

April 2021

## MESSAGE FROM THE DEAN

Dear Friends and Colleagues,

It has been a challenging year for everyone, but I'm pleased to announce that the college will be working towards returning back to a sense of normalcy—or a new normal— as we transition back to in-person learning in the fall semester. Our plan to return to in-person learning in the fall is buoyed by the recent news that everyone over the age of 16 in Washington state will be eligible to receive the COVID-19 vaccine starting April 15. I know that many of our students, faculty and staff have already received, or are in the process of receiving, their vaccines, bringing us one step closer to a safer re-opening come fall semester.



In addition to this uplifting news, congratulations to the following faculty members on their [recent promotions](#), effective July 1. These faculty have worked hard in teaching, service, and research and I appreciate all that they do for the college.

- [Josh Neumiller](#) was promoted to Professor
- [Jennifer Robinson](#) was promoted to Professor
- [Angela Stewart](#) was promoted to Professor
- [Megan Willson](#) was promoted to Professor
- [Jeffrey Clark](#) was promoted to Associate Professor
- [Connie Remsberg](#) was promoted to Associate Professor

Last but certainly not least, [Danial Baker](#) was promoted to Regents Professor. Danial is the first and only Regents Professor in the 130-year history of the college. This is the highest distinction bestowed by the University upon its faculty. No more than 30 WSU faculty members can hold such an honor at any one time, so a big congratulations to Danial and thank you for representing the college so well in your decades of service and scholarship. For those of you who don't know Danial, he is the Director of our [Drug Information Center](#) which responds to inquiries from health care professionals across the state regarding drug interactions, side effects, and other drug-related topics. His most recent accomplishment was being part of the team to develop the [COVID-19 Vaccine Handling Toolkit for the US Pharmacopeia](#). His contributions to the body of knowledge in pharmacy have been felt worldwide with millions of COVID-19 vaccines administered daily.

For now, the college is fully focused on the final four weeks ahead before the end of the school year. I applaud our faculty and staff for their hard work and dedication to our students. In many ways, transitioning the college at the start of the pandemic in 2020 was easier than planning for our new normal. We are in a marathon to deliver an engaging curriculum with the added challenge of safety measures and social distancing precautions in place.

Finally, to help our students during this difficult year, I hope you all can join us for [#CougsGive on April 14](#), when we come together as a community to raise funds to support our talented students. This is our chance to not only support our students on their learning journey, but also to show our gratitude to them for volunteering their time in the race to get the nation vaccinated.

Sincerely,



Mark Leid, Professor and Dean  
WSU College of Pharmacy and Pharmaceutical Sciences

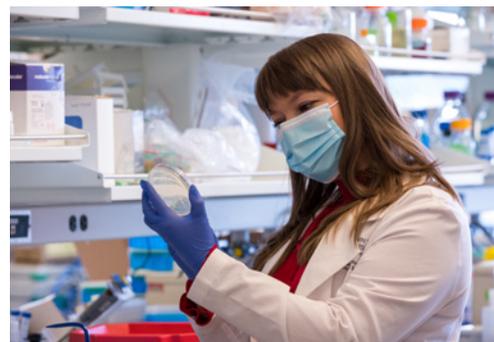
## Top Stories

### Nontraditional pharmacy roles that you never knew existed

#### PHARMACY ROLES IN PHARMACEUTICAL INDUSTRY

Most PharmD students know that their degree can land them a career in the pharmaceutical industry, but what exactly do people with a PharmD degree do in these companies?

According to Pharmaceutical Sciences Associate Professor Bhagwat Prasad and Director of Industry Engagement at the college, Doctor of Pharmacy of students are highly sought-after candidates in the pharmaceutical industry. Not only do they have the scientific knowledge to comprehend how drug therapy works, but they also have the practical patient care skills to know how therapies will be delivered, whether it's by doctors or at home. Positions for Doctor of Pharmacy graduates in pharmaceutical industry range from marketing and sales, drug manufacturing and quality control, medical communication, regulatory affairs, health economics to clinical research and development of drug therapies. In addition, many graduates with a PharmD get involved with clinical drug trials as well as helping to establish safe guidelines and quality control for drugs.



“A lot of students who pursue a Doctor of Pharmacy degree don't realize the vast opportunities available to them in the pharmaceutical industry. Our college makes an effort to expose our students to various jobs in industry and share the many career paths available to them. Getting a PharmD allows for a lot of flexibility in careers—especially now during the pandemic. Not only can graduates work in a community pharmacy, but they can be crucial in helping to develop effective drug therapies and effective medical communications between industry and healthcare providers,” said Prasad. “The [PharmD/PhD dual degree program](#) can also help expedite this career growth.”

#### PHARMACY ROLES IN GOVERNMENT

Did you know that pharmacists are needed in a variety of government agencies, including the Drug Enforcement Administration (DEA), the Federal Bureau of Investigation (FBI), and the Food and Drug Administration (FDA)? Forensic pharmacists and drug diversion investigators are just some of the positions requiring a background in pharmacy. Investigators have a variety of responsibilities including evaluating drug-related evidence in court cases or investigating causes of death by assessing a person's medical record, illegal drug habits, prescription medication, and other factors.

Pharmacotherapy Associate Professor Megan Undeberg remarks on the time she was approached by the FBI to offer her expertise on an order of saltpeter three years after 9/11. Saltpeter, a chemical compound with a variety of uses was rumored to reduce libido in military recruits and used for explosives and weapons during the Civil War.

“At least the agent had a little sense of humor; he confirmed they were investigating the saltpeter/explosive connection. So, with a little investigation on the pharmacy side and discussing with the agent, we were able to figure out the purchase in question was utilized by a local farmer as a fumigant and around the grain storage facilities to keep rodents out of the grain,” said Undeberg. “Thus, case closed. But the upside, the agent told me

if I were ever interested in another angle of work to give them a call and they could put me to work with a job opportunity with the FBI!”

Undeberg also notes that pharmacy careers with the government often expand to include agencies such as the Indian Health Services, the military, the US Public Health Service, as well as Veterans Affairs.

Drug diversion experts are used in government agencies and within institutions such as hospitals and pharmacies to ensure that controlled pharmaceuticals which are dispensed by health care providers are in compliance with regulatory requirements. Diversion investigators are responsible for sleuthing out employees who falsify records and subsequently sell drugs and looking into those who may be stealing inventory or falsifying orders to cover illicit sales, or even track down prescription forgers.

Pharmacotherapy Associate Professor Julie Akers says that pharmacists are often asked to provide expert testimony in administrative, civil, and criminal cases based on their specialties. Akers has reviewed several Washington state administrative cases and has testified at hearings. She has also worked on federal criminal cases related to controlled substances.

“The ability to utilize my training and knowledge of state and federal statutes and regulates to assure safe care is provided to patients is rewarding. Having a pharmacist review a case that is not only familiar with the laws and rules, but also has years of experience in practice, allows for an in-depth review including standards of care, workflow constraints, and other factors that may influence pharmacist decision making in practice,” said Akers. “I appreciate working on administrative cases, as there is no pressure or influence to come to a decision on guilt or innocence. The goal is to objectively review case findings and make a recommendation if the case should be dropped or continue on to a hearing.”

## PHARMACY INFORMATICS

Pharmacy informatics may seem a bit abstract, but that’s because it is a relatively young and quickly evolving field. According to the [American Society of Health-System Pharmacists \(ASHP\)](#), the pharmacist’s role in clinical informatics is data, information, and knowledge management; information and knowledge delivery; practice analytics; applied clinical informatics; and leadership and management of change. Pharmacy informatics position work in a variety of settings including health systems such as hospitals, the FDA, academia, National Institutes of Health and much more.



“What we do is basically answer questions with data, and we do that by developing different dashboards, analytical tools, and reports that our executive leadership team and pharmacy leadership team uses to solve issues related to pharmacy operations, pharmacy finance, or pharmacy clinical data, and figure out essentially the best route forward for the organization,” said Gabe Arguinchona, who graduated from the college in 2019, [during an interview with CPPS](#). Arguinchona currently works at Kaiser Permanente as a Pharmacy Analytics & Business Intelligence Manager.

You can learn more about the field of pharmacy informatics by considering our dual degree program to receive your master’s or certificate in [Engineering and Technology Management along with your Doctor of Pharmacy degree](#).

## Raising trans awareness in pharmacy education and across campus

By Sara Zaske, WSU News, Originally posted in the [WSU Insider](#) March 31, 2021

The guest speaker in Cheyenne Newsome’s pharmacy class confesses he hates Brussel sprouts. He loves his daughter. He is also transgender. He does not like public speaking but feels compelled to speak to the class in honor of his transgender friend who had little support and died by suicide.

Unfortunately, this is not an unusual story. An estimated 40% of transgender and non-binary people attempt suicide, compared to 4.6% of the general public. While there is strong evidence that gender-affirming care can help resolve gender dysphoria and improve quality of life, less than half of pharmacy schools report having education on the issue, according to a [national survey](#) conducted by Newsome.

That's one reason Newsome, a clinical assistant professor in the College of Pharmacy and Pharmaceutical Sciences, wants to make sure WSU pharmacy students have a chance to hear directly from transgender people.

"When I first got exposed to a transgender person at a clinic, I had nothing up to that point in my education about this community," said Newsome. "I just met these patients who had no access to care. They couldn't find a willing provider or one who felt able and competent to give them care. Then, I heard stories of intentional harassment and mistreatment these patients had experienced from the medical community. I also recognized my lack of knowledge was probably not unique."

Transgender and non-binary people make up an estimated 0.6% of the U.S. population – about 1.4 million people, but that number is expected to grow as more people, especially young adults, become more open about their gender identity. This increases the likelihood pharmacists and other health care providers will encounter trans and non-binary people in their careers.

Since arriving at WSU, Newsome helped institute training on transgender care for future pharmacists. She has taken the issue nationally with not just a survey of other pharmacy schools but with a recent [commentary outlining strategies to include transgender care](#) in pharmacy education. She has also been invited to guest lecture on transgender care at other universities in Boston, Chicago and Richmond, Virginia.

At WSU, colleagues from pharmacy, medicine, and other units have reached out to Newsome to learn how to incorporate transgender issues into their curriculum. Newsome also praised the work of WSU President Kirk Schulz's [Commission for Gender Identity/Expression and Sexual Orientation](#) for helping encouraging greater inclusivity.

"The WSU community has been incredibly supportive," she said. "I've been so proud of my colleagues, and our work at WSU where this is really embraced and encouraged by the leadership from the president on downward. It's been fantastic."

At WSU College of Pharmacy and Pharmaceutical Sciences, transgender care education involves three hours in a class on special populations. This includes interactive discussions on terminology and cultural competency as well as medications such as hormone therapy specific to this community. Then, she invites a guest speaker from the community – and from the class reviews, that is the portion the students find particularly compelling.

"They start to realize the impact they can make by helping trans people," she said. "A gender-affirming provider can make a difference."

Becoming gender-affirming includes asking people their pronouns, but that's just part of it, Newsome said.

"It starts with just recognizing when you're automatically making an assumption, such as assigning a pronoun to someone, but it applies to many different aspects of care," Newsome said. "You want to make sure you're really getting the story from the patient, asking them open ended questions so you can really hear what their experiences have been, rather than assuming they're like other patients that you've seen."

In the future, Newsome would like to see transgender care woven throughout the pharmacy curriculum as it will help caregivers treat the whole person rather than focusing just on hormone therapy. WSU College of Pharmacy and Pharmaceutical Sciences has begun to make this change including transgender care in multiple courses to give students repeated exposure to the care for transgender patients throughout the curriculum. Newsome suggested that pharmacy programs could include patients in those case-based learning with conditions like hypertension or diabetes who also happen to be transgender.

Newsome would also like to see more pharmacy schools adopt training for this community. There has been some movement: the American College of Clinical Pharmacy now includes gender affirming hormone therapy in their toolkit identifying important therapeutic topics in pharmacy education, but it is included as Tier 3, meaning it is optional but not necessary to include in the curriculum. Newsome would like to see that change.



Cheyenne Newsome, clinical assistant professor at the College of Pharmacy and Pharmaceutical Sciences, introduced gender-affirming health care curriculum in that college after working with transgender patients during her pharmacy residency in New Mexico.

“If there is a community that we need to reach out to and make sure doesn’t have extra harm or extra barriers, it’s the transgender and non-binary community,” she said.

## **Inflammation-fighting protein could improve treatment of rheumatoid arthritis**

By Judith Van Dongen, WSU Health Sciences Spokane Office of Research, Originally published in the [WSU Insider](#)

SPOKANE, Wash. – New research led by scientists at Washington State University has found that a protein known as GBP5 appears to play a key role in suppressing inflammation in rheumatoid arthritis, a potentially debilitating disease in which the immune system mistakenly attacks the body’s own joint tissues.

Published in the journal *Arthritis & Rheumatology*, the discovery could someday lead to new treatments to slow or halt the progress of the disease, which affects an estimated 1.5 million Americans. The researchers said it may also have applications in other inflammatory diseases.



Mahamudul Haque, Salah-Uddin Ahmed, and Anil K. Singh discuss a protein array in 2019

First author Mahamudul Haque first stumbled upon GBP5 back in 2015, when he was working toward a Ph.D. in pharmaceutical sciences in WSU’s College of Pharmacy and Pharmaceutical Sciences. Now a postdoctoral research associate in the WSU Elson S. Floyd College of Medicine, Haque had been tasked with comparing the expression of different genes in joint tissue from rheumatoid arthritis patients and non-diseased joint tissue. Among the thousands of genes included in his analysis, one gene stood out in particular because its expression level was several times greater in rheumatoid arthritis tissue. That gene was guanylate binding protein 5 (GBP5), which helps produce the GBP5 protein.

“That caught our attention and interest,” said senior author Salah-Uddin Ahmed, a professor in the College of Pharmacy and Pharmaceutical Sciences who oversaw the work.

As far as Ahmed and Haque could tell, no other studies had looked at the role of GBP5 in rheumatoid arthritis or other auto-immune diseases, so they decided to take on the task.

The inflammation seen in rheumatoid arthritis causes painful swelling of joint tissues that can result in bone loss and deformed joints. Previous research conducted by Ahmed and his team has suggested that this inflammation is driven primarily by a cytokine protein known as interleukin-1 beta (IL-1 beta). To find out what role GBP5 plays, the researchers designed a series of experiments using rheumatoid arthritis synovial fibroblasts, a type of cell located in the tissue that lines joints and is known to play a role in inflammation and joint destruction. When they manipulated the cells to stop producing GBP5 and then added IL-1 beta to induce inflammation, they saw much higher levels of inflammation in cells that lacked GBP5 versus in non-manipulated cells. What’s more, when they increased levels of GBP5 in those same cells, inflammation triggered by IL-1 beta went down.

“Our initial thought had been that the GBP5 protein played a role in causing the disease, but as we worked to decipher the mechanism of GBP5 in rheumatoid arthritis we found that it was induced in response to inflammation and was trying to cut back inflammation before it goes out of control,” Ahmed said.

In addition, their research revealed how GBP5 interacts with interferon gamma, another cytokine that has been shown to fight inflammation under certain circumstances. When they silenced the GBP5 gene, the researchers found that it reduced interferon gamma’s ability to fight the inflammation triggered by IL-1 beta. This suggests that, on top of having its own anti-inflammatory effect, GBP5 also supports the anti-inflammatory function of interferon gamma.

Finally, the researchers confirmed their findings in a rodent model of rheumatoid arthritis, which showed that joint inflammation and bone loss increased when the GBP5 gene was turned off.

Ahmed said he and his team are conducting additional research to confirm that their findings hold up in other pre-clinical models of rheumatoid arthritis. Pending further, clinical studies to test this concept in rheumatoid arthritis patients at different stages of the disease, Ahmed said their findings could someday lead to the development of new combination therapies that could boost GBP5 levels to reduce inflammation and bone loss.

“What we would like to understand is, if we introduced this protein very early during the onset of rheumatoid arthritis, could we reverse or suppress the course of the disease?” Ahmed said.

Haque also suggested that researchers should take a closer look at the role of GBP5 in other conditions that involve inflammation. This includes other types of arthritis, such as gout and osteoarthritis.

In addition to Haque and Ahmed, authors on the paper include Anil K. Singh—an assistant research professor in the Ahmed lab at WSU—and Madhu Ouseph, a pathologist who was at the Stanford University School of Medicine and is now at Weill Cornell Medical College.

Funding for the study came from the National Institute of Arthritis and Musculoskeletal and Skin Diseases of the National Institutes of Health under award number R01AR072615 and from internal funds provided by Washington State University. Support for the initial findings that laid the groundwork for this study came from the Rheumatology Research Foundation.

#### A NOTE FROM LINDA GARRELTS MACLEAN

Dear Friends and Colleagues,

It’s that time of the year again when we have a chance to pay it forward and support our students! [#CougsGive will take a place on April 14](#) across the University, and it is our chance to help future pharmacists and scientists in pursuit of their degrees and lifelong learning. I feel even more compelled this year, than any other year, to make this ask as so many of our students have devoted countless volunteer hours to help with vaccination efforts across the country. They are juggling virtual learning, rotations, research responsibilities, and putting in extra hours to help vaccinate people in their communities. Not only have they shown their commitment to the profession but proven their resolve to become providers who protect the health of the communities they serve. Sabrina Fischer, class of 2022, shares how the experience has changed her perspective. It is just one of many similar comments that I hear from our students everyday:



“I feel extremely thankful to be a part of this moment in history. I am so proud that my profession has been able to be part of the vaccine effort and help our community get through this pandemic!”

I hope you will join me (virtually, of course!) to support our students on #CougsGive. And if you are unable to contribute, the small act of spreading the word will help us in many ways.

In celebrating our students, I am so proud to present our second-year student pharmacist Kennedy Erickson, who was elected APhA-ASP President by her peers across the nation. This is the first time that the college has had one of our students elected as president! She will attend every board of directors meeting, and as a former APhA trustee, I know how valuable this opportunity will prove to be as just a first step in a very promising future for Kennedy. Though the APhA annual meeting was virtual this year, it was great to see so many familiar faces. Our college had a banner year at the annual meeting with several faculty presenting on topics ranging from care of LGBTQ+ patients to immunizing during a pandemic, as well as students appointed to national leadership roles, and recognized for their work in immunizing local communities.

While it has been a difficult year of back-to-back Zoom meetings, one great aspect that this pandemic has helped catalyze is our ability to share the many innovative and inspiring career journeys of our alumni in the Career Seminar Series. Most recently, we had the great honor of hosting Majid Tanas (class of 2007), Stephanie Paugh (class of 2011), and Stacy Crow Bernard (class of 2010). Majid currently serves as Chief Pharmacy Officer and Vice President of Pharmacy Services at Legacy Health in Portland Oregon after a successful career at the National Institutes of Health. Stephanie in 2019 launched Pharmacist 360, her own consulting business to review medications for older adults living independently in Montana; and Stacy is a Solid Organ Transplant Pharmacist

at Mayo Clinic. They have taken very different career paths, but their messages on entrepreneurship, networking, taking bold steps have truly resonated with our students. Thank you to all our alumni who continue to inspire the next generation of health care providers with your stories.

With best regards and much respect,



Linda Garrelts MacLean, Vice Dean of External Relations  
WSU College of Pharmacy and Pharmaceutical Sciences

## Spotlight on Success

### CPPS announces faculty promotions

The time a student spends in a University are foundational to their future careers. The connections they build and the community they become a part of leave a permanent mark. Faculty are a substantial part of this community. They guide students through the curriculum, sharing their own experiences and expertise to help students forge their own paths.

At the Washington State University (WSU) College of Pharmacy and Pharmaceutical Sciences (CPPS) faculty members are passionate about inspiring the next generation of health care providers and scientists. By giving faculty the opportunity to excel through professional advancement and research, both faculty and students benefit. University promotions recognizes a faculty member's growth through activities in teaching, research and service.

"These faculty members have worked hard to reach this point and I am deeply appreciative for each of them and all of the work they do for the college," said CPPS Dean Mark Leid.

Effective July 1, 2021, seven CPPS faculty in Spokane and Yakima will receive the following respective promotions:

- [Danial Baker](#) was promoted to Regents Professor
- [Josh Neumiller](#) was promoted to Professor
- [Jennifer Robinson](#) was promoted to Professor
- [Angela Stewart](#) was promoted to Professor
- [Megan Willson](#) was promoted to Professor
- [Jeffrey Clark](#) was promoted to Associate Professor
- [Connie Remsberg](#) was promoted to Associate Professor

Baker, who also holds the J. Roberts and Marcia Fosberg Distinguished Professorship of Pharmacotherapy, is the first and only Regents Professor in the 130-year history of the college. The rank of Regents Professor is the highest distinction bestowed by the University upon its faculty and can be held by no more than 30 WSU faculty members at any one time. Baker was one of only two scholars across the University system chosen for the promotion this year. The University awards this honor to those who attain the highest level of professional achievement and selected Baker for his international distinction as a thought leader and expert in clinical pharmacy and drug information.

Baker has been a CPPS faculty member for 38 years and also serves as director of the Drug Information Center at the college. In addition, Baker recently contributed his expertise to the United States Pharmacopeia (USP)



CPPS Dean Mark Leid (left) presents Danial Baker with certificate recognizing his promotion to Regents Professor during Showcase 2021.

[COVID-19 vaccine handling toolkit](#) as the Healthcare Safety & Quality Expert Committee vice chair. The toolkit was developed to support health care practitioners in the storage and administration of COVID-19 vaccines.

“Danial Baker’s continuing contributions to the pharmacy profession are legendary,” said Leid. “I am honored to call him a colleague.”

Promoted faculty from across the University were honored at a virtual [Celebrating Excellence Awards Ceremony](#), on Friday, March 26 at 3:30 p.m.

## **Students advocate for pharmacists in the era of COVID-19**

In an ordinary year, the spring semester is when dozens of pharmacy students descend upon the Washington state capitol for Legislative Day to speak with lawmakers and advocate for the pharmacy profession. As with so many things, this year’s event looked quite different with students traveling not to Olympia, but instead the few short steps to their computers.

On Tuesday, February 16, 54 pharmacy students from Yakima and Spokane logged in to host 61 meetings with legislators and legislative aids for the first-ever virtual Washington State University student chapter-Washington State Pharmacy Association (WSU-WSPA) Legislative Day made possible by WSU-WSPA student leaders including WSU-WSPA Yakima chair Brian Wu, WSU-WSPA Spokane senior student liaison Xiaomeng Jiang, WSU-WSPA Spokane junior liaison Brook Kotlarz, and WSU-WSPA Yakima co-chair Todd Riddle. Their goal? To raise awareness of the training it takes to become a pharmacist and the role pharmacists play in public health particularly as it relates to two upcoming House Bills (HB).

“It is important that our lawmakers understand that pharmacists are the most accessible health care providers, particularly in rural areas, and that our areas of knowledge and service go beyond just medications. This is particularly important during the COVID-19 pandemic, where pharmacists are continuing to provide quality care in addition to vaccination and testing services,” explained Wu.

Pharmacists have been providing delegated prescriptive authority patient care since 1979, as a highly accessible option for medication prescriptions and vaccinations. In 2015, Washington state officially recognized pharmacists as health care providers included in the 2009 Every Category of Provider law. Today, pharmacists serve as an integral part of the health care team. In addition to their traditional roles dispensing medications, pharmacists are found in most of the same patient care settings where one would find physicians and nurses. Pharmacists have also served a critical role in communities during the COVID-19 pandemic by providing point-of-care testing and immunizations for the virus.

Lawmakers understanding the current role of pharmacists in health care is particularly important for bills such as HB 1368, which has to do with funding for COVID-19 response. During Legislative Day, pharmacy students asked legislators to consider expanding pharmacists’ roles when discussing such policies to make health care more accessible, equitable and cost effective.

The other bill students talked about this year, HB 1445, is focused on the definition of compounding for purposes of the practice of pharmacy. Compounding is the art and science of combining ingredients to fit the unique needs of a patient. Rather than ingesting a drug in the traditional form of a pill, pharmacists can use innovative methods to help patients take their medicine such as creating medicine in the form of lollipops or gummy bears to make it more palatable for young children. In 2008 the definition was modified and does not currently align with the Federal Food and Drug Administration definition. As a result, pharmacists face difficulty with mixing even simple solutions such as water or saline with common prescriptions—which would not traditionally be considered compounding. HB 1445 clarifies what constitutes compounding.

Background on current bills is provided to students ahead of Legislative Day by the Washington State Pharmacy Association (WSPA), which also is the formal organizer of the event. The WSPA also offers advice ahead of time to prepare students for what is often their first direct experience with political advocacy—though many students continue to volunteer for the event through all four years of their pharmacy education.

“This will be my third Legislative Day and having the chance to talk to legislators is just as exciting and rewarding as when I was a [first-year],” said Wu. “I can’t wait to be back next year, hopefully back in-person in Olympia.”

## HealthChats Recap: Working in a Health Care Team

How do pharmacists work with doctors and nurses to help their patients thrive?

In the latest HealthChats, representatives from across the Washington State University colleges of Pharmacy and Pharmaceutical Sciences, Medicine and Nursing came together to discuss the importance of working in a health care team and fostering an environment of peer-to-peer learning through a collaborative approach known as interprofessional education. From the first day in the Doctor of Pharmacy program, students are exposed to the value of interprofessional learning and working in a team with doctors and nurses.

Interprofessional education gives health care students in programs such as pharmacy, nursing and medicine the opportunity to learn and practice working alongside their future health care teammates. The team-based approach gives students the opportunity to learn more about the scopes of practice of other health care professions as well as what each discipline brings to the table. To help students in this endeavor, the curriculum begins with communication skills such as problem solving and conflict resolution.

“You want them to feel they have the confidence to speak up when they have something to contribute... we’re hoping it really encourages them to speak [up] because that’s part of your role as an advocate for patients and also just trying to provide the best possible care,” explained College of Nursing Associate Professor Marian Wilson.



WSU pharmacy and nursing students have been working side-by-side administering COVID-19 vaccines at clinics across the Spokane area.

By the end of the interprofessional curriculum students work together on complex patient-care simulations, problem solving in real time to create patient care plans. By working together in the classroom, the students become better prepared to work together in an interdisciplinary health care team in experiences outside of the classroom.

“If you have that situation awareness of how the different scopes of practice, how the team should function, really you have a good baseline for how to help the patient help themselves,” said Michaelle Guerrero, Practice Manager for Range Community Clinic.

As part of their education, health sciences students often take the opportunity to gain experience through volunteer and extracurricular activities, independently or through their student groups. While volunteering during events such as community health or vaccination clinics they often find themselves working alongside students from the other health programs. Previously these experiences required individual preceptors for each discipline, but thanks to a WSU student-led effort in 2019 Washington state now allows a single trained preceptor to oversee students from any discipline.

Now the University is taking their interdisciplinary education efforts a step farther with the Range Community Clinic, a non-profit academic health network affiliated with WSU. The Range Community Clinic William A. Crosetto Mobile Health Care Unit was unveiled in the fall of 2019 and has since hit the road, taking health care professionals and students to the communities that need them most.

Before the Labor Day weekend, the Mobile Unit also travelled to WSU Pullman where representatives from all three WSU Health Sciences colleges worked together to test almost 600 people for COVID-19.

“Range it’s purposely designed to get students from the different professions together on rotation and then have them be overseen by faculty from the different professions. I’m really excited to see how far this goes for our students,” said College of Pharmacy and Pharmaceutical Sciences Associate Professor and Director of Health Outreach and External Residency Research Julie Akers.

Watch the video: [youtu.be/KMaKHu-KDYE](https://youtu.be/KMaKHu-KDYE)



## PHILANTHROPY FOCUS

Calling all Cougar pharmacists! Sign up today to be an Ambassador for #CougsGive on Wednesday, April 14 and help the college meet its mission to serve our students, alumni, and communities. It's easy and fast—simply sign up on the [Cougs Give Ambassadors page](#) then get ready for the big day on April 14 by helping us share the exciting news about #CougsGive to make a difference for our student pharmacists. All donations are tax deductible and will benefit the Dean's Excellence Fund, which provides support for the college's most urgent needs. For more information, please email [Kelly.Sylvester@wsu.edu](mailto:Kelly.Sylvester@wsu.edu) or call 509-369-6675.

## Alumni News

We recently caught up with **Wayne Clemens**, class of 1973, who is keeping busy filling in occasionally at Yoke's Fresh Markets in the Spokane area. He's also traveling with his wife, Pamela, and volunteering at the Union Gospel Mission's health clinic each week in Spokane. Wayne continues to be highly engaged with the college and supports the Compounding Boot Camp as well as other activities to help our student pharmacists.

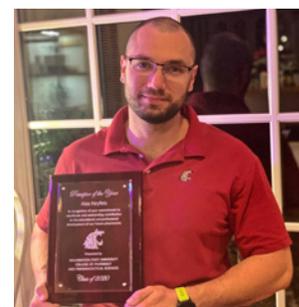
**Lisa (Fried) Osborne**, class of 2002, is still working as a pharmacist in Spokane Valley for Cigna, which owns Express Scripts. She has been there for more than a decade and has worked with other WSU pharmacists at that location, including recent retirees **Shannon O'Keefe**, class of 1982 and **Debbie Askins**, class of 1979.

**Scott Williams**, class of 1978, has had a unique career. After pharmacy school at WSU, he attended the University of Washington and received his dental degree. After many years as a dentist in Sunnyside, Washington, Scott sold his practice a few years ago and is currently taking courses to earn his certification in aviation repair. He will graduate in May and looks forward to being able to work on his own two airplanes. Scott is also helping to coordinate a class reunion for his pharmacy class with the hope of gathering this fall during homecoming at WSU.

**Daniel Healey** (center), class of 2015, from MultiCare Deaconess sent us this photo of himself with his Preceptor of the Year plaque! Pictured with him are current student **Brandon Lujan** (right), class of 2021, and **David Platt** (left), class of 2017. Platt is one of the other pharmacists instrumental in the student program at MultiCare Deaconess. Healy was one of two preceptors selected for the [2020 Preceptor of the Year](#) award for their outstanding contributions to educational development by demonstrating high standards of professionalism, ethics and clinical practice within the experiential training environment.



**Aleksander (Alex) Heyfetz**, class of 2014, from Genoa-1st Avenue Pharmacy sent us this photo of himself with his Preceptor of the Year plaque! Heyfetz was one of two preceptors selected for the [2020 Preceptor of the Year](#) award for their outstanding contributions to educational development by demonstrating high standards of professionalism, ethics and clinical practice within the experiential training environment.



Want to be listed in our alumni updates? Send us your career information or let us know what you've been up to at [pharmacy.gocougs@wsu.edu](mailto:pharmacy.gocougs@wsu.edu)!

## Other News

### 360 Coverage: Pharmacists' vital role in providing health care

"You're already seeing pharmacy practice evolving into something that I would say is more clinical and less dispensary, but I think we are taking more steps in that direction as we start jumping into more immunizations and point of care testing." Pharmacotherapy Associate Professor Kim McKeirnan during her recent conversation with KHQ Local News about the role pharmacists play in health care and administering the COVID-19 vaccine. [See the interview](#)

### With vaccines in more drugstores, Walgreens, CVS and other pharmacies go on hiring sprees

As COVID-19 vaccination efforts continue to gain speed around the country, pharmacies are hiring thousands of pharmacists and technicians to vaccinate customers. WSU College of Pharmacy and Pharmaceutical Sciences faculty members Linda Garrelts MacLean and Kim McKeirnan lend their insight into the growing demand for pharmacists and technicians, along with the immunization training offered through a collaboration between the American Pharmacists Association and the college. [Read more from the Chicago Tribune](#)

### Advocating for LGBTQ+ Education

"When students hear from an individual who has had a bad experience or a good experience, they begin to understand the impact they can make by being a trans-competent provider. It helps them see why it's important to learn this material and it helps them feel more comfortable and confident stepping up to be a good provider." Pharmacotherapy Assistant Professor Cheyenne Newsome is helping lead the way in transgender-related care at the WSU College of Pharmacy and Pharmaceutical Sciences. [Read more about LGBTQ care curriculum in pharmacy schools across the nation from AACP](#)

### WSU studies herb's effect on medication

Diabetic patients taking the natural product goldenseal while taking the prescription drug metformin may be unwittingly sabotaging their efforts to maintain healthy blood glucose levels. Recent research out of Dr. Mary Paine's lab details how taking the natural product affected metformin levels in participants' bloodstreams. [Read more from Yahoo News](#)

### How does toothpaste clean your teeth?

College of Pharmacy and Pharmaceutical Sciences Dean Mark Leid recently talked to Dr. Universe about how toothpaste works and why it's important to brush your teeth. [Read more from Ask Dr. Universe](#)

## Faculty Scholarship

### PUBLICATIONS

Pharmacotherapy Associate Professor **Kimberly McKeirnan**, Pharmacotherapy Associate Professor **Megan Undeberg** and two co-authors published, "[A case of pharmacist-led care team interventions to maximize rural patient quality of life](#)," in the Exploratory Research in Clinical and Social Pharmacy Journal in March 2021.

Pharmacotherapy Assistant Professor **Cheyenne Newsome** and one co-author published, "[Strategies to bring transgender and non-binary healthcare into pharmacy education](#)," in the American Journal of Pharmaceutical Education in February 2021.

### PRESENTATIONS

**Cheyenne Newsome** presented on transgender patient care at the American Pharmacists Association (APhA) virtual Annual Meeting in the student programming track on March 14, 2021.

## SERVICE

Vice Chair & Allen I. White Distinguished Associate Professor of Pharmacotherapy **Josh Neumiller** has been appointed to the American Diabetes Association's FDA Advisory Working Group. This is a new council of experts convened by the ADA to advise their work with the U.S. Food and Drug Administration.

**Cheyenne Newsome** was quoted on integrated care for transgender patients in AACCP's Academic Pharmacy Now article, "[Advocating for LGBTQ+ education.](#)" The article highlights how faculty like Dr. Newsome have integrated care for transgender patients into pharmacy curriculums.

## GRANTS & AWARDS

Pharmaceutical Sciences Assistant Professor **Zhaokang Cheng** was awarded an R01 grant in the amount of \$1,904,234 over four years from the National Institutes of Health-National Heart, Lung, and Blood Institute (NIH-NHLBI) for the project titled, "Cell cycle proteins as key regulators of cardiac chemosensitivity."

## Student Achievement

### DOCTOR OF PHILOSOPHY (PHD) STUDENTS

**Tarana Arman** (Clarke lab) received the third-place award for the prestigious and highly competitive Carl C. Smith Graduate Student Award from the Society of Toxicology (SOT) Mechanisms Specialty Section for her manuscript, "Diet-induced nonalcoholic fatty liver disease slowed recovery of hepatic fibrosis and carcinogenic reprogramming after microcystin-LR toxicity in rats.". Judging is based on an unpublished full-length research manuscript that covers the work presented at the annual SOT conference.

### DOCTOR OF PHARMACY (PHARM.D) STUDENTS

The Washington State University College of Pharmacy and Pharmaceutical Sciences chapter of APhA-ASP received the Operation Immunization 2019-2020 First Runner-Up Award at the APhA virtual Annual Meeting.

**Kennedy Erickson**, class of 2023, was elected as the American Pharmacists Association- Academy of Student Pharmacists (APhA-ASP) national president-elect at the APhA virtual Annual Meeting. This is the first time that WSU has had a student elected to an APhA national leadership position.

**Carissa Teeters**, class of 2023, presented a resolution during the house of delegates related to immunizations at the APhA virtual Annual meeting. The resolution passed.

**Zachary Coleman**, class of 2022, was selected to serve as the chair of the national Policy Standing Committee at the APhA virtual Annual Meeting.

**Elizabeth Satterwhite**, class of 2022, published, "[Metformin extended-release oral solution](#)," in the Clinical Pharmacology Update in the American Diabetes Associate journal Clinical Diabetes in February 2021.



College of

Pharmacy and  
Pharmaceutical Sciences

WASHINGTON STATE UNIVERSITY