

PITTPHARMACY

University of Pittsburgh School of Pharmacy | Summer 2021

USING DATA TO INFORM PATIENT CARE



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Dear Friends,

Today is a gorgeous sunny day. It is as if nature is reflecting my sentiment of gratitude. I share with you my appreciation for you and what you have done to meet the myriad of challenges created by the events of the past year. Whether you are an alum, a student, or faculty or staff member, you have been challenged and have met those challenges. And the work that you have all done and that we have done together make me grateful.

I thank you, the pharmacists who have now shown the world that pharmacists deliver. Pharmacists, including our faculty and alumni, never stopped caring for patients; and then took on the additional challenge of administering COVID vaccines. Thank you. You make me grateful that I am a pharmacist.

Thank you to the Pitt Pharmacy team of faculty and staff who pushed the limits of their creativity and endurance to assure the best possible experiences for our students. You also developed promising discoveries to mitigate the effects of disease, including this virus that will be with us for a long time. Thank you. You make me grateful to be a Pitt Pharmacy faculty member.

Thank you to the Pitt Pharmacy students. You worked with each other and with us to create the best possible experiences for you. You have been understanding of the challenges we faced and gave us feedback and ideas to make us better teachers and better people. Thank you. I am grateful to be your teacher and dean.

Yes, I am grateful for what we have done in the past and for the bright future ahead of us, including a time to celebrate as we come back together in a newly renovated Salk Hall.

In gratitude, I thank you sincerely.

Patricia D. Kroboth, PhD
Dean and Dr. Gordon J. Vanscoy Distinguished Service Chair

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Awards, Accolades, & News

FACULTY, STUDENTS, AND ALUMNI



Gretchen Garofoli

Flip the Pharmacy Wins Top Honor Nationwide

Flip the Pharmacy is a nationwide, community pharmacy practice transformation effort, sponsored by the Community Pharmacy Foundation and led by CPESN USA, to transform community pharmacies from a traditional, prescription-driven model to a patient-centered care model. The University of Pittsburgh School of Pharmacy and the Pennsylvania Pharmacists Care Network joined forces and received grant funding to be a part of the effort as Team Pennsylvania. The program began in October 2019 and has been ongoing since. Flip the Pharmacy just awarded Team Pennsylvania its highest honor: Flip the Pharmacy Transformation Award - Team of the Year. Team Pennsylvania was selected out of dozens of practice transformation teams participating across the country. Led by Stephanie McGrath as the PI, Team Pennsylvania is supporting practice transformation efforts in over 50 independently owned pharmacies statewide, including some pharmacies owned and led by PittPharmacy alumni. Pitt

team members include: Stephanie McGrath, Sophia Herbert (Fellow), Kelsey Hake (Fellow), Kim Coley, Joni Carroll and Melissa McGivney.

Garofoli Receives National & International Recognition for Leading Vaccine Efforts in WV

Pitt Pharmacy alumni Gretchen Garofoli, PharmD '09, BCACP, Associate Professor at West Virginia University School of Pharmacy, took a leading role in vaccination efforts during the COVID-19 pandemic. West Virginia was efficient in vaccine administration, utilizing pharmacists throughout the state in an active role.

Dating back to December 2020, Garofoli was featured administering the vaccines on multiple national news outlets. She was seen on both CBS and ABC Nightly News vaccinating nursing home patients and staff during her first clinic experience in West Virginia a few days after the first vaccine was authorized. Notably, she vaccinated the first nursing home patient in West Virginia who was COVID positive in March 2020. Pitt Pharmacy alumni Heather Johnson,

PharmD '18, also participated in this initiative.

Garofoli was featured in both local and national media, including the New York Times, National Public Radio (NPR), and PBS News. Garofoli was also interviewed by BBC World News, where she was highlighted for her expertise. In her work, Garofoli advocates for the profession of pharmacy, and she continues to lead the way, making Pitt Pharmacy proud!

Project Lifeline Awarded Best Abstract at the American Public Health Association 2020 Annual Meeting

4,320 patients served, 50 brief pharmacist-led interventions, and 372 naloxone kits dispensed. Those are the highlights from the abstract on the Project Lifeline initiative, that was awarded Best Abstract by the Pharmacy Section at the American Public Health Association's 2020 Annual Meeting. The abstract, which detailed the success of Project Lifeline, was authored by Pitt Pharmacy Professor Jan Pringle, and several others.



Matthew Gray

Project Lifeline is a public health initiative to incorporate screening, brief interventions, and referrals to treatment in community pharmacies. The American Public Health Association, founded in 1872, is the largest professional organization of public health professionals in the United States. The Pharmacy Section was founded in 2014 as a Special Interest Group and has grown to over 200 members.

Graduate Student Matthew Gray Receives Grant from National Institute of Allergy and Infectious Diseases

Matthew Gray, PharmD, received a competitive National Institute of Allergy and Infectious Diseases (NIAID) Loan Repayment Program Grant, studying the Long-term Outcomes Associated with Penicillin Allergies and Economic Evaluation of Literature-Supported Interventions for Removing Erroneous Allergies. Gray is a graduate student in the Pharmaceutical Outcomes and Policy Research track in Pharmaceutical Sciences. Dr. Sandra Kane-Gill is Gray's PhD advisor and provided mentorship for this grant.



Sandra Kane-Gill at KDIGO Conference

Kane-Gill Co-Leads Group at KDIGO Conference

Sandra Kane-Gill, PharmD, MS, FCCM, FCCP was a member of the steering committee, co-leading the group on nephrotoxins, for the Kidney Disease: Improving Global Outcomes (KDIGO) Clinical Controversies Conference on Acute Kidney Injury. The KDIGO Conference was held April 25-28, 2019 in Rome, Italy. The results of the Conference were published in *Kidney International*.

Pitt Pharmacy and University Pharmacy Collaborate with Pharmacy Partners to Combat COVID

University Pharmacy and Pitt Pharmacy served as a Pfizer COVID-19 Vaccine Hub for CPESN USA on Thursday, April 15th, 2021. Patrick Pugliese, PharmD '11, Director of Pharmacy at University Pharmacy, worked with Maggie Schmidt and Caleb Schork, Class of 2023 to organize and prepare Pfizer vaccine supplies for five Pennsylvania Pharmacist Care Network/CPESN



Maggie Schmidt, Caleb Schork, and Patrick Pugliese

independent pharmacies in Western Pennsylvania including ACROx, Asti's South Hills Pharmacy - co-owned by Chris Antypas, PharmD '09, Palmer Pharmacy, The Medicine Shoppe and Span and Taylor Drug Co. Stephanie McGrath, PharmD '07, Executive Director of Network Operations, Pennsylvania Pharmacist Care Network and Pitt Pharmacy Community Leadership & Innovation in Practice (CLIP) Center, organized Pfizer hubs throughout the PPCN Network to support vaccine delivery from the Federal Pharmacy Program.

Nolin Invited as Participant in NKF-ASN Task Force to Reassess the Inclusion of Race in Diagnosing Kidney Diseases

Thomas D. Nolin, PharmD '99, PhD '03, recently presented to the National Kidney Foundation (NKF) – American Society of Nephrology (ASN) Task Force to Reassess the Inclusion of Race in Diagnosing Kidney Diseases. Since September 2020, the Task Force has been hosting meetings of stakeholders across the country and examining every aspect of the inclusion of race in calculations that estimate adult kidney function with a goal of seeking a solution that is safe; equitable; will not disadvantage any patient by race, sex, or age; and will promote accurate and consistent GFR estimation for all patients throughout the United States. Nolin initially presented 'Implications of Excluding Race from eGFR Equations on Drug Selection, Dosing, Safety and Efficacy', and was subsequently invited for a follow up presentation titled 'FDA Guidance on PK in Patients with Impaired Kidney Function: Impact on Use of eGFR'.

Nolin is Associate Professor in the Department of Pharmacy and Therapeutics and holds secondary appointments in the Department of Medicine Renal-Electrolyte Division and in the Clinical and Translational Science Institute.

PharmD Students' Research Published in Cardiovascular Drugs and Therapy

Niti Patel and Britney Stottlemeyer, graduates of the class of 2021, led the publication of their research project entitled, "A Pharmacovigilance Study of Adverse Drug Reactions Reported for Cardiovascular Disease Medications Approved between 2012-2017 in the United States Food and Drug Administration Adverse Event Reporting System (FAERS) Database" in *Cardiovascular Drugs and Therapy*. These two students learned to implement data analysis techniques while completing their PharmD degree as part of the pharmacoanalytics area of concentra-

tion. Faculty member, Dr. Sandra Kane-Gill mentored the students for this research endeavor.

Mercer Selected as One of 40 Health Professional Students Nationwide to Be a Paul Ambrose Scholar

Julianne Mercer (Class of 2022) was selected as one of 40 health professions students across the nation to be a Scholar of the Paul Ambrose Scholars Program, which is planned and implemented by the Association for Prevention Teaching and Research (APTR). APTR is "the professional organization representing accredited and emerging graduate public health programs, medical and health professions faculty, and students dedicated to interprofessional prevention education and research." As a Scholar of this program, she will be focusing on population-based and public health education, research, and service to implement academic prevention at the Women's Center and Clinic of Greater Pittsburgh. The program requires the scholars to plan and implement a community-based project at their home institution and produce a final project report. Julianne's project is a health literacy intervention and improvement program.

Kane-Gill Elected President of the Society of Critical Care Medicine for 2022

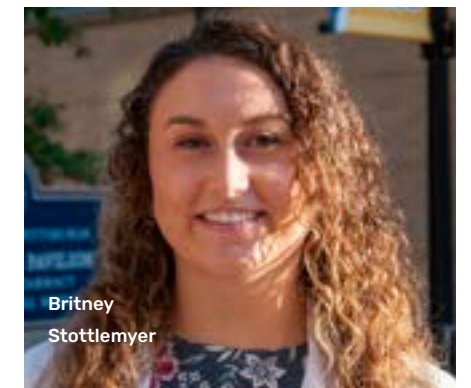
Sandra Kane-Gill, PharmD, MS, FCCM, FCCP is President-Elect of the Society of Critical Care Medicine (SCCM), the largest non-profit medical organization dedicated to promoting excellence and consistency in the practice of critical care. Kane-Gill will be only the second pharmacist to ever have this position. SCCM is the largest interprofessional healthcare organization in the world, having members in more than 100 countries and represents all professionals caring for patients with critical illness.



Thomas Nolin



Niti Patel



Britney Stottlemeyer



Julianne Mercer

Jennifer
Bacci

Bacci Selected as Recipient of 2021 Albert B. Prescott Pharmacy Leadership Award

Jennifer Bacci, PharmD '11, MPH, BCACP, of Seattle, Washington, was named the 2021 recipient of the Albert B. Prescott Pharmacy Leadership Award. The Prescott Award is presented by the Pharmacy Leadership & Education Institute and is sponsored by the Phi Lambda Sigma Pharmacy Leadership Society.

According to the press release announcing the award, Bacci was "...recognized for her outstanding leadership example in the Academia-CPESN Transformation (ACT) Pharmacy Collaborative Task Force by the American Association of Colleges of Pharmacy (AACCP), as a Flip the Pharmacy coach and as a network facilitator for Community Pharmacy Enhanced Services Network (CPESN) Washington."

It was also noted that Bacci is "... a nationally recognized researcher in implementation science and community pharmacy practice advancement. She trains the next generation of pharmacists through a high level of involvement in community residency training, mentoring students in research and teaching, and leadership contributions to UW School of Pharmacy's curricular innovation." Bacci is currently on faculty at the University of Washington School of Pharmacy. She received her award and delivered a scholarly address during the APhA Annual Meeting in March 2021.

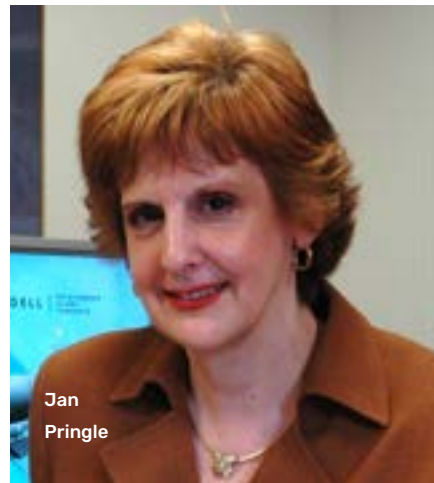
Amy
Seybert

Seybert Serves as Guest Editor in Journal of the American College of Clinical Pharmacy

Amy Seybert served as a guest editor with Stuart Haines and editor-in-chief Jerry Bauman on the Journal of the American College of Clinic Pharmacy (JACCP) Themed Issue on Clinical Pharmacy Education and Training published in February. Their editorial "Getting beyond learner reactions: elevating our scholarship about teaching and learning" challenges educators to rigorously measure and report educational outcomes beyond learner reactions.

Pringle Co-Authors Article Published in New England Journal of Medicine Catalyst

In 2016, the Pennsylvania Department of Human Services partnered with the Program Evaluation and Research Unit (PERU) at the University of Pittsburgh School of Pharmacy to provide technical assistance to Pennsylvania's Opioid Use Disorder (OUD) Centers of Excellence (COE) program. The COE program aims to increase access to opioid use disorder treatment and reduce opioid-related deaths by: mobilizing a community-based care management team; integrating physical health and behavioral health; and increasing access to Medication-Assisted Treatment (MAT) and Medications for Opioid Use Disorder (MOUD). For

Jan
Pringle

individuals with OUD, the COE model has led to increased rates of access to and use of MAT, continued engagement in treatment beyond 30 days, and decreased rates of overdoses.

The New England Journal of Medicine Catalyst article titled "Pennsylvania's Novel Public-Private Approach to Combatting the Opioid Crisis," discusses the COE model, and was co-authored by Gwen Zander, Esq. Chief of Staff of Pennsylvania Office of Medical Assistance Programs within PA Department of Human Services (Project Officer for the COE) program, Dr. Poonam Alaigh, a Research Professor at the University of Pittsburgh, Director of Innovation at PERU, and President and CEO of Alaigh Care Associates, and Dr. Jan Pringle, Professor at the University of Pittsburgh and the Director of PERU.

PharmD Student Research Published in Pharmacoepidemiology and Drug Safety

Christian Andreaggi, Mitchell Miarabile, Emily Novak and Shivani Sampathkumar, graduates of the class of 2020, led the publication of their research project entitled, Safety Concerns Reported by Consumers, Manufacturers and Healthcare Professionals: A Detailed Evaluation of Opioid Related Adverse Drug Events in the FDA Database over 15 years in Pharmacoepidemiology and

Drug Safety. These 4 students learned to implement data analysis techniques while completing their PharmD degree as part of the pharmacoanalytics area of concentration. Dr. Sandra Kane-Gill mentored the students in this research endeavor.

Vanscoy Selected as EY National Entrepreneur of the Year as he Transitions to New Role

Dr. Gordon J. Vanscoy's first day at the School of Pharmacy was as a pharmacy student in what was then the Bachelor of Science program in pharmacy. Nearly a year ago, he transitioned from Pitt Pharmacy Associate Dean for Business Innovation to adjunct associate professor. That sounds so simple.

The story is so much longer and so full of accomplishments, that we can share only an overview. After completing his PharmD at Duquesne University and residency at Mercy Hospital, he joined the PittPharmacy faculty in 1986 as assistant professor and clinical pharmacy specialist at the Pittsburgh Veterans Affairs Health System (VAHS). As a clinician, he developed one of the country's first Anticoagulation Clinic Services and obtained medication prescribing privileges at the Pittsburgh VAHS. Vanscoy, PharmD, CACP, MBA, had a rapid trajectory through positions at Pitt that included founding Director of the Drug Information and Pharmacoepidemiology Center, Vice Chair of the Department of Pharmacy and Therapeutics, Vice Chair of the University Biomedical Institutional Review Board, and Assistant Dean for Managed Care.

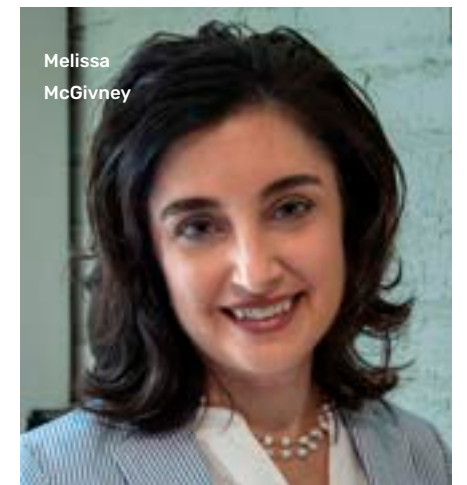
As his interests turned to business in managed care and then specialty pharmacy, his loyalty to Pitt never wavered. He took on developing clinical services as Executive Vice President at Stadtlanders Specialty Pharmacy and was eventually promoted through company sales to Chief Operating Officer. In his School's administrative role, he established the Area of Concentration in Pharmacy Business Administration and the Master of Pharmacy Business Administration that we now offer in partnership with the Katz Graduate School of Business.

Vanscoy has been recognized as a PittPharmacy Distinguished Alumnus in 2008, and in 2017 was awarded the University of Pittsburgh's highest recognition, the Distinguished Alumni Fellow Award. His service to organizations has been exemplary and includes his current role as Director-at-Large, Board of Directors for the National Association of Specialty Pharmacy (NASP); from 2015 to 2018 he was Director-at-Large on the Board of Directors for the American Society of Health System Pharmacists Foundation.

With thirty-five years of executive experience creating and developing successful medical and pharmaceutical service businesses, Vanscoy is a recognized leader in the health care industry and a pioneer in the specialty and rare pharmacy sector. Today, he serves as the Chairman and CEO of RareMed Solutions and PANTHERx Rare Pharmacy; the latter is the 2018 NASP Specialty Pharmacy of the Year and the 2020 Deloitte/Wall Street Journal U.S. Best Managed Business. The Pittsburgh Business Times acknowledged him as one of Pittsburgh's Outstanding CEOs and Top Executives.

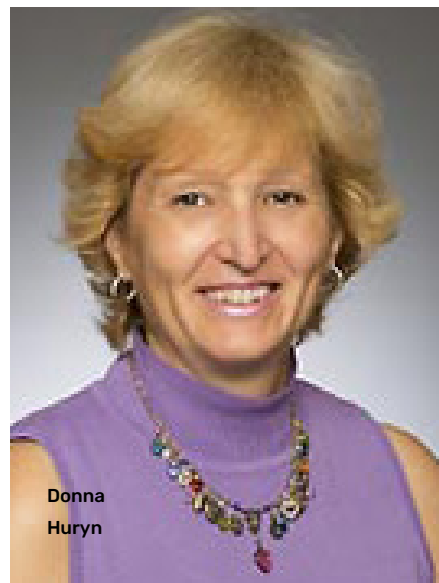
Vanscoy and his wife, Bethann, are residents of Naples, FL and philanthropists to PittPharmacy, where they have established an endowed scholarship, an ongoing gift to support the White Coat Ceremony, and an endowed chair, which is currently held by Dean Patricia Kroboth.

Recently, Vanscoy was selected to represent the United States in the EY World Entrepreneur of the Year 2021 Competition. Vanscoy was chosen as an Entrepreneur of the Year 2020 National Award winner after he was selected as an East Central regional award winner. EY noted that "His recognition marks the first time a Pittsburgh native competed for the EY World Entrepreneur of the Year Award." Vanscoy competed for the award of EY World Entrepreneur of the Year virtually in June, along with entrepreneurs from nearly 40 countries.

Gordon J.
VanscoyMelissa
McGivney

McGivney Awarded APhA-ASP Outstanding Chapter Advisor Award

Melissa Somma McGivney, PharmD, FCCP, FAPHA was awarded the 2021 APhA-ASP Outstanding Chapter Advisor Award. This national award was established in 1998 to recognize one ASP chapter advisor nationwide who has "promoted with distinction the welfare of student pharmacists through various professional activities". Current Pitt Pharmacy ASP student leaders nominated McGivney, who serves as a Pitt Pharmacy ASP Chapter Advisor.



Donna Huryn

Huryn Receives Lifetime Achievement Award

Donna Huryn, PhD, and Professor in the Department of Pharmaceutical Sciences, was chosen as the winner of the Philadelphia Chapter of the Association for Women in Science (AWIS-PHL) Lifetime Achievement Award for 2021. The award is given to "...a distinguished scientist who has significantly influenced the advancement of women in science and who serves as a role model for all." Donna was chosen for "excellence in research, teaching, and promoting the entry and advancement of women in science." She will give a presentation to AWIS-PHL members about her career and scientific journey in September 2021.

Richardson Selected for CVS Health Minority Scholarship

Kenneth Jaquez Richardson, Class of 2023, was awarded the 2020 CVS Health Minority Scholarship for Pharmacy Students. Each year, CVS Health and the American Association of Colleges of Pharmacy (AACCP) selects high-achieving first-year or second-year PharmD students of underrepresented minority backgrounds who demonstrate academic success, leadership, and commitment to progressing the pharmacy profession and



patient healthcare. Each recipient is awarded a single \$8,000 scholarship.

"Being awarded this scholarship means far more than alleviating the financial burden of pharmacy school expenses. It is an affirmation that I chose the most authentic career path and to be in the best position to make huge impacts on patient's lives," Richardson said. "This award also allows me to represent and inspire rising minority pharmacy students, affirming that they can do it too."

Richardson, shown second from the right, also said he feels optimistic in his growth through pharmacy school, noting that he would use his skill set to advocate and serve patients through compassion, integrity, and empathy. "I look forward to taking more advantages of opportunities through my organizations, internship, and extracurricular experiences to optimize patient care in the community," he said. "This scholarship is a monumental boost in my drive to become a successful pharmacist and better provider for future patients."

Gibbs Appointed Vice Chair of Education

Robert B Gibbs, PhD, was appointed Vice Chair of Education in the Department of Pharmaceutical Sciences effective April 1,



Robert Gibbs

2021. As the Vice Chair for Education, Bob's major responsibilities include: teaching coordination for the faculty of the Pharmaceutical Sciences; serving as a mentor for faculty teaching in the Department of Pharmaceutical Sciences; serving as co-advisors for graduate students or post-doctoral fellows when needed; any duties related to innovation in the classroom; and representing the department at internal or external meetings related to teaching and education.



Melissa McGivney explains the importance of pharmacy symbols and asks the P1 students to pin the Pitt Pharmacy pin on their white coats during the virtual White Coat Ceremony. Background artwork done by Shay Roth, Class of 2024.

Recognition and Reflection: Pledge of Professionalism Reimagined After an Unprecedented Year - Presented by the Class of 2024

Early in the spring semester, Pitt Pharmacy's class of 2024 participated in the cherished tradition of the White Coat Ceremony. During this special rite of passage, students typically recite a standard pledge aloud. The purpose of the pledge is to make a vow of professionalism, morality, and dedication to the practice of pharmacy.

As the original Pledge of Professionalism for pharmacists states, "The profession of pharmacy is one that demands adherence to a set of rigid ethical standards." This year,

Pitt Pharmacy students took it upon themselves to elevate those standards even further – by making some timely and important additions to the pledge they committed to. In response to recent events in America – including the COVID-19 crisis, racial injustice, political tension, and the ongoing disparities in healthcare – the first year students wrote a bold, new preamble to the pledge.

The traditional pledge mandates that members of the profession "develop a sense of loyalty and duty...by being a builder of the community, one able and willing to contribute to the well-being of others..." The students exemplified this call to action in their written addendum, by reflecting on the many ways in which they plan to spe-

cifically address the inequities that exist today. In their own words, as they start on the pathway to becoming pharmacists, they declared that "...in 2020, a year pervaded by the COVID-19 pandemic with its loss of lives and livelihoods, a national recognition of civil rights activism, and divisive politics, my pledge to inclusion, unprejudiced compassion, and equity is more important than ever." The students went on, taking turns identifying specific injustices and addressing the ways they planned to right those wrongs in their own course of practice. They gave a moving and spirited presentation – leaving everyone within earshot filled with pride and confidence that the next generation of pharmacists will continue to be an inspiration to us all.

A PERFECT STORM

The Journey of Salk Hall Renovations and a Pandemic?

By: Patricia D. Kroboth, PhD

At my very first faculty meeting in 1980, I was mesmerized by the opportunity described for renovating the interior of our historic Salk Hall. Even then, Salk Hall looked very old to my much younger self.

Fast forward 41 years. We soon to move into a Salk Hall that no one could have begun to imagine in 1980. Both the interior and exterior—including Salk Hall’s 29 roofs, will be renovated or replaced. The change will be nothing short of dramatic both in the look and importantly, what we will be able to do in this reimagined, superbly functional space.

Did it really take 41 years in planning and construction? Well, not really. The planning for this renovation restarted in 2008 in concert with planning for Salk Pavilion so that the two facilities could function as one and share support systems. Once we moved into the Pavilion in 2015, planning became intense. Imagining uses, flow of people, design, and construction plans developed as well as financial constraints. As plans took shape, the question of timing arose.

To Phase the Renovation or Just Do It?

A phased approach to renovation was projected to take 11 years and cost at least three times as much as the just-do-it approach; the latter was estimated at take two and a half years. The toll of noise and mess would have meant that years of graduating classes would never have a “construction-free” experience.

The just-do-it approach prevailed. So, in July 2018, 163 people packed up their labs and offices full of instruments, computers, AV equipment, books, files and personal items. And we moved. As you can imagine, there was no single empty facility that could house us together. We moved into four locations around Pittsburgh. We learned to use technology for seminars and to shuttle to Salk to teach classes and for meetings. Eighty people learned to use telephone rooms for privacy and consideration of their aisle-mates, as many were located in what looked like a biotech company with open work-spaces and glassed-in conference rooms. Regardless of where we were, we thrived.



Seriously. A Pandemic?

We all know what happened in March 2020. Life as we knew it changed for the entire world. And construction stopped. Yes, construction stopped. After 40 years of waiting, construction stopped.

And fortunately, construction restarted, initially at a slower pace because of social distancing and new precautions.

The Silver Lining of the Perfect Storm

Think of it. With respect to construction, the timing for the pandemic was perfect. The timing actually facilitated construction. Construction could occur without regard to occupants—e.g., renovating classrooms and dropping floor plates between floors to make the grand natural-light lobby.

Construction could occur during daytime hours instead of off-hours. I think we can imagine different scenarios for timing that would have been tremendously worse.



What Will We See?

The first thing that will strike any visitor is the airiness and natural light that fills the three-story elevator lobby. A grand “monumental stair” allows easy walking access to the next floor, where a glass-walled new classroom and a maker space are located. Every floor from four to eleven will be totally renovated. Glass walls allow natural light to diffuse into hallways from large exterior windows. Offices are smaller and more and larger spaces are available for gathering, learning, sharing ideas and developing collaborations. The rest of the description will have to wait for photos and your personal visit.

A Beautiful Ending to the Perfect Storm

Students, faculty and staff are in for an amazing transition: from remote to in-person learning and into a newly renovated space. The storm and its ending are perfect: For the first time in three years, we will be back in our Salk Hall home.

A Symbolic Transformation

The transformational renovation of Salk Hall is a wonderful symbol of the transformation of our programs that are now infused with technology through our tradition of innovation. In addition, innovation, like construction, was actually accelerated by the pandemic. The new space will allow us to grow and innovate in all new ways for impacting those in our region and people across the world. For the first time, we will have the full range of space and technology needed to support in and out-of-the-classroom learning for students in all of our programs. Salk Hall will be a destination building that will enhance the reputation of our educational and research programs. Salk Hall will truly be a place that we will all be proud to claim as our home.

UNIVERSITY OF PITTSBURGH SCHOOL OF PHARMACY

CLASS OF 2021



P1 Class Photo
Fall 2017



LEADING THE WAY

FEATURE

MEASURE OF HEALTH

All of us are constantly reminded that Artificial Intelligence (AI) is changing how we work, shop, and are entertained. We see news feeds on social media and product recommendations on shopping sites because algorithms are using deep learning to figure out what we will be interested in seeing. Advertisements tell us that “AI makes things easier from building smarter cars to predicting sales trends to improving customer service.” The use of AI and the application of the internet of things (IoT) connecting many devices from the “smart home” to the “smart city” are creating opportunities to effectively use data in ways that were not possible just a few years ago. Massive data collection is also happening in health care. Now smart watches can measure your blood oxygen level, take an ECG anytime, anywhere, show you your fitness metrics, measure your quality of sleep and sleep patterns to name just a few. The availability to add your personal genetic data now makes new predictions possible and, as the commercials say, “a healthier, more active, more connected life is within reach.”

The following faculty stories show how the PittPharmacy’s pharmacoanalytics program is leading the way in computation and data science application in all medication areas. Our faculty are using computation in discovery and development to quickly and efficiently find and develop the best lead compounds. They are using data to identify the best drug for an individual patient and to predict who will have side effects. They are improving access to medications by mapping large data sets on healthcare services to show where new services are needed. They are helping develop new policies based on their analysis of cost and drivers of cost. They are training the next generation of leaders making a difference for Pittsburgh and for the world.

FOURTEEN MILLION & COUNTING

How Kane-Gill is Using Data to Detect, Prevent, and Mitigate the Risk of Adverse Drug Events



According to Health and Human Services, each year about one of every three hospital visits is due to a serious adverse reaction to drug. Adverse drug reactions also cause of more than a million emergency department visits. Sandy Kane-Gill, PharmD, MS, FCCM, FCCP has made it her mission to identify effective approaches for the detection, prevention, and management of medication errors and adverse drug events (ADEs). Kane-Gill is taking advantage of the vast amount of health and patient data available in local and national databases and state-of-the-art computational methods to predict, identify, and mitigate ADEs. Her work is key to the strategic medication safety initiatives at PittPharmacy and the UPMC Department of Pharmacy.

Kane-Gill and her collaborators have recently completed compiling and “cleaning” data from the Food and Drug Administration Adverse Event Reporting System (FAERS). FAERS includes voluntarily reported data from both healthcare providers, consumers and manufacturers – making it the largest adverse event reporting database in the United States. Kane-Gill used the data from 2004 to 2021 to create a database containing over 14 million adverse drug event reports. She used this data to identify previously unreported drug-event associations for acute kidney injury and dysrhythmias. Her team has also characterized ADEs reported for newly approved medications for treating diabetes, respiratory and cardiovascular diseases.

Kane-Gill also finds ways to mitigate adverse drug events. She recently conducted a federally funded program called “Transforming the Medication Regimen Review Process of High-Risk Drugs Using a Patient-Centered Telemedicine-Based Approach to Prevent Adverse Drug Events in the Nursing Home”. She and her collaborators integrated clinical decision support alerts into consultant pharmacist workflow to identify high-risk medication safety events and prevent ADEs in nursing home residents. The consultant pharmacists communicated with nursing home residents to complete medication reconciliations and medication regimen reviews using video-based telemedicine. This was the first evaluation of pharmacist-led patient-centered telemedicine services to manage high-risk medications during transitional care and throughout the resident’s nursing home stay. This new model of care resulted in greater than 90% reduction in adverse events.

Kane-Gill is preparing students for a future where care is informed by data. She leads the pharmacoanalytics area of concentration that provides pharmacy students opportunities for personalized, active learning experiences to master pharmacoanalytic skills. Many of the students have published their research and have been successful in competing for industry fellowships in health economics and outcomes research. Some have continued their training in PhD programs and Kane-Gill currently advises graduate students and residents. She is creating an innovative approach to graduate education in the development of a pharmacoanalytics MS program for medication outcomes research. This program will incorporate microcredentials and badging for competencies attained by students.

Kane-Gill’s future research is dedicated to improving medication safety in patient care using pharmacoanalytic techniques. The most recent goal of her work is to build a predictive model using machine learning to identify patients at risk for drug associated acute kidney injury. This model will be used as the foundation to develop an advanced clinical decision support tool to prevent drug associated acute kidney injury and improve patient outcomes. Prospective identification of patients at risk for drug associated acute kidney injury is one component of a set of many coordinated patient care management strategies for safe medication use of nephrotoxins to ensure kidney health and avoid unnecessary resource utilization (referred to as nephrotoxin stewardship).

DRIVING DRUG DISCOVERY

Xie Uses Artificial Intelligence to Identify and Develop Lead Compounds



As Associate Dean for Research Innovation, Dr. Sean Xie provides critical leadership and research expertise to lead Pitt Pharmacy technology innovation in both research and education programs for graduate and PharmD students. Dr. Xie is also charter member of the Science Board to the U.S. Food and Drug Administration. As evidence for research innovation, he serves as Director/PI of an NIH-funded Center of Excellence (www.CDARcenter.org), a joint initiative between the University of Pittsburgh and Carnegie Mellon University that has spawned several fruitful collaborations and catalyzed development of artificial intelligence (AI) computing technologies used for interdisciplinary research in greater Pittsburgh and nationwide. Additionally, Dr. Xie is Director/Professor of a computationally guided drug design/drug discovery Chemical Genomics Screening Center (www.CBLigand.org/CCGS) integrating high-end AI machine/deep learning tools developed by his team with medicinal chemistry synthesis and bioassay validation. Dr. Xie and his team have a track record of 12 patents and over 180 publications. Of special note,

Dr. Sean Xie and his team’s 2020 publication in *Cell* (impact factor 38.23), describing the cryoEM 3D structure of human cannabinoid receptor CB2-Gi/agonist signaling complex (2020 *Cell*, 180:645); represents a landmark publication in the field, particularly for those endeavoring to develop selective CB2 therapeutics, as well as a milestone of his innovative work spanning two decades in the field. He also discovered a first-in-class small molecule targeting p18INK4C for haematopoietic stem cell expansion (2015 *Nat Comm*, 6:6328). Specially, Dr. Xie patented a first-in-class p62ZZ small molecule with therapeutic potential for multiple myeloma (2016 *Leukemia*, 30:390) and neurological diseases (2017 *Nat Comm*, 8:102). This innovative work was awarded a fast-track FDA IND-enabling studies towards human clinical trials. Dr. Xie was also a recipient of an AAPS Outstanding Research Achievement Award.

Dr. Xie is Founding Director and a driving force for developing innovative graduate programs in data science driven Pharmacometrics & System Pharmacology (PSP). PSP faculty have trained over 58 graduate and PharmD students since 2018. These graduating students received extensive PSP training, strengthening their candidacy for PhD admission to top-ranked US Colleges of Pharmacy (UCSF, UNC, UM, etc.), internships at Pharma/Biotech (Merck, MBS, Biogen, etc), and postdoctoral fellowships at top Institutes (MIT, Sloan Kettering Cancer Center, NIH, etc). Furthermore, our established PSP program provides innovation in graduate and PharmD education

and training, which is a critical component of the PittPharmacy PharmacoAnalytics program. It has trained outstanding next-generation scientists and researchers that have published cutting-edge AI GPU computing machine-/deep-learning algorithms, diseases-specific chemogenomics knowledgebases, and systems pharmacology TargetHunter drug discovery for preclinical and/or clinical pharmacoanalytics research. The research and publications were done by graduate and PharmD students, and their published works include: DeepMGM for target-/scaffold-focused chemical library design and development of cannabinoid CB2 allosteric modulators (2020); Deep convolutional generative adversarial network (dcGAN) models for screening and design of cannabinoid small molecules (2019 *Mol. Pharm.* 16:4451); DAKB-GPCRs: an integrated computational chemogenomics platform for drug abuse-related GPCRs (2019 *JCIM* 59:1283); Computational systems pharmacology analysis of Cannabidiol (CBD) (2019 *APS* 40:374); Analysis of substance use and its outcomes by machine learning II. Derivation and prediction of the trajectory of substance use severity (2019 *Drug and Alcohol Dependence*. 107604); and Synergism of antihypertensives and cholinesterase inhibitors in Alzheimer’s disease (2018 *Alzheimer’s & Dementia: Translational Research & Clinical Interventions*. 4:542-555). During the COVID-19 pandemic, Dr. Xie has led his PSP team to develop and publish open accessible resources, including Virus-CKB: an integrated chemogenomics knowledgebase platform and analytics resource for COVID-19 research (2020 *Brief Bioinform* doi: 10.1093/bib/bbaa155) and MCCS, a novel pattern-recognition algorithm scoring function-based computing Molecular Complex Characterizing System (MCCS) for fast track discovery of anti-SARS-CoV-2 drugs (2020 *Brief Bioinform* doi: 10.1093/bib/bbaa260).

GETTING PERSONAL

Yang Analyzes “Big Data” to Personalize Drug Therapy



You know the story; you may not know the name. The story you know is Angelina Jolie’s BRCA1 gene story and the gene’s association with breast and ovarian cancer. The name you may not know is Da Yang, MD, PhD.

Yang and colleagues solved the BRCA1/BRCA2 puzzle using a novel computational approach and gene analysis on two types of genes: the genome of the tumor and the genome of the patient. The data are stored in The Cancer Genome Atlas (TCGA). We are fortunate that since 2014, Dr. Yang has been a faculty member here at PittPharmacy, where he has expanded his research and educates our pharmacists and pharmaceutical scientists. Each year, more than 250,000 women and men are diagnosed with breast cancer nationwide, which emphasizes the importance of Da Yang’s work with his team.

Yang cultivates novel big data strategies to optimize chemotherapy. He and his team have successfully built and developed algorithms and computational tools to predict

drug response phenotypes (metabolism, efficacy, and drug–drug interactions) aimed at tailoring and personalizing treatment strategies for breast cancer patients. For the BRCA1/BRCA2 work, they analyzed 3 billion nucleotides from each of these 316 patients, which means that they evaluated 1 trillion bits of data. They also had the clinical and drug response data, making the database even larger. This IS “big data.”

They are advancing novel prescribing strategies by considering pharmacogenomics, gene–drug interaction, and drug–drug interaction. They are testing the approach of using the DNA from the person (germline DNA) and the DNA from the tumor to personalize the drug therapy regimen. Those studies have been published in top biomedical journals including *JAMA*, *Cancer Cell*, *Nature Communications*, and *Science Advances*.

Based on the expression of several biomarkers, breast cancer has been classified into four subtypes with different biological and genomic features that can be used to guide treatment. Among those subtypes, triple negative breast cancer (TNBC) tumors have the poorest prognosis. For a very long time, there were no effective therapy for the TNBC patients. Dr. Yang and several collaborators developed a novel combination therapy that may help breast cancer patients to fight the deadly disease by unleashing their own immune system. Their approach integrates pharmacogenomics and preclinical data and uses TECENTRIQ, the recently approved drug for patients diagnosed with TNBC.

TECENTRIQ can activate a patient’s own immune system to fight tumor cells, but it works only if tumor cells can be recognized by the patient’s immune system. In some TNBC breast cancer patients, the tumor is so “smart” that it develops a strategy to evade the immune system’s surveillance. In these patients, simply activating the patient’s own immune system with TECENTRIQ is

not working because the tumor becomes “invisible” to the immune system.

Dr. Yang’s groundbreaking work found the cause of the tumor’s “invisibility” to the immune system to be attributed to the activation of a pair of genes named EPIC1 and EZH2. The activation of EPIC1 and EZH2 causes the loss of MHC-I and other molecules in the tumor surface. The MHC-I molecules are cells’ immune “fingerprint” and they are majorly used by our immune system to discover and locate those bad cells. Yang has demonstrated that EPIC1 and EZH2 activation leads to the loss of tumor’s immune “fingerprint”. This makes the tumor become invisible to the patient’s immune system and leads to the TECENTRIQ drug resistance.

This finding is important because Dr. Yang’s group further discovered that using an FDA approved EZH2 inhibitor can force the tumor to grow back their “fingerprint” MHC molecules. When combined with TECENTRIQ, the EZH2 inhibitor can expose the tumor to the attack of patient’s own immune system. These drugs are FDA approved and have shown to be very safe to patients. The combination therapy of TECENTRIQ and the EZH2 inhibitor could dramatically improve survival rates in patients with breast cancer. Yang, with his oncologist collaborators is now poised to test this novel drug combination therapy in a clinical trial in a patient population, with the ultimate goal of significantly improving TNBC patient outcomes.

FROM DNA TO DRUG SELECTION

Empey Leads Pittsburgh Pharmacogenomics Team to Tailor Prescribing Practices



How do we reduce wide variability in medication response to achieve better clinical outcomes? What is the best medication (and dosing schedule) for a specific patient? These are some of the big questions now being studied through a large Pitt/UPMC initiative led by PittPharmacy that focuses on the implementation of precision medicine through pharmacogenomics.

Increasingly, it is understood that how a person metabolizes or responds to some medications can be predicted based on their DNA profile. This field, called pharmacogenomics, promises more personalized prescribing through a simple blood or saliva test. Over 350 FDA-approved medications currently have pharmacogenomic information in their labeling and consensus guidelines recommend the use of genetic data to tailor prescribing for over 50 commonly-prescribed medications. PittPharmacy’s Pittsburgh Pharmacogenomics (PittPGx) team, led by Dr. Philip Empey, is working to make pharmacogenomics an integral part of routine clinical care through research, clinical implementation, and education programs here in Pittsburgh.

In partnership with Pitt’s Clinical and Translational Science Institute (CTSI), the Institute for Precision Medicine (IPM), UPMC, and Thermo-Fisher Scientific, we recently launched the Pharmacogenomics Center of Excellence and the first “at-scale” US academic–industry collaborative pharmacogenomics implementation

program. The premier Center initiative is a large population study that seeks to enroll >150,000 participants in Western Pennsylvania. These participants join CTSI’s new institutional biobank, Pitt+Me Discovery, and undergo preemptive (before it is needed) pharmacogenomic testing using a contemporary panel assaying >4600 genetic markers in nearly 1200 genes that may impact medication response. Results are stored for research and electively returned to participants and their UPMC electronic health record.

Empey’s team has developed the research and clinical data pipelines with UPMC, CTSI, and IPM. Beyond developing the new test, this new analytics infrastructure allows researchers to combine real-world genomic and drug prescribing data into algorithms that predict medication outcomes, improve prescribing, and show the economic value of precision medicine. Over 6000 participants have been enrolled to-date. As the program expands recruitment will further target those that would most likely benefit from testing; such as those that are likely to receive certain medications, that require surgery, or that have certain conditions such as breast cancer or mental health disorders.

Overall, this exciting new Pharmacogenomics Center of Excellence builds upon PittPharmacy’s success in pharmacogenomics clinical services and education. In 2015, we were one of the first programs nationally to implement pharmacogenomic testing through our PreCISE-Rx (Pharmacogenomics-guided Care to Improve the Safety and Effectiveness of Medications) program led by Drs Empey and Jim Coons. Patients who receive cardiac stenting at UPMC Presbyterian Hospital now receive a simple genetic test as part of routine clinical care to significantly reduce the risk of cardiovascular events by helping to identify more effective medications. The test

identifies a genetic deficiency that affects the body’s ability to activate clopidogrel, a common antiplatelet drug given after a coronary artery stent is inserted. The pharmacist-led Pharmacogenomics Service then makes prescribing recommendations. About 30 percent of all patients have the genetic deficiency, which can lead to decreased clopidogrel effectiveness and increased risk for adverse cardiovascular events, such as strokes, heart attacks and death.

Last year, PittPharmacy faculty member Dr. Lucas Berenbrok expanded the scope of PreCISE-Rx by advancing patient care in the Primary Care Precision Medicine Clinic formed through a partnership of PittPharmacy and Family Medicine. Patients seeking pharmacogenomic services can meet with a pharmacist and PittMedicine faculty, Dr. Mylynda Massart, to determine whether testing is right for them, go through testing, or to interpret prior testing results in the context of comprehensive medication management. Education is also critical to advance the adoption of pharmacogenomic testing. To be able to use test results appropriately, practitioners and students in health sciences curricula alike must learn to apply these data in practice. PittPharmacy’s Test2Learn program (www.test2learn.org) is an award-winning educational solution designed to overcome this knowledge gap. What started as an innovative learning method in the PharmD program has become a national program for genomics education. Learners can go through testing themselves and work with their own data to attain superior learning outcomes. Over >3100 pharmacists, physicians, students, and other healthcare professionals and were awarded >9400 hours of continuing education through >80 online and live education programs deployments cumulatively. We are also currently funded by grants to develop educational programs to accelerate precision medicine implementations within the UPMC health system and beyond.

MOVING BEYOND MOMENTARY CARE

Pitt Pharmacy and the Community Leadership and Innovation in Practice (CLIP) Center Use Data Management to Provide Long-term Care for Patients in the Community



You have heard of the amazing work the University of Pittsburgh School of Pharmacy does with PharmacoAnalytics in the areas of drug development, precision medicine, and clinical outcomes research. Did you also know that PittPharmacy is also leading the way in the data science of community pharmacy practice?

Pharmacists in community pharmacies are providing patient care while documenting care and outcomes that is captured in a standardized format, called the Pharmacist eCare Plan. PittPharmacy and the team within the Community Leadership and Innovation in Practice (CLIP) Center are forging a path for management of these data and related research and quality improvement initiatives. These efforts will lay the groundwork for research examining how care provided in community-based pharmacies impacts patients and supports the value of pharmacists payment for these services.

Faculty and staff at PittPharmacy lead the Pennsylvania Pharmacists Care Network (PPCN)/CPESN of over 160 participating community pharmacies, which is one of the most prominent networks in the country. Faculty, staff and fellows are also leading Pennsylvania's national "Flip the Pharmacy" initiative that focuses on transforming practice to facilitate "moving beyond pre-

scriptions in a moment in time to caring for patients over time." Over 50 PPCN/CPESN pharmacists in Pennsylvania are involved in this effort where the Pennsylvania Team recently was awarded the National Team Award for Flip the Pharmacy.

Flip the Pharmacy is a nationwide effort sponsored by the Community Pharmacy Foundation and led by a clinically integrated network of community pharmacies known as CPESN USA (Community Pharmacy Enhanced Services Network USA). The goal is to accelerate transformation of pharmacies.

A core component of the Flip the Pharmacy program is the Pharmacist eCare Plan, which has revolutionized how pharmacists in the community document the care they provide. Many pharmacy software vendors have adopted the eCare Plan standard so that documentation of care happens in real-time. The Pharmacist eCare Plans submitted through Flip the Pharmacy have resulted in the largest community pharmacy patient care dataset that has ever existed. PittPharmacy is collaborating with other institutions to lead exploration of the data and establishment of standards and recommendations for use of the data by others.

Over the first 15 months of Flip the Pharmacy, 53 pharmacies in Pennsylvania documented over 40,000 eCare plans, nearly all of which included at least one identified medication-related problem. These eCare plans also included over 5,600 blood pressure values for patients, over 2,000 instances of care coordination, and over 10,000 recent opioid prescriptions. As data generated by community pharmacy practices become more robust through utilization of the Pharmacist eCare Plan, PittPharmacy will continue to explore best practices and share the impact of the data. These efforts will lead to additional opportunities for researchers, new payment models for community pharmacies and payers, and improved outcomes for patients.

Students Stepping Up

Student pharmacists from Pitt Pharmacy are also lending a hand. Sydney Dyne and Hannah Madara are third year student pharmacists who have taken numerous opportunities to help pharmacies when they can. One of their projects involves helping pharmacies track metrics by aggregating data into an easy to read infographic. "The objective of this project is to gather pharmacists' perspectives and increase their awareness of pharmacy specific performance metrics" Dyne said about this project. They have had close contact with pharmacies from all over Pennsylvania while working towards their goal of helping pharmacies identify needs in the community.

This is just one example of the multiple Flip-the-Pharmacy specific projects that are being worked on by PittPharmacy students. Since its inception, Flip-the-Pharmacy has been a great opportunity for students to be able to make an impact directly on the pharmacies in their communities.

Ben Hermann and Jim Matis are also third year pharmacy students who are working closely with the Flip-the-Pharmacy effort. Their project involves identifying and sharing best practices to transform community practice from a product driven model to a service and outcome driven model. "We are looking for ways to help improve the practice of community pharmacy," Hermann said. "We want patients to continue to have access to a high level of care while allowing for more pharmacies to offer that care."

— Matthew Kuhn, Class of 2021

*Note: The students mentioned were mentored by Sophia Herbert, Kelsey Hake, Joni Carroll, Kim Coley and Stephanie McGrath as a part of the CLIP ARCO.

THE INTERSECTION OF DATA & DRUG POLICY

Hernandez Utilizes Advanced Data Mining Techniques to Evaluate Outcomes of Drug Therapy



In 2019, Forbes magazine announced a group of "bold risk-takers putting a new twist on the old tools of the trade", the Forbes Annual 30 under 30 list. Among the innovators making the future look bright was 28-year-old Inmaculada Hernandez, PharmD, PhD. Forbes lauded the impact of Hernandez's research on drug pricing. In the announcement, Forbes specifically called attention to her work that demonstrated that drug prices increase twice as fast during a shortage as they would otherwise, and her work that quantified the full cost of recently approved CAR T-cell cancer therapies. This was a significant accomplishment for Hernandez, who was only three years into her first faculty position, and one that would serve as a prelude to many subsequent achievements that would further distinguish her from her peers.

Hernandez's passion for research and her data management and analysis skills immediately made an impact when she joined PittPharmacy in 2016. She partnered with Dr. Will Shrank, Chief Medical Officer of UPMC Health Plan at the time, to begin examining factors affecting drug costs and outcomes for plan patients. Hernandez also received support for post-PharmD fellowships from PittPharmacy's novel Pharmacoanalytics Program funded by a generous gift from the Meyer Family Foundation. She built her research program at the intersection of pharmaceutical health services and outcomes research, pharmacoepidemiology, pharmacoconomics and

pharmaceutical policy. She analyzes data from large health databases (including insurance claims, Medicare, and electronic health records) using advanced data mining techniques and comparative effectiveness research to predict and compare outcomes of drug therapy. She publishes in leading medical journals including the *Journal of American Medical Association*, *Annals of Internal Medicine*, and *Health Affairs*. She was awarded a K01 career development award from the National Heart, Lung and Blood Institute to study patient and system-level determinants of oral anticoagulation use in atrial fibrillation.

Hernandez uses real world data to provide insights for improving drug use and developing more effective drug policies. Her work on pharmaceutical pricing trends and pricing strategies in response to market disruptions has received worldwide attention from mainstream media outlets, including NPR, ABC, CNBC, BBC, Fox News, and Bloomberg. For example, Hernandez has shown that rising prices of branded drugs are driven by year-over-year increases in prices of existing products as opposed to the entry of innovative products. Recently, Hernandez and her collaborators showed that patients see their pharmacists two times more than their physicians – a finding that garnered significant national attention, with mentions in *Pharmacy Times*, the APhA website, and many posts on social media. Clearly her research methods and skills make a difference in many areas of healthcare.

Hernandez's passion for research also includes facilitating training opportunities for graduate students, fellows, and PharmD students. Student pharmacists that worked with her have published their results and have successfully competed for post-PharmD residencies and fellowships. Hernandez is using data to inform health-care and making a difference for patients, students, and healthcare decision makers.

The published work of Drs. Lucas A. Berenbrok, PharmD, MS, BCACP, TTS, Kim C. Coley, PharmD, FCCP, Inmaculada Hernandez, PharmD, PhD, FACC, FAHA and data analyst Joseph Gabriel is featured in the JAMA Network OPEN titled, "Evaluation of Frequency of Encounters with Primary Care Physicians versus Visits to Community Pharmacies Among Medicare Beneficiaries." Their paper estimates the number of times patients visit the community pharmacy compared to their primary care physicians to highlight the important role of pharmacists on primary care teams.

This revolutionary study shows that Medicare patients visit community pharmacies almost twice as often as they visit primary care providers. In all 50 states and all but 9 counties, visits to community pharmacies were greater than visits with primary care providers. Publication in JAMA Network Open supports how community pharmacists can assist primary care physicians in the delivery of chronic disease management.

PittPharmacy Assistant Professor Inma Hernandez, PharmD, PhD was elected a Fellow of the American College of Cardiology based on outstanding credentials, achievements and community contributions to cardiovascular medicine. As a Fellow, Hernandez will be able to use the professional designation, FACC, to signal to both patients and colleagues alike of her commitment to the highest standards of cardiovascular care.

Fellowship is one of the most distinguished designations the College offers its members and is the ultimate recognition of professional achievement.

As of May 2021, Hernandez started a new position as Associate Professor of Clinical Pharmacy, Skaggs School of Pharmacy and Pharmaceutical Sciences, at the University of California, San Diego.

Where We Are Going

INSIDE SALK HALL & RESEARCH PAVILION

Alumni Updates

Margaret (Peg) Verrico '93

Winner of a 2020 Richard L. Simmons, MD, Speak Up for Safety Award

Michael Tortorici '02

Began new position as Executive Director, Clinical Pharmacology & Pharmacometrics at CSL Behring

Annette Boyer '81

Retired from Premier, Inc.

Allison Doherty '15

Promoted to Scientific Director, Oncology-BCMA, US Medical Affairs

Cristina Elgin Plemmons '14

Promoted to Primary Care Supervisor and PGY1 Residency Program Director for the Ralph H. Johnson VA Medical Center

Yardlee Kauffman '10

Wrote The Essential Guide to Pharmacy Residency Research

Christine Ruby- Scelsi '94

Winner of the Excellence in Leadership Award in Geriatric Pharmacy SIG

Samuel Poloyac '93

Accepted position of Dean, College of Pharmacy, University of Texas Austin

Brandon Antinopoulos '14

Accepted a new role at AmerisourceBergen as Community Pharmacy Business Coach

Louis Williams '74

Received Kappa Psi GCD Outstanding Achievement Award

Asha Tata '05

Awarded the Society of Hospital Medicine Maryland Chapter's Non-Physician Clinician of the Year

Gordon Vanscoy '84

Awarded Entrepreneur Of The Year National Award by Ernst and Young. Gordon was also Selected to Represent the United States in the EY World Entrepreneur Of The Year™ 2021 Competition

Jennifer Bacci '11

Recipient of The Albert B. Prescott Pharmacy Leadership Award

Ogechi Mezu '07

Wrote and published Never Broken, a book of poems

Melissa McGivney '98

Awarded the APhA-ASP National Chapter Advisor Award

Kathy Monangai '20

Awarded the 2021 Phi Lambda Sigma 2021 Chapter Alumni of the Year

Margie Snyder '06

Recognized by APhA-APRS for her extensive list of peer-reviewed publications in top journals, book chapters, and contributions to the APhA-APRS Economic, Social, and Administrative Sciences Section

Megan (Reilly) Langer '11

Recipient of the 2021 HOPA Patient Advocacy Award from the Hematology Oncology Pharmacy Association

New Faces: Staff

Lori Pickel

Research Grants Office Manager

New Faces: Faculty



Rhea Bowman, PharmD

Director of Communications; Assistant Professor of Pharmacy & Therapeutics Class of 2011



Mario Browne, MPH, CHES, CDP

Associate Dean for Equity, Engagement, and Justice; Associate Professor of Pharmacy & Therapeutics



Maria Felton Lowry, PharmD, BCPS, BCGP

Assistant Professor of Pharmacy & Therapeutics, Pitt Pharmacy; Palliative Care Clinical Pharmacy Specialist, UPMC Palliative and Supportive Institute Class of 2015



Terri Newman, PharmD, MS

Assistant Professor of Pharmacy & Therapeutics, Health Economics and Outcomes Research



Ashley Yarabinec, PharmD, BCGP

Associate Director of Experiential Learning; Assistant Professor of Pharmacy & Therapeutics Class of 2011

Retirees



Jan Shaw

Jan Shaw joined Pitt Pharmacy as a part of the communications team in 2004, and later became the Director of Communications. In this role, she took on and "owned" new skills, elevating both our brand and our publications to a higher level. Her creativity and knowledge allowed her to successfully execute many functions, including photography, event planning, and being the managing editor of PittPharmacy magazine. Jan was a constant advocate for excellence in our print and digital communications; she truly made a positive impact on the entire School of Pharmacy.



Nancy Spice

Nancy Spice joined Pitt Pharmacy in Fall 2013 as Research Project Manager. She brought with her quite a sponsored research portfolio, which included experience at Allegheny-Singer Research Institute and Pitt's Office of Research. During her time at Pitt Pharmacy, Nancy increased communications with investigators and has overseen our grant management office as the portfolio of grant applications and post-award funding doubled in magnitude. Nancy's support for investigators, and her expertise in grants administration has been an incredible asset to PittPharmacy.



Thomas Waters

Thomas Waters joined the School of Pharmacy in 1999 as the Director of New Media. His background consisted of a range of educational skills and experiences, including a decade of work for the Department of Neurobiology and a degree in education. Over the years, he has built numerous databases, created our Web site, managed design, instituted the use of tools to track performance, and more. As an artist and an activist, Tom models civic engagement and advocacy for positive change. His creativity and hard work, along with his ability to listen and respond, challenged us to think better and differently.

Q&A **Jovonne (Jones) Williams, Class of 2009**

Clinical Pharmacy Specialist, Home Infusion; Patient Care Management for Biologics and Specialty IV Therapy at Optum Rx/UnitedHealth Group



What drew you to your career path?

As a child, I always loved helping people and knew I wanted to work in the medical field. I initially wanted to be a Doctor of Sports Medicine/ Physical Therapist. In high school, I started to consider my future career options and learned about jobs in pharmacy. A friend's mother was a pharmacy sales rep and I loved hearing about all the cool things she did and how she traveled. As I talked to my parents and grandmother about it, I realized that my love of math and science was a strong foundation for pharmacy. The more I learned, I realized there were so many opportunities and I could blend my love of talking to people, helping people, and my math and science background into a profession I could love. When my grandmother was diagnosed with cancer when I was in high school, I started to think about how the medication she was receiving was working in her body. My desire to learn more, led me on a journey to pharmacy to help others understand and use their medication safely.

Did you know that this was something you always wanted to do?

I didn't always know I wanted to be a pharmacist, but I always knew I wanted to be in the medical field. I wanted a job that had stability, that I loved, and had a lot of opportunity for growth and advancement.

What was a skill that you had when you came to pharmacy school that was nurtured and that you fostered through your career?

One skill that I was able to further develop in pharmacy school was my communication skills. Initially I thought being a pharmacist was all about the science of medicine and having a strong background in biology and chemistry would be what I needed to succeed. The Pitt School of Pharmacy took my knowledge from the classroom and applied it to the real world through community events like Brown Bag events at senior centers and Helping Hands for Healthy Hearts initiative with the Student National Pharmaceutical Association (SNPhA). My leadership roles in pharmacy organizations like SNPhA, Rho Chi, Phi Lambda Sigma (PLS), Kappa Psi, the American Pharmacists Association Academy of Student Pharmacists (APhA-ASP), the American Society of Health-System Pharmacists (AHSP), and a host of other pharmacy and non-pharmacy organizations helped me to build my confidence to step into new areas of pharmacy. Whether inside the classroom providing didactic learning or being an advisor to the numerous pharmacy associations, the faculty and administrators at Pitt truly believe in each pharmacy students' ability, and their support helped me build my confidence to step into clinical leadership roles throughout my career. The communication skills I learned at Pitt transformed into a passion for advancing health care

communications and has led me to become a clinical leader that has coached clinicians to improve their health literacy skills. I have worked to operationalize solutions to improve health literacy and health equity in diverse patient populations and health systems. I came to realize that it is not just about what you know. It's how you communicate your knowledge to patients in a way in which they understand and feel empowered to use the information to make well-informed decisions.

Who was the most influential faculty member and why?

The Pitt School of Pharmacy has a host of dynamic and amazing professors that influenced my professional career by helping me develop my clinical skills. There was one faculty member that stands out as having a significant impact on my professional development, Dr. Gary Stoehr. As the professor of the Profession of Pharmacy course, he exposed us to the concept of pharmaceutical care and Medication Therapy Management (MTM). In this course, I learned how to take my clinical knowledge and apply it to the real-world setting. I learned how to develop and implement patient-centered practice models which I carried with me throughout my professional career. The Profession of Pharmacy course allowed me to explore the role of a pharmacist in various health-care settings, learn how pharmacists play pivotal roles in addressing the health care disparities, and act as advocates for patients and their caregivers. In this course I was exposed to concepts like health literacy, motivational interviewing skills, direct patient centered care, and providing culturally competent patient care. The skills I learned allowed me to be successful in my clinical career and provided me the strong foundation to excel in with the development and implementation of telephonic Medica-

tion Therapy Management (MTM), comprehensive medication review, and health assessment programs; along with the management of various clinical products. Additionally, I was part of the clinical leadership team that established a clinical strategy delivery of care through the development and implementation of a quality assurance clinical excellence supervision member engagement model.

I did not know as a P1 pharmacy student when I completed a professional poster on 'Closing the Health Literacy Gap in Elderly Diabetic Patients through the use of Teach-back', that this exposure to health literacy in the Profession of Pharmacy course would have a lasting impact in helping to develop and roll out a full Health Literacy training program with the use of teach back skills for pharmacists and pharmacy technicians within the telephone MTM program at Optum in partnership with the UnitedHealth Group Department of Health Literacy. This clinical coaching model was translated into a clinical excellence supervision model for other clinicals like social workers, and nurse case managers by delivering cost effective, health-literate, patient-centered telephonic consultations to address health disparities in Medicare and Community & State beneficiaries.

I am forever grateful for the exceptional clinical faculty and administrators at Pitt Pharmacy school for their vision and commitment to advancing the pharmacy profession. Thank you for being role models that opened doors for the next generation of pharmacists.

Is there anything you wished someone would have told you when you were a student?

Enjoy the process! Even with the long nights of studying and seemingly endless exams, it may not feel like it P1 year but pharmacy school will fly by. As a student I felt like I was constantly thinking about what type of pharmacist I would become. I wanted to live up to the examples that were set before me. Looking back, I would tell students to stay open to exploring and enjoying the process of BECOMING a pharmacist, don't just focus on BEING a pharmacist. I encourage stu-

dent pharmacists to not settle for defining yourself early on in your career as the type of pharmacist you want to be but have the freedom to explore and be willing to learn outside of your comfort zone. Blend your strengths and passions with your profession and create a career you love! Seek out mentorships and maintain them throughout your career. Be a mentor and help others on this adventure we call pharmacy!

What is the best thing about being a pharmacist right now (and/or) what are you currently working on to advance the industry?

Currently I am working as a Clinical Pharmacist at Optum Infusion Pharmacy. During this pandemic I had the opportunity to be the Clinical Trial Site Lead overseeing the patient care management of patients enrolled in the open-label clinical trial with Eli Lilly in partnership with UnitedHealth Group. The trial was testing an antibody treatment designed for people who are high risk for severe COVID-19 complications. The treatment was authorized by the US Food & Drug Administration for emergency use and demonstrated early positive results. The trial was different from the National Institute of Health (NIH) trial that tested the antibody in hospitalized patients. By contrast, this trial was targeted for non-hospitalized people with early, mild to moderate COVID-19, who were infusing at home. This collaboration between Eli Lilly and UnitedHealth Group was an opportunity to combine the expertise of the science, clinical research, and technology of UnitedHealth Group with Eli Lilly's expertise in pharmaceutical development to responsibly and proactively address a major healthcare issue. It was an honor to be part of the solution to help overcome the devastation of the COVID-19 pandemic.

What types of difficult decisions do you make as a pharmacist?

As a pharmacist there are a lot of opportunities for you to try and I feel one of the difficult decisions is to know when you should consider changing your current trajectory on your clinical path to try something new.

It can be scary to consider changing the course of your clinical career but there is so much pharmacists can do to advance the healthcare system. I encourage pharmacists to stay connected and continue learning. Never be afraid to try something new.

BY THE NUMBERS

PittPharmacy Vaccination Stats

45 clinics completed to date

21,110 doses given (11,802 first doses; 9,396 second doses)

Over 900 volunteers University-wide

9,934 people fully vaccinated through these clinics (9,396 second doses; 565 J&J)

With our planned efforts, we would fully vaccinate over 10,000 people in our region

PittPharmacy had the most volunteers (half of our PharmD student body!)

Q&A **Sam Bott, Class of 2019**

Medical Outcomes Liaison at Akebia Therapeutics



What drew you to industry?

Opportunity struck and it blended business and science together. I was offered a Medical Outcomes Liaison position which incorporated science and tacked on a lot of business concepts.

Did you know this was something you were going to do, or did you just fall into this career?

When I was preparing for pharmacy school, I had industry in mind. I emailed Randy Smith directly to see what different alumni were doing in industry to understand what the opportunity was at Pitt.

What skills do you feel that you learned at PittPharmacy that have assisted you with your current role?

I believe that I was prepared quite well, but if I had to choose what has helped the most, that would be "Motivational Interviewing." That course has taken a surprisingly large stake in my current role. Motivational Interviewing is essentially letting other people "spill the beans" by keeping

questions open ended. People love talking about themselves; just let them have the floor! Much of my job is based around this type of interviewing and being able to garner insights out of people in order to drive company strategy. For example, this type of interviewing has assisted in ways such as how we move forward with different goals for our customer base.

Who was the most influential faculty member that assisted you with your career path and why?

That would have to be Randy Smith. Early on at orientation and during the interview process, he came in and explained what sort of boundaries they were pushing at Pitt Pharmacy and the different opportunities that pharmacists had. Being accepted, starting school, and being around Dr. Smith allowed me to peg him as this "big ideas guy," who was pushing the pharmacy profession forward. In school we had the opportunity to work together on a multitude of different projects and I remember coming to him with (sometimes) wacky and (other times) valuable ideas. An example of one of the ideas was the Pitt Pharmacy investment portfolio. I imagine at other schools, faculty might have said that this isn't really the place for that or maybe we will consider this later, but Randy was a big "yes man" for these types of ideas. Randy incentivizes idea creativity in Pitt Pharmacy students. With that being said, any idea that has the potential to push the school forward he champions for us and the school in order get these ideas out there and allow them to come to fruition.

Is there anything you know now that you wished someone would have told you when you were as student?

How important networking is. It really needs to be drilled in. Alumni really do care

about helping people in school succeed. When I was a student I would think, "Am I bothering this person, am I using up too much of their time?" Now that I am an alumni, if someone from Pitt reaches out to me, I get excited! I am now able to share this advice with students and potentially better their career path. I love to help students in school who want to help themselves. Get a good alumni network going because people want to help you. That is the best path for people get into whatever career they want to get into.

It is an exciting time right now to be a pharmacist, what are you currently working on to advance the pharmaceutical industry?

As a Medical Outcomes Liaison, we work heavily on the reimbursement side of pharmaceuticals. One of the things we are working on is Value Based Care. We are currently working with Pharmacy Benefit Managers (PBM's) and Payors and just trying to understand how our company can fit into this paradigm of Value Based Care. This ultimately incentivizes better care for patients vs. a volume-based system that allows for more treatment even if it is not the most valuable thing to do for that patient. This is an exciting time to be in this space, particularly for this reason and I am very excited to see how it shakes out!

Your career path is unique, what advice would you give to students who are trying to make it in industry?

"All roads lead to Rome." There is not one set path. Coming into school I had it in my mind that it was "Fellowship or bust" to get to industry. A lot of people find their way into industry through a variety of different paths. I feel that the best course of action is networking with different people and understanding how they got to where they are. My advice is getting help from those people, getting referrals, and hopefully you will move into positions where you can really work your way into an industry career position. Fellowships are a great way to break into industry, but they are not the only way.

The pandemic has changed the way that we work, communicate, and commute, how has this impacted your position in industry?

My current role is a field-based role. I am one of three people on my team of outcomes liaisons within the company and we share accounts throughout the country. If we were not going through a pandemic right now, I would probably be on a flight at least 2 to 3 days a week. I have spent a lot of time at home doing Zoom calls with my colleagues and customers. The way that this has impacted me the most is trying to find new ways to build relationships with those people. It forces us to become a little more creative with how we do things. For example, a lot of relationships can organically form when you are in the same space together and now you really must put in extra effort to find ways to do it when you are in this virtual setting.

What types of difficult decisions do you make as a pharmacist?

Not so much as a pharmacist, but mostly as a person working in the world. I am still learning how to maintain balance while still being able to advance in a company. There are always opportunities for more work when working in a small company, but now more than ever during this pandemic it is important to really maintain that mental health aspect and not burn yourself out. Knowing when to say no is a great learning experience. Knowing what and what not to take on is the hardest decision that I currently must make now a days.

BY THE NUMBERS

Residency/Fellowship Programs

For Post-Grad Programs, Our Graduates Are Going to:

PGY1 Pharmacy = 42
 PGY1 Community = 2
 PGY1 Managed Care = 2
 PGY1 Pharmacy/PGY2 = 2

Graduates Also Accepted:

14 fellowships
 3 in PhD programs

**Ranked #6 Nationally
 in Percent Matched**

IN MEMORIAM

The following individuals have passed away as of May 2021, including three distinguished alumni. (highlighted currently in italic)

- Edwin R. Armour- BS '53
- Glenna S. Baker- BS '69
- Ronald W. Ball Sr. - BS '69
- Walter J. Bieleski- BS '72
- Robert R. Buck- BS '55
- Thomas W. Carr- BS '70
- Michael Philip Ciampaglione- BS '68
- Joseph A. Cippel Sr. - BS '56*
- Leon J. Darling - BS '67
- Scott R. Drab - PharmD '89*
- David Lee Erwin- BS '52
- Kyle Robert Everett- BS '84
- Richard A. Floyd- BS '67
- Donald R. Gnagey- BS '51
- Douglas Joseph Golias- BS '87
- Mercedes Kravetz Hansen- BS '45
- Terry L. Hibbs- BS '81
- Douglas Marcus Landy- BS '68
- Dane Joseph Lewis- BS '79
- Gilbert L. Little- BS '48
- Kenneth Martin Maurer- BS '71
- Patricia K. McDonald- BS '71
- Charles Joseph Michaels- BS '80
- Gregg William Montgomery- BS '74
- Bernadette A. Muhlberger- BS '72
- Joseph Muoio Jr.- BS '53
- Lee Naczynski- BS '90
- Donald H. Overstreet- BS '56
- Rosemarie Pepe Papincak- BS '77
- Henry P. Perciballi- BS '51
- Ronald L. Peters- BS '53
- Robert Charles Quel- BS '63
- Morris Riemer- BS '43
- Frederic V. Shaefer- BS '57
- Myron Snider- BS '62
- Don E. Stewart- BS '51
- Marianne Sweeney- Burkhardt- BS '84
- Richard A. Szczesny- BS '56
- Nell Irene Taylor- BS '49
- William D. Thompson Jr. - BS '62*
- Harry Allen Weisberg- MS '74
- Jan A. Wunderlich III- BS '75

If someone you know from the Pitt Pharmacy family has passed away, please feel free to contact the school to let us know.

Investing in the Future

Innovative Investment: Giving Back with Continuous Compassion and Care

Commitment and compassion are two words that reflect the personal and professional life of Lloyd Myers, a distinguished innovator who creates caring communities everywhere he goes.

Lloyd and his three sisters witnessed his father drive an hour each way to work at a West Virginia furniture store. That commitment to provide for his family and for his children’s college educations was an inspiration for young Lloyd.

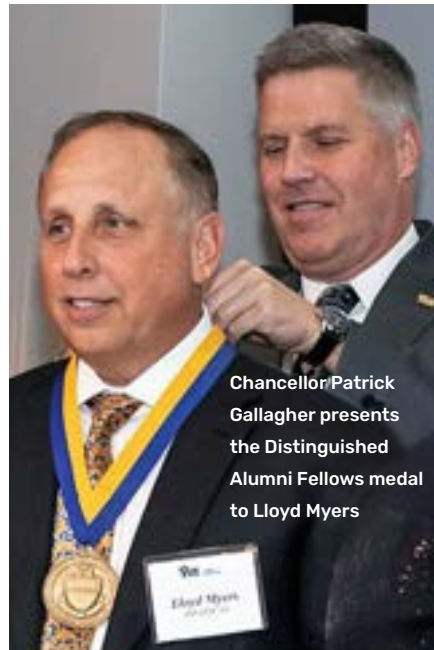
Lloyd also recalls the dedication to community and patients displayed by the neighborhood drugstore of his childhood—Murray Pharmacy. The care and comfort offered by the pharmacist owner inspired Lloyd to pursue a Bachelor of Pharmacy degree at Pitt and a career in retail pharmacy.

After graduating in 1984, Lloyd moved to Washington, D.C., where he worked at People’s Drug Store before returning to Pennsylvania to join the team at Stadtlanders Pharmacy in Penn Hills.

Lloyd believed the pharmaceutical industry should address the changing needs of the public. In response, he created innovative wrap-around pharmacy services that helped ensure the life-saving prescription regimens could be more easily adhered to and paid for.

Lloyd eventually left Stadtlanders and purchased Murray Pharmacy, the drugstore of his childhood. From there he launched similarly revolutionary systems for HIV, infertility, and cancer patients.

After selling Murray Pharmacy in 1994, Lloyd joined forces with his sister, Simone Myers Karp, who is a 1986 graduate of Pitt’s Pharmacy School. The siblings created CECity, a company that revolutionized health-care’s continuing education model. CECity became the undisputed leader in pay-per-



Chancellor Patrick Gallagher presents the Distinguished Alumni Fellows medal to Lloyd Myers

value reporting, performance improvement, and lifelong learning.

In 2015, Lloyd was recognized as a Distinguished Alumnus by Pitt’s School of Pharmacy. That same year, CECity was acquired by Premier, Inc. Lloyd remained as Vice President of Innovation at Premier until 2018, when he left to create yet another new company – Quixote Health, LLC.

He continues to support his alma mater through the company he founded by providing services to the Pitt Pharmacy program and its alumni. Lloyd and his wife, Debbie, also give generously to Pitt’s Pharmacoeconomics program through the Myers Family Foundation.


Lloyd and Debbie, with their commitment to family paramount, always look to support the needs of others and seek innovative ways to show they care.

BY THE NUMBERS

Pitt Day of Giving

7th Place
for participation

\$1000
in bonus funds



Pharmacy, Love, and Legacy



Jim and Gayle Steck

What brought the two of you to the University of Pittsburgh School of Pharmacy?

We wanted to pursue a degree in pharmacy and Pitt had the only pharmacy school in the area that was affordable for us, having recently gone from a private to a state-related university.

What is your most cherished memory of your time at PittPharmacy?

We have good memories of interacting with our classmates and professors, who had unique personalities and teaching styles. Also, we fondly remember our graduation ceremony at the Civic Arena when we fully realized our accomplishments, being the first in our families to graduate from college. Finally, our time at the School of Pharmacy will forever hold a sentimental place in our hearts, because meeting and getting to know each other in our pharmacy classes led us to recognize we had found our life partners.

Why do you feel it is important to give back philanthropically to PittPharmacy?

Our pharmacy degrees from Pitt allowed us to have careers that were rewarding personally and financially. What better way to use the fruits of our success than to support PittPharmacy and help deserving students, especially today when obtaining a college degree is so much more expensive than when we attended.

Why did you choose to make a planned gift/ bequest intention to PittPharmacy?

We would like to leave a modest legacy as a token of our gratitude for everything we learned and experienced during our time at the School of Pharmacy and the positive impact those years had on the rest of our lives. We hope this can in a small way help future students realize their dreams.

What advice would you give the next generation of PittPharmacy graduates?

Absorb all you can and take advantage of all the various career paths that are available to PittPharmacy graduates. Finding a career you enjoy and that suits your interests and talents can make your working years more gratifying.



WHAT ARE LOCKER NAME PLATES?

More Appropriate Than Carving Your Name On A Desk.... Locker Name Plates!!!!

When we finally move into our new building, there will be three big and bright spaces for our students to relax, engage, and share. These Student Hubs have rows of lockers for our students to store their belongings while hard at work learning. For \$1,000 donated to any PittPharmacy Fund of your choice, your gift will be recognized with a name plate installed on one locker. What a vote of confidence for our students to know how many ways you support them every day. If you would like to make a one-time donation today Contact Nicolas Gaudreau at npg18@pitt.edu or 412.514.1932.

PittPharmacy
Offices @Baum
5700 Baum Blvd. Suite 303
Pittsburgh, PA 15206



Melissa McGivney at COVID-19 Vaccine Clinic

The PittPharmacy family wants to hear about your achievements and promotions.

We want to share with alumni, faculty staff and students.

Send us your news and keep in touch.

LinkedIn:
www.linkedin.com/company/university-of-pittsburgh-school-of-pharmacy

Facebook:
www.facebook.com/PittPharmacy

Twitter:
[@pittpharmacy](https://twitter.com/pittpharmacy) and [@RxDeanKroboth](https://twitter.com/RxDeanKroboth)

Instagram:
[@pittpharmacy](https://www.instagram.com/pittpharmacy) and [@pitt_rx](https://www.instagram.com/pitt_rx)

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