Dear Friends and Colleagues:

The College of Pharmacy and Pharmaceutical Sciences is about to embark on developing its next strategic plan, led by Associate Dean Andrea Lazarus. This effort will proceed through the current academic year, culminating with the college’s annual retreat after the spring semester. This year faculty and staff will gather together to agree, disagree, laugh, perhaps cry, and eventually finalize the plan for implementation beginning July 1, 2019. I am confident that a good time will be had by all. After all, who doesn’t love (the end) of a good strategic planning process?

Our next strategic plan will be especially important because it will coincide with WSU’s next campaign. The plan will not only serve as a roadmap for continued growth and programmatic development, but will provide pillars around which we can engage alumni and donors. Given the college’s recent success across all of its mission areas, I am confident that our next plan will communicate a compelling vision of the future for CPPS.

A strategic plan is, of course, only as good as the financial plan upon which it is based. Sarah Kohler, our area finance officer, and I have begun the process of developing a financial plan that will support continued aspirational development. As part of this budgeting process we have reviewed the college’s economic growth during the period covered by our current strategic plan. The numbers are rather interesting. In the 2012 fiscal year, the college generated $11.3 million in tuition, research funding, and gifts. Our “economic footprint” (with the heel in Spokane and big toe in Yakima) is currently $25.6 million. These numbers do not represent the economic impact of our college in our two host communities, as they do not include “multiplier effects” and other elements that together represent an organization’s true economic value. The growth of our revenue streams is paralleled by the return on the state’s investment in our college. In 2012, we generated $2.17 for every dollar invested in us. That figure now stands at $4.16, and we project continued healthy growth into the future.

In communicating the value of a program we tend to focus on dollars in part because they are easily measured (if not so easy to come by), and in part because financial health is required to support a healthy organization. However, we should never ignore the fact that the true value of our college is in what we do with the funds we generate. We help our students prepare for lives of
UPCOMING EVENTS

OCT. 7
CougaRx Reception at NCPA
7:00 p.m. - 8:30 p.m.
Sheraton Boston Hotel
Boston, MA

OCT. 26
CougaRx Nation in Hawaii
October 26-27
Honolulu, Hawaii

NOV. 6
Yakima Career Fair
November 6-8
Red Lion Hotel, Yakima

NOV. 8
Spokane Career Fair
9:00 a.m. - 6:00 p.m.
CCRS, Spokane

More college events >>

COLLEGE NEWS

New nanoparticles wait to release drugs, target infection
Washington State University researchers have found a new way to fight sepsis, a systemic inflammatory response that can cause organ failure.

In a research study published in the journal Advanced Materials, scientists at WSU’s College of Pharmacy and Pharmaceutical Sciences built a new nanoparticle and coated it with the molecules that blood vessels have been found to release in response to infections. This dressing makes the nanoparticle sensitive to the signature acidity of infection sites, and upon arrival at the site of an infection the bacterial enzymes present act as a trigger for the drugs to be released.
Additionally, the research marks the first time a nanocarrier has been built to deliver not one, but two drugs, and delivers these drugs in a manner that waits to deploy until it encounters infectious tissues.

“This study not only proves a new drug delivery system but also may shift the current landscape in nanomedicine to biology-driven design of nanotherapeutics,” said Pharmaceutical Sciences Assistant Professor Zhenjia Wang. “This has the potential to improve the therapies of many more infectious diseases.”

Earlier WSU research established that stimuli-responsive nanoparticles can specifically target infections to simultaneously prevent the spread of bacteria and reduce the inflammation it causes. These microscopic particles are loaded with antibiotic and anti-inflammatory agents that are released when the particles encounter infection in the body.

The new research builds on those findings.

Antibiotics and anti-inflammatories are already used to mitigate the onset of sepsis, but there are issues with the old school use of these therapies. They are metabolized quickly, so their effects don’t last long and a portion of the drug is eliminated from the body without ever encountering the infected tissue it was intended for. They have what is called poor bioavailability, so the rate at which these drugs are absorbed into infected tissues from the injection site is slow. Also they are toxic, so repeated dosing causes its own damage to organs.

“This study will allow chemists and materials engineers to design new drug formulations to treat many bacterial infections, such as TB infection,” said Can Yang Zhang, who is the leading author on the paper and a postdoctoral research associate in Wang’s lab.

The use of nanoparticle technology in medical practice is growing. But the ability to deliver more than one type of drug in a manner that waits to deploy until it reaches the infectious tissues could provide a new triple punch that ducks, for the most part, issues with blanket administration of antibiotics and anti-inflammatories. Additionally the nanocarrier specifically targets infection sites, so less medicine is needed and there is limited collateral damage to otherwise healthy tissues.

A video illustration of how the technology works can be found at https://player.vimeo.com/video/289938380?muted=1&autoplay=1.

Spokane high school, WSU students partner to address the stigma of mental health

Within the past three years, there have been a total of 13 suicides in the Spokane School District.

A team of student pharmacists from Washington State University partnered with North Central High School’s Institute of Science and Technology in Spokane to address a community-based health care issue. The students at North Central selected the topic of mental health awareness. The school has experienced three teen suicides since April 2017. The students wanted to use this initiative to prevent another one from happening.

“This program allowed the high school students to directly make an impact among their peers and experience how they can individually make a difference within their community,” Mark Nguyen from WSU said.

WSU submitted the project to the American Association of Colleges of Pharmacy (AACP) Pharm4Me Innovation Challenge this last April. The WSU-North Central collaboration placed second in the nation.
WSU student pharmacists Nguyen, Thomas Maslo, Mindy Lee, Taylor Birkland, Natty Tran, and Katherine Dier worked with a group of seven high school students twice a week over the span of six months to develop an approach to address the negative stigma towards mental health within the North Central community. They focused on education, fostering acceptance, and building awareness within the high school population with the goal of increasing the outlook of a welcoming future.

“Pharmacists are a good fit to participate in a program like this because they are arguably one of the most accessible health care providers in the community,” Nguyen said. “Pharmacists have the opportunity to maximize patient outcomes due to their consistent physical presence and ability to take advantage of frequent patient interaction.”

The WSU team’s innovative approach incorporated engagement and collaboration in order to prevent the disconnect that can happen in a traditional lecture-style educational format. WSU student pharmacists guided the high school students as they researched and discussed the topic together. They collaborated on outreach activities that included informational sessions and invited presentations, a presence at a WSU-hosted health fair and a NCHS-hosted mental health symposium this spring where the high school student team presented a series on mental health awareness that was featured on the KHQ Local News and Facebook. A video of their work is available on YouTube: https://youtu.be/bw0EGAXw76g.

“The high school students were empowered to teach and foster an open dialog on mental health with their colleagues,” Nguyen said.

The Pharm4Me Innovation Challenge was initiated by the AACP to help raise awareness of careers in pharmacy by giving high school students an opportunity to participate in innovative community-based solutions that also demonstrate a pharmacist’s role as a health care provider.

The high school received a cash prize of $500 to support STEM programs, a plaque for the school and certificates to each high school team member. The WSU CPPS received a plaque for the school and certificate to each student pharmacist along with an invitation to attend the 2018 AACP Annual Meeting in Boston this last July.

Robbers recognized for contributions to pharmaceutical sciences, teaching

During pharmacy school James Robbers worked as an assistant in the research lab of Professor Melvin R. Gibson at WSU. “I will always be grateful for Dr. Gibson’s generosity in mentoring me because it started me on a pathway toward a career in research and academics,” Robbers said.

Robbers, of Mukilteo, Washington, was named the 2017 Outstanding Alumnus of the Year by the WSU College of Pharmacy and Pharmaceutical Sciences (CPPS) on Friday, September 28. He was selected for his continued contributions to the pharmaceutical sciences at WSU that provide graduate students travel awards, fellowships, and research grants, as well as summer research internships for student pharmacists. Robbers was recognized at the college’s annual Crimson Gala in Spokane, Washington.
The Outstanding Alumni award was established in 1991 by the CPPS dean’s advisory council to recognize a pharmacy alum whose personal achievement or contributions to the community, society at large, or the health care profession have brought distinction to his or herself and the college.

Robbers not only has a legacy in the pharmaceutical sciences and teaching, but has made a significant impact on the college’s ability to recruit exemplary students from around the country and across the world to the Pharmaceutical Sciences Graduate Program. The Ph.D. program has increased over the past eight years from nine Ph.D. degree-seeking students in 2010, to 32 now.

Robbers graduated with a Bachelor of Pharmacy in 1957 and a Master of Science in pharmacy in 1961 from WSU, followed by a Ph.D. in 1964 from the University of Washington. After two years at the University of Houston, he joined Purdue University and served as a professor in the department of medicinal chemistry until he retired in 1997. He is now professor emeritus of pharmacognosy.

In 2004, he was honored with a WSU Alumni Achievement Award for a lifetime of distinguished advancement in the field of pharmacognosy and pharmacobiotechnology as a renowned teacher, scientist and editor; and for providing superb professional leadership as president of the American Society of Pharmacognosy. Robbers and his wife Diann established the James and Diann Robbers Student Research Scholarship in 2007 as a way of honoring Professor Gibson and in appreciation of the outstanding education they received at WSU from dedicated faculty.

Dear Alums, Colleagues and Friends of Pharmacy,

We had so much fun with you at Pharmacy Homecoming Weekend this year! Thank you to everyone who attended and participated in our Crimson Gala on Friday. What a special night!

It was great to see so many of our class of 1968 back for their Golden Grads reunion. I enjoyed introducing all of our current and past mentors, preceptors and alumni award winners as Dr. Robinson presented each with a pin or medal. I am so glad we have this new tradition to honor the ways you contribute to excellence in pharmacy education.

I appreciated Dr. Robbers’ comment on remembering his professors during his building tour and thinking of how proud they would be to see how their legacy is being carried on by those now at the college. I am humbled and honored at his words, and I wholeheartedly agree that our faculty, preceptors, and alumni mentors are what make the WSU pharmacy and pharmaceutical sciences programs second to none.

A MESSAGE FROM LINDA GARRELTS-MACLEAN

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The gala was a night to celebrate the people who allow us to succeed in our mission to develop outstanding health care professionals and scientists. I am so grateful to everyone who made the evening such a success!

Once again, we had record attendance at our football tailgate on Saturday in Pullman. It was a beautiful day and our team did not disappoint with the win over Utah! Thank you to our student, faculty and staff volunteers: Sue L., Kelly S., Megan J., Lori M., Tia W., and Sarah K., you made the weekend’s events possible! And, to our fabulous band: alums Jason Doss and John Rackham, adopted Cougar pharmacist Eleanor Doss, as well as the entire HLS band (The Best 80s Rock Cover Band, Period) thanks for the fantastic music that created the energized atmosphere!

I saw you, Taylor Goodman, on the jumbo screen during the football game! It was fun to see such great Cougar spirit and college representation in Pullman.

Be sure to join us next year for Pharmacy Homecoming Weekend 2019. We will be sending you more information once the 2019 football schedule has been released. There is still time for you to contribute to our effort to name a space in honor of Larry Simonsmeier. Please contact Kelly Sylvester at gocougs@pharmacy.wsu.edu or call 509-358-7651. You may also give to this fund online.

As always, we appreciate you!

Linda Garrelts MacLean, BPharm, RPh
Vice Dean of External Relations Clinical Professor

ALUMNI NEWS

HONORING EXCELLENCE IN PHARMACY EDUCATION

Friday’s Crimson Gala brought Cougar pharmacists together for a night of celebration and reconnection.

Full story on page 7

WSU HONORS OUTSTANDING PRECEPTORS

Monica Graybeal and Chris Greer were named Preceptors of the Year last Friday.

Full story on page 8

HOMECOMING WEEKEND

Thank you to everyone that attended our Pharmacy Homecoming Weekend events! It was great to reconnect with all our alumni and friends.

Crimson Gala photos »
Homecoming Tailgate photos »
ALUMNI UPDATES

• **James E. Robbers**, class of 1957 and 1961, was named WSU College of Pharmacy and Pharmaceutical Sciences 2017 Outstanding Alumnus of the Year.

• **Paul Thompson**, class of 2005, was named WSU College of Pharmacy and Pharmaceutical Sciences 2018 Mentor of the Year.

• **Ron Jennings**, class of 1984, was named WSU College of Pharmacy and Pharmaceutical Sciences 2018 Mentor of the Year.

• **Monica Graybeal**, class of 2008, was named WSU College of Pharmacy and Pharmaceutical Sciences 2018 Mentor of the Year.

Want to be listed in our alumni updates? Send us your career information or let us know what you’ve been up to! gocougs@pharmacy.wsu.edu.

NEW TITLES AVAILABLE ON WSU CONTINUING EDUCATION (CE)

• New Drug Update: July/August 2018
• New Drug Update: May/June 2018
• Phase IV & Post-Marketing Surveillance

View all WSU CE titles »

A night to honor excellence in pharmacy education

Living up to expectations, the Washington State University College of Pharmacy and Pharmaceutical Sciences (CPPS) hosted its annual Crimson Gala event in Spokane on September 28. The event was part of the college’s Pharmacy Homecoming Weekend activities, which brought Cougar pharmacists back to WSU for celebration, recognition, reconnection, comradery, and to share some good old Cougar pride and spirit.

The college vision is to be a leader in advancing, promoting and protecting human health. We do this through developing practice-ready graduates who will lead tomorrow’s health care solutions, and by contributing to the advancement of knowledge and discovery within pharmaceutical, clinical and applied sciences.

The annual Crimson Gala contributes to the CPPS mission and vision...
by providing a platform on which to publicize those alumni or friends of the college who champion, emulate or otherwise demonstrate the success of the college through their own success in driving tomorrow’s health care solutions as lifelong and outstanding health care professionals, innovators, entrepreneurs, and thought leaders.

There was plenty to celebrate this year.

The college announced its annual awards and hosted class reunions for the alumni hitting milestones in 2018, with the class of 1968 being recognized as Golden Graduates. All past alumni, preceptors and mentors of the year were honored in a special pinning ceremony that paid tribute to the college’s longstanding tradition of excellence in pharmacy education.

Proceeds from the event raised money to honor Emeritus Dean Larry M. Simonsmeier through an endowed naming fund. Naming funds provide an endowment that memorializes a space on campus to honor the individual or entity the fund is named for. The money is then used to support student pharmacists through activities such as annual scholarships, travel grants and support for student professional organization initiatives.

Simonsmeier served as interim dean and then dean from 1979-85, but was on the college faculty from 1974 until he retired. He was known as an expert on pharmacy law, an advocate for student pharmacists, a great mentor, and a friend to all.

**WSU CPPS annual award winners:**

- Alumnus of the Year: James E. Robbers, class of 1957, 1961
- Preceptors of the Year: Monica Graybeal, class of 2008, and Chris Greer, class of 1991
- Alumni Mentors of the Year: Paul Thompson, class of 2005, and Ron Jennings, class of 1984

The weekend activities continued on Saturday in Pullman at the college’s annual tailgate party prior to the WSU Homecoming football win against Utah.

**WSU honors two local pharmacists as outstanding preceptors**

Monica Graybeal and Chris Greer, both of Spokane, were named Preceptors of the Year by the Washington State University College of Pharmacy and Pharmaceutical Sciences last Friday. Preceptors are an important part of the WSU Doctor of Pharmacy program. They supervise, teach and mentor student pharmacists at the practice sites where they complete the final year of pharmacy school.

The Preceptor of the Year Award is given annually to a WSU pharmacy preceptor for outstanding contributions to the educational development of future pharmacists through demonstrating high standards of professionalism, ethics and clinical practice. Preceptors are nominated by the student pharmacists who participate in rotations at their practice sites.

Monica Graybeal has demonstrated excellence as a professional role...
model, clinical pharmacist and teacher. She was selected for this award for her commitment to “always go above and beyond” for her patients and the student pharmacists she precepts. She also contributes to advancing the profession of pharmacy through her clinical practice, which provides treatment to hepatitis C patients in Spokane.

“Monica is exactly what they teach us in school of what we should push ourselves to be. Monica strives to help everyone she comes into contact with,” wrote one of Graybeal’s nominators.

Graybeal received her pharmacy degree from WSU in 2008. She is a pharmacist at Unify Community Health, a community health center in Spokane and part of the Yakima Valley Farm Workers Clinic health system. She received the 2017 Excellence in Innovation Award from the Washington State Pharmacy Association for developing a pharmacist-managed telehealth model of care to treat and cure patients with hepatitis C. Graybeal manages patients across five clinics in Spokane, Yakima and Walla Walla.

Chris Greer is building a legacy as an extraordinary preceptor for the WSU pharmacy program. He demonstrates the highest level of humility, genuine care for people, integrity, passion, and servant leadership. Greer has been a preceptor for WSU since 2003. He supervises fourth-year student pharmacists in acute care and institutional pharmacy rotations, second-year student pharmacists in introductory institutional pharmacy, and job shadowing experiences for first-year student pharmacists.

“Chris is great at teaching things to us in a way that’s easy to understand; he’s patient, kind, makes every day at the rotation fun, and teaches us more than just the basics that we need to know,” wrote one of Greer’s nominators.

Chris Greer received his pharmacy degree from WSU in 1991. He completed a pharmacy residency specializing in adverse drug reactions and then spent three years as a staff pharmacist in Olympia, Washington, before returning to Spokane. He has been with St. Luke’s Rehabilitation Institute since 1995, working his way up to pharmacy manager in 2009. Greer was also named Preceptor of the Year in 2006, and in 2015 he was one of eight pharmacy preceptors nationally to receive the Master Preceptor Recognition from the American Association of Colleges of Pharmacy.

The awards were announced at the college’s annual Crimson Gala event in Spokane on Friday, September 28.

FACULTY SCHOLARSHIP

Publications

- Pharmaceutical Sciences Assistant Professor Shobhan Gaddameedhi and eight co-authors published, “Cardiac autonomic activity during simulated shift work,” in Industrial Health, a peer-reviewed scientific journal from the National Institute of Occupational Safety and Health. View abstract »
Pharmacotherapy Professor and Associate Dean for Professional and Continuing Education **Danial E. Baker** published, “Drug evaluation – pegvaliase-pqEZ (Palynziq),” in Wolters Kluwer Health’s The Formulary monograph Service (FMS) in September 2018. 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, “Angiotensin II,” in the peer-reviewed journal Hospital Pharmacy in May 2018.

**Danial Baker** published, “Coagulation factor Xa (Recombinant), inactivated-zhzo (Andexanet Alfa),” in Hospital Pharmacy in July 2018.

Pharmaceutical Sciences Professor and Associate Dean for Faculty and Student Development **Kathryn E. Meier** published, “Omega-3 fatty acids and prostate cancer: G protein–coupled receptors to the rescue,” in the peer-reviewed Journal of the National Cancer Institute in September 2018. [Read article »](#)

R. Keith Campbell Distinguished Professor and Pharmacotherapy Chair **John R. White Jr.** and six co-authors published, “Improved glycaemic control and lower hypoglycaemia risk with reduced prior oral antidiabetes drug therapy in patients with Type 2 diabetes treated with insulin glargine 300 U/mL,” in the peer-reviewed journal Endocrinology, Diabetes & Metabolism in March 2018.


Pharmacotherapy Clinical Assistant Professor **Cheyenne Newsome** and two co-authors published, “Addition of care for transgender-related patient care into Doctorate of Pharmacy curriculum: implementation and preliminary evaluation,” in the journal Pharmacy in September 2018. [View pdf of article »](#)

**Presentations**

• USTUR Assistant Research Professor Maia Avtandilashvili and Sergei Tolmachev presented the poster, “Four-decade follow-up of plutonium-contaminated puncture wound treated with Ca-DTPA,” at the 24th Meeting of the Conference on Radiation & Health.


• Maia Avtandilashvili, USTUR Adjunct Professor Daniel Strom, Stacey McComish, USTUR Assistant Research Professor George Tabatadze, Sergei Tolmachev and one other presented the poster, “New compartmental model for plutonium decorporation therapy,” at the 64th Annual Meeting of the Radiation Research Society.

• Pharmaceutical Sciences Postdoctoral Research Associate Peng Xia (Zhaokang Cheng lab) presented the poster, “Activation of CDK2 mediates doxorubicin-induced cardiotoxicity,” at the American Heart Association’s Basic Cardiovascular Sciences Sessions 2019 in San Antonio, Texas, on July 30, 2018.

Awards

• Peng Xia (Zhaokang Cheng lab) received a New Investigator Travel Award to attend the American Heart Association’s Basic Cardiovascular Sciences Sessions 2019 in San Antonio, Texas, in July 2018.

• Doctor of Pharmacy Preceptor Monica Graybeal was named WSU College of Pharmacy and Pharmaceutical Sciences 2018 Preceptor of the Year.

• Doctor of Pharmacy Preceptor Chris Greer was named WSU College of Pharmacy and Pharmaceutical Sciences 2018 Preceptor of the Year.

Grants

• Pharmaceutical Sciences Assistant Professor Senthil Natesan received $458,163 over three years from the National Institute of General Medical Sciences, one of the National Institutes of Health, for the project, “Specifics of ‘non-specific membrane interactions’ of drugs: an integrated approach for understanding structure-membrane interaction relationship.”

• Pharmacotherapy Clinical Professor Jean-Baptiste Roullet and Pharmacotherapy Professor K. Michael Gibson received $125,429 over one year from Speragen Inc. under a National Institutes of Health Small Business Technology Transfer (STTR) grant for the project, “Farnesol analogues as novel treatment for succinic semialdehyde dehydrogenase (SSADH) deficiency.”

STUDENT ACHIEVEMENT

Doctor of Philosophy (Ph.D) students

• Sara Dumit (pharmaceutical sciences, Tolmachev lab) with faculty co-authors Maia Avtandilashvili, Daniel Strom, Stacey McComish, George Tabatadze and Sergei Tolmachev presented the poster, “New compartmental model for plutonium decorporation therapy,” at the 64th Annual Meeting of the Radiation Research Society on September 26, 2018, in Chicago, Illinois.
Doctor of Pharmacy (Pharm.D.) students

• The student pharmacists in Yakima who participated in the Yakima Valley Interprofessional Practice & Education Collaborative (YVIPEC) event were featured in the PNWU Health Blog.

JOBS

• Associate/Full Professor: Department of Pharmaceutical Sciences
• Clinical Assistant Professor: Department of Pharmacotherapy
• Clinical Assistant Professor: Kootenai Health
• Clinical Assistant Professor: Providence St. Peter Hospital Olympia
• Clinical Assistant Professor: Virginia Mason Memorial Hospital
• Clinical Assistant Professor: Applied Patient Care