Message From The Dean

O

ur 2019 Buffalo Pharmacy Magazine highlights the many impressive accomplishments of our faculty, staff, alumni and students. I am very proud of their creative efforts and the positive impact these new achievements have had on global health care.

We continue to work toward ensuring our leadership and expertise in high-impact pharmacy initiatives which are grounded in exceptional patient-centric pharmaceutical sciences research. This builds on the strengths of the school through enhanced program development in clinical pharmacy, biologically based therapeutics and the initiation of research training programs in pharmacometrics and personalized pharmacotherapy.

We are very fortunate to have excellent community clinical partners who provide us with high-quality experiential sites for students, clinical practice sites for faculty and opportunities for patient-centric research. Our curriculum, experiential opportunities and leadership experiences for our pharmacy and pharmaceutical sciences students are both comprehensive and innovative.

UB’s comprehensive campaign, Boldly Buffalo, is underway to raise funds to support our vibrant programs and new initiatives. Our goal is to increase scholarship and fellowship support, allowing us to recruit the best students and faculty and provide them with the resources to excel. We also aim to expand opportunities for students, faculty, and staff to engage with the larger scientific and professional communities to positively influence Buffalo and Western New York.

Without a doubt, we are the best pharmacy school in New York State and among a relatively small group of elite, research-intensive schools in the United States. Our pharmaceutical sciences program is internationally recognized for its contributions to the field and training of outstanding scientists. Our PharmD program graduates highly qualified pharmacists with strong patient care skills and the knowledge to practice advanced, evidence-based pharmacy. We are well-prepared to meet the changing health care environment and remain a leader in pharmacy and the pharmaceutical sciences.

Warm Regards,

James M. O’Donnell, PhD
Professor and Dean

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Partnering to Support the Best and Brightest

BY REBECCA BRIERLEY

The University at Buffalo has been the flagship New York State school of pharmacy since 1886 with a strong tradition of providing access to one of the highest caliber pharmacy programs in the country. Strong local and regional partnerships were fundamental in building this program and have grown to include region-wide educational partnership agreements. These partnerships span collegial connections with private colleges, as well as State University of New York (SUNY) four-year and two-year institutions, and provide students from all backgrounds the advantage of completing a PharmD degree along with another college degree more efficiently and often with reduced time and significant cost savings.

4+4 Agreements: like the 2+4 agreements, allow students to streamline course for admittance to the PharmD program.

College advisors from across New York State are very pleased have these enhanced opportunities to offer their highly motivated students.

“The affiliation agreement between Lehman College of CUNY and the UB School of Pharmacy and Pharmaceutical Sciences is already creating excitement among our students,” Scott Calvin, PhD, senior pre-health advisor, Lehman College CUNY, states. “We are particularly proud this agreement allows students who might normally take five years to graduate PharmD to participate. This is important as many highly talented students from underrepresented communities have some catching up to do when they first come to college; this agreement gives them the space to do that while still pursuing their education at an accelerated pace.”

“UB Pharmacy’s willingness to partner with a full range of academic institutions allows each individual future pharmacist to start their higher education journey in a setting where they can most readily thrive.”

BY KARA SWEET

Gordon L. Amidon, BS ’67, received a State University of New York (SUNY) honorary doctorate of science at the University at Buffalo’s 122nd Commencement.

Amidon’s academic career started at UB, where he earned a bachelor’s degree in pharmacy. During his time at Buffalo, he gained a passion for the study of pharmacokinetics, the convergence of pharmacy and mathematics.

Amidon, who currently serves as the William I. Higuchi Distinguished University Professor of Pharmaceutical Sciences and Charles R. Walgreen Jr. Professor of Pharmacy, University of Michigan, has been called a true visionary in the pharmaceutical sciences for his sophisticated research, most notably in the area of oral drug absorption.

Amidon is credited with developing the Biopharmaceutical Classification System, recognized and utilized worldwide to differentiate drugs on the basis of their solubility and permeability. Amidon’s scientific achievements have greatly contributed to the pharmaceutical community’s overarching understanding of drug absorption, and serve as guiding principles used by the U.S. Food and Drug Administration to determine generic drug bioequivalents.

Amidon’s scientific achievements...serve as guiding principles used by the U.S. Food and Drug Administration to determine generic drug bioequivalents.

Celebrating 170 New Chapters

By Rebecca Brierley

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CELEBRATIONS AND COMMUNICATIONS

Ten Years of Success in Protein Drug Development and Research Training

BY KARA SWEET

In 2006, Joseph Balthasar’s laboratory began a collaboration with Novartis to evaluate the pharmacokinetics and pharmacodynamics (PK/PD) of therapeutic proteins. Out of this partnership, the Laboratory for Protein Therapeutics was formed. This pharmaceutical sciences departmental center had a modest internal grant program that solicited grant applications from faculty, which were reviewed and prioritized in consultation with Novartis. Over the next three years, ten projects were funded, each with a total cost budget of $50,000 per year.

The success of the Novartis collaboration led Balthasar and then-department chair William Jusko to pursue the development of a larger center, focused on the application of bioanalysis, formulation and PK/PD of protein drugs. “The formation of the Center for Protein Therapeutics was a tremendous opportunity to advance understanding in the bioanalysis, formulation and PK/PD of protein drugs,” says Balthasar, director of the center.

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Joseph Balthasar, PhD, CPT director

Information is shared between faculty at UB, members of the Center for Protein Therapeutics (CPT) and the industry through pre-competitive research projects, and then published in leading scientific journals. Since its inception in 2008, the CPT has played a key role in the advancement of the application of liquid chromatography/mass spectroscopy techniques for the measurement of therapeutic proteins in biological samples (largely through work conducted by Dr. Jun Qiu, the development of mechanistic and semi-mechanistic mathematical models to characterize and predict the pharmacokinetics and pharmacodynamics of monoclonal antibodies (work conducted by Drs. Dhaovil Shah, Donald Mager, William Jusko and Joseph Balthasar), and mechanistic evaluation of drug-drug interactions and drug-disease interactions involving monoclonal antibodies and other protein drugs (work performed by Drs. Marilyn Morris and Joseph Balthasar).

The most important accomplishment of the center, according to Balthasar, has been “the training of an outstanding cadre of young scientists.” In ten years, the CPT has funded 116 research projects and has supported the education of more than 30 graduate students and fellows. The unique training environment enables trainees to receive a combination of didactic course instruction, application of theoretical models and hands-on experimentation.

Balthasar is confident about the future of the center. He anticipates more research and training in the prediction of target engagement and disposition of novel protein constructs, biologically based gene and drug delivery systems, and targeted immunology therapies. “Our research and trainees are highly valued by the pharmaceutical industry and academic institutions,” Balthasar says. “The Center for Protein Therapeutics will continue to meet and exceed the rapidly increasing demand for the development of new knowledge and new methodologies.”

“I have seen our young trainees produce high-quality research that has been published in high-impact scientific journals. I have also seen our younger trainees advance their professional careers through leadership opportunities.”

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Sharing Contemporary Research in Pharmaceutical Sciences

BY KARA SWEET

The University at Buffalo School of Pharmacy and Pharmaceutical Sciences hosted scientists and researchers from around the world for a series of pharmaceutical sciences symposiums: the Quantitative Systems Pharmacology Symposium and the Protein Therapeutics Symposium and the Buffalo Pharmaceutics Symposium.

The Quantitative Systems Pharmacology (QSP) Symposium, launched in 2017, brought together scientists to discuss contemporary approaches, including the challenges and opportunities, for advancing the science and practice of quantitative systems pharmacology. Quantitative systems pharmacology represents an approach to translational medicine that combines computational and experimental methods to elucidate, validate and apply new pharmacological concepts to the development and use of small molecule and biologic drugs.

The 2018 QSP Symposium, titled “Pharmaceutical Sciences: In Pursuit of Excellence,” was held in memory of UB Distinguished Professor Emeritus of Pharmaceutical Sciences Dr. Gerhard Levy, a pioneer and leading contributor in the areas of pharmacokinetics and clinical pharmacokinetics.

The Center for Protein Therapeutics (CPT) celebrated its tenth anniversary with faculty, postdoctoral fellows and graduate students presenting the results of CPT-funded research projects during the past year to other UB faculty and pharmaceutical scientists from across the nation.

The 14th Buffalo Pharmaceutics Symposium (BPS) joined alumni with internationally recognized faculty and invited researchers to exchange valuable scientific knowledge and showcase cutting-edge research in pharmaceutical sciences.

“Many of our alumni attending have gone on to highly successful careers in their field, having become leaders in pharmaceutical research.”

Donald Mager, PharmD, PhD

“Many of our alumni attending have gone on to highly successful careers in their field, having become leaders in pharmaceutical research. This alumni-focused event greatly benefits our up-and-coming students, to inspire as well as to inform.”

Donald Mager, PharmD, PhD

Lockport Locks

BY KARA SWEET

In the late 1800s, seven daughters who grew up on a Lockport, N.Y., turkey farm became national sensations for their hair, which reached a collective length of 37 feet. Their popularity was noticed by Barnum & Bailey’s, and soon they were touring the country as “The Seven Wonders,” astounding audiences by letting down their magnificent manes, quite a risk for the time!

Their father, Fletcher Sutherland, capitalized on his daughters’ widely envied locks and created a haircare product line, which included hair grower and hair and scalp cleaner (pictured). By 1900, over 2.5 million bottles of hair grower were sold. Their empire fell quickly due to poor management of their fortune and, perhaps even more devastating, the arrival of the Roaring Twenties and the shorter hairstyles of the flappers.

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“The symposium affords us the opportunity to invite our alumni back to the school to reconnect and to learn about their current research,” said Donald Mager, PhD, PharmD, professor and vice chair, pharmaceutical sciences, and organizer of the 2010, 2014 and 2018 BPS symposia. “Many of our alumni attending have gone on to highly successful careers in their field, having become leaders in pharmaceutical research. This alumni-focused event greatly benefits our up- and-coming students, to inspire as well as to inform.”

Donald Mager, PharmD, PhD

The collective length of the seven Sutherland sisters’ hair.

37ft.
2018 Awards Ceremony

BY KARA SWEET

Spotlight on Alumni Honorees
Kimberly Zammit, BS ’86 & PharmD ’00, was honored with the Alumni Association’s most prestigious award, the Willis G. Gregory Award, for her exemplification of the ideals of service, integrity and the profession of pharmacy.

Zammit is a clinical coordinator for critical care and cardiology and director of the PGY-2 Critical Care Pharmacy Residency Program at Kaleida Health. She holds board certifications in pharmacotherapy and critical care pharmacy through the Board of Pharmacy Specialties. Since 1993, Zammit has been an adjunct assistant professor at School of Pharmacy and Pharmaceutical Sciences as well as an Advanced Pharmacy Practice Experience (APPE) preceptor, providing lectures and contributing to curriculum and experiential program development. Her leadership activities include service as president and a member of the board of directors of the New York State Council of Health-system Pharmacists. Mark Stramaglia, BS ’81, received the 2018 Orville C. Baxter Memorial Professional Practice Award, in recognition of his high ideals of professionalism and his genuine concern for patients.

Stramaglia is currently the director of process services and business development at Thermo Fisher Scientific. In this role, he is charged with incoming new product portfolio development decisions that lead to continued overall growth trajectory for the cell culture business. During his more than 20 years at the company, he has worked in various capacities, including marketing, business development, operations and R&D portfolio management. Stramaglia has been a Dean’s Alumni Ambassador and a Dean’s Alumni Ambassador Mentor since 2009.

Mark Stramaglia and Kimberly Zammit

2018 Award Winners

Willis G. Gregory Memorial Award
Kimberly Zammit BS ’86 & PharmD ’00

Orville C. Baxter Memorial Professional Practice Award
Mark Stramaglia BS ’81

Daniel H. Murray Memorial Professional Development Award
Nicholas Smith PharmD ’18, MS ’18 & PhD ’20

Teacher of the Year
Calvin Meadway PharmD ’11, Clinical Assistant Professor of Pharmacy Practice 2018

Outstanding Teacher Awards
Irene Reilly PharmD, Clinical Assistant Professor of Pharmacy Practice
Ashley Woodruff PharmD ’03, Clinical Assistant Professor of Pharmacy Practice

Staff Member of the Year Award
Kara Sweet Project Manager, Office of External Affairs

United States Public Health Service Excellence in Public Health Pharmacy Award
Amy Shaver PharmD ’18

View the complete list of 2018 award winners at pharmacy.buffalo.edu/awards.

2018 Student Scholarship Recipients: L-R: Lukas Brightman ’19, Jess Greger ’19, Megan O’Connor ’19, Dean James O’Donnell, PhD, Ben Do ’20, Jessica Swiderek ’20, Syed Samad ’19 (not pictured: Marissa Gaszowski ’20)

Golfing For Scholars

The picturesque Lockport Town and Country Club hosted our 15th Annual Student Scholarship Golf Tournament, which raised over $13,000 for student scholarships. Since its inception in 2004, the tournament has provided over 75 students with the financial support necessary to be bold.

Tournament Winners:
First Place Threesome (with a score of 64):
Kimberly Sunderland, PharmD ’17
Andrew Depczynski
Lukas Brightman ’19

Second Place Foursome (with a score of 64):
Christopher Barry
Jim Bennitt
Gary Ritzman
Jay Shearer

Longest Drive, Hole 16:
Tanner Merchants ’19
Kimberly Sunderland, PharmD ’17

Closest to the Pin, Hole 6:
Michael Johnson, PharmD ’07
Kimberly Sunderland, PharmD ’17

Closest to the Pin, Hole 18:
Bob Harper:
Kimberly Sunderland, PharmD ’17

Closest to the Line, Hole 4:
Christopher Banker ’21
Kimberly Sunderland, PharmD ’17

Ring of Gold:
Dean Salyer, BS ’85

Tournament Sponsors:
Grand Sponsor:
Rochester Drug Cooperative

Bronze Sponsors:
Independent Health
J. Rutowski Pharmacies
Brian Louchis, BS ’86, and
Dean Salyer, BS ’85
Middleport Family Health Center
Rite Aid Pharmacy
Woodmark Pharmacy of New York

Over 75 student scholarships awarded since 2004
IN MEMORIAM

Dr. Alan Forrest: PK/PD Leader and Mentor

BY KARA SWEET

Dr. Alan Forrest (1952-2018) was a University at Buffalo faculty member and a research professor in the department of pharmacy practice and biosciences from 1989 to 2015. He was renowned in the field of antimicrobial pharmacokinetics, pharmacodynamics and toxicokinetics (PK/PD/TK) as a researcher and educator for almost 40 years.

Forrest received his PharmD from the University of Southern California in 1979 and held a number of prestigious faculty positions at USC, the University of Maryland and then at UB. He served most recently as a clinical professor and director of the Center for Pharmacometrics at the University of North Carolina, Eshelman School of Pharmacy. He also worked as the senior director of pharmacometrics at the Institute for Clinical Pharmacodynamics and was an expert adviser to the Food and Drug Administration and the pharmaceutical industry.

His research primarily focused on aspects of translational medicine within the fields of anti-infective and oncology, using pharmacometrics as a means of integrating preclinical and clinical data, including both healthy volunteers and patient data. His landmark paper studying ciprofloxacin pharmacodynamics in seriously ill patients was paradigm-shifting. As a result of his work, exposure response analyses for anti-infectives have become standard practice in translational drug development.

Forrest mentored over 100 trainees and fellows, and in 2016 he received the 2016 Lewis B. Sheiner Lecture Award from the International Society of Pharmacometrics. Throughout his esteemed career, Forrest always maintained his focus in translating his research into clinical practice to improve the care of patients.

“I am forever indebted to Alan for everything he taught me,” says Elizabeth Lakota, PharmD ’15, who currently works as the assistant director of pharmacometrics at the Institute for Clinical Pharmacodynamics in Schenectady, N.Y. “He and I spent countless weekends in Kapoor Hall, working on projects side-by-side. I have heard dozens of Alan’s former students say that they owe their career to him. I wholeheartedly agree—he was pivotal to my career.”

Forrest is survived by his wife, Susan, and his children Ayelet and Liat.

MEMORIAL FUND: http://buffalo.edu/campaign/forrest

GET TO KNOW

Ashley Woodruff

PHARM ’99, CLINICAL ASSOCIATE PROFESSOR, PHARMACY PRACTICE

Dr. Woodruff, what is your favorite place in Kapoor Hall and why?

Dr. Nicole Carri

Hutcherson's office. Always filled with gorgeous pics from her travels!

What is your favorite topic to teach and why?

Heart failure and cirrhosis

What are the “hot topics” in pharmacy now and why do they interest you?

Many would be inclined to say cannabis or provider status for pharmacists but I would say transitions of care. Patients who are discharged from the hospital are frequently readmitted shortly after discharge because they fall through the cracks. No one helps them “transition” back to the community setting, making sure new and old medications are reconciled, follow-up appointments are made and kept, and education is provided about their chronic and new diagnoses and conditions. Pharmacists have been shown to help reduce readmissions in these transitional care roles and this need will continue to grow as hospital reimbursement is tied to keeping patients out of the hospital after discharge.

What has been your proudest professional accomplishment?

Teaching. I am proudest of my work in the classroom and rotation setting.

If you were stranded on a desert island and could only bring one book, one movie and one record what would they be and why?

Anything Disney to remind me of my family. I live in a house filled with Disney princess loving daughters.
Pharmacists: Primary to Primary Care

BY GABE DIMAIO

ON THE FRONT LINES OF HEALTH CARE DELIVERY

Every day, pharmacists from the UB School of Pharmacy and Pharmaceutical Sciences are on the frontlines of health care delivery, working in clinical settings within physician provider groups across Western New York.

Their knowledge and expertise as medication experts not only help practitioners provide better health outcomes for patients, but the information they provide is later transformed into research to make health care delivery more efficient and effective as measured by improved patient outcomes, increased patient satisfaction and decreased health care costs.

A pharmacist embedded in a clinical setting is especially important today as it is not uncommon for some patients to be on upwards of 15 medications, in addition to any herbs or other supplements. These complex medication regimens, along with the desire to provide effective continuity of care, further strengthen the need to provide patients with an interdisciplinary health care team, with pharmacy having a central role.

It’s not only pharmacists. Using the team approach, any number of health care professionals such as dieticians and physical therapists can be involved depending on the practice.

Collaborative Practice Groups

“It’s all a very collaborative environment. We educate the patients, review all of their medications, and send recommendations for therapy optimization to the referring provider. Often it is an exchange of ideas with the provider about what can we do for a patient as a team to really improve their care,” said Erin M. Slazak, PharmD ’04, clinical assistant professor in the Department of Pharmacy Practice. She practices at General Physicians, P.C., where she and several other pharmacists receive referrals from primary care providers. The pharmacists then work with these patients to better manage chronic conditions like diabetes, or to better manage complex medication regimens. The team has also implemented a transitions of care program in which the pharmacist completes a comprehensive medication review for patients transitioning from one health care setting to another, such as from the hospital to home.

Introducing pharmacists into physician provider groups has enhanced patient care services. Pharmacists know the latest drug research. They reconcile medications to ensure that dosages are correct or even if the patient should still be on a current regimen. They also provide the necessary follow-up to answer questions and make sure patients stay compliant with their care plans.

“We appreciate the state of health care today where doctors have very little time to accomplish a lot with a very complex patient. We want to be seen as an extender. We help doctors accomplish patient goals,” Slazak adds.

“Pharmacists are taking a leadership role in clinical decision-making, and are being seen as an extension of the patient care team,” said Nicole Albanese, PharmD, clinical assistant professor in the Department of Pharmacy Practice. Albanese’s referrals are for chronic disease state management such as diabetes, hypertension and cardiovascular risk reduction. Additionally, pharmacists can refer as needed to behavioral health or the dietitian, further enhancing positive patient outcomes.

Christopher J. Daly, PharmD/MBA ’12, is a clinical assistant professor in the Department of Pharmacy Practice and recently started working at UB Family Medicine on Sheridan Drive. He said primary care groups need to branch out and bring in different levels of expertise but do it cost effectively. This presents an opportunity for pharmacists to enhance improvements in interprofessional patient care as their scope of practice continues to expand and evolve.

“Every single person reacts with, ‘Oh, OK. I was here.’ Every single person reacts with, ‘Oh, OK. I was here.’” Daly said.

While Slazak, Albanese and Daly are on the front lines, there are researchers from the School of Pharmacy and Pharmaceutical Sciences who are looking at the data that’s generated from clinical patient visits more strategically, evaluating the interactions that are most effective.

Analyzing health care

“The opportunities for performance or value-based interventions are growing. Practices therefore need to position themselves more strategically to get to that upper echelon to return value to the practice while delivering better patient care. This is contingent on multidisciplinary team approaches and understanding how to best deliver patient care in the future,” Daly said.

The new health care professional in the room

Working for years with Buffalo Medical Group, P.C., Nicole P. Albanese, PharmD, clinical associate professor in the Department of Pharmacy Practice, has helped to solidify pharmacy’s critical role in this physician provider group, but it wasn’t always the case.

“When I first started here and I was sending recommendations to the doctor, they took half of them at best. Now, they take 99 percent,” said Albanese.

However, this evolution to team-based health care delivery is not without its challenges, particularly disabusing patients of the notion that a pharmacist merely dispenses medications at their neighborhood drug store. For many, seeing a pharmacist in a clinical setting takes some getting used to.

“I start all my patient appointments with, ‘I’m a clinical pharmacist. I am not what a normal pharmacist is to you. We don’t dispense medications here. Every single person reacts with, ‘Oh, OK. I was wondering who you were and what you are going to do for me,” Albanese says. “I do a lot of education with every single patient that we see.”

Albanese adds that many patients come into her office angry about why they’re seeing her, but they oftentimes leave the meeting hugging her.

“The value that pharmacists bring is especially important as compensation from insurance companies is gradually shifting to patient wellness outcomes. Essentially, when their patients do better, the practices are rewarded. However, primary care groups can’t accomplish all that they need to by doing what they’ve always done.

Buffalo Medical Group is a large multispecialty medical group with approximately 200 hundred providers, including primary care and specialty physicians and advanced practitioners, behavioral health, dietetics and pharmacy. The majority of Albanese’s referrals are for chronic disease state management such as diabetes, hypertension and cardiovascular risk reduction. Additionally, pharmacists can refer as needed to behavioral health or the dietitian, further enhancing positive patient outcomes.

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Analyzing health care

Crumpling the numbers at that higher level is David M. Jacobs, PharmD ’13, PhD ’18, assistant professor in the Department of Pharmacy Practice. He works closely with clinical pharmacists in primary care settings to design studies to explore the effectiveness of particular interventions. Together they figure out the objective, the sample, what will be included and excluded, and how the data will be analyzed. After the data is collected, they interpret it to see what worked and what might be improved in the clinical setting.

Jacobs also looks at data at the population level to try to answer questions to move forward.

“We utilize large databases to see, for example, ‘What has been the change in readmissions in...
As the battle plan for a multidisciplinary team approach in primary care is being written, it will be informed by the work done by researchers and clinicians from the UB School of Pharmacy and Pharmaceutical Sciences.

Jacobs said the ultimate goal from the researcher’s standpoint is to publish in peer-reviewed literature to get feedback from other researchers. From a clinician’s standpoint, it means improving the model, implementing it in the clinic and looking toward the next step to improve patient care. He added that there are an infinite number of primary care research opportunities in the future.

Transforming health care through research

Looking to the future is Collin Clark, PharmD ’17. He’s a freshly minted PharmD, who was recently awarded a prestigious National Research Service Award fellowship, with funding through the National Institutes of Health. Clark will be working out of the UB Department of Family Medicine’s Primary Care Research Institute, which brings together a multidisciplinary team of researchers, clinicians and other health care experts to research ways to solve complex problems in health care.

Clark will be pursuing the practice transformation research track, focusing on changing health care team workflows, practice improvement science and implementing evidence into practice. He will develop scholarship and research techniques to better understand health disparity inequities in primary care related issues and apply those findings to further enhance leadership and care.

The fellowship is being used for postgraduate training that will help him become a better researcher in health services and the primary care arena. It’s a program that allows him to work with mentors across the university to develop his research skill set. Currently, he’s working with a multidisciplinary primary care research team that is focusing on medication safety for the elderly.

“We’re trying to take what we know works and doesn’t work from some of the more classic levels of evidence—things like randomized control trials—and trying to find ways to translate that evidence into practice within the Family Medicine department. We’re working with the university’s physician provider group, UBMD, to try to turn the evidence that we know from more rigorous trials into real-world studies that can hopefully provide better care for our patients,” Clark said.

Specifically, Clark and his group are looking at the practice of “deprescribing” medicine: systematically removing medications that a patient no longer should have as they age because the risks outweigh any potential benefit, or because the medicine is no longer necessary. What they’re trying to figure out is the best way for the health care provider and pharmacist to broker that with the patient.

Clark, Jacobs, Daly, Albanese and Slazak realize the work they are doing now will help further solidify the essential role of the pharmacist in the primary care arena. As the battle plan for a multidisciplinary team approach in primary care is being written, it will be informed by the work done by researchers and clinicians from the UB School of Pharmacy and Pharmaceutical Sciences.

New Faculty:
Agents of Change

An agent of change is someone who promotes and enables change to happen within any group or organization. These strategic new hires are bringing exciting and innovative changes to our research and educational programs.

[BY GABE DIMAIO]
A renowned leader in quantitative systems pharmacology who does innovative work on brain tumors. A UB alum who does promising research on antimicrobial pharmacokinetics/pharmacodynamics. A Canadian research professor who investigates the side effects of anti-cancer drugs.

Mix the intellectual gravitas of these change agents with the dynamic academic environment of the university, and the results are helping to assure growth and success at the school for decades.

Innovative Mechanistic Models
JAMES M. GALLO, PharmD, PhD, was hired as an Empire Innovation Professor (EIP) to lead efforts in the emerging field of Systems Pharmacology, also called Quantitative Systems Pharmacology (QSP). Supported via a State University of New York strategic investment initiative, EIPs are senior faculty who have an established international reputation for leadership in their field and who are able to bring in external funding to support their body of research. For Gallo, his approach uses computational models to describe dynamic interactions between a drug and pathophysiology to understand systems at the cellular and biochemical levels.

"They're considered...a mechanistic model that would characterize both the pharmacokinetics and the pharmacodynamics of a drug. They are, in a number of cases, a larger model in terms of the number of equations, the number of parameters, potentially the data that would support that type of model," Gallo said. "So going from traditional pharmacokinetics and pharmacodynamics to QSP is, I'd say, mostly a matter of scale. But there are some other attributes that get into the nitty gritty of the modeling piece."

Gallo is the son of a pharmacist, but his pursuits extended beyond his father's Wisconsin pharmacy. Before coming to the university, Gallo was the chair of pharmaceutical sciences at the Albany College of Pharmacy and Health Sciences.

What sets him apart from contemporaries is his approach to obtain the answers to his research questions. While other researchers rely on theoretical work or access to public databases, his approach is a combination of both computational and wet lab experiments. This allows him to generate his own data to inform his model.

Of his current projects, three focus on the QSP of brain tumor drug therapy. The first relates to QSP of drug development, where collaborators would provide new candidates that his team will evaluate for efficacy in a brain tumor model. The second is related to the epigenetic modulation of drug resistance in brain tumors. What Gallo seems to be most excited about is the third, which involves intratumoral heterogeneity. Due to the complex nature of tumors, they cannot be classified as a single entity, which makes designing drug therapy difficult. However, it also presents an intriguing opportunity to do cell-type specific or single-cell investigations, which are a significant focus in his lab.

"I think this will be a rewarding scientific experience," Gallo says.

Combing Antimicrobial Resistance
RAYMOND CHA, BS ’97 & PharmD ’00, originally came to the university to pursue his BS in pharmacy and then continued on to complete his post baccalaureate PharmD. The New Jersey native's mom is a retired neonatal intensive care nurse and his dad is a retired revener. This influenced his decision to find a career that included the theme of human service. Coupled with his interest in science, he saw pharmacy as an extension of those things.

"Immediately, the concept of the technical aspect of drug development and drug application...then also being able to have a health service component, at the time, really attracted me," said Cha. "I was able to witness the technical aspects of drugs from the standpoint of biomedical pharmacology and the technical science of molecular structure activity relationships and, on the surface level, I knew that pharmacists were interactive with patients and that I'd be making impactful interactions with patient[s]."

In the summer of 2018, Cha was hired as a clinical associate professor of pharmacy practice. The focus of his research is to understand and curb antimicrobial resistance, which he describes as an uphill battle. He said that understanding the effect of antimicrobials has exponentially increased over the past few decades. Antimicrobial resistance allows an organism to stop an antimicrobial (antibiotic, antiviral) from working against it, which causes standard treatments to become ineffective, allowing devastating infections to persist. Combating this resistance is a major worldwide health focus.

"Understanding the kinetics and incorporating dynamic studies will help us to better optimize our current treatment options so that we try to contain antimicrobial resistance to preserve our therapeutic options," Cha added. His goal is to build up his scientific body of work with the goal of providing data that are more meaningful to improve patient outcomes through better antimicrobial therapy.

As part of his clinical consultant activities, Cha is developing his clinical practice to enhance therapies for patients in the hospital and in specialized clinics with challenging infections. He brings this clinical expertise to the classroom, where pharmacy students can learn from his interesting case studies and progressive research. He sees teaching as rewarding and fun. Cha states, "It's an incredible privilege to impart knowledge and wisdom on an individual because he or she can make bigger and lasting impacts on the community than he could make by himself.”

Targeting Cancer Cell Mutation
JASON SPROWL, PhD, was also brought onboard during the summer of 2018 as an assistant professor in the Department of Pharmaceutical Sciences. He came to UB from across town at D’Youville College, where he was an assistant professor of pharmaceutical, social and administrative sciences. Before that, he researched anti-cancer drugs at St. Jude Children’s Research Hospital in Memphis.

"What really attracted me to UB was that the experience here is vast," said Sprowl. "Working with people who are at the cusp at new findings...it’s incredible to be with these individuals, learn from them, and to contribute to what is being put out there was very attractive," Sprowl said.

An escape from the Canadian winter sparked Sprowl’s career path. "When it was too cold to be outside, he would spend time in the library; that’s where he came across a journal article on genetics. He found it interesting that genetics could explain many different diseases, which led to his interest in cancer and his undergraduate degree in biochemistry.

Currently, he studies the toxicity and side effects of approximately 30 anti-cancer drugs, tyrosine kinase inhibitors, specifically designed to target a mutation in a cancer cell, and rendering it inactive. However, these inhibitors are not as target specific as originally expected. Some side effects include changes in the concentration of other chemotherapeutic drugs or additional medications a patient might be taking. Before coming to the university, he published research on using one of these tyrosine kinase inhibitors to prevent neuronal accumulation of the anti-cancer drug, Oxaliplatin, which could reduce neurotoxicity.

“Pharmacokinetic and pharmacometric models are key to understanding drug behavior and predicting outcomes,” Sprowl said. "But we can’t forget the role of the pharmacologist in interpreting these results and translating them into practice.”

While these innovative new faculty members have only been onboard for a few months, they have already started making great strides in their work—improving brain tumor drug therapies, improving infectious disease drug therapies, fighting antimicrobial resistance and improving cancer drug therapies. Their expertise in their collective fields will bring new ideas and new vitality to the School of Pharmacy and Pharmaceutical Sciences.
Imagine you’re doing a major renovation on a home you’ve owned forever. You know what you want done and are ready to build. During the project, your architect doesn’t talk to the contractor. The contractor talks to neither the electrician nor the plumber. The concrete guy comes and goes as he pleases. How confident would you be about the workmanship? It’s not a good idea for managing a major construction project. As it turns out, it isn’t such a great idea for managing patients’ health care either, so medical professionals throughout the country are increasingly using the team approach to solve patient health issues.

By removing themselves from their silos and collaborating with colleagues from other disciplines, professionals are giving their patients better, safer health care at a lower cost. Collaboration in health care closes communications gaps and promotes a patient-centered approach where health care professionals work as a team interprofessionally, instead of waiting their turn to care for a patient.

According to the National Academies of Science, Engineering, and Medicine, merely reducing preventable medical errors alone could save up to $29 billion a year.

The University at Buffalo and the School of Pharmacy and Pharmaceutical Sciences embrace this national trend by providing students with learning opportunities in Interprofessional Education (IPE). This training provides students with core competencies that will help them work more effectively with other professionals in this new paradigm once they graduate and enter the workforce.

Campus Collaborative Commitment

UB pharmacy and nursing students learn they had “saved” Patient X in an interprofessional escape room activity.

The instruction extends to schools beyond the health professions and includes students in the schools of management, social work and law.

The students learn IPE by progressing through three levels. The first exposes them to the value of IPE and principles of interprofessional collaborative practice through interactive, online learning and group engagements. Here they also learn teamwork skills, the scope of practice of other professions, and the impact of culture on health care delivery. The second develops competency by immersing the students in interprofessional simulations and community-based service learning. The third continues student development in communication, leadership and teamwork while working with patients in interprofessional clinical teams.

“I think there was a realization that it had to be more deliberate so that all graduates were having entry-level competence in this area,” said Nicholas Fusco, PharmD ’10, interim director of the School of Pharmacy and Pharmaceutical Sciences’ Office of Experiential Education. He’s also a clinical associate professor and the school’s representative on the UB IPE leadership team.

“Our feet are going to be held to the fire now with regard to integrating interprofessional education,” says Fusco. “People are better understanding the value of these activities in the curriculum and the feedback from students has been pretty positive with regard to how they view the experiences and how they think it’s influencing their training.”

To achieve these core competencies, the university’s IPE office and the school work together to ensure that students across the health science schools understand the scope of practice from other professions, communicate effectively to ensure high-quality patient care, and foster the ability to plan, deliver and evaluate patient-centered care. The university takes guidance from the Interprofessional Educational Collaborative (IPEC), a national organization dedicated to working with
academic institutions to prepare students to work collaboratively with other professions. Aside from classroom training and learning about the team-based approach as an abstract notion, the UB Office of Interprofessional Education integrates activities into student education with both large scale and smaller events.

IPE forums engage pharmacy students with students from across the university for an experience that is much more interactive than a traditional lecture. Each forum has a theme and keynote speakers to discuss an important issue and its implications. A recent forum involved confronting the nation’s opioid crisis with Erie County Health Commissioner Dr. Gail Burstein and the Medical Director of Substance Abuse Services for Catholic Health, Dr. Paul Updike, as keynoters, which the school hosted in Kapoor Hall.

After the keynote, the student audience is broken down into smaller groups, each group having student representatives from each discipline. Here, a facilitator engages the students and has them offer solutions for care.

Pharmacy’s Care Plan
“Once they get into the meat of the activities, they really start to realize how they can individually contribute to the team and also how each of the other individual team members contribute to the ultimate goal of a care plan for a patient,” Fusco said. Pharmacy students bring a unique skill set to these direct patient care activities, providing education in pharmacology, pharmacotherapeutics and self-care.

Mason Chan, a third-year PharmD student, was enlightened after going through the forum. He said that he expected students would share things within their own scope of practice, but got more when his Interprofessional group was presented with a scenario to create a care plan for a hypothetical patient.

“It was a lot different than what I expected. It was surprising by how well we worked together and how much knowledge and different perspective we got from other health professions,” Chan said. “Being able to see it through their eyes, sitting down with them and saying, ‘Hey, this is how I would approach the problem…’ helped us better understand and communicate with each other.”

In addition to the training en masse, students get IPE experiences in smaller settings that are both fun and educational. Recently, pharmacy and nursing students met to participate in a unique escape room activity specially designed for IPE collaboration. Their mission: to unlock the mystery of a patient’s ailment through solving medically based puzzles.

However, in this situation they had to rely on one another’s medical expertise to solve the riddle…just as they would have to do in real life.

“It was a fun time, I loved it!” said Jessica Swiderek, a third-year PharmD student. “All the clues were medically based. One clue was ‘Find the dosing of this medication,’ so that’s where the pharmacy students would help out. There were other things that nursing students would know that pharmacy students wouldn’t, and that’s how we would help each other out. It was very interesting!”

During their first three years of the PharmD program student will engage in ten hours of IPE training, which prepares them for their final year of advanced experiential training. During their fourth year, students experience interprofessional collaborative practice in its real-world application as they immerse themselves in regional and national practice sites. All pharmacy students also have the opportunity to see interprofessional education “up close and personal” during medical mission trips, where they help the less fortunate throughout the world as part of an integrated health care delivery team.

Both Chan and Swiderek were able to apply their IPE skills while volunteering for the nonprofit Remote Area Medical (RAM) in rural Virginia. Chan also volunteered for Camp Affinity where pharmacy students worked together with nursing and medical students to monitor glucose levels of children with type 1 diabetes. Swiderek also went to the Dominican Republic where she worked side-by-side with other health science students and health care professionals. In these missions, SP5S students help by providing assessments, medication counseling, and preparing and packaging medications in rural medical clinics.

Microcredentialing
To further emphasize its interprofessional education commitment, UB just launched a micro-credential in Interprofessional Collaborative Practice (IPCP). A micro-credential is the university’s official validation of a set of educational experiences pertaining to a certain area that falls outside of the curriculum. While it doesn’t rise to the level of an academic minor or even a certificate program, it’s more flexible and easily customized, so it can be based on a student’s particular needs.

When a student accomplishes and documents a predetermined number of designated experiences, the university places the micro-credential on his or her transcript. It can also be digitally displayed on social media accounts, digital resumes and email signatures via a digital badge.
A new study led by Kathleen Tornatore, PharmD ’81, professor of pharmacy practice, is exploring the effects of age, race and gender on immunosuppressive medication and immune responses of renal transplant patients.

African Americans are four times more likely to experience chronic kidney disease and kidney failure than Caucasians. From 2000-08, kidney transplants more than doubled in recipients above 65 years of age. According to the National Institutes of Health (NIH), the prevalence of end-stage renal disease in the United States has continued to increase, particularly among elderly patients and African Americans. The disease—which has no symptoms in its early stage—is responsible for more deaths each year than breast or prostate cancer, according to NIH.

Funded by a five-year, $3.5 million grant from the National Institute of Aging, the study aims to bridge the gap between current, non-specific clinical methods and personalized medicine for high risk kidney transplant patients across the spectrum of aging,” says Tornatore, also director of the UB Transplantation Immunosuppressive Pharmacology Research Program.

From 2000-08, kidney transplants more than doubled in recipients above 65 years of age.

“Tornatore secures a new $3.5 million NIH grant to help unravel racial disparity in kidney transplant success

BY REBECCA BRIERLEY

IonStar will totally change the face of clinical and pharmaceutical research and industry, where large-cohort investigations on system-level are often critical.

IonStar and UB Proteomics

Creating a New Direction for Clinical and Translational Research

BY REBECCA BRIERLEY

IonStar: Revolutionizing disease research and drug therapy via comprehensive, system-level understanding with near perfect accuracy

A new proteomic analysis tool developed by Jun Qu, PhD, professor, pharmaceutical sciences, has the real potential to increase and enhance the comprehensiveness and precision with which disease and drug effects are characterized. The IonStar protein analysis tool provides near perfect accuracy for quantifying and comparing a vast array of proteins allowing for increased accuracy and precision, with drastically lower missing data and false-positives.

The goal is to improve the quality of disease diagnosing, staging and treatment, and enhance drug development. “IonStar will totally change the face of clinical and pharmaceutical research and industry, where large cohort investigations on system-level are often critical,” says Qu. This analysis tool is the first-ever proteomics quantification method that is capable of reproducible, high-quality measurement of a large number of proteins in large biological cohorts (e.g., cell conditions, animals or patients), which are crucial benchmarks for pharmaceutical and clinical investigations. The tool features excellent quantitative quality, low missing data and low false-positives. In the past, large-cohort investigation relied on piecing together data from many protein batches, which resulted in staggeringly high missing data and compromised statistical power.

The tool is composed of two components: an experimental component for highly efficient and reproducible sample preparation and LC-MS analysis, and a novel informatics component for accurate, precision quantification with low missing data and low false-discovery. Qu’s many years of research in proteomics makes him confident his analysis method may revolutionize the way we investigate clinical and pharmaceutical proteomics systems.

“in clinical trials, comparing only a handful of patients gets you nowhere,” says Qu. “If you can analyze a large number of patients with high-quality data, you can discover and track biomarkers much more accurately and reliably. The same is true for pharmaceutical investigations.”

So far IonStar analysis has been used in more than 70 large scale proteomic investigations. Impressive advances have been realized in the discovery of novel mechanism to treat chronic heart disease, traumatic brain injury and pathways for drug development in cancer treatment. These promising results were recently released in the prestigious Proceedings of the National Academy of Science.

Qu’s early successes point to a bright future for IonStar’s global impact on drug development and early treatment decisions for a variety of life threatening diseases.

UB: The Flagship Center for Proteomics

The concepts for Ionstar were developed in collaboration with the other cutting-edge proteomics and protein therapeutics work being done in the Department of Pharmaceutical Sciences. Qu’s lab, under the auspices of the school’s Center for Proteomics, works closely with the UB SPSS Center for Protein Therapeutics (CPT) to conduct novel LC-MS based investigations of bio-therapeutics and corresponding targets and biomarkers in a wide range of therapeutic systems.

The CPT and the Department of Pharmaceutical Sciences has pre-eminence researchers in the field of proteomics, mass-spectrometry based protein analysis and systems pharmacology, outstanding discoveries are occurring which will improve diagnostic techniques, elevate treatment of disease and allow for cutting-edge drug development. Qu quickly acknowledges that access to the school’s world class computational facilities and collaboration with renowned faculty colleagues has allowed his research to flourish and evolve. He also credits all members of the UB pharmaceutical sciences faculty as well as university faculty: Timothy Murphy, MD, SUNY Distinguished Professor; Senior Associate Dean for Clinical and Translational Research, Jacobs School of Medicine and Biomedical Sciences; and John Canty, MD, SUNY Distinguished Professor; Albert and Elizabeth Rebake Professor and Chief, Division of Cardiovascular Medicine, Jacobs School of Medicine and Biomedical Sciences, as instrumental partners in his success.

Qu states, “I am extremely privileged to be a member of UB SPSS, which allows me access to some of the greatest minds in pharmaceutical sciences in the world, a critical factor making our progress and success possible. Moreover, the university provided us not only abundant resources for our facility, but also a collaborative and supportive environment that is essential for our success.”
Student Innovation Takes First Place

BY KARA SWEET

Students from the University at Buffalo School of Pharmacy and Pharmaceutical Sciences and Buffalo Academy of the Sacred Heart’s STEM Honors Cohort were awarded first place in the American Association of Colleges of Pharmacy’s (AACP) 2018 Pharm4Me Innovation Challenge.

The Pharm4Me Innovation Challenge is a nationwide competition in which high school and college pharmacy students work together to identify medication or health-related problems in their communities and create innovative solutions to solve them. Teams are critiqued on innovation, presentation, relevance and accessibility.

The UB and Buffalo Academy of the Sacred Heart team received the top prize for Pharm4Me, an initiative that seeks to prevent opioid abuse and addiction through education. It serves as a resource for students across the country to promote opioid awareness. The program includes public service announcements, downloadable posters and brochures, educational quizzes and guidelines for hosting health fairs, all of which are available on the Pharm4Me website and social media accounts.

To gauge the effectiveness of the program, the team tested the use of Pharm4Me materials at a Buffalo Academy of the Sacred Heart health fair. Students completed surveys on their knowledge of opioids before and after the fair.

Prior to the event, 47 percent of students were unfamiliar with opioids. After the health fair, every student understood what opioids were, what they were used for, how addiction occurs and the pharmacist’s role in opioid education.

Justin Bui ’19, said the benefits to the high school students were twofold. “This community outreach initiative was a way to educate high school students on the opioid epidemic, as well as the important role pharmacists play in its treatment and prevention.”

UB hopes the program is adopted by other schools seeking to increase opioid awareness, says Robert Wahler, PharmD ’00, team faculty adviser and clinical assistant professor in the School of Pharmacy and Pharmaceutical Sciences, who was joined by School of Pharmacy and Pharmaceutical Sciences Associate Dean Jennifer Rosenberg, PhD, as a faculty adviser.

“The Innovation Challenge gave our students the opportunity to promote health and wellness through prevention, intervention and educational strategies for individuals and communities. These are essential learning objectives for our PharmD curriculum, which our group’s high school students were able to observe firsthand,” Wahler remarks.

The UB students received the award at the 2018 AACP Annual Meeting in Boston. The Buffalo Academy of the Sacred Heart also received a $2,000 prize to support science, technology, engineering and math (STEM) programs.

The Pharm4Me Innovation Challenge is part of Pharmacy is Right for Me, an AACP program that aims to stimulate interest in pharmacy careers among high school students to meet the growing demand for pharmacy and health care health professionals.

Buffalo Academy of the Sacred Heart Head of School Jennifer Demert says the program succeeded.

“Student Innovation Takes First Place”

OpiEducate

MAKE THE CHANGE.

OpiEducate

Team Members

University at Buffalo School of Pharmacy and Pharmaceutical Sciences:

Justin Bui ’19
Rachael Cardinal ’18
Alice Chan ’19
Melissa Dhivera ’20
Esther Esada ’20
Troy Hooel ’18
Nabila Ismail ’18
Edward Lee ’19
Jasmine Nurse ’19
Cynthia Sukulak ’18
Gigi Yam ’18
Dr. Jennifer Rosenberg
(Adviser)
Dr. Robert Wahler
(Faculty Adviser)

Buffalo Academy of the Sacred Heart:
Sarah Campbell
Gianna DiPasquale
Claire Mastrandrea
Fiasco Murphy
Olivia Zanelli

OpiEducate Team Members:
Justin Bui ’19, Gigi Yam ’18, Esther Esada ’20, and faculty adviser Robert Wahler, PharmD ’00

“The young women who participated had an absolutely fascinating.”

What was your favorite IPPE experience?

“...the collaborative efforts of doctors, mid-level providers, pharmacists and nurses working together to take care of their patients was what I found absolutely fascinating.”

STUDENT LIFE

Northeast Pharmacy Students Shuffle Off to Buffalo

BY KARA SWEET

T he American Pharmacists Association Academy of Student Pharmacists (APhA-ASP) holds an annual Midyear Regional Meeting (MRM) that is designed exclusively for student pharmacists, by student pharmacists.

For the first time in seven years, the Region 1 MRM was held in Buffalo, N.Y., coordinated by APhA-ASP regional officers and our own PharmD students Stephanie Lanza ’20, and Laurie Diaz-Ordaz ’21, and UB chapter president Johanna Sulessky ’20.

Over 800 student pharmacists from Connecticut, Maine, Massachusetts, New York, Rhode Island and Vermont attended the three-day event, which focused on career development and leadership training.

Dean James O’Donnell, PhD, provided opening remarks and Edward Bednarczyk, BS ’14, PharmD, director of the Center for Health Outcomes, Pharmacinformatics and Epidemiology, hosted a Q&A session.

“A Buffalo social event gave out-of-town attendees a chance to learn fun facts about the Queen City.”

What was your favorite APPE experience?

“...it was the first time I had the opportunity to follow patients from presentation in the emergency room, commonly for suspected heart attacks, through their intensive care stay, up to a regular medicine floor and finally to discharge. My role on the team was to counsel them at discharge on a number of medications patients are started on after experiencing a heart attack. It can be very overwhelming for a person to go from not taking any medications to suddenly being on four or five, each with different directions, side effects and important monitoring parameters. As pharmacists, I think we’re in a unique position to improve patient outcomes by being intimately involved in a patient’s transition from the hospital to home, as their medication regimen is often overlooked.”

DOMINIC CARDEN ’19
Dedication to the Profession

By KARA SWEET

Pharmacy practice faculty members Karl Fiebelkorn, BS ’78 & MBA ’88, and Christopher Daly, PharmD/ MBA ’12, were recognized by their Western New York peers for their dedication and service to the profession of pharmacy.

The Pharmacists’ Association of Western New York (PA WNY), an organization of pharmacists and associated health care professionals dedicated to the advancement of the profession of pharmacy, honored both faculty members at their 2018 annual banquet.

Karl Fiebelkorn was inducted into the PAWNY Hall of Fame to honor his lifelong work in the profession and the community. A faculty member at UB SPPS since 1995, he teaches several subject areas, including pharmacy practice for over 10 years. His academic charge is to lead the innovation of new practice opportunities for advanced clinical outpatient pharmacy—his work seeks to establish a community pharmacy practice-based research network, developing various pharmacy models in the Western New York region.

Fiebelkorn was also honored for his commitment to substance abuse education with the 2016 Cardinal Health Generation Rx Award of Excellence from the Pharmacists Society of the State of New York (PSSNY). In 1996, he began the UB SPPS Poison Prevention Program, which educated thousands of children about the hazards of poisoning across New York State. A few years later, he helped pioneer local drug take-back efforts—this model was used by the United States Drug Enforcement Administration as a framework for the current National Prescription Drug Take-Back Day. Fiebelkorn has also promoted student advocacy in partnerships with Erie County Crisis Services, Prescription Drug Take-Back Day. Fiebelkorn has also promoted student advocacy in partnerships with Erie County Crisis Services, and the role of pharmacy in community health fairs and local drug take-back events.

“Dr. Daly is an outstanding pharmacist whose insight into our profession has benefited both academia and community,” says Galluzzo. “We are forever grateful for his dedication to our members and the profession of pharmacy.”

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“Dr. Daly is an outstanding pharmacist whose insight into our profession has benefited both academia and community,” says Galluzzo. “We are forever grateful for his dedication to our members and the profession of pharmacy.”

“Professor Fiebelkorn and Dr. Daly are helping to optimize the role of pharmacy in patient care,” says Dean James O’Donnell, PhD. “Their efforts and training are truly impacting the health and well-being of countless members of our community.”

A career milestone

Juliane Nguyen, PharmD, PhD

In recent years, the University at Buffalo School of Pharmacy and Pharmaceutical Sciences has been successful in drawing some of the world’s brightest young researchers to Western New York.

A perfect example is Juliane Nguyen, PharmD, PhD, associate professor of pharmaceutical sciences. In April 2018, Nguyen received a National Science Foundation (NSF) CAREER award, the agency’s most prestigious honor for junior faculty who exemplify the role of teacher-scholars through research, education and the integration of education and research within the context of the mission of their organizations.

The award comes with a federal grant for research and education activities for five consecutive years—Nguyen received $500,000 to fund her research on novel drug delivery aimed at treating incurable diseases.

“We are developing a completely novel way to deliver macromolecules directly to the body,” says Nguyen. “It is an honor to have the National Science Foundation supporting our research and educational endeavors.”

Nguyen is optimistic that her discoveries will result in safer and more effective drug therapies that will benefit patients.

“If successful, our new drug carriers could allow diseases that are currently incurable to be treated in a safer and more effective manner.”

The Pharmacists’ Association of Western New York (PA WNY) seeks to enhance the professionalism of the pharmacy practice and to promote the health and welfare of the public. They are dedicated to the advancement of the profession of pharmacy and the public’s health through education, research, and service to the profession of pharmacy. The PA WNY has been continuously active for over 100 years.

“The Pharmacists’ Association of Western New York (PA WNY) seeks to enhance the professionalism of the pharmacy practice and to promote the health and welfare of the public. They are dedicated to the advancement of the profession of pharmacy and the public’s health through education, research, and service to the profession of pharmacy. The PA WNY has been continuously active for over 100 years.

Juliane Nguyen joined the UB Department of Pharmaceutical Sciences in 2013. Within her first three years, she obtained two NIH R21 grants to support her miRNA delivery work. Her exosome-based research has been recognized with a 2018 UB Bruce Holm Memorial Catalyst Fund award, a 2017 UB Exceptional Scholar Award for Young Investigators and a $1.5 million National Institutes of Health grant. Her research has also been highlighted in the American Association of Pharmaceutical Sciences (AAPS) Journal’s “Pioneering Pharmaceutical Science by Emerging Investigators” special issue and by the Institute of Physics.

Juliane Nguyen, PharmD, PhD

A Career Milestone

BY KARA SWEET

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Dr. Nguyen with her students and lab assistants

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Recognizing Excellence

These faculty and staff members were recognized for their leadership and pioneering approaches to education and research in 2018.

Nicole Paolini Albanese, PharmD, clinical associate professor of pharmacy practice received a University at Buffalo 2018 Award for Teaching Innovation, for engaging students with new methods and approaches to teaching that have enhanced student learning outcomes.

Edward Bednarczyk BS ’78, PharmD was elected to the American Pharmacists Association Board of Trustees as president of the Academy of Pharmaceutical Research and Science for the 2018-19 term.

Rebecca Brierley EdM, assistant dean of external affairs, received a 2018 State University of New York Chancellor’s Award for Excellence in Professional Service. Brierley was also elected chair-elect for the American Association of Colleges of Pharmacy Administrative Services Section.

David Jacobs PharmD ’11, PhD ’18, assistant professor, pharmacy practice, received the Buffalo Translational Consortium Mentored Career Development Award for his project entitled “A pilot study to evaluate objective assessment tools to improve medication management in chronic obstructive pulmonary disease.”

William Jusko BS ’65, PharmD ’70, SUNY Distinguished Professor of Pharmaceutical Sciences, was the 2018 recipient of the Oscar B. Hunter Career Award in Therapeutics from the American Society for Clinical Pharmacology and Therapeutics.

Calvin Meaney PharmD ’11, clinical assistant professor of pharmacy practice, received a 2018 New Investigator Award from the American Association of Colleges of Pharmacy in support of his research project titled “Personalized Erythropoiesis in Hemodialysis Patients: The Novel PREDHICT Tool.”

Scott Monte PharmD ’06, clinical assistant professor, pharmacy practice, along with Clinical Assistant Professor Robert Wahler, was co-investigator on a $35,000 grant from the University at Buffalo Office of the Vice President for Research and Economic Development, Innovative Micro-Programs Accelerating Collaboration in Themes (IMPACT). The grant supports a multidisciplinary proposal titled “Collaborative Drug Safety Management with Frail Elders and Caregivers for Successful Aging.”

Marilyn Morris PhD ’84, SUNY Distinguished Professor and chair, department of pharmaceutical sciences, received a 2018 American Association of Pharmaceutical Scientists (AAAPS) Distinguished Service Award.

Gene Morse BS ’80, PharmD ’83, SUNY Distinguished Professor of Pharmacy Practice and director of the Center for Integrated Global Biomedical Sciences, received a $1.1M National Institute of Health Fogarty International Center grant to train 15 scientists from the Caribbean in viral infection research to improve the study of Zika, HIV, hepatitis and other viruses.

Juliane Nguyen PharmD, PhD, associate professor, pharmaceutical sciences, received a $35,000 Bruce Holm Memorial Catalyst Fund award for her project “EXOCodes: A Highly Efficient Platform for Loading Exosomes with Chemical and Biological Agents.” She was also acknowledged by the American Association of Pharmaceutical Scientists (AAAPS) for her manuscript, “The Phenotypic Effects of Exosomes Secreted from Distinct Cellular Sources: a Comparative Study Based on miRNA Composition,” appearing in the themed AAAPS Journal: “Pioneering Pharmaceutical Science by Emerging Investigators.”

Robert Wahler PharmD ’00, clinical assistant professor, pharmacy practice, was the recipient of a $20,000 (SUNY) Innovative Instruction Technology Grant (IITG) for his project, Development of a Micro-Credential on the Newly Developed Pharmacist Patient Care Process for Use in Pharmacy and Health Profession Programs: Promoting Patient-Centered Care.
Mario Rocci Jr., BS ’76, PhD ’81, wants others to receive the support he received at UB

BY S. A. UNGER

Mario Rocci Jr., BS ’76, PhD ’81, an international leader in pharmaceutical sciences, wants others to receive the support he received at UB.

BY S. A. UNGER

Fond Memories of UB

Linda Edelman, BS ’66, PharmD, leaves a generous bequest

BY S. A. UNGER

Fond Memories of UB

Linda Edelman, BS ’66, PharmD, knew from an early age that she wanted to be a pharmacist. Her father, Sam Edelman, graduated from the UB School of Pharmacy and Pharmaceutical Sciences in 1925 and opened a drugstore on Seneca Street in South Buffalo. When Linda was 10 years old and her sister, Sue, 12, their mother died and the girls spent most of their time with their father at his store. In 1966, Linda followed in her father’s footsteps, earning her bachelor of science degree in pharmacy at UB, after which she worked at Prichard’s Pharmacy on High Street for a short time before moving to California, where she lived until her death in 2016. In gratitude for the education she received at UB, Linda left a bequest that provides a generous, unrestricted endowment to the School of Pharmacy and Pharmaceutical Sciences. “Her years at UB were happy times,” her sister, Sue, recalls. “She lived at home, and her friends would come over, study in groups and even though she worked hard, saved a lot and had a talent for investing, she lived an unpretentious life.”

“Unrestricted gifts such as the one made by Dr. Edelman are compounded in their value by the flexibility with which they allow us to address both short- and long-term needs of the school.”

James M. O’Donnell, PhD
Professor and Dean

Launched in 2017, the campaign seeks to raise $650 million to deliver transformative changes for the public research university, Western New York, and the world. The portion of the campaign goal for our school is $31 million.

“The gifts described in these stories are part of Boldly Buffalo: The Campaign for UB.”

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“Throughout this campaign, we want to increase scholarship and fellowship support for our students and to recruit top faculty and provide them with resources to excel,” says Dean James O’Donnell. “We also want to increase opportunities for students, faculty and staff to engage the larger scientific and professional community, as well as to positively influence Buffalo and Western New York.” To learn more, visit buffaloguardian.com/campaign or contact the SPPS University Advancement Office at (716) 645-3432.
If you want to go fast, go together. If you want to go far, go alone.

Tell us about your work as a pharmacist and what you can bring to the Gates MRI.

Jill Fiedler-Kelly, vice president, pharmacometrics services, and other colleagues at Cognigen Corporation were a critical part of my success. When I started at Cognigen, I was the project lead for a BMGF grant to build a pharmacometrics communication platform for malaria drug development. Over time, I built on my PharmD/MSc education and gained the basic technical skills required for a pharmacometrician. As a 1.0 PTC consultant through Cognigen, became a BMGF Quantitative Sciences (QS) team member for two-and-a-half years prior to joining the Gates MRI. In this role, I was responsible for monthly updates to the QS team deputy director on the pharmacometric analyses and software development projects I led at Cognigen. I also worked with other BMGF QS team members to guide and implement antimalarial model informed drug development strategies. This experience was truly a blessing and allowed me to learn from the world’s experts in clinical pharmacology and antimalarial drug development. When I heard about the Gates MRI, I was so excited to leave this team, but energized by the opportunity to work at the new nonprofit.

Why did you choose to complete all of your degrees at UB?

I grew up in Buffalo and only applied to UB. The cost of living was cheap enough for me to stay local and independent. Young woman and be on track to pay off my six-figure student loans within five years of graduating, which was very important to me. UB was flexible and allowed me to follow my dream by allowing me to finish my PhD part time, enabling me to take risks and ultimately land my dream job. I don’t know if that would have been possible this early in my career if I pursued my degrees elsewhere. I have found that building my own opportunities at UB and in Buffalo— from spearheading a new academic program to championing a new grant proposal and crafting a new global health leadership position at a pharmacometrics contract research organization— was fun, meaningful and a wonderful way to grow as a leader early in my career.

Tell us about a memorable student moment.

Each pharmacy student must complete intermediate and advanced pharmacy practice experience hours (IPPE/APPE). In 2012, my church organized a medical mission trip to the Dominican Republic. I was energized by the opportunity to help those less fortunate and immediately signed up and wrote letters to family and friends to help sponsor my trip. That trip was the first international mission trip I had ever been on, so I was so excited. I spent two-and-a-half weeks in the Dominican Republic serving with a group of UB students now participating annually. This trip approved as a UB IPPE. I am excited to learn UB has expanded their participation in mission trips with numerous faculty and students now participating annually. This trip ultimately changed my life and the trajectory of my career, and I will be forever grateful.

Shortly after my second mission trip, I visited my new husband, who was working in Seattle. On that trip, I mentioned I wanted to work for a nonprofit either in drug development or health care, and David told me about BMGF, their mission and the work they fund. From that moment, I was determined to work for BMGF. Abraham Lincoln said the best way to predict the future is to create it, and that advice has been my compass on the road to the Gates MRI.

The in-depth background in pharmaceutical sciences and program rigor enabled me to learn to challenge the status quo and think creatively, essential skills when working for a start-up.

Tell us about your work as a consultant at BMGF and how this led you to the Gates MRI.

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How do you think your unique PharmD/MS/PhD degree experiences have given you a professional advantage?

When asked about my background, I always begin with my training as a pharmacist, which provided me with seven years of patient interactions, strong problem-solving skills and the ability to possess a cool disposition in the face of adversity. Working as a pharmacist also required me to explain complex scientific concepts to people of all backgrounds and biases, a skill which allows me to anticipate questions and shape my strategic thinking.

As a woman in science, this foundation has served me well in my career. The dual training as a pharmacist and scientist has made me an effective clinical pharmacologist. The PharmD training allowed me to leverage my basic sciences and clinical sciences skills to my full potential. In addition, the Gates MRI presents an incredible opportunity to work with the world’s experts in clinical pharmacology and antimalarial drug development. When I heard about the Gates MRI, I was so excited to leave this team, but energized by the opportunity to work at the new nonprofit.

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The in-depth background in pharmaceutical sciences and program rigor enabled me to learn to challenge the status quo and think creatively, essential skills when working for a start-up.
Beta Phi Sigma: One of the First Pharmacy Fraternities in the US Reconnects Again...

BY REBECCA BRIERLEY

UB Pharmacy has many things to be proud of along with being able to state we are home to one of the first pharmacy fraternities in the country—Beta Phi Sigma!

Beta Phi Sigma stands for Buffalo Pharmacy School, with the first chapter (alpha chapter) founded here at UB in 1888. The fraternity grew in number over the years and saw a ‘heyday’ in the 1950s and 1960s. In the 1970s pledges dropped off and in 1973 the fraternity officially ended. But the good memories and friendships formed through this society of fraternal brothers continue and were again celebrated during the 2018 UB Pharmacy Reunion. A BPS reception was held in Kapoor Hall where brothers talked about great memories, BPS events and insightful advice from Dean Murray as well as other members of the faculty. Alan Levitt BS ’68 was the driving force behind the 2018 BPS Reception. He reached out to many former BPS brothers regarding the reception and reconnected many to the BPS motto of “To promote and provide for the social welfare of the student.” Beta Phi Sigma greatly helped me both academically and socially. I was then able to help my other fraternity brothers during the course of my time in Beta Phi Sigma. An active BPS brother from a decade before, Bruce Moden BS ’57 remembers many good times, “In the 1950s fraternities were important to social life on the UB campus. At that time, UB was a private institution and not governed by the State University of New York. As students we were able to control social activities. So we had more off-campus activities.”

Even though Beta Phi Sigma ended officially sanctioned activities in the early 1970s, the brothers look forward to more future get-togethers where they can continue the proud BPS tradition of honor and service to the profession of pharmacy.

Reunion 2018


CLASS REPRESENTATIVES

Class of 1968:
- Gail Black Proctor
- Gary Reynolds
- Stew Siskin
- Alan Levitt

Class of 1978:
- Karl Fiebelkorn
- Nick Honcharik

Class of 1983:
- Renee Rizzo Fleming

Class of 1988:
- Linda Germain
- Elinor Equinozzi
- Evelyn Schuleinkloper Reda

Class of 1993:
- Amy Burke
- Kimberly
- Yunker Maier
- Gerald Wemple

Class of 1998:
- Paul Grew

Beta Phi Sigma Brothers Song

Join hands again and sing for Beta Phi / and pledge anew our vows so firm and high
To stand for the right and to shun the wrong / forever in our hearts a song.

So now to thee oh Beta Phi we bring / our love and our most humble off-ring
As we answer the call we’ll be true one and all / to the vows we made to thee oh Beta Phi
The Hayes Society
The Hayes Society honors individuals who have made legacy gifts to the School of Pharmacy and Pharmaceutical Sciences through a bequest or other method of deferred giving.

Allen Barnett ’65
Thomas Blanchard ’61
Daniel ’89 and Gayle Brazeau ’89
Alex Cardoni ’66
Raymond ’82, ’87 and Mary Anne Dannenhoffer ’81, ’87
Nina Doran ’53
Joseph Figlow ’70
Edward ’52 and Jean Frank ’54
Carol Glatt ’75
Florence Ho ’75 and Wing Fung Ron ’56 and Gail Isaacs
Carol Gloff ’75
Florence Ho ’75 and Wing Fung
Ron ’56 and Gail Isaacs
Rose Mary Madejski ’59
Dwight Niles ’62
James and Kimberly O’Donnell
Margaret Quinn ’60
Robert Ravin ’57
Mario ’76, ’81 and Donna Rocci
Irving Sultz ’55
Ralph Vesco ’56
Margaret Yang ’75

To learn more or notify the school of a legacy gift that you have planned, please call the SPPS University Advancement Office at (716) 645-3432 or visit our website at pharmacy.buffalo.edu.

416
The number of current Hayes Society members across the university who have remembered UB in their will or through another deferred gift.

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IN MEMORY OF ALEXANDER AVERSANO ’63
Paul and Paula Aversano

Anthony and Camilla Passarella

IN MEMORY OF THOMAS J. BARDOS
Virata ’61, ’64, ’74 and Brinca Akas
Wayne and Lorraine Anderson
Bruce ’82 and Judith Aungst ’75, ’80
Maria Bardos
Dennis Biggio ’75 and Luana Goodwin ’71
Bristol-Myers Squibb Foundation
David ’75 and Jane Chu ’75
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Peter and Kathleen Forgesch
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Millennium Pharmaceuticals
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Michael Perlman ’84
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Agnes Szekeres

IN HONOR OF GAYLE BRAZEAU ’89
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AND LOIS D’AMBROSIO
Tad D’Ambrosio
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Lida Zaffaroni
Li ’15 and Ming Zhang
Baileng Zhao

IN HONOR OF BRUCE ’57
AND BARBARA MODER
Ty Andrews ’96 and Linda Moden Andrews ’97

IN HONOR OF THEODORE MROZINSKI
Kathleen Mrozinski ’80

IN HONOR OF JOSEPH BUTOWSKI SR. ’61
Timothy Lowmaster

I want to thank every person who made a gift in the past year. You keep the UB Pharmacy reputation strong and allow us to continue to serve as a leading pharmacy school for the next generation.”

James M. O’Donnell, PhD
Professor and Dean
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- **LEADER:** James Baxter, Mary Ann Danneffenhoefer, Mary Danneffenhoefer, John Rodgers
“Alumni support has allowed me to focus on my studies and to get more involved in organizations and in the community.”

Tanner Merchant '19
Thank you for contributing to our success. The School of Pharmacy and Pharmaceutical Sciences is currently ranked #1 in New York State and #22 in the country by U.S. News & World Report.

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