenberg and the third co-founder, Charles Lacy, first named it the Nevada College of Pharmacy when it opened in 1999 in Henderson. “Each of us put in \$5,000, so we had a bankroll of \$15,000,” Coffman says. “Now, we have three campuses.”

The university grew based on the needs of its community, Coffman says, so they added nursing programs and expanded geographically, launching the first dental program in Utah. Since they began offering advanced degrees in dentistry and dental residency, these programs have been successful for a region in dire need of medical professionals. “Nevada ranks very low in health care in the number of physicians per capita. The health professions are so needed, particularly here in the Southwest.”

Filling that void is her goal as president. Now with a budget of \$100 million, a staff that has grown from 12 to 400 and a student body of 1,500 students, Roseman will soon offer master’s and PhD-level nursing degrees — and is on track to become the first private, not-for-profit MD-granting medical school in Nevada.



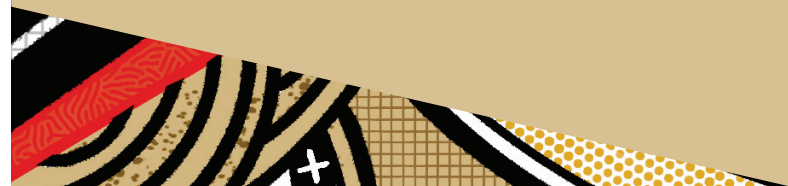
“Pharmacy is a great profession, because it’s very close to patients, and has a lot of area of impact.”

MASTERING NEW LEARNING MODEL

Renee Coffman, Harry Rosenberg and Charles Lacy – all professors of pharmacy – wanted to make a fundamental change in how pharmacy is taught. “It’s hard to do that in an existing organization,” Coffman says. So, they set out to build not only a college but a new pedagogical model. The Six-Point Mastery Learning Model is an immersive program that addresses professional competency.

The traditional teaching models don’t address what it’s like to be in the field, Coffman says. Students at Roseman University of Health Sciences take one course at a time, and they focus on only that subject – six hours a day, five days a week. They have classrooms in the round, work in teams, and receive two levels of immediate feedback on all tests, which they must pass by at least 90%, with no curve.

“Being able to do something is a ‘yes’ or a ‘no.’ You can, or you can’t,” she says. “In health professions, you need to have someone who is highly competent.”



BUILDING ON A STRONG FOUNDATION

Coffman still teaches pharmacokinetics, her area of expertise, for the first few days of each course. Unique to the field of pharmacy, pharmacokinetics creates a mathematical model for dosing patients, and it’s a very quantitative way to treat larger health populations as well as patients with specific issues.

“Pharmacy is a great profession, because it’s very close to patients and has a lot of area of impact,” she says.

At Roseman, Coffman previously served as executive vice president for quality assurance and intercampus consistency and as dean of its College of Pharmacy. Before Roseman, she was a founding member of the faculty at Western University of Health Sciences. She earned her pharmacy degree from Ohio Northern University and then worked as a pharmacist in her home state of Ohio. She earned a doctorate in Industrial and Physical Pharmacy from Purdue, where she received the Kienle Award for Excellence in Teaching and the Jenkins-Knevel Award for Outstanding Graduate Research.

“The good foundation in research and analytical and critical thinking” that she received in her PhD program at Purdue is something she draws on a lot. “In our research groups, each one of us would talk about what we were working on. Communicating with colleagues made your research so much more robust. I’ve employed that now in so many different areas, in how we’ve grown the university.”

FIGHTING DISEASE ON THE FRONT LINES

“When we were first here, pharmacists were not able to do finger-stick blood glucose testing,” Coffman says.

Nearly a decade ago, she led successful efforts to pass Nevada legislation that allows pharmacists to perform the testing. She has worked with the Southern Nevada Medical Industry Coalition and Improving Diabetes and Obesity (iDO) in Southern Nevada. And she serves on the board for Las Vegas Health, Education, Advocacy and Leadership (HEALS), a nonprofit that builds fruitful alliances in the health care community, advocates for the workforce, and campaigns for legislation that improves access to health care.

What gets her up in the morning? “Thinking about all of the lives that those students will touch. Before I was president, I was dean of students for a long time. One of our recent grads called me. He had just saved the life of a patient who had come into his pharmacy. He said, ‘I want to let you know that I appreciate how the education I got at Roseman impacts the lives of all my patients.’ When I start to think about all those graduates over 20 years ... the multipliers there, I am in awe of the impact they have in the world.”

Purdue
STYLE
IN OR OUT OF THE LAB

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THE FUTURE OF PURDUE PHARMACY

Planned
\$90 million
facility to
help enhance
clinical learning
and direct
patient care

As the role of pharmacists on the front line of medical care undergoes revolutionary change, Purdue's College of Pharmacy is planning a \$90 million active clinical learning facility to prepare students for their role as health care providers practicing at the top of their license.



ERIC BARKER

dean of the College of Pharmacy



WARREN MOORE

vice president of Health and Wellness for Walmart



JASMINE GONZALVO

clinical associate professor of Pharmacy Practice



VERONICA VERNON

assistant professor of Pharmacy Practice at Butler University and Clinical Pharmacy specialist at Veteran Health Indiana

“Pharmacy is going to shift dramatically in the next decade,” says Eric Barker, dean of the College of Pharmacy. “The role of the pharmacist will shift more and more from distribution of product to direct patient care. With this shift, we need to enhance the active clinical learning for our students.”

The building is planned for the southwest side of campus and will be shared with the School of Nursing as part of a larger planned Health Sciences complex.

When Purdue Pharmacy’s current home — Heine Hall — opened in 1969, it was state-of-the-art in clinical pharmacy. The building contained

three clinical practice offices. Today, the College has 25 clinical practice faculty. In the decades that followed, clinical pharmacy has evolved with the advent of the internet and cellular technologies, an aging population, and a greater demand for personalized medicine.

The pharmacy industry sees a future where robots deliver prescription drugs, while pharmacists manage point-of-care testing and administer flu and strep tests and treatment at health and wellness hubs. Pharmacists currently team with doctors, nurses and dietitians to manage diabetes patients, hypothyroidism and contraceptive care. They also visit hospital patients

bedside — “meds to beds” — to counsel patients. During medical residencies, pharmacists are embedded with physicians and nurses.

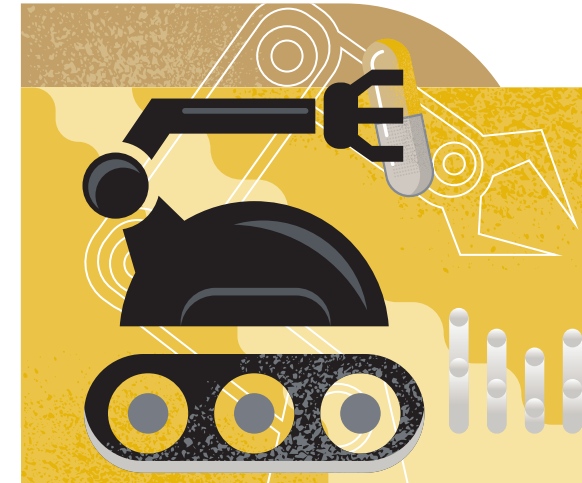
“Future pharmacists must learn in ways that prepare them for a world that will look different five or 10 years, post-graduation,” says Warren Moore (PharmD ’02), vice president of Health and Wellness for retail giant Walmart and a member of the Dean’s Advisory Council. “Tackling issues like reducing the overuse of medications, improving adherence and persistence to therapies, optimizing individualized outcomes, and performing tasks in-person or virtually must be incorporated into learning

environments. I believe today’s health care professional must be accomplished in working in an interdisciplinary manner, solving problems in agile fashion, and using big data to simulate/solve complex health challenges in the most optimal way, while still having the compassion you expect from a trusted health care professional.”

Still in the conceptual phase, Purdue’s new clinical active learning facility will include cutting-edge space for experiential simulation work that will include virtual reality and simulation mannequins. The facility will be jointly occupied by the School of Nursing to allow students to practice interprofessional teamwork, the norm throughout health care education.

Jasmine Gonzalvo, clinical associate professor of Pharmacy Practice, looks forward to a teaching facility with clinic exam rooms and mock patients. She also sees large lecture halls with group tables to allow for interactive group activities, such as taking blood pressure, using a continuous glucose monitor or demonstrating appropriate inhaler techniques.

And she envisions laboratory space with built-in laminar flow hoods to allow students to practice sterile technique in an environment closely modeling the real-world setting. “These improvements would help ensure that students are trained in environments to facilitate their comfort level and confidence when they start practicing,” says Gonzalvo, who is also a clinical pharmacy specialist in primary care at Eskenazi Health in Indianapolis.



Purdue graduate Veronica Vernon (PharmD ’11), assistant professor of Pharmacy Practice at Butler University and clinical pharmacy specialist at Veteran Health Indiana, knows innovation. Following her residency at the Richard L. Roudebush VA Medical Center/ Butler University, she created her own position there in the internal medicine resident and gynecology clinics to meet the needs of the growing population of women veterans from Iraq and Afghanistan.

Vernon also is chair of the Indiana Pharmacists Association’s Legislative and Regulatory Council, which is working to advance the statewide scope of pharmacy practice.

In 2019, the Indiana Legislature passed bills allowing pharmacists to prescribe medical devices and supplies (spacers for inhalers, nebulizers, insulin pump supplies, supplies for CPAP). In 2020, the council hopes to propose a bill increasing access to care and allowing pharmacists to prescribe select medications, such as those for strep and flu treatment. Nine states across the nation currently allow pharmacists to write prescriptions for contraceptives.

“Space that inspires students to be innovative and think outside the box is needed,” Vernon says. “The pharmacy job market is dynamic right now, having changed considerably from 10 years ago. Students need to be creative in order to prepare for different jobs.”

OUR NEXT

GIANT LEAP

WHY A NEW BUILDING?

Our College's current building was designed in 1965, construction began in 1967, and it opened and was dedicated in 1970. As Dean Barker often reminds our donors, the "new" Pharmacy building is now 50+ years old, and although we have been great stewards of the space, it is limiting from an educational and aesthetic standpoint.

We have come so far with modern technology that no space this old can truly be transformed without a major and costly renovation. In 1970, for example, there was no need for everyone to plug in a laptop and charge an iPhone while sitting in a lecture hall.

Our persistent pursuit of the next Giant Leap in Pharmacy history will be defined by this capital project. Almost all of our Big Ten peers have built new facilities for their pharmacy programs. In an era where the competition to recruit the best and brightest is as intense as ever, we must not allow a bricks-and-mortar component to be the reason a student or faculty member chooses to go elsewhere.

HOW CAN YOU SUPPORT IT?

There are many ways to be involved with our capital campaign. The motto "Cash is King" certainly holds true with construction bill payments, but fortunately, we have other giving vehicles that can assist our donors with making an impact and leaving a legacy.

6 GIVING VEHICLES:

- **Appreciated Assets or Marketable Securities** — It "costs" the donor less than an equivalent gift of cash and can assist with managing capital gains taxes.
- **Donor-Advised Fund** — Ability to fulfill a commitment by using monies in an existing charitable fund.
- **Beneficiary of a Will or Trust** — Ability to retain full control of assets during your lifetime.
- **Gifts of Real Estate** — Reduce taxable income and avoid capital gains.
- **Retirement Plan Beneficiary Designation** — Beneficiary change to make Purdue Foundation (on behalf of Pharmacy) the partial or full beneficiary of your IRA.
- **IRA Rollover Contribution** — Individuals 72 or older can avoid taxable income by directing their IRA custodian to contribute up to \$100,000 per calendar tax year directly to charity.

WHAT OTHER WAYS CAN YOU SUPPORT THE COLLEGE?

Scholarships are a great way to help our Pharmacy students. In 2019-20, the College awarded over \$1 million in student scholarships. This is the first time in College history that such a mark has been achieved, thanks to the generous donors who have stepped up to make student affordability a priority.

One reason for such a great increase in student scholarships is because of dual-purpose endowments, a vehicle of funds dedicated to future facility needs that can first aid scholarships.

As we move forward with the exciting Pharmacy-Nursing Active Clinical Learning Building, there will come a point where several dual-purpose endowments are liquidated to aid in our building efforts. To offset the dollars we will no longer have available for scholarships, this is a perfect time for a donor to establish a scholarship endowment of their own. Even if it takes five years to fully fund the scholarship, the endowment produces earnings when the students need it most.

Our team feels most effective when a donor's passion is unearthed. If anyone has an idea that sparks their philanthropic interest, it is very likely we can find a home in the College for those dollars. We look forward to having the conversation with you!

To learn more about how you can help the Purdue College of Pharmacy, contact our College of Pharmacy Development team at pharmacy-dev@purdue.edu.

24TH ANNUAL

BOILERX GOLF CLASSIC

FRIDAY, JUNE 5, 2020

Join us at the Birck Boilermaker Golf Complex-Kampen Golf Course for a fun-filled event, which supports Pharmacy Alumni Scholarships. Lunch included. Visit Purdue.edu/Pharmacy/BoilerRx for more information and to register by **May 28, 2020**.

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For more information, contact Dana Neary, Manager of Alumni Relations and Special Events
nearyd@purdue.edu | 765-494-2632

CLASS NOTES

▼ Purdue alums **Jim Roehm (IS '72)**, left, and **Rae Willis (BSPHA '61)**. The attached pictures were taken on the Athabaska Glacier and at Maligne Lake, Alberta, Canada. "We were on a Road Scholar Tour with our wives and 24 others, titled "Western Canada by Train & Ferry: Grizzlies, Orcas & Totems."



◀ **Dr. John Bailey Hertig (PharmD '08)** and his wife, Dr. Angela Skaff Hertig, welcomed their first child at 8:02 a.m. Thanksgiving Day, Nov. 28, 2019. Ava Skaff Hertig was born, weighing 7 lbs. 4 oz. and 21 inches long, at St. Vincent Women's Hospital in Indianapolis. She is the first grandchild of Nancy Bailey Hertig (BA '74) and the late John Castner Hertig (BS '74), and the fifth grandchild of Nicholas and Lody Skaff. "Every good and perfect gift is from above ..." James 1:17

Dr. Michael Stevens (PharmD '83) has been elected council member for West Windsor Township in New Jersey.

IN MEMORIAM

Ms. Sandra K. (Boyd) Bazini (BSPHA '86)
Dr. Gilbert Banker (PhD '57, MS '55)
Chuck Flemming (BSPHA '57)
Charles Allan Reynolds (BSPHA '56)
Stan Shaw (Professor Emeritus)



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EXCELLENCE IN ENGAGEMENT

PROFESSOR DELIVERS
LIFE-CHANGING SERVICES IN KENYA



PASTAKIA ALSO HAS BEEN INSTRUMENTAL
IN THE CREATION AND IMPLEMENTATION OF:



● COMMUNITY-BASED HEALTH CARE PROGRAM
SERVING A POPULATION OF 15,000



● A SUPPLY CHAIN SYSTEM FOR ESSENTIAL
MEDICATIONS WITH OVER 1.5 MILLION
PRESCRIPTIONS DISPENSED



● A LARGE, MULTI-COUNTRY GESTATIONAL
DIABETES STUDY IN LOW- AND MIDDLE-
INCOME SETTINGS



● AN ANTICOAGULATION MONITORING
PROGRAM FOR OVER 4,800 PATIENTS WITH A
FOCUS ON RHEUMATIC HEART DISEASE



In countries such as Kenya and other parts of sub-Saharan Africa, financial and mobility constraints often limit rural patients' access to the critical health care services these populations need to be able to thrive.

Cardiovascular disease, including heart attacks and strokes, is the leading cause of disease-related death in the world. Eighty percent of cardiovascular deaths occur in low- and middle-income countries such as Kenya. The country also has a disproportionately higher prevalence of HIV and is facing a rapidly growing incidence of noncommunicable diseases such as diabetes and hypertension.

Sonak Pastakia, a professor of pharmacy practice, spends most of his time each year onsite in Kenya, helping lead the Purdue Kenya Partnership (PKP), a global public health practice and experiential learning site located in Eldoret, Kenya. In addition to being the home of limit-breaking marathon runners, like Eliud Kipchoge, Eldoret is also the home of the Academic Model for the Prevention and Treatment of HIV/AIDS (AMPATH), which is led by the Indiana University School of Medicine.

Through the PKP's collaboration with AMPATH, Pastakia has implemented a variety of community health delivery models that combine economic support, agricultural assistance and comprehensive health care into one integrated delivery system.

"We have designed models and programs using the unique strengths of Purdue and the Kenyan communities we serve to provide them with a responsive set of solutions to meet the health and economic needs in rural Kenya," says Pastakia, who received the 2019 Excellence in Engagement Award from Purdue Pharmacy. The award honors faculty who demonstrate dedication and excellence in scholarly engagement endeavors that address community and societal needs.



MEDICINE AND MONEY

Pastakia helps lead the Bridging Income Generation through Group Integrated Care — or BIGPIC — a health care program that brings together medicine and economic opportunities through microfinance and job opportunities.

Instead of requiring members of rural communities to travel long distances to reach health care facilities, BIGPIC lets community members work with community health workers who assist in forming self-help microfinance groups. Those groups provide microloans and create agricultural cooperatives that increase the returns on investment.

These community-based group meetings also serve as a makeshift clinic. A team of doctors, nurses and pharmacists visit these groups and bring state-of-the-art, point-of-care labs and a full complement of medications to address the wide spectrum of health care needs within this population.

"This is a unique model of health care that harnesses the strength of the community and addresses the fact that money is the primary, sustainable motivating force in the provision of health care," Pastakia says. "Patients are financially motivated to maintain monthly attendance at the microfinance groups, where they receive care from consistently available providers."



PATIENTS AND PATENTS

Pastakia and his team in Kenya have worked with the Purdue Research Foundation's Office of Technology Commercialization to patent their technologies. One of those team members, Dr. Imran Manji, is the principal pharmacist in charge of clinical pharmacy services at Moi Teaching and Referral Hospital. Manji has worked alongside Pastakia in Kenya for more than a decade to establish programs focused on health care and economic impact.

"Sonak is a visionary in the truest sense of the word," Manji says. "None of these programs, care nor education would be there had it not been for Sonak's vision, passion and dedication to the underserved population of Kenya. It is through this and his goal to develop passionate Kenyan leaders in health that have made PKP one of the most successful global health partnerships in the world."

In addition to their collaborative work in Kenya, they are working together to replicate their successful activities in rural India and Ghana as well as in Indiana. 🌱



ACTION + INNOVATION

BOSTON ALUM LEADS STUDENT RETREAT FOCUSED ON BIOTECH CAREERS

Helping Purdue pharmacy students learn more about careers in biotech, or “the innovation industry” as one of the organizers called it, was the impetus for October’s Action Innovation retreat in Boston.

“Over the last five to seven years, pharmacy students have started showing more interest in the pharmaceutical industry,” says Brian Shepler, assistant dean for the College of Pharmacy’s engagements and partnerships.

“The pharmacy landscape is changing so much. When I graduated in the 1990s, the average pharmacy student received 16 job offers. The average student now receives just over one. It’s dramatically different.”

The retreat story began several years ago when Shepler connected with Jeff Hatfield (BS Pharm ’81), a Purdue alum who worked for Bristol Myers Squibb for several years and then launched Vitae Pharmaceuticals in the Boston area. Hatfield told Shepler he wanted to give back to Purdue by helping students.

That led to eight Purdue students doing industrial rotations with Zafgen, where Hatfield served as their primary preceptor. What followed next was the idea for the retreat after a discussion between Hatfield and four recent Purdue pharmacy graduates who had worked with him — Sarah Stelzleni, Alex Schuster, Madeline Merkel and Zack McCormack.

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The innovation industry, or biotech or Big Pharma, offers very attractive career options for PharmDs and yet it’s the least easy to understand and very difficult to follow.

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BIOTECH BRAINSTORM

“The innovation industry, or biotech or Big Pharma, offers very attractive career options for PharmDs and yet it’s the least easy to understand and very difficult to follow,” Hatfield says. “The retreat was conceived as a way to expand our ability to reach more students and talk with them about careers and what I do. It’s a middle level between a rotation or internship, and a broad lecture to hundreds of students.”

A steering committee, comprised of recent Purdue pharmacy graduates, current students and Shepler, organized the retreat. The two current students are Becky Fritz and Andrew Karaki, both fourth-year pharmacy students who completed clinical rotations at Zafgen in November. Fifteen second- and third-year pharmacy students participated in the retreat, which was held in Boston because it “is like the biotech center of the universe,” Shepler says.

The event consisted of workshops and fireside-type chats, with participation by the audience and



a walking tour of some biotech companies in Boston. Speakers were Eric Barker, dean of Purdue’s College of Pharmacy and professor of medicinal chemistry and molecular pharmacology; and Peter Barrett, an entrepreneur and co-founder of Playground Global, a venture fund.

Topics included how an experiment becomes a drug, what speakers learned in their careers enroute to their current positions, and what they would study if they were back in college. Day Two focused on skill-based rotations to help students build career plans.

“I think the biggest benefit for me was seeing that light bulb click on for other students. It was fun to see other students experience what I had, and for them to get a little taste of what it’s like and understand what can be in that industry,” Fritz says.

“I’ve always said the pharmacist’s role is more than just dispensing medicine. We play an important role in how drugs work with the body and helping develop drugs. We can impact patients from that perspective. To show that to people through dialogue with people involved in it so they can see how that happens is awesome to see.”

OTHER EVENTS IN THE PLAN

Fritz and Shepler both praise Hatfield’s role in the retreat — and his willingness to assist students.

“Purdue is such a special place to allow students to explore these opportunities and to be in an atmosphere of innovation. You’re almost expected to innovate,” Fritz says. “To have alums like Jeff Hatfield and to have an opportunity to talk with him says a lot about the University. I don’t think I would get anything near the experience I’m getting at Purdue anywhere else. I applaud Jeff for spending his time and money on the retreat, and for doing so much for Purdue and students at Purdue.”

Shepler and Hatfield say there could be future events like the retreat. “The committee plans to poll students who attended to see what they got out of it,” Hatfield says. “If it’s valuable, then yes, it’s likely we will do it again.”

SPEEDING UP THE CANCER WAITING GAME

NEW PURDUE SCREENING METHOD IS SENSITIVE ENOUGH TO POTENTIALLY DETECT CANCER CELLS IN VERY EARLY STAGES



While treatment options for cancer have increased significantly the past several years, early detection remains one of the best methods of treatment. For patients waiting for the results of a cancer-screening test, the days or even weeks can feel like an eternity, especially when early diagnosis and quick action are tied to better outcomes.

According to Cancer Research UK, more than 9 in 10 bowel cancer patients will survive the disease for more than five years if diagnosed at the earliest stage. More than 80% of lung cancer patients will survive for at least a year if diagnosed at the earliest stage compared with around 15% for people diagnosed in the most advanced stage of disease.

A passion to improve screening techniques for a wide variety of diseases, including cancer, motivated Darci Trader to develop a technique to detect cancer cells faster. Trader, an assistant professor of medicinal chemistry and molecular pharmacology at Purdue, and her team created a process to analyze proteins expressed on cancer cells.

“Identifying cancers early is correlated to better patient outcomes,” she says. “Cancer in particular has touched the lives of many of our friends and families, so being able to contribute to better detection methods is very special to us.”

TRIAL AND ERROR

Trader says pathogen or cancer cell identification often relies on culturing a sample, which can take several days. Her team’s novel screening technique, featured in the January 2019 edition of ACS Combinatorial Science, speeds up the process by screening one-bead-one-compound libraries against biological targets, such as proteins or antibodies.

The Purdue technique provides an alternative to current methods, which require very specialized equipment and complex analysis to measure the proteins that are binding small molecules. They also typically only detect if there is binding but not the extent of that binding. These protein and binding measurements provide key information for diagnosing cancer and other illnesses.

The team used a trial-and-error approach to develop the screening technique and determine which chemical combinations led to the best outcomes in detecting biological targets.

“Even though we experienced setbacks along the way, the puzzling and sometimes frustrating results make the successes even more rewarding,” says PhD candidate Marianne Maresh, who worked on Trader’s team. “Working with Darci has been the best experience I could ask for. She is truly an amazing mentor who challenges me to be my best and never hesitates to listen to my ideas.”

FINDING SUCCESS BEYOND CANCER

Trader says this screening method also could be developed into a rapid, sensitive technique to identify cancer cells in patient blood samples and expedite cancer diagnoses. Based on results obtained by screening known interactions between proteins and small molecules, researchers think the method will be sensitive enough to detect forms of cancer in very early stages.

“The activity of the biological target being tested also does not need to be known or monitored with the Purdue technique, which increases the types of proteins that can be screened,” Trader says.

Development of this new test will involve mixing a biological sample, such as cancer cells or blood plasma, with a near-infrared range emitting fluorophore. The protein is allowed to interact with small molecules, so doctors and scientists can measure the intensity of the light produced by the protein binding the small molecule. Certain intensity rates can indicate the presence of cancer cells or other pathogens in the body.

Maresh says the team wants to expand the method into a tool that could be used to detect antibodies to

diagnose autoimmune disorders or bind cancer cells to facilitate early detection of blood cancers. “I am excited to see the twists and turns this project takes in the future. This project has so much potential, and we are just in its infancy,” she says.

To facilitate the process of moving her technologies from the lab to the marketplace and ultimately patients, Trader and her team have worked with the Purdue Research Foundation’s Office of Technology Commercialization to patent the

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I am excited to see the twists and turns this project takes in the future. This project has so much potential and we are just in its infancy.

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team’s technologies. The Purdue OTC operates one of the most comprehensive technology transfer programs among leading research universities in the United States.

“We hope to be able to develop it to a point where it can be marketed as a diagnostic technique for a variety of diseases using small molecules synthesized on bead that are specifically recognized by specific cell types,” Trader says. 🍌

PRIMARY TARGET: CONTROL TUMOR GROWTH

When wildfires rage, emergency responders know it's critical to first stop the fire from spreading. Once contained, they can focus on extinguishing the blaze.

For more than three decades, that's been a strategy of many cancer researchers too. They've been looking for ways to control the MYC gene, which is overexpressed and drives growth in more than 80% of cancers. Controlling MYC means stopping cancer's spread — limiting the damage — and giving cancer drugs and therapies a fighting chance.

Mark Cushman, a distinguished professor of medicinal chemistry in the College of Pharmacy, and Danzhou Yang, the Martha and Fred Borch Chair of Cancer Therapeutics in the College of Pharmacy, believe a novel series of molecules may be the answer.

"In cancer cells, this class of molecules will disrupt the replication of cancer cell DNA and disrupt cancer cell proliferation," Cushman says. "Controlling the growth and spread of cancer cells is an important part of successfully fighting the disease."

DNA must replicate to form new cells. When it does, the strands in its double-helix structure come apart and snap together like an old telephone cord that bunches into a tangled ball after being stretched. An enzyme called topoisomerase 1 untangles those DNA strands so it can replicate and form new cancer cells. If the enzyme cannot untangle the DNA, new cell formation is thwarted.

Cushman developed a series of molecules called indenoisoquinolines to regulate topoisomerase 1, and there have been promising results. "Those were tested in phase 1 clinical trials, and we know they have anti-cancer activities in human cells," he says.

But Yang found that they also fight cancer cell proliferation in another way. At one point, a section of DNA that contains the MYC gene folds its double-helix structure into a four-stranded globule called a G-quadruplex stabilizer. When intact, the G-quadruplex

MYC GENE

DRIVES
GROWTH IN
MORE THAN
80%
OF CANCERS

stabilizer inhibits DNA replication. But once it unfolds, DNA can split and cancer cells can duplicate.

This happens over and over, with the G-quadruplex stabilizer inhibiting DNA replication, and then falling away to allow replication.

"This is like a child flipping a light switch on and off all the time," Cushman says. "The molecules we developed are like the parent coming in and grabbing the hand and stopping the child from flipping the switch."

UNIQUE STRUCTURE CRITICAL

The folded DNA is the key. Yang said MYC was long thought to be "undruggable" because there is nowhere to attach a molecule to inhibit its expression. When the DNA is folded, however, the indenoisoquinoline molecules have a structure to which they can attach, keeping the G-quadruplex stabilizer functional.

"Because it's a unique structure, it can be specifically recognized by small molecules," she says. "These molecules completely stabilize this silencer element to make it a much longer inhibitor." The molecules essentially starve cancer cells that, as Yang puts it, are "addicted to oncogenes" like MYC.

"We don't need to have complete inhibition of MYC. We only need to reduce MYC levels to 50% to kill cancer

cells," Yang says. "You also don't need to have a long inhibition. A short-term inhibition can push cancer cells to apoptosis quickly."

And since MYC's role is as a promoter of other genes that lead to cancer cell formation, reducing its function does not affect formation of or do damage to healthy cells.

The discovery of indenoisoquinolines' effect on G-quadruplex stabilizers, in addition to their work against topoisomerase 1, means the molecules could have two modes of action in fighting cancer cell proliferation.

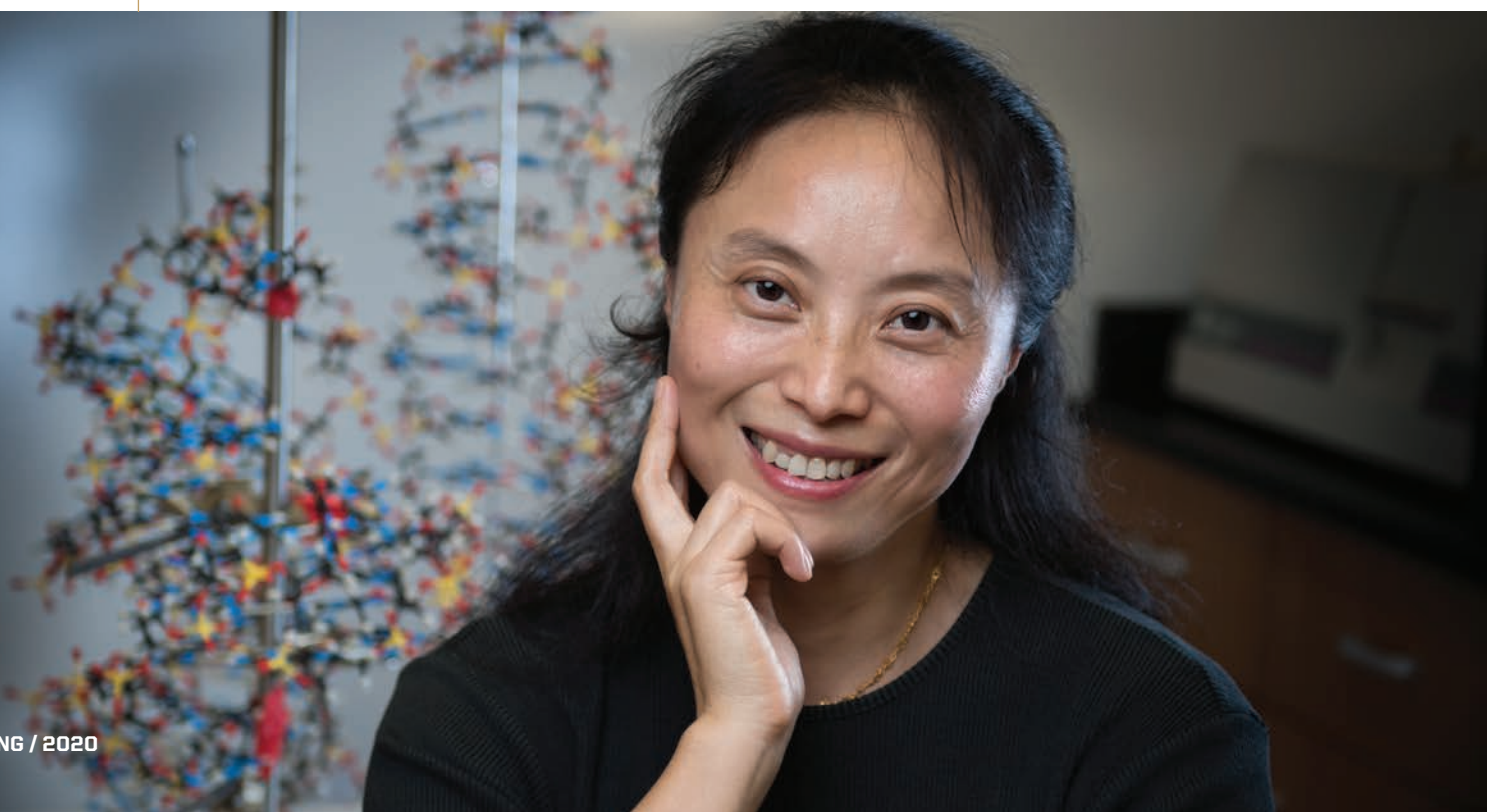
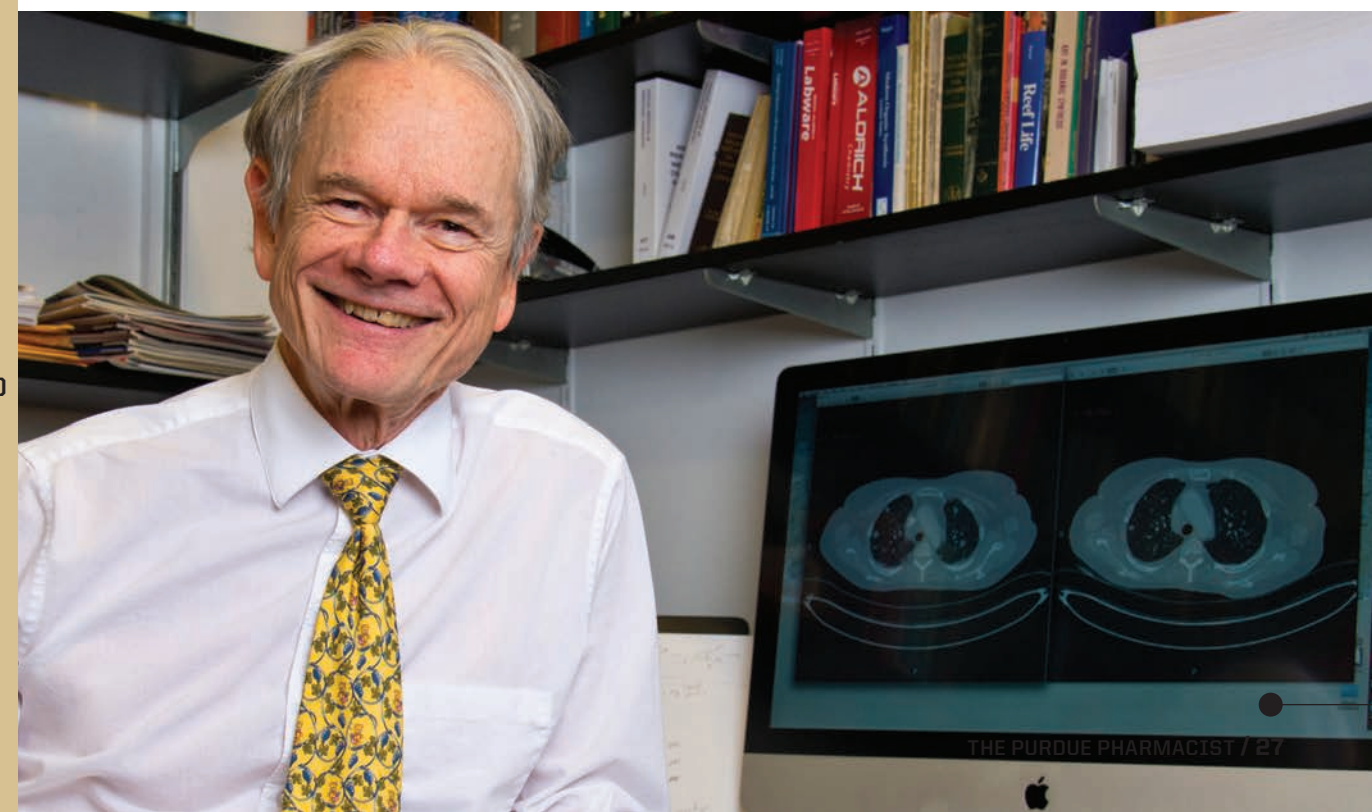
"It could be like a very strategic one-two punch," Cushman says.

LICENSING DEAL ADVANCES EFFORT

With lab-based evidence in hand, Purdue has licensed around 80 of the indenoisoquinoline molecules to Gibson Oncology of Louisville. The company is testing about a dozen of the most promising molecules to find those that will have the most effect on both modes of cancer cell formation. "If you're going to develop a therapy that will have a material impact on patients, you'd want to affect an oncogene that drives 80% of all tumors," says Gibson CEO Randall Riggs. "There is a high demand for drugs that stabilize this gene, but until now no one has had one."

RESEARCHERS DEVELOP
GENE-INHIBITING AGENTS
THAT MIGHT APPLY TO
HUNDREDS OF CANCERS

WE ONLY NEED
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CANCER
CELLS





INDY COUPLE TURNS PHARMACY DEGREES INTO DYNAMIC LIVES

MORE

THAN

AN

EDUCATION

Cooperating. Motivating. Remaining diligent. Staying organized and thinking ahead. Always doing the right thing. These are skills Randy Shields (MS Pharm '75) and his wife, Linda Haldrup Shields (MS Pharm '77), honed during their pharmacy careers.

Those skills have applied to the couple's second careers, as entrepreneurs and McDonald's franchise owners.

For them, success in both pharmacy and the food industry — as different as these ventures might seem — began with their education at Purdue.

"You're taught the concept of lifelong learning at Purdue — it prepares you for life, not just an occupation," says Randy Shields, who earned a master's degree from the University's Krannert School of Management in 1977.

"I think Purdue is a challenging university that, no matter what degrees you pursue, gives you the education you need to discover what you want to do," he says. "It might take years, it might change over the years, but that's what Purdue really does for you — prepares you for life."

ESTABLISHED CAREERS

Linda Shields, born in Greenfield, was drawn to pharmacy early on. She worked for pharmacists while she grew up, and saw that a pharmacy career could fit with her other life goals.

"One of the pharmacists I worked for was a woman who raised her family while still working," Linda says. "I also wanted a family and saw that a pharmacy career could accommodate that. I probably wanted to be a pharmacist my whole life."

The same cannot be said about Randy Shields. Recruited out of Milwaukee to play basketball at Purdue, he studied pharmacy with an eye on administration. He took business classes as electives and entered Krannert after graduating from Pharmacy.

"I was always interested in the business aspect of pharmacy," says Randy, who helped the Boilermakers win the 1974 National Invitational Tournament and earned a Red Mackey Award for leadership. "As time passed, I learned more about the opportunities offered by pharmaceutical companies. I felt that this would be a great fit."

After Purdue, Randy accepted a job with Eli Lilly and Co., and Linda went into retail and managed-care

pharmacy. Their professional pharmacy careers lasted 17 years, which included frequent relocation.

LIFE HAPPENS

A desire to explore new, entrepreneurial opportunities and raise a family led the Shieldses to make a change in 1994. The couple, who met and married while at Purdue, have three children and seven grandchildren.

"I had tremendous opportunities at Lilly, but I was at that age when you take a look at life and decide what's important," Randy says. "We like to say that life happens. We were thinking about our community, our family and even our legacy."

They researched opportunities in the Indianapolis area and found that buying a McDonald's franchise was best for them. McDonald's has a history of philanthropy and community involvement, as well as business success. They eventually owned six franchises.

Randy, who had helped run Lilly's United Way campaign, now is vice president of the Indiana Ronald McDonald House and Children's Charities Board. Linda has served as president of the Indianapolis Zoo Guild and participated in other philanthropies. They also serve as co-chairs of the Purdue President's Council Advisory Board.

"Pharmacy gave us the financial ability to purchase a franchise, and pharmacy always filled our desire to help the community," Linda says. "That all led us into another career with McDonald's, which has always been known as an organization that gives."

ENDURING CONNECTIONS

Making a permanent home in Indianapolis has allowed the couple to reconnect with friends, relive Purdue memories and experience the University's evolution firsthand. Two of their children graduated from Purdue and married fellow alumni.

"Purdue was where we learned how to live our lives. It left us with a lot of great memories," Randy says. "When you have children who later go there, it just adds to the memories and the fun."

Linda's advice for today's pharmacy students: "Take advantage of this exciting time at Purdue. Follow your heart and don't be afraid to take bold steps. You may not end up doing what you thought you would, but that just adds to your life." ☺

LEGACY BUILDERS

ALUMNI COUPLE ENCOURAGE FOUR SONS
TO FOLLOW THEIR PATH TO PURDUE

In just Purdue's second home basketball game of a new decade, Dan Degnan and his oldest son, Charlie, watched the Boilermaker men trounce a top-10 ranked Michigan State team by nearly 30 points.

The elder Degnan (BS Pharm '91, PharmD '92) hopes the high-decibel camaraderie of a Sunday afternoon at Mackey Arena will inspire Charlie, an engineering freshman, to convince three younger brothers to follow in their footsteps to Purdue.

Michelle Degnan (BS Pharm '92) is doing her own recruiting, too. Though Max, a high school junior, teases them about plans to study business at Indiana University. They retort by suggesting an IU degree, however valuable, might come on his own dime.

Regardless of where their three younger boys land, the Degnans know that Purdue, and specifically Purdue Pharmacy, is part of their family story. Dan and Michelle met as students during his internship rotation at the Osco Pharmacy where she worked part-time. After graduation and marriage, they were regulars at home football and basketball games before their boys, which also include Sammy, 15, and Danny, 12, came along in quick succession.

PULL TO PURDUE (AND BACK)

Neither of the Degnans grew up dreaming about becoming pharmacists. The daughter of a science teacher, Michelle says a guest speaker in a chemistry class at Huntington North High School got her thinking about a career in pharmaceutical sales. Once at Purdue, however, she discovered the lab coat fit better than the business suit, and she's loved working in retail pharmacy ever since.

"Purdue really helped me with the communication part," says Michelle, who helped usher many students through their first steps of retail pharmacy over the years. "There are a lot of really smart pharmacists out there from other schools, but I felt like I could communicate with physicians and patients better than many of my peers."

For Dan, who took a hospital and administrative route through the pharmacy field after graduation, the initial pull to the discipline came from a college guidance counselor who suggested he take on the toughest major of a university. He embraced his pharmacy studies that led to a specialty of medication safety at Community Health Network in Indianapolis, where he worked for more than a decade.

In 2013, he experienced a springtime Purdue homecoming, becoming the senior project manager in the Center for Medication Safety, as well as a courtesy appointment as a clinical assistant professor of pharmacy practice. As a researcher, Dan works with industrial engineering students at the Regenstrief Center for Healthcare Engineering in Discovery Park. "We're looking at infusion pump data from all over the country for solutions in automation technology," he says.

In his role as associate director of professional program laboratories since 2018, Dan coordinates a professional lab for third-year pharmacy students in a robust, simulated setting that uses standardized patients. Through video recordings of interactions, students and faculty can review the "real-time" experience that requires young people to think on their feet. "They counsel patients, gather and analyze data from patients' charts, and make recommendations to prescribers," he says. "To me, it's the active part of being a pharmacist."

FOR A GREATER GOOD

Just as the pharmacist takes an oath, in part, to "consider the welfare of humanity and relief of suffering," the Degnans hope their boys will adopt similar ethics in engineering, business or any career.

"Purdue instills this thought that you need to be more than a good pharmacist," says Dan, who also earned his master's degree in health system pharmacy from the University of Wisconsin. "Doing more for your community or family is an important aspect of school."

Modeling those ethical concerns is critical in retail pharmacy. "I really miss working with students in my part-time role," says Michelle, now working a few days a week at a Carmel CVS.

As students, Michelle and Dan bonded over the challenging pharmacy curriculum, though each had their "least favorites." For Michelle, organic chemistry was a tough nut to crack. Dan disliked physics. Still, their shared road to success might be enough to ensure a few Purdue repeats among their foursome of sons.

Perennially ranked among the nation's best, Purdue Pharmacy has been a model of consistency while still adapting to the demands of the field.

The pharmacy doctorate, now standard, stipulates a minimum six-year requirement. Though Dan finds it a little strange to see the children of former classmates coming through his lab, he knows the bar is set just as high as when he and Michelle earned their degrees. And they take a special Boilermaker pride in helping students achieve those same "one-brick-higher" goals. 🧱



RENAISSANCE MAN

MOISES MARTINEZ EXCELS IN BOTH HIS MUSICAL PURSUITS AND PHARMD STUDIES

An affinity for music keeps Moises Martinez connected with his family. The third-year pharmacy student from Attica, Indiana, first cut his musical teeth at 13 by playing a Rock Band videogame before transitioning to bass guitar.

Now a seasoned member of his father's band, Leyenda Inolvidable (The Unforgettable Legends), Martinez performs at nightclubs and events alongside his dad and two younger brothers. "I've done gigs all through college," he says. "One cool thing about being so close to home is I would go to classes, and then on Saturday my dad would pick me up so I could play with him."

The band performs Musica Norteña, a traditional folk style of music that tells stories through song. And though the group mostly sings in Spanish, the family's first language, it does play the occasional English-language request.

That proficiency in both Spanish and English serves Martinez well. In 2018, he completed a 10-week Spanish immersion program in the South Texas border town of Alamo through CVS Health. Designed to provide future pharmacists with practical experience, these internships help students improve their Spanish-language skills, including medical terminology.

"They placed me in a pharmacy that serves at least an 85% Spanish-speaking population," Martinez

says. "They really want to immerse you in the culture. You help counsel and talk with people, plus complete a community project with other interns in your area."

ASSISTS IN OVERCOMING LANGUAGE BARRIER

By breaking down cultural and language barriers, such training will prove essential as the nation's Hispanic population continues to grow. For example, even simple written instructions to "take one tablet once a day" can become problematic, Martinez notes, because "once" in English translates to "11" in Spanish. Yet while some patients may find this confusing, many won't contact their pharmacy. "Even if they do call, they're not going to know what to say because they don't speak the language," he says.

Martinez also assists Spanish-speaking patients through part-time work at a CVS in Greater Lafayette. And many customers only come in on those days when he's scheduled. "One thing I'm passionate about and want to do no matter where I am is utilize my Spanish to help people," he says.

Equally enthusiastic about working with children, Martinez interned last summer at Riley Hospital for Children in Indianapolis. Assigned to various clinical specialties,

he conducted research, shadowed physicians and pharmacists, and saw the irrepressible strength of those young patients Martinez calls "the bravest of the brave."

It was here he learned that children often are more resilient than adults. Studies support this perspective, showing a direct correlation between one's state of mind and treatment outcomes. Thus, an optimistic attitude can be beneficial.

"A lot of times, children don't know what's going on. All they know is that they're being put into the hospital," he says. "They might be losing hair and weight, or feel a little sick, but they don't understand the full gravity of the situation."

ASPIRATIONS OF PEDIATRIC RESIDENCY

Thanks to the Riley internship, Martinez hopes to land a pediatric residency when he graduates. "After my experience at Riley, I don't know how I can't be invested in those children," he says, explaining how Purdue's 2+4 doctor of pharmacy program has equipped him for the challenge.

"A lot of people who start as a freshman at Purdue and go this route will end up having a doctorate in pharmacy by the time they're 22 or 23 years old," he says. "It's really intense, but they prepare you right from the start."

Extracurricular pursuits also promote his success. "Moises has volunteered and participated in many roles through university, college and national organizations," says Cynthia Koh-Knox Sharp, clinical associate professor of pharmacy practice. "He is very self-motivated to learn and explore the profession while representing the college proudly in all activities."

It's that same commitment to excellence that Martinez will continue bringing to his musical performances while staging his professional dreams. 🎸

IN THE SPIN OF PHARMACY SCHOOL



FIRST-YEAR PHARMACY STUDENT BALANCES STUDIES, PASSION FOR COLOR GUARD

Toward the end of high school, Hailey Pike woke from surgery. All she knew was her foot was in pain. Her family gathered around the hospital bedside to remind her that she had torn the Achilles tendon in her left foot.

Hailey wondered if she would still be able to pursue her passion of spinning color guard flags. Soon after surgery, her dad handed her a letter. She opened the envelope and through tears of joy and pain, she read an acceptance letter into Purdue's College of Pharmacy. After nine months of recovery, Hailey would step onto Purdue's campus as a pharmacy student.

"That was one of the worst and best days I've ever had in my life," Hailey says.

In the fall of 2019, with a healed Achilles tendon, she started her first year of college. She had been admitted to Purdue, fulfilling a longtime dream. "I really liked Purdue's pharmacy program and how prestigious its curriculum and degree were. I knew going here would help my future career," Hailey says.

All her Purdue classes focus on the pre-pharmacy core curriculum of various rigorous chemistry, biology and mathematics courses. During her fall semester, in the introduction to pharmacy class, she figured out exactly where she wanted to practice pharmacy — in a hospital.

"I always wanted to work in a hospital setting, specifically on a baby delivery team. I find that job the most interesting. And I like the hospital setting because it gives me the chance to interact with patients and see how they are progressing," she says.

Much of her time may revolve around her pharmacy studies, but now that her foot is healed, she has joined the Golden Silks color guard run by coach Jef Furr as part of the Purdue "All-American" Marching Band.

"You can tell Hailey is passionate about color guard because no matter what is happening in school she always shows up to practice with a smile," Furr says.

She first came to love color guard and spinning flags when she was introduced to it in high school, after being a dancer and gymnast for over 10 years. "I have loved color guard ever since I joined in high school, so I knew I wanted to continue my passion in college."

As part of the color guard, Hailey recalls stepping onto the field at Ross-Ade Stadium for her first football game at Purdue. "It was such a rush stepping out on the field for the first time. It was exciting to see the crowd and know that my family supports me in every step," Hailey says.

Although her family supports Hailey, she is not the only one that her family follows in Purdue's marching band. She has an identical twin sister, Hannah Pike, who plays the Big Bass Drum. Hannah, who studies engineering at Purdue, grew up enjoying the same hobbies of gymnastics and marching band.

"It is great to have my twin with me in marching band. Hailey is my built-in partner. I was so proud of her for getting into pharmacy school and was even more excited to learn that we were going to Purdue together," Hannah says.

Hailey may have had to overcome a serious injury right before starting her college career, but she has never been more thankful to be able to pursue her dreams in pharmacy and continue to march alongside the band, and her twin, with her flag in hand.

"Anyone that can see Hailey on the field can tell she is having the time of her life while performing," Hannah says. 🎯



College of Pharmacy

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BRAIN FLOWER

PURDUE'S PARTICIPATION IN NOVEMBER MARKED THE SECOND INSTALLATION OF THE FLORAL SCULPTURE. THE FIRST WAS AT NEW YORK CITY'S HERALD SQUARE IN APRIL 2019.



FOR INFORMATION ABOUT REGIONAL AND INDIANA DRUG AND ALCOHOL PREVENTION, EDUCATION AND TREATMENT PROGRAMS, PLEASE CONTACT:

- Mental Health of America Crisis Center:
mhawv.org/services/crisis-center
- Indiana Addiction Hotline:
in.gov/fssa/dmha/2933.htm
- Drug-Free Coalition of Tippecanoe County:
drugfreetippecanoe.org

