

CougarRx News

WASHINGTON STATE UNIVERSITY

Events

Ways to Give

Top Stories

Alumni News

Faculty Scholarship

February 2022

MESSAGE FROM THE DEAN

Dear Friends and Colleagues,

Happy belated New Year to all—both in the lunar and Gregorian calendar! For those who recently celebrated the Lunar New Year, we have just entered the Year of the Tiger, which symbolizes strength and braveness, and exorcises evils. This Year of the Tiger will be a year for gaining back some strength and vitality after a hard-working and often tiring 2021 Year of the Ox. Though I am a person of science (and not astrology), I take that to mean that we are going to come out of this pandemic and rock 2022. As we make our way through the omicron wave, I'm grateful for everyone in the college and our partners who remained steadfast yet flexible in providing our students with a quality education and staying on track to ensure their on-time graduation and success in our program.



I've spent a large part of the new year visiting alumni and partner sites across the state, many working in rural and underserved communities. Julie does a great job summing up the value of these trips in her note below. Spending time on the road and passing through farming communities always strengthens our resolve to serve our state's underserved and underrepresented populations through our [Rural Health Initiative](#) (RHI). Thanks to the support we received thus far, I'm pleased to announce that we have made the first steps towards implementing the RHI, with the recruitment of the first class of students for the [rural health track](#). This is part of an ambitious 10-year plan to place student pharmacists and future providers, into rural and underserved communities. I encourage anyone to [recommend students](#) who may be interested in rural health to consider applying to our program. Likewise, we appreciate all guidance you may offer in this area. While we have an overarching plan laid out before us, feedback from alumni, partners, and friends in the trenches has been invaluable in focusing our goal to serve these communities. I thank all the alumni and partner sites who have taken time to meet with us to share their stories and insights.

Finally, in celebration of Black History Month, I share history from our own college. Jessie Senora Sims Walker was the first African American to graduate from Washington State University back in 1913. At the time the college was known as the School of Pharmacy at Washington State College. Although Jessie worked in a Pullman pharmacy during her student days, the racial climate of the time prevented her from practicing as a professional pharmacist until several decades after graduation. After earning her pharmacy degree, she married Harry L. Walker. They lived in Seattle and later moved to Tacoma, and Jessie became well known for a catering business she operated out of her home. She later went on to lead a successful career as a pharmacist in Tacoma. Jessie was honored as a distinguished alumna of the college in a special ceremony in Spokane in 1964. She died at age 87 in Tacoma on May 17, 1978. Her memory lives on today through her student scholarship fund.

The days are getting longer, the thermometer is creeping up, and spring will be here before we know it. I thank everyone for a great start to the new year. Happy February and Valentine's Day, everyone!

Sincerely,

A handwritten signature in black ink that reads "Mark Leid". The signature is written in a cursive, slightly slanted style.

Mark Leid, Professor and Dean

WSU College of Pharmacy and Pharmaceutical Sciences

Top Stories

From Doctor of Pharmacy to Doctor of Love

As the associate dean of external relations, Julie Akers has helped to connect people in more ways than one. When she is not advocating for the pharmacy profession or teaching a class on pharmacy law and management, she officiates weddings. Most of the weddings have been of student pharmacists who meet their life partners while in the WSU doctor of pharmacy program.

“In pharmacy school, you get to meet people more intensely than you would in undergrad. Our students spend three didactic years together where they have every class together, meet with the same people, every day, every year, for three years. It pushes you to have stronger relationships because you spend that time together going through the same struggles and triumphs,” said Akers, who has taught at the college for nearly 10 years. “I think that’s why you see a lot of relationships form in the program.”

In the last five years since she was ordained, Akers has married five couples from the college, including students and faculty. Shelby Denney (nee Williams), class of 2017, was the first wedding she ever officiated. Soon, Akers’ ability to marry couples traveled by word of mouth. Students who met their life partners while in pharmacy school would ask her to marry them.

“Pharmacy school fast-forwards your relationships. Because you’re spending such a significant amount of time together, day in and day out, you find out very quickly whether you’re compatible or not,” says Akers.

The weddings she has officiated are as eclectic as the students themselves. In a recent wedding she married two former students, Thomas Maslo and Katelyn Cashman, both class of 2019. Traditionally, a groom stands with the officiant waiting for the bride-to-be to come down the aisle. Akers says, fitting with his outgoing personality and passion for kayaking, Thomas paddled over on a kayak across a pond to the ceremony arch. The theme song of Jaws played in the background, and though it wasn’t the typical entrance for a groom to meet his future wife, it left an indelible impression on Akers. She says watching students break out of who they were as young adults and move into adulthood has been one the most rewarding aspects as an officiant and professor.

“It’s great when you see two people elevate each other and bond through common interests,” says Akers.



Thomas Maslo and Katelyn Cashman met as WSU doctor of pharmacy students. Akers officiated their wedding in May 2021.



Akers stands with class of 2019 student, Ahmed Bassyouni, as he awaits his bride, Danielle Deardorff. The two married in September 2021 at a ranch overlooking the Cascade Mountains in Arlington, Washington.

WSU and Mobius educate community on healthy lifestyle habits in February

Mobius Discovery Center in Spokane will be teaming up with Washington State University’s College of Pharmacy and Pharmaceutical Sciences and Dr. Universe to educate children and the public about health and wellness each Saturday in February. Along with sharing the basics of healthy lifestyle habits and understanding the human body, the event aims to inspire children in STEAM-related subjects. Families can also sign up for the Dr. Universe

club, which hosts regular podcasts, videos, and activities to inspire young scientists and have their most burning questions answered by professors and researchers at WSU.

Student pharmacists from the WSU doctor of pharmacy program will lead the activities, sharing their expertise on basic functions of the human body.

“WSU is training future pharmacists to protect the health of local communities. These activities are just one example of how pharmacists build bridges to help people live longer, healthier lives,” said Associate Dean of Professional Education Jennifer Robinson who helped to organize the activities at Mobius.

Health + Wellness Series will be free with admission and will include the following activities on each Saturday from 10:00am- 2:00pm:

February 5 | Blood Sugar

Activities include understanding insulin and how the pancreas works, understanding the amount of sugar in everyday foods, and visualizing a healthy diet.

February 12 | Vitals of Hand Hygiene

Learn how quickly germs transfer from person to person using Glo Germ Powder. Student pharmacists will share how proper hand washing can prevent the spread of germs.

February 19 | Heart and Lungs

Ever wonder how your heart and lungs work? Children will create models of the heart and lungs to understand the basic anatomy of these vital organs and how they work.

February 26 | Blood

Discover the components of your blood and how it is pumped through the body. Through various sensory activities, children will learn about blood type and how the heart pumps blood through the body.

Student Spotlight: APhA-ASP regional member at large Tajana Vujic

Second-year pharmacy student Tajana Vujic was recently appointed in the American Pharmacist Association Academy of Student Pharmacist (APhA-ASP) as regional member at large, a national position, where she will be able to advocate for her peers. Vujic shares how she hopes to help the profession and why she encourages future pharmacy students to get involved with student organizations.

What does the regional member at large do?

The regional member at large position makes sure that we are networking with other regional members and staying on track of the things we do in APhA. Our goal is recognition and communication. We are charged with gathering content for our APhA student publication, the Student Pharmacist Magazine. This means creating fun events and staying connected with student pharmacists on social media. We are the “social butterflies” for the organization, so it’s important that we communicate and network with our student colleagues.

How did you get selected as regional member at large?

I was recommended and recruited by our current APhA-ASP president, Kennedy Erickson, who is a third-year pharmacy student at our college. She inspired me to investigate this position. Once I understood what the role required, I was looking forward to applying for the position and excited for elections!



What are the most pressing issues you hope to bring to the table as regional member at large?

The most pressing issue for me is to eventually change the role of pharmacists in prescribing and addressing patient care. Pharmacists are still misunderstood in their role as a health care provider, and I would like to change that for my future colleagues. Most people still don't know pharmacists are doctors. This is because a doctor of pharmacy is a relatively new degree, and a requirement that the U.S. implemented for all pharmacists. It was introduced as a professional prerequisite in 2006. Prior to this mandate pharmacists only needed an RPh (Registered Pharmacist) license after their name for them to work as a pharmacist. Because of this change, many people still do not understand that pharmacists are specialized doctors. I think that pharmacists need to be able to prescribe more than what they can now. My role will be to advocate for our profession by speaking to the house of representatives for our state. I did this last year with recognizing the prices of insulin. I represented our school and had discussions with a couple of our senators and they were able to speak on the floor about this issue. We were able to bring insulin prices down for our state and it was an amazing experience!

For students who are considering pharmacy school, can you tell them why it's important to get involved with pharmacy student organizations and how has it impacted your career in pharmacy?

It is very important to get involved in student organizations because it exposes you to connections that you will later find down the line to be very important in getting a job as a pharmacist. It also helps you learn more about yourself as an individual and fosters your interests in various fields of work you'd like to go into one day.

Getting involved in student organizations has also opened many doors for me. I was able to put myself out there and get to know people on a different level. Student organizations has helped me make friends outside of school which gave me the opportunity to be recommended for a regional position allowing me the opportunity to go to national conferences this year. With this opportunity, I am able to apply for residency and hopefully have a chance to get matched with my residency of choice. I think being recognized nationally is unique and special and not a lot of people can say they work with national positions across the country!

A NOTE FROM JULIE AKERS

Dear Friends and Colleagues,

Happy New Year from the advancement team! We have had a great start to the new year visiting alumni and catching up with friends of the college. Regrettably, due to the surge in omicron, the January 27 CougaRx Nation event in Walla Walla had to be postponed to June 23. Dean Leid, Director of Development Kelly Sylvester and I still travelled to Walla Walla to meet with alumni and friends of the college.

We caught up with Arthur (Art) Griff ('51) at a diner for an early lunch and I could have listened to Art and Dean Leid talk for hours! As they shared stories, we learned that Art gave Dean Leid his first job in pharmacy. Art also said he takes credit for everything good Mark has done in his career. Tallman Drugs, which Art owned and then sold to another Cougar pharmacist, is now the only independent pharmacy in Walla Walla, and was sold to an out-of-area owner several years ago. It's happening every day in communities across the country and it's impacting access to health care. On a brighter note, Art recently hit a milestone as a Diamond Donor, which means he has been giving annually to the college for 50 years!

We also visited with JoAnn Schultz who served as president of the Walla Walla Eagles Aerie 26, a nonprofit which raises money to support progress in kidney and heart disease, diabetes, cancer, spinal cord injuries and more. As president of the state organization, she raised funds for her chosen philanthropic endeavor and selected Dr. Travis Denton's lab, which uses medicinal chemistry to study neurological disorders such as ALS, Alzheimer's disease, Parkinson's disease, Huntington's disease and more. JoAnn shared that she lost her husband Larry Block



to PSP, Progressive Supranuclear Palsy in 2020 (PSP is a rare parkinsonian disease). She happened to see an article about Dr. Denton's research and decided this is where she wanted the donation to go.

We made an unexpected stop at the old Crescent Drug that had become a law office. Paula Mochel, granddaughter of owner Charles Franklin Mochel (class of 1910), has established a scholarship in his honor to benefit industrious students in need of financial support. We were on a mission to find the old pharmacy and managed to snap photos of antiques and memorabilia. That evening we had a wonderful dinner with Dalari Allington ('10) and Clell Hansenbank ('15) both who work for Providence St. Mary Medical Center in Walla Walla.

Finally, on our way back to Spokane, we stopped through Dayton to visit Elk Drug owner Sean Thurston ('10), and alumni Tory Knebel ('19) and Cierra Schafer ('21). Sean and his team are providing amazing care to Dayton, as well as surrounding areas, including all the way to Walla Walla. His successful independent pharmacy business model was inspiring in a time when many in community pharmacy are struggling. Sean is doing many things right, including having so many Coug pharmacists work for him! It doesn't hurt that Elk Drug was previously owned by Paul Hendrickson ('68) who set Sean up for success.

Thank you to all the alumni and friends we had a chance to catch up with on this trip. We look forward to seeing everyone on June 23 in Walla Walla at the Cougar Crest Winery for our CougaRx Nation event. And, for our Coug pharmily in the Lewis Clark Valley, we are planning a CougaRx Nation event for April 28 and will share details soon. I look forward to planning an event in my hometown (Lewiston High School '93).

With my best and, as always, Go Cougs!



Julie Akers, Associate Dean of External Relations
WSU College of Pharmacy and Pharmaceutical Sciences



Restored pharmacy counter from The Crescent Drug.

Spotlight on Success

Researcher on the Rise: Q&A with Chris Szlenk

By Judith Van Dongen, originally published via [WSU Spokane Research News](#)

Looking for a change after completing his undergraduate degree in chemistry, Chris Szlenk left his home state of Alabama in 2017 to pursue a PhD at Washington State University's College of Pharmacy and Pharmaceutical Sciences. A rotation in the lab of assistant professor Senthil Natesan got him interested in the field of computer-aided drug design. Szlenk's research in that area recently got him honored as a [highlighted trainee author in the October 2021 issue of the journal Molecular Pharmacology](#).

What exactly is computer-aided drug design?

Drug design as a process is expensive and time-consuming and the number of drugs failing in clinical trials is extremely high. Computer-aided drug design allows you to simulate molecules and their respective proteins, as well as their environment—such as water and cell membranes—at an atomistic level. You can think of it as a computational microscope. You can look at the atom-by-atom level to see how things are interacting with each

other and then use that information to develop molecules that better interact with their particular receptor target or with the environment around them. Running these simulations prior to doing any clinical trials can help save money, time, and effort in the long run.

What got you interested in this field of research?

When I came to WSU, I was interested in how drugs interact in the body. I didn't necessarily want to do wet lab work—I was much more interested in visualizing at an atomistic level what's going on with a drug, like how a molecule binds to the receptor. I only became exposed to the concept of computer-aided drug design when I sat down for interviews to pick a mentor here. When I met my current mentor—Dr. Senthil Natesan—basically everything he explained was what I've always wanted to do. So, I decided to do my first rotation in his lab and just fell in love with it and was able to stay on.

What type of research do you do within the field of computer-aided drug design?

Our lab is focused on how we can use the cell membrane in a rational manner. The cell membrane is on the surface of any cell and is a very complex mixture of lipids—or fat molecules—along with other components. A lot of proteins are actually embedded across this membrane that separates the outer and inner layer of the cell. We're interested in how a drug gets to its particular target by using that membrane interaction. This is one reason why I study membrane-embedded proteins. The other reason is that the majority of FDA-approved drugs bind to these membrane-embedded targets, so it's important to get more information on how that process happens.

What are some recent research projects you've worked on?

I had a recent publication about beta-2 adrenergic receptors. Drugs that are used for the treatment of asthma and chronic obstructive pulmonary disorder (COPD) target and activate that receptor. Experimental results from other research groups showed that there's a membrane interaction that affects how quickly these drugs get to their target. Basically, it affects the onset of action for some drugs and might also be implicated in their duration of action. In my paper I described in detail how that process happens, which helps to explain why some drugs have quick onset of action and a short duration of action, while others have slower onset but a longer duration of action.

I also study the mu-opioid receptor, which is targeted by opiates, or pain-relieving medications. The reason we're looking at that is to see whether we can design a molecule that binds in the transmembrane region of the receptor and still gives you the benefits of common opioids but with fewer negative side effects, so that your breathing rate isn't affected, you don't get as much constipation, and your tolerance doesn't build up as quickly as with common opiates. In that case you could perhaps use a smaller dose of an opiate with that molecule to reduce overdose potential.

Two other membrane-embedded proteins I've worked with are the GABA subtype A receptor—which facilitates binding of anti-anxiety medication such as Xanax and Valium—and resolvins, which are molecules that help fight inflammation in the body. That last project might eventually prove helpful in the development of therapeutics for treating inflammation.

What is your proudest achievement so far?

I've published four papers and was first author on three of them. I'm particularly proud of the fact that people have read those papers, synthesized the information, and thought they were relevant enough to cite in their own papers.



Chris Szlenk is a graduate student in the pharmaceutical sciences and molecular medicine program at the WSU College of Pharmacy and Pharmaceutical Sciences.

What do you hope to see come out of your work in the long run?

The ultimate goal would be for this work to lead to improved therapeutics with limited negative side effects, a better understanding of how drugs actually get to their particular target, and the ability to design molecules that use these drug-membrane interactions in a rational manner.

Besides research and classes, what has kept you busy here at WSU?

I served as vice president of the Graduate Research Student Association and PhD senator for the Associated Students of Washington State University Health Sciences (ASWSUHS) last year and was vice president of the Health Sciences Student Advocacy Association for three years. I was also selected as a 2020 Washington Fellow for the American Society of Pharmacology and Experimental Therapeutics (ASPET), which allowed me to go lobby for science funding to our state senators.

When will you graduate, and what's next for you?

I'm defending my dissertation this coming March. After I graduate, I hope to land a job working in research and development for a pharmaceutical company.

Do you want to give a shout-out to anyone who has helped you succeed?

I want to thank my mentor, Dr. Senthil Natesan, who has given me the opportunity to really dive into the issues and difficult questions and let my curiosity guide me. My graduate student cohort and my wife have also been really supportive.

This interview has been edited and condensed for clarity.

Alumni Spotlight: Pharmacy Career in Nuclear Pharmacy

Brady Jens, class of 1992, owns the NuQuest Pharmacy in Grand Junction, Colorado. He shares his insight on what nuclear pharmacists do and how future pharmacists can gain experience in this specialty area of pharmacy practice.

What does a nuclear pharmacist do?

A nuclear pharmacist compounds radioactive isotopes that are used for diagnostic medical testing. The nuclear pharmacy compounds the isotopes, then delivers them to a hospital or clinic. The nuclear medicine technologist at the hospital or clinic performs the nuclear medicine procedure. Then the technologist gives the results of the exam to a physician and they will make a diagnosis based on the results of the exam. The majority of the isotopes that we compound are for nuclear cardiology. If a patient has a suspected blockage in one or more of their coronary arteries, a physician will order a nuclear cardiology exam.

What led you on this career path?

During career day at WSU, the local nuclear pharmacy in Spokane was there interviewing to hire a nuclear pharmacist. I took a tour of the nuclear pharmacy and I was hired there as my first pharmacy job after graduation. Eventually, I went to open my own nuclear pharmacy.

What is the most rewarding part of your job?

The most rewarding part of my job is knowing that I am helping people by providing accurate diagnostic testing so patients are receiving the best medical information to improve their health.



This is the compounding area where a nuclear pharmacist will mix the appropriate dosage of radioactive material to be used for individual patients.

What is the best career advice you can offer student pharmacists?

If you are interested in learning more about a career in nuclear pharmacy, reach out to the local nuclear pharmacy in the area and see if you can take a tour and shadow the pharmacist to get a better feel for the profession. Most cities with a population over 250,000 will have one or more nuclear pharmacies.

Personalized Medicine and the Future of Pharmacogenomics

Pharmacogenomics, a budding field of personalized medicine, is the study of how genes influence an individual's response to treatment with medications. Drug-related morbidity and mortality due to unoptimized medication therapy is estimated to cost the United States \$528 billion annually. According to the Centers for Disease Control and Prevention, adverse drug events (ADEs) have been categorized as a leading cause of preventable death in the United States. Almost 500 therapeutic products recognized by the Food and Drug Administration (FDA) include pharmacogenomic information in their drug labeling. Most of us carry at least one actionable pharmacogenomic variant that impacts the way we metabolize medication. Approximately, 20% of prescribed medications in the United States carry a labeled pharmacogenomic recommendation based on these variants. Major therapeutic areas involving these medications include oncology, psychiatry, cardiology and pain. Pharmacogenomics can help to remove the trial-and-error approach by providing health care professionals with informative guidance from the very beginning of treatment to prevent toxicity and improve overall effectiveness of medication use. For this reason, the College of Pharmacy and Pharmaceutical Sciences is launching an [8-week Interprofessional Clinical Pharmacogenomics Certificate Program](#) on March 8, 2022. This program will be offered to both pharmacists and physicians for 16 hours of continuing education (CME/ACPE).

Although the origin of pharmacogenomics is unclear, early signs of its relevance potentially date back to 510 BC, where certain individuals experienced fatal hemolytic anemia (destruction of red blood cells) when ingesting fava beans. This was later shown to be due to an inherited deficiency of glucose-6-phosphate dehydrogenase (G6PD), which is important for protecting red blood cells from oxidative stress. G6PD deficiency is more commonly observed in African and Mediterranean ancestry. According to recommendations from FDA drug labeling, individuals who have G6PD deficiency should not use certain medications. Some examples include rasburicase (drug used for patients who undergo chemotherapy) and antimalarial primaquine. For this reason, knowledge of an individual's genes can provide a personalized approach to ensure that an individual receives right medication and right dose.

Together, the mapping of the human genome project completed in 2003 and advances in technology have accelerated pharmacogenomic discovery broadening its clinical utility in practice settings. Today, the costs of whole genome sequencing have decreased significantly to less than \$1,000 per individual. Pharmacogenomic testing for an individual is usually ordered when a health care provider suspects intolerable side effects to a medication or if a medication is not working. This is known as reactive testing. Although payer coverage for pharmacogenomic testing is not universally accepted in the United States, it is improving. Billing and coverage of some single gene tests has been supported by current procedural terminology (CPT®) codes, a universal language for coding medical services and procedures to streamline reporting and increase accuracy and efficiency. However, multigene panels are considerably more cost-effective than single gene panels, with this former approach covered by some large commercial payers, specifically, for individuals who have failed treatment with medications such as antidepressants and antipsychotics.

Greater clinical uptake of pharmacogenomic testing and consumerism is anticipated to grow exponentially in the future. Professional pharmacy organizations such as American Society of Health System Pharmacists (ASHP) support efforts to incorporate pharmacogenomics into clinical practice. Therefore, education of health care professionals is critical to keep pace with the rapidly evolving field of pharmacogenomics. This education is necessary for meeting the current needs of patients and ensuring optimization of patient treatment outcomes and long-term cost savings. The Interprofessional Clinical Pharmacogenomics Certificate program is an interactive practice-based program designed to equip physicians and pharmacists with greater readiness, confidence,

and advocacy for optimizing medication management using pharmacogenomic data. This program will provide participants with a broad knowledge of fundamental pharmacogenomic principles and enhance their overall capacity to apply this information across multiple therapeutic areas in various practice settings to improve the delivery of patient care.

To learn more about Washington State University's new course on pharmacogenomics, please email pharmacy.ce@wsu.edu.



PHILANTHROPY FOCUS

We are excited to announce a new scholarship endowment is being established at the college by Steven Smith ('80) and Natalie Stewart-Smith. The **Steven Smith and Natalie-Stewart Smith Scholarship** will give preference to a veteran with Federal or National Guard active-duty service in the Army, Navy, Air Force, Marines or Coast Guard.

Steven is an alumnus of the College of Pharmacy, class of 1980, while his wife, Natalie Stewart-Smith, received a master's degree from the WSU Department of History in 1980. Both were commissioned officers in the United States Army during the 1970s. Steven earned a doctor of pharmacy degree from the University of Tennessee Center for the Health Sciences in 1982 and went on to have a 17-year career as a clinical pharmacist in hospital practice. He then became a physician assistant and worked in family practice and internal medicine until his retirement 2017. Natalie earned her second master's degree in reading education from Edinboro University in Edinboro, Pennsylvania in 1992. This led to a 25-year career in education. Natalie spent the majority of her time as an educator at the New Mexico Military Institute, where she achieved the rank of full professor. Natalie's master's thesis at WSU was on the women Air Force service pilots of World War II. This was the first academic study of the extraordinary group of women fliers. Natalie has made many presentations over the years about the women Air Force service pilots, and she continues to speak on the topic of women's aviation.

Alumni News

Congratulations to **Brandy Seignemartin** ('20)! She recently accepted the position of executive director for the Alaska Pharmacist Association and faculty at the University of Alaska Anchorage/Idaho State University College of Pharmacy program. [Read more](#)

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!

Prescription for Love

In honor of Valentine's Day we're spotlighting some of our pharmacy alumni couples! If you have a pharmacy love story you'd like to share please email us your story and a few pictures to pharm.social@wsu.edu and we might feature you on the college's social media feeds.

Healthy competition turns to marital bliss

Although Grant MacLean ('73) and Linda Garrelts MacLean ('78) both graduated from the Washington State University (WSU) pharmacy program, they never met in college. It wasn't until they were working as competing pharmacists that they initially became acquainted. Grant was working for a Rosauers location on the South Hill in Spokane, Washington, while Linda was working for Jones Pharmacy just two blocks away. They had their first date just after Linda graduated from the WSU College of Pharmacy in 1978, and as they say, the rest is history. Their professional rivalry saw an end shortly thereafter when Grant became the Director of Pharmacy for Rosauers and moved to their corporate office. It was a job he held for the rest of his career.

Grant was proud to have been one of the first to put pharmacies into grocery stores in the four northwest states where Rosauers operates. Linda stayed at Jones Pharmacy and went on to purchase the pharmacy with business partner Rick Jones. Linda and Rick eventually owned three pharmacies until they sold them in 2000. Grant retired from Rosauers, which was an employee-owned company when it sold in 2000.

Grant and Linda were married in 1983 and found themselves caught in a hurricane on their honeymoon in Mexico. That didn't deter them from giving up on future travel to Mexico or anywhere else, as they have been avid travelers throughout their marriage. They return to Mexico almost every year for the holidays and have been all over the world on vacations. They love traveling with family and friends!

Their three daughters have been the center of their lives and they are very proud of their family. Kaili, their oldest, is an attorney and is married to Lonnie who works with DocuSign. Their middle daughter, MacKenzie, teaches at Cataldo Catholic school and is married to Nick who is a software engineer. Cassie, their youngest, works for Amazon in Seattle. All three daughters love tennis, skiing and swimming and they still enjoy doing all those activities together on vacations, even in Mexico, where it all began.

Linda said she is very grateful to have had the opportunity for a second career (post pharmacy ownership) in academia with the WSU College of Pharmacy and Pharmaceutical Sciences (CPPS). She especially enjoyed being a part of the profession on the academic side because it was so fulfilling as she watched and mentored so many young pharmacists become leaders in the profession.

Grant and Linda will celebrate 39 years of marriage on October 14, 2022. Congratulations to the MacLeans and their family.

Linda Garrelts MacLean retired from the WSU CPPS on July 1, 2021 and will be honored with the R. Keith Campbell Lifetime Achievement Award (along with John Oftebro, '65) at the 2022 Crimson Gala on Friday, October 7 in Spokane, Washington.



Grant MacLean and Linda Garrelts MacLean will celebrate 39 years of marriage October 14, 2022.

**JOIN OUR
TEAM**

We're looking for dedicated individuals to join our Cougar community for positions in recruitment, experiential services, research, and more!

Click to see positions available at the college and across WSU.

Finding love through serving others

There's something in the air at pharmacy school. Every year we learn about students who have met while in college and end up getting married, starting families, and living the dream. One such couple is Cassandra (Cassie) Song, who graduated in 2015, and Eric Wilson, who was a year behind her in pharmacy school. Here's their story, in Cassie's words, and it's pretty sweet!

"Eric and I met during Eric's orientation of his first year in pharmacy school. I was in my second year and was one of the orientation leaders at that time. We had our first official date a few weeks later at the ZZU in Pullman over wings and football.

Eric and I could relate to each other right from the start as we both had been starting pharmacy school a little later in our lives and both had a history of service. Eric had been in the army for six years and done two tours in Afghanistan and the Philippines. I had come back from serving in the Peace Corps in Turkmenistan. Everything with each other was easy from the start and we clicked almost immediately. We both took our studies seriously but also loved having fun and really made the most of our time while we were both in school. We ended up getting married while Eric was working as a pharmacist, and I was still a resident at the VA in 2017. We got married in Gig Harbor. The ceremony was really a pharmacy reunion at that point and tons of fun."

Fast forward to 2022, Eric is now a pharmacy manager at Safeway in Enumclaw running a very busy and successful pharmacy. For Cassie, after two years of residency at the VA, and some years as residency director, she is now a Formulary Program Manager for the VA Puget Sound in Seattle. They are very busy parents of Silas, their two-and-a-half-year-old son and are expecting a baby girl at the end of May. Congratulations to Cassie and Eric, and Happy Valentine's Day!



Dear Santa: This year I would like to become a big brother! May 2022

Other News

WSU pharmacy students aim to help others

In honor of National Pharmacist Day January 12, pharmacy students talk about the role of the pharmacist and what made them pursue the field.

[Read more from the Daily Evergreen](#)

Cybersecurity, pharmacy residency programs funded in 2022 supplemental budget proposal

Funding requests to support new cybersecurity and pharmacy programs at Washington State University are fully supported in Washington Gov. Jay Inslee's proposed 2022 supplemental budget. If embraced by the legislature, the College of Pharmacy and Pharmaceutical Sciences would receive about \$341,000 in state support to develop a one-year psychiatric pharmacy residency program in tandem with the University of Washington.

[Read more from the WSU Insider](#)

Studies suggest cannabinoid metabolites result in harmful drug interactions

Major metabolites for cannabinoids may interfere with two families of enzymes that help metabolize a wide range of drugs prescribed for a variety of conditions.

[Read more from Pharmacy Times](#)

Faculty Scholarship

PUBLICATIONS

J. Roberts and Marcia Fosberg Distinguished Regents Professor of Pharmacotherapy and Director of the Drug Information Center **Danial Baker** with five co-authors published, "[Impact of educational intervention in evidence-based drug information in interprofessional practice at a tertiary-level care hospital,](#)" in the Journal of Interprofessional Education and Practice online in January, 2022.

Danial Baker and Pharmacotherapy Clinical Professor and Director of Quality Assurance Improvement & Accreditation Preparation **Terri Levien** published, "Drug evaluation – avacopan (Tavneos): updated evaluation," in Wolters Kluwer Health's The Formulary Monograph Service (FMS) in January 2022. Wolters Kluwer Health is a drug and health information publisher, the FMS is a resource used in the formulary decision making process for hospitals and managed care systems on recently released and investigational drugs.

Danial Baker published, "Drug evaluation – tisotumab vedotin-tftv (Tivdak)," in the FMS in January 2022.

Terri Levien and **Danial Baker** published, "Drug evaluation – varenicline solution nasal spray (Tyrvaya)," in the FMS in January 2022.

Drug Information Center Resident **Regan Smith**, **Terri Levien** and **Danial Baker** with student co-author **Victoria Chase** (PharmD class of 2022) published, "Drug evaluation – lonapegsomatropin-tcgd (Skyrizi)," in the FMS in January 2022.

Regan Smith, **Terri Levien** and **Danial Baker** with student co-author **Kellyan Nguyen** (PharmD class of 2022) published, "Drug evaluation – mobocertinib succinate (Exkivity)," in the FMS in January 2022.

Danial Baker published, "Drug utilization evaluation – avacopan (Tavneos)," in the FMS in January 2022.

Pharmacotherapy Associate Professor **Megan Undeberg**, Pharmacotherapy Associate Professor and Director for the Center for Pharmacy Practice Research **Kimberly McKeirnan**, and one co-author published, "[Respecting the patient's choice: a case of possible drug-induced parkinsonism,](#)" in Pharmacy – A Journal of Pharmacy Education and Practice in January 2022.

Kimberly McKeirnan, **Adriel Supnet** ('21 PharmD) and **Connor Capdeville** ('21 PharmD) published, "[Exploring the relationship between stress and student leadership among student pharmacists,](#)" in Currents in Pharmacy Teaching and Learning in December 2021.

Allen I. White Distinguished Associate Professor of Pharmacotherapy **Joshua Neumiller** with three co-authors published the book chapter, "Glucagon-like peptide-1 receptor agonists (GLP1-RA)," in the second edition of Diabetes and Kidney Disease.

Associate Dean for External Relations and Pharmacotherapy Associate Professor **Julie Akers**, Elson S. Floyd College of Medicine Collaboration for InterProfessional Health Education Research & Scholarship Coordinator **Jennifer Anderson**, Elson S. Floyd College of Medicine Director of Interprofessional Education & Research **Barbara Richardson** and **Brandy Seignemartin** ('20 PharmD) published, "[New interprofessional health sciences precepting legislation provides opportunity to assess student and preceptor knowledge, experience, and confidence,](#)" in the Journal of Interprofessional Education & Practice in June 2022.

SERVICE

Pharmaceutical Sciences Associate Professor **Sue Marsh** taught cardiovascular physiology to two seventh-grade science classes at the Institute of Science and Technology at North Central High School on December 6, 2021.

Josh Neumiller has been appointed for a two-year term on the American Diabetes Association's (ADAs) Science and Healthcare Executive Council. The Science and Healthcare Executive Council is advisory to the ADA Board of Directors through the Chief Science and Medical Officer (CSMO) and the Chief Executive Officer (CEO). The Council is co-chaired by the ADA Presidents of Medicine and Science and Health Care and Education.

Josh Neumiller was acknowledged as an expert consultant for the development of the [2022 American Diabetes Association \(ADA\) Standards of Medical Care in Diabetes](#).

Student Achievement

PHARMACEUTICAL SCIENCES AND MOLECULAR MEDICINE STUDENTS

Deepak Ahire (Prasad lab) with faculty co-author Pharmaceutical Sciences Associate Professor and Director of Industry Engagement **Bhagwat Prasad** and four others published, "[Inter-individual variability and differential tissue abundance of mitochondrial amidoxime reducing component \(mARC\) in humans](#)," in the peer-reviewed, Journal of Drug Metabolism and Disposition in December 2021.

DOCTOR OF PHARMACY (PHARMD) STUDENTS

Karen Vo, a third-year PharmD student in the Paine lab, was selected to participate in the [FDA Pharmacy Student Experiential Program](#), of which the goal is to provide an opportunity to learn about the FDA's multidisciplinary processes for addressing public health issues involving drugs, biologics, and medical devices. She will be working with the pediatrics group within the Office of Clinical Pharmacology in fall 2022 as part of her fourth-year Advanced Pharmacy Practice Experience (APPE) requirements.

Victoria Chase (class of 2022) with faculty co-authors **Regan Smith**, **Terri Levien** and **Danial Baker** published, "Drug evaluation – lonapegsomatropin-tcgd (Skyrizi)," in the FMS in January 2022.

Kellyan Nguyen (class of 2022) with faculty co-authors **Regan Smith**, **Terri Levien** and **Danial Baker** published, "Drug evaluation – mobocertinib succinate (Exkivity)," in the FMS in January 2022.



WASHINGTON STATE UNIVERSITY
**College of Pharmacy and
Pharmaceutical Sciences**

Washington State University College of Pharmacy and Pharmaceutical Sciences
412 East Spokane Falls Blvd., PBS 130, Spokane, WA 99201
pharmacy.wsu.edu