WSU | SPOKANE

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WASHINGTON STATE UNIVERSITY HEALTH SCIENCES SPOKANE

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Cover photo (by Cori Kogan) of Nursing student Madeline Misterek.

A Letter from the Chancellor

Partnerships brought WSU Health Sciences into existence and continue to help us grow to serve the needs of our state. In fact, as I become more knowledgeable about the history of this campus, I am more convinced than ever that it's the partnerships that have made the campus, our students and faculty what we are today, and it's the partnerships that will influence how future generations see us.

One need only look at our most recent success—the Elson S. Floyd College of Medicine—to see the importance of wide-ranging partnerships in its establishment and early success.

Partners accomplish inspiring feats together. WSU Health Sciences is a vibrant community of innovative educators and cutting-edge researchers empowered by a host of committed colleagues who share the vision of improving society. Specifically, the three colleges are training the next generation of health care providers and leaders, and are building research programs that address challenges in human health.

Simultaneously, the enduring advocacy of the citizens of this state and region have put the campus on our trajectory.

So how are we doing with that trust you've put in us? This magazine answers that question. Our research report beginning on page 21 shares a breakthrough finding on autism and the effect of a common toxin on liver disease. What it doesn't say is that our campus has averaged grant and contract awards of over $25 million per year for the last three years.

Speaking of research, read about our opiate research on page 3. With the federal government just committing approximately $5 billion to tackle that problem, Marian Wilson and other researchers like her are poised to contribute to the solution.

The educational portfolios of the colleges on campus are also growing. On page 4 learn how nurse practitioners are working in clinics, such as CHAS Health, that provide care in rural and medically underserved areas.

Meanwhile our student and faculty pharmacy leaders exemplify our mission. Please read about their impact on the national scene beginning on page 13.

And I hope you'll read about the Elson S. Floyd College of Medicine's first-ever hackathon for medical innovation. That's an example of the economic impact we are partnering with community members to make.

We are delighted that you are on the team. And if you're not yet, we need you. We need you for advocacy, support, engagement and resourcing. There is always room for those who want to accomplish inspiring feats together.

Thank you.

Sincerely,

Daryll B. DeWald, Ph.D.
Chancellor, Washington State University Health Sciences Spokane

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Legacy of Service Continues to Expand

By Addy Hatch

Patrick snuggled his little dog Maggie May inside his jacket as they stood in the cold.

The two were in line an hour before the inaugural Healthy People + Healthy Pets clinic was scheduled to open in late January.

Students and faculty from the WSU colleges of Nursing and Veterinary Medicine offered vaccinations, health screenings and simple treatments to homeless and low-income people and their pets. Nearly 100 people and 125 dogs and cats were seen by the end of the five-hour clinic—a turnout that topped even the most optimistic expectations.

"I thought we'd be successful if even 15 to 20 pets and people showed up," said Assistant Professor **Gail Oneal**, Ph.D., of the College of Nursing, who organized the event with **Raelynn Farnsworth**, D.V.M., clinical assistant professor at the College of Veterinary Medicine in Pullman.

The deans of the two colleges—**Joyce Griffin-Sobel**, Ph.D., of Nursing, and **Bryan Slinker**, Ph.D., of Veterinary Medicine—came up with the idea for the clinic while walking to a meeting together in Pullman last year.

Healthy People + Healthy Pets was just the latest example of the ways College of Nursing students and faculty engage with communities—and have done for nearly 50 years. Students and faculty fan out across the region each fall to give flu shots and vaccinations, and volunteer their time at children's camps during the summer. They host teenagers who want to learn about nursing careers, and travel to South America, Asia, and Africa to provide much-needed health care and expertise.

"Service learning is one of the key things we do for students," Griffin-Sobel said. "They need to understand how they can help the community, but that's impossible if they aren't exposed to the people and issues in the community."

The Spokane Regional Health District relies on WSU health sciences students in Spokane to staff vaccination and flu shot clinics in the region, said **Kari Lidbeck**, the district's Immunization Community Network specialist. Students from the College of Nursing and College of Pharmacy vaccinated more than 850 people in Spokane County last fall, giving children and adults increased protection against flu, tetanus, polio, measles, mumps, hepatitis A and B, shingles, and other serious conditions.

"If we didn't have that partnership with WSU, we wouldn't have been able to provide those services to the community," Lidbeck said.

Sarah Griffith, M.P.A., an instructor at the College of Nursing, said community outreach lets health sciences students practice clinical skills at the same time they're learning the equally important skill of relating to people.

Plus, "WSU Spokane is a member of this community and has a stake in improving community health," Griffith said.

Dean Griffin-Sobel said there will be a repeat of the successful Healthy People + Healthy Pets clinic, based on its initial success and thanks to funding from the Denice Murphy Community Nursing Endowment.

"Pets are so important to people, especially people who don't have very much," she said. "If we can help strengthen that bond by keeping both the person and the pet healthy, it's a real benefit for public health."

Nursing and Veterinary Medicine students and faculty who participated in the Healthy People + Healthy Pets Clinic joined by Dean Joyce Griffin-Sobel, far right.

Nursing Research:

Online Programs Show Promise in Helping People Cope with Chronic Pain

By Addy Hatch

Like many nurses, Marian Wilson was on the front lines of America's opioid crisis.


Marian Wilson

She worked at a community hospital, where the emergency department was trying to reduce repeat visits from people with chronic pain. The plan was to refer those patients to primary care or pain specialists. Yet, many were distraught if they left their ER visit without an opioid medication.

"I felt like we should offer them more help," said Wilson, Ph.D., now an assistant professor at the WSU College of Nursing and executive faculty at the Program of Excellence in Addictions Research.

She found some online programs that seemed to help, coaching people on how to think about their pain, tracking their progress toward goals like exercise, and charting daily information on their mood and the intensity of their pain.

"I don't think the Internet is necessarily the best solution to help people with their pain, but I do think it's something, and it's better than the 'nothing' some people felt they were getting," Wilson said.

That spark has guided much of Wilson's research since she joined the College of Nursing. She's led and participated in multiple studies testing the effectiveness of online programs in helping people manage pain, the most common sources of which are back, spine, fibromyalgia, and arthritis.

She used the same approach in addressing depression, which is frequently linked to chronic health conditions.

The online programs make people more confident they can manage their pain, and can help change behaviors and alleviate symptoms. Some report reducing their reliance on opioids.

"My actual pain is about the same, but it seems to cause me less stress," one study participant said. "I feel I have better coping mechanisms in place now."

Online programs have other benefits: they're relatively inexpensive and are available to people in areas where health care resources are in short supply. Wilson's research also showed some limitations to the online approach, such as people struggling with the technology and needing more encouragement to stay engaged.

Just as she was as a nurse in the hospital, Wilson is still motivated by the desire to help people who are in pain. While an online program may not be the whole answer, Wilson noted, "It empowers you, instead of having the person with the prescription pad be in charge of your destiny."

Wilson represents a strong cohort of addictions researchers at WSU Health Sciences Spokane. For more, visit nursing.wsu.edu/research/PEAR.

Federal Grant

Aims to Steer Nurse Practitioners Toward Work in Rural and Underserved Clinics

By Addy Hatch

Nurse practitioners can help alleviate provider shortages in rural and medically underserved areas. The Doctor of Nursing Practice (DNP) degree offered by the WSU College of Nursing prepares students like Chad Love, below, for careers in that field.

Most of the 20 counties that make up Eastern Washington are rural, and most are considered "medically underserved," meaning there aren't enough primary care providers, the area has a high poverty rate, high infant mortality, or a large elderly population.

At the College of Nursing, a two-year, $1.3 million federal grant is funding scholarships and other initiatives to attract nurse practitioners to those areas of care.

It's important to give nursing students practical knowledge in working in rural and underserved clinics before they graduate if the aim is to encourage more students to go into that line of work, said Associate Professor **Janet Purath**, Ph.D., project director for the WSU-ANEW grant.

Such patients' health care needs are often complex, and it can be daunting for new graduates to enter that field, she said. Yet studies have shown that nurse practitioners are key to alleviating health care shortages in rural and medically underserved areas.

The project hopes to have placed 15 nurse practitioner students in clinics serving those populations by the end of the two-year grant.

The grant also created a Nurse Practitioner Faculty in Residence position at CHAS Health. **Todd Smith**, M.S.N., was named to the new role, which is part faculty member, part primary care provider, and part liaison for the preceptors who offer on-the-job training to students in the health professions.

The goal is to create a meaningful, ongoing exchange of information between CHAS, which offers primary care to medically underserved communities in the Inland Northwest, and the College of Nursing. Smith said he'll use his clinical experience to offer feedback and suggestions to the college and "start building some partnerships between the educational institution and actual healthcare delivery system in the community." ■

Homestay Program

Pairs Medical Students with Local Families

By Kevin Dudley

When Nancy Ellis picked up her local newspaper last summer in Vancouver, Washington, she saw a story about the new Elson S. Floyd College of Medicine needing host families in her area to house the school's medical students.

With her four children all grown and out of the house, Ellis wanted to help.

"We have often opened our home to various students or young adults who need a place to stay temporarily," she said. "One of our daughters was also a med student, now a practicing physician, so we are also aware of the stress of that undertaking. And, basically, we thought it sounded like a fun experience."

Ellis is one of 60 families across the state in Everett, Spokane, the Tri-Cities and Vancouver who have opened their doors to WSU medical students, offering them a place to live during their intersession weeks in their first two years of medical school. Years three and four will be spent in their learning communities.

Ellis and others are part of the Community Hosting and Homestay Program, which has been a success in its first year.

Here's how it works: Students are placed in a learning community—Everett, Spokane, the Tri-Cities or Vancouver—and spend a week at those locations six different times during the first two years of medical school. Students are immersed in their communities and gain clinical experience with local physicians right away, all to engage them in the communities where they are likely to practice medicine.

Community hosts like Ellis provide housing and networking opportunities, and the Ellis family has ties to the medical community.

"My husband is an oncologist here in the community and our student was able to do a clinical rotation with him," she said. "We've also highlighted other professionals who we intend to introduce him to. When he is here he is a part of the family, but with some respect to his private time so he can study and relax from the stresses of school."

The college hosts Community Night during each of the six weeks. There, the students and their host families gather for an evening meal in an informal setting where they can interact with faculty and other hosts.

Medical student Carly Celebrezze is interested in pediatrics. Her local preceptor in the Tri-Cities, Dr. Arunbhai Patel, is a pediatrician.

Opening your home to a new medical student might seem daunting, but not to Ellis.

"We have housed our own children's friends over the years and other students as they pass through various experiences, and it has always been a fun experience to get to know a young person as they are undertaking their new experience," she said. "We get to share in their excitement."

Three of the four Ellis children graduated from WSU, so she was particularly interested in the opportunity to host a student.

"Being a Coug is part of our family's identity," Ellis said.

First-year medical student **Carly Celebrezze** has experience living with a family that isn't her own. She's done so in other countries, so moving in with new hosts didn't worry her at all. The only real reservation she had was how to manage her time between her studies and spending time with her host family.

But once she arrived at her host family's home in the Tri-Cities, she immediately felt welcomed. Upon entering her new bedroom, she found a gift consisting of a WSU coffee to-go mug and other WSU items.

"That gesture immediately made me feel at home," Celebrezze said.

And as luck would have it, another WSU medical student's host family lived next door. Last September, the neighborhood hosted a barbecue to welcome the two students.

"This certainly ensured I had a positive initial impression of the Tri-Cities community," Celebrezze said. "I became more excited to have been placed there."

As for the academic side, Celebrezze says she's been given opportunities to explore multiple pathways in medicine. Halfway through her first year of medical school, she's already spent time in the Tri-Cities with an anesthesiologist, an oncologist, an ear nose and throat doctor, and a neurologist.

Celebrezze is interested in pediatrics, and her local preceptor in the Tri-Cities is a pediatrician.

"He is a phenomenal teacher who challenges me to apply knowledge and skills learned in class," she said.

If you'd like more information on the Community Hosting and Homestay Program, contact Kyle Holbrook at kyle.holbrook@wsu.edu or visit medicine.wsu.edu/homestay.

Ashley Ingiosi, a postdoctoral fellow in the Department of Biomedical Sciences, at work.

Medicine Boosts Research Portfolio

In just its third year of existence, the Elson S. Floyd College of Medicine is already seeing a major uptick in research grants and awards.

In December, the college announced it had brought in $10 million in new grants and contract awards. That's $2.7 million more brought in through the first six months of fiscal year 2018 then it did in the entire fiscal year 2017.

"This has been a successful year for our researchers, and receiving these funds further validates the quality of research we are conducting," said **John Roll**, Ph.D., professor and vice dean for research at Elson S. Floyd College of Medicine and associate vice president for Health Sciences Research at WSU. "Research is a major focus of both the college of medicine and WSU, so we are proud to contribute significantly to this effort in such a short period of time."

The grants will be used to explore a wide range of health science issues that align with the college's vision of solving problems in challenging health care environments. Some of the largest awards went to studies focusing on immune response, treating alcohol disorders in the mentally ill, autism and sleep disturbances, addiction, the underlying mechanisms of sleep, and lifestyle and health variances in twins.

Research grants also signal a boost for the local economy. In addition to creating job opportunities for researchers and supporting roles, expanding research increases the Spokane area's portfolio of health sciences expertise and aids in business interest from health science companies.

Medical School's Holistic Admissions Process Attracts Diverse Class

By Kevin Dudley

For the first time ever, more women than men enrolled in medical schools in the United States.

The Association of American Medical Colleges (AAMC) reported females made up 50.7 percent of medical students who enrolled in 2017. The number of females enrolling in medical schools in the U.S. is up 9.6 percent since 2015.

That trend matches up with the demographics at the Elson S. Floyd College of Medicine, where the first class of medical students features 34 females, or 56.7 percent of the class of 60.

"I think this is a great indication that what has historically been known as a male-dominated field is shifting to better reflect the national population and that of Washington," said **Leila Harrison**, M.A., M.Ed., the college's associate dean for admissions, recruitment and inclusion. "It also reflects the shift that is occurring in higher education overall where more women are pursuing college degrees."

The diversity of the College of Medicine's class started with getting a diverse interview pool. To do that, the college used a holistic review in its admissions process, which means academics and test scores don't drive the admissions decisions. Rather, academics and test scores are balanced with the applicants' life experiences and attributes. That way, a more well-rounded applicant is selected that best fits the mission of the medical school.

The college does have GPA and MCAT combination thresholds, though.

"Once an applicant meets one of those, we blind our process from further assessing these factors, which allows us to fully focus on an applicant's life experience and attributes," Harrison said.

This allows students to stand out based on their personal experience. Some have overcome severe hardships, some are the first in their family to graduate from college, and others have degrees in non-science subjects, or even graduate degrees. The ages of the students range from 21 to 36.

Those vastly different experiences benefit the students because in a class of 60, they spend a lot of time together and rely on each other for support.

The class also boasts 11 students who are first-generation college graduates, and 20 members of the class came from low socioeconomic backgrounds.

Having a diverse class helps in the long run. WSU's medical students are all from Washington or have strong ties to the state, and they're sent to communities across Washington throughout their four years of medical school, where they'll come across people in all walks of life.

"It is important that the physicians we produce better reflect the diversity of the state's population they will hopefully serve," Harrison said.

Selecting students and serving patients with similar backgrounds in communities across Washington shows prospective medical students that becoming a doctor—no matter your background—is possible.

In terms of the AAMC report, Harrison said the younger generation is noticing.

"As women and girls see more women pursuing a medical education it can serve to inspire, encourage and support others coming behind them to believe being a doctor is possible," she said.

Inaugural Hackathon

Tackles Rural Health Care Challenges

By Kevin Dudley

Student innovators recently came together with health care professionals, developers, designers and engineers for the Elson S. Floyd College of Medicine's inaugural hackathon.

The students came from the College of Medicine, the College of Pharmacy, WSU's Pullman campus, Eastern Washington University, Whitworth University and Gonzaga University. There was also a local high school student participating.

The weekend began with a presentation of various rural health challenges, as well as presentations on app development, security implications of medical data and what it takes to be successful in the health care business sector.

After the presentations and a brief "Hacking 101" lesson, the participants went through a problem pitching exercise, where they each had 60 seconds to convey a problem they wanted to solve.

Then, it was time to create teams and start coming up with business solutions to rural health care challenges.

Teams met with four mentors and two judges throughout the weekend to refine their solutions and perfect their final presentations.

By Sunday, teams were ready to make their final presentations. Each team had just three minutes to present their solutions and two minutes of questions from the judges.

One solution involved developing a cooking class and community dining events designated for those in low income areas. These classes and events—designed as a nonprofit—would address food scarcity in rural and underserved communities.

Another solution included a gig economy service to connect health professionals in rural communities with understaffed facilities. For instance, a nurse at a rural hospital could also work temporarily for another facility that is understaffed. The solution would help improve service and cut costs, among other things.

The winning team, calling itself PTme, developed a technology that would allow patients to wear an iWatch to track their physical therapy exercises at home. The patients would then electronically send that data to their physical therapist. PTme said the technology would help patients stick to their physical therapy demands and achieve their desired results.

PTme took home the hackathon trophy, which will live at the College of Medicine's technology incubator. It will include the names of the winning teams each year. PTme also took home $1,000, a three-month membership to Startup Spokane, and access to the Mind 2 Market Program, a Startup Spokane initiative that helps commercialize viable business ideas.

PTme, the winners of the inaugural Hackathon, pose with their grand prize. The team developed technology that would aid physical therapy patients and their physical therapists through the use of an iWatch.

Coug Nurse Erik Stiles

In First Medical School Class

By Addy Hatch

From left, medical students Jaime Mackiewicz, Erik Stiles, and Syed Saif.

If all goes as planned, Coug Nurse Erik Stiles will become Coug Doctor Erik Stiles in 2021.

Stiles graduated from the WSU College of Nursing in 2010 and worked as a nurse for more than four years. Now he's back on the WSU Spokane campus as part of the first class of the WSU Elson S. Floyd College of Medicine.

Stiles, 30, said he felt successful and fulfilled in his nursing career. The Lacey, Washington, native worked at UW Medical Center in Seattle, including stints in the cardiac intensive care unit and as a transplant coordinator. His mother and his aunt both graduated from the WSU College of Nursing, back when it was called the Intercollegiate Center for Nursing Education.

But he was always curious about medicine, he said. He took some classes at UW, then pursued a master's degree in medical physiology at Loyola University Chicago to pick up the prerequisites he needed to apply to med school.

He was evaluating various schools when he flew back to the Inland Northwest to volunteer at Camp Stix, a children's diabetes camp. Helping there was an annual tradition begun when he was a WSU nursing student. The camp medical director told him WSU's new medical school was moving quickly toward preliminary accreditation and would be taking applications soon.

"During the whole application process it was a little like pulling teeth, thinking about different medical schools and how I might match up with some of these institutions' missions," Stiles said. "But it was just butter when it came to WSU, it fit so perfectly. WSU is who I am."

He knew the campus, the culture, and some of the faculty and staff. More importantly, though, "the biggest thing I was looking for, and what WSU nails, is patient-centered medicine. That speaks to my education in nursing," he said.

The College of Nursing's holistic focus taught him, for example, that someone isn't a diabetic—they're a person with diabetes.

"It's the little distinctions that make all the difference," Stiles said. "That's who I was as a nurse, and that's who I plan on being as a physician."

He is one of a relatively small group of people with an undergraduate degree in nursing who apply to medical school each year—according to the American Association of Medical Colleges, an average of 250 such students applied annually from 2014 through 2017.

John Tomkowiak, M.D., founding dean of the Elson S. Floyd College of Medicine, said, "Medical students who have nursing backgrounds bring some unique advantages that align well with the mission of the college. We are training our medical students to have a patient-centered approach to care, and this comes very naturally to those with nursing backgrounds as they often have a lot of experience interacting with patients on a personal level. In addition, they come with an appreciation for the health care environment and, more specifically, they understand the way health care teams should work together for the benefit of the patient. All of these experiences prove to be significant assets for a physician in training."

Stiles believes his experience as a nurse will make him a better doctor. The physician has historically been at the top of a hierarchy of caregivers, he said, but "it's not the doctor carrying the patient all the way through the disease, it's a whole team of people. I want to be that person to empower each and every one of them to step forward and make the best contribution to that patient's health." ▪

Donor's Giving Mirrors her Approach to Life

By Addy Hatch

Carol Quigg's support of Washington State University is wide-ranging—

programs in interprofessional health care, agriculture, nursing, extension, and medicine all benefit from her philanthropy.

It's a reflection of the woman herself.

A 1958 WSU graduate in home economics, Quigg is from a farming family near Wilbur, Washington, and worked as an agent at WSU Extension Service for a time. Her interest in health sciences grew from her involvement with many community groups in Spokane. She frequently meets with WSU researchers and faculty to talk to them about their work.

"I call it my continuing education program," Quigg says.

Her interest in interprofessional education is driven by her belief that a team approach will improve the quality of health care. Her farm upbringing is behind her affinity for agriculture programs and rural health care. She appreciates innovation in education and close connections between faculty and students, and said she finds those attributes at WSU.

Her connection with the school extends to her 12-year service on the WSU Foundation Board of Trustees. In 2015 she was given the Outstanding Volunteer Service Award by the foundation. In nominating Quigg for that honor, **Theresa Boyer** wrote, "Carol... supports a vast area of the University and she does so by determining where there is need but little support. She meets with the students, faculty, and project leads to learn about the concept, impact, and where she can help."

On March 22 Quigg and her brother **Jerry Sheffels** were honored by the WSU College of Agricultural, Human, and Natural Resources Scientists as Philanthropists of the Year.

Quigg wrote in accepting that award, "I support WSU because I see opportunities to help students realize their potential in some amazing programs... These students are our future leaders." She added, "I hope seeing others support WSU education will encourage them to 'pay it forward' in their own lives as their resources permit. I think they will find it satisfying, as I have."

Her approach to philanthropy over more than 30 years of giving to Washington State University has helped WSU in countless ways.

Quigg says it's helped her, too, noting, "You can't ever stop learning." ■

Invest in WSU Health Sciences Spokane's Future: Create a Lasting Legacy

Carol Quigg has invested widely in the health sciences. The nurses, pharmacists and physicians educated at WSU Health Sciences Spokane will go on to help people in Washington's most underserved counties, thanks, in part, to her support. Carol, featured at left, says their WSU education will give students the basic stepping stones to build their futures, "as they go into a world of opportunities and challenges."

What is an endowment?

A gift of $25,000 or more is invested and a percentage of the endowment is distributed to benefit students, research, or programs. An endowed fund can also be established through an estate or planned gift and is a great way to link your legacy with WSU Health Sciences future.

We have experts who can help.

Please contact Brooke Ledeboer, WSU Foundation

509-324-7202 | brooke.ledeboer@wsu.edu

WASHINGTON STATE UNIVERSITY HEALTH SCIENCES SPOKANE

Joshua Neumiller

Takes on Another National Diabetes Leadership Role

By Lori Maricle

Pharmacy's **Joshua Neumiller**, Pharm.D., was named chairperson of the Professional Practice Committee for the American Diabetes Association (ADA). He will be leading the committee's work to incorporate new clinical research findings into the Standards of Medical Care in Diabetes.

"I am very excited and honored to continue to be involved with this committee that actively revises the ADA Standards of Medical Care in Diabetes each year," Neumiller said.

Neumiller's appointment will run from January 1, 2018, through December 31, 2019. He was offered the chair position by the ADA in December based on his exceptional reputation as a leader in clinical practice and research in the field of diabetes.

Neumiller also currently serves as editor-in-chief of the journal *Diabetes Spectrum* which is published by the ADA, serves as a member of the ADA's Standards of Care committee, and holds national and international standing in the diabetes community. In 2016, he received the Albert B. Prescott Leadership Award from the Pharmacy Leadership and Education Institute.

Neumiller is a WSU alumnus. He is also an associate professor and vice-chair for the Department of Pharmacotherapy at the WSU College of Pharmacy. He is a certified diabetes educator and a fellow of the American Society of Consultant Pharmacists.

"Josh is not just a member of the committee but he is the leader of the entire Standards of Care," Pharmacotherapy Chair **John White**, Pharm.D., said. "The ADA Standards are one of the most influential, cited, and clinically utilized documents in medicine. They cover not just medication but all aspects of diabetes care."

According to White, the standards potentially impact the care of some 30 million Americans and are widely used worldwide.

Based in Arlington, Virginia, the ADA is a national non-profit organization with a mission to prevent and cure diabetes and to improve the lives of all people affected by diabetes. The Professional Practice Committee is a multidisciplinary expert committee comprised of physicians, diabetes educators, registered dietitians, and others who have expertise in a range of areas.

Advocating for Student Support, Increased Access in Higher Ed

By Lori Maricle

Shannon Kozlovich, in her role as director of legislative affairs

Shannon Kozlovich

for the Associated Students of WSU Spokane, led a team of five students to represent the WSU Health Sciences campus at the Coug Day at the Capitol event in Olympia, Washington, on January 22.

The event connected students with 103 legislators from around the state to discuss student-related issues and lobby for bills that seek to make college more affordable and accessible for students all over our state. The Spokane team joined 90 other students from other WSU campuses (Pullman, Vancouver, Tri-Cities, Everett, and Global) for the event.

"In addition to meeting with legislators, Lt. Governor **Cyrus Habib** spoke to our collective group of students and student government representatives from all six of the WSU campuses met with Governor **Jay Inslee**," said Kozlovich, a graduate student in pharmaceutical sciences. "The three main issues discussed were increasing funding for suicide prevention and mental health services on our campuses including adding support for our student veterans, the rising cost of textbooks that can be solved with the implementation of a grant program professors can apply to in order to develop their own in class resources so they don't have to assign a textbook, and finding a way to ensure that all of our students who are raising children have access to safe, close, and affordable child care while they are in school."

"Now that we have laid the ground work, we will spend the rest of the legislative session working to get beneficial legislation passed by remaining in contact with the legislators from the districts our students are from," she said.

Kozlovich works in the research lab of **Philip Lazarus**, Ph.D., in Spokane. She is working on her Ph.D. in pharmaceutical sciences studying the impact of genotype and tobacco flavoring agents on the detoxification pathway of tobacco carcinogens, and has been involved in student government at WSU Spokane since May 2017.

Providing opportunities for students to coordinate and participate in events like Coug Day at the Capitol is an example of how the College of Pharmacy is dedicated to providing a transformative student experience in collaborative research, scholarship and advocacy, and its commitment to developing outstanding health care professionals and scientists.

WSU student leaders at Coug Day at the Capitol are shown with Governor Jay Inslee, center.

From left are Shauna Leggett, Katie Cashman, and Megan Baker.

Champion Compounders:

Student Pharmacists Earn Top Prize in National Compounding contest

By Lori Maricle

Three student pharmacists competed in the national Student Pharmacist Compounding Competition in Florida.

Student pharmacists **Shauna Leggett**, **Katie Cashman**, and **Megan Baker**, made up one of 20 teams from pharmacy programs across the country.

The WSU team won the competition. They took home trophies, a check for $1,000 for the WSU compounding lab, and gift certificates for training opportunities for each student member and faculty mentor valued at over $3,000 per person.

Drug companies produce medicine in standard doses. Compounding is when pharmacists customize prescriptions to better fit the individual. Not all pharmacies provide compounding services, which makes it an ideal niche for pharmacy entrepreneurs interested in owning their own stores.

Basic compounding is taught in the first year of the Doctor of Pharmacy program. For students who are interested in developing further skill in customized medicine, they can also participate in the college's compounding club where students can further develop their skills. The annual Student Pharmacist Compounding Competition is one way students can practice their skills and even receive some national recognition. The local compounding competition took place in Spokane on January 20.

The national competition is hosted and co-sponsored by MEDISCA, a FDA-registered supplier of pharmacy compounding ingredients and products, to promote the compounding pharmacy community and provide student pharmacists with an opportunity to practice their skills and receive national recognition in the process.

Providing these types of opportunities for students to engage and gain recognition nationally is an example of how the WSU College of Pharmacy is dedicated to advancing human health through clinical education in its Doctor of Pharmacy program, and its commitment to developing outstanding health care professionals and scientists. ▪

Congratulations!

By Heather Byrd

WSU Health Sciences Spokane faculty and staff were recognized with many community, state, University and national awards in the last few months.


Renee Hoeksel

Renee Hoeksel, Ph.D., executive associate dean and professor at the College of Nursing, received the V. Lane Rawlins President's Award for Distinguished Lifetime Service. One of WSU's highest honors, the award is given to individuals who have demonstrated great personal or professional commitment to the University. In addition, Hoeksel was recently inducted as a Fellow in the National League for Nursing Academy of Nursing Education. She was recognized by the national organization for her work in establishing new RN-BSN pathways across five western states.


Debbie Brinker

Debbie Brinker, M.S.N., an assistant dean and assistant professor at the College of Nursing, was inducted into the Washington State Nurses Association Hall of Fame. Inductees are chosen for their significant accomplishments and contributions to the nursing profession. She became the seventh member of the College of Nursing faculty to earn a place in the WSNA Hall of Fame. Brinker has held leadership positions in nursing organizations statewide.


Laura Wintersteen-Arleth

Laura Wintersteen-Arleth, M.N., senior instructor at the College of Nursing, received WSU's Crimson Spirit Award. The award is a special commendation for WSU faculty and staff who have provided outstanding service and have exceeded expectations while representing the University.


John Clarke


Radha Nandagopal

John Clarke, Ph.D., assistant professor, College of Pharmacy, and **Radha Nandagopal**, M.D., clinical education director in the Elson S. Floyd College of Medicine, were honored as 2017-2018 Featured Faculty Members. Featured Faculty Members are recognized for their hard work and dedication in playing a central role in the University's land grant mission.


Alyson Blum

Alyson Blum, Ph.D., clinical assistant professor, College of Pharmacy, will serve as the first pharmacist medical director at Camp Stix, a summer camp in Spokane, for children aged 8 to 18 with juvenile diabetes.


Kathryn Meier

Kathryn Meier, Ph.D., professor and associate dean for Faculty and Student Development in the College of Pharmacy, received a Ferring Innovation Grant in the amount of $70,000 over one year from the Ferring Research Institute for the project, "Follicle-stimulating hormone (FSH) receptor as a therapeutic target in prostate cancer."


Megan Wilson

Megan Wilson, Pharm.D., clinical associate professor, College of Pharmacy, was chosen to be a member of the Provost's Leadership Academy (PLA) cohort. The PLA is an opportunity for deans and chancellors to recognize early and mid-career faculty who show promise as leaders and positive role models in their colleges or campuses.

Anna Brown, academic coordinator for Speech and Hearing Sciences, and **Luke Klein**, grounds and nursery specialist for Grounds and Facilities Operations, received 2017 Employee Excellence awards for administrative professional employee and civil service employee, respectively. Student Affairs received the Department Excellence award. ■

Education Faculty Leader has Math K-12 Background

By Lorraine Nelson

From left in the College of Education, Kristin Courtney, Janet Frost, Ella Kerr, Deva Chakraverty and Kelly LaGrutta.

The leader of WSU's College of Education office on the Spokane campus

was a math teacher in middle school and high school before she decided to return to school for a Ph.D.

Janet Frost, Ph.D., is finishing her first year as the academic leader of the Education unit and is in her 11th year as a faculty member for the College of Education unit at WSU Spokane. The Education unit has faculty who have expertise in math and science education, educational psychology and educational leadership.

Frost has a Ph.D. in Educational Specialties from the University of Nevada Reno, a master's degree in Philosophy from the University of Colorado Boulder, and a bachelor's degree in religion and philosophy from Denison University at Granville, Ohio.

"Although I loved the study of religion and philosophy, I found my true passion when I became a middle and high school math teacher in 1988," Frost said. She taught at a small school in Colorado that had students from kindergarten to grade 12 in the same building, and later at a small school in the U.S. Virgin Islands.

"I developed a special concern for diverse students who are often underserved in math education, including girls, students of color, and students from low-income households. That concern became the focus of my studies when I went back to get my Ph.D. at age 50."

Frost became the associate director of the Health Science STEM Education Research Center on campus in 2015 and has now been the director since fall 2016. In that role, she started a regular meeting for people from all the outreach programs on campus such as Project Lead The Way, MESA (Mathematics Engineering, Science Achievement), the Native American Health Sciences program, Community Engagement and Service Learning, Student Affairs student recruitment and others.

"We have so many great efforts happening on this campus, but we can accomplish more when we are knowledgeable and supportive of all those efforts, and when we can share them with Greater Spokane Inc., the Rural Alliance for College Success, and the students involved in great programs like MESA," she said.

Project Lead the Way (PLTW) is a national nonprofit organization offering professional development in the STEM fields for K-12 teachers. There are various PLTW training tracks such as computer sciences and engineering, but the one offered at Spokane focuses on the biomedical sciences and draws teachers from all across the country. Teachers are taught how to get their students involved in science inquiry by giving them situations they have to figure out.

Something that is new for Frost but that she is finding interesting is being involved in discussions about STEM education policy at the state level as a member of the Governor's STEM Education Innovation Alliance, which meets several times a year.

"I feel honored to have been invited to serve on this Alliance and am glad I can bring a WSU and Eastern Washington perspective to the table."

The College has added three new faculty at Spokane in the last two years and two of them are researchers who are investigating how they can collaborate with the researchers in the health sciences colleges on campus. The three new faculty are: **Deva Chakraverty**, researcher, Ph.D. in Science Education from the University of Virginia; **Robert Danielson**, researcher, Ph.D. in Urban Education Policy from the University of Southern California; **Kristin Courtney**, Master in Teaching Program coordinator, Ed.D. in Educational Leadership & Policy Studies from the University of Washington.

Para-educators Who Want to Become Teachers

Purpose of Changing Program

By Lorraine Nelson

Faculty member Kristin Courtney has been a leader in the development of the paraeducator program.

A new version of an existing teaching degree and credential program is starting on campus this summer with its first cohort of students.

The program is for para-educators—also known as instructional assistants or teacher's aides—to get a master's degree in teaching and a teaching credential while continuing to work, compared to the traditional master's degree in teaching (MIT) which is a fast-paced, 13-month program that necessitates people take a year off work.

"The programs both require a bachelor's degree for admission and are for people who got their undergraduate degrees before deciding they wanted to be a teacher," said **Janet Frost**, Ph.D., academic director of the WSU College of Education's Spokane office. Through a series of afternoon and evening classes over a period of two school years and three summers the new para-educators program offers people the opportunity to become certified K-8 teachers.

"The para-educators program will address a teacher shortage in the community, particularly in special education," Frost said.

An information night held in January on the WSU Spokane campus drew 35 interested para-educators from local schools.

Frost credits faculty member and MIT program coordinator, **Kristin Courtney**, Ph.D., with taking a leadership role in developing the para-educator program.

"The idea for this new approach came from similar programs offered by the College of Education on the Tri-Cities and Vancouver campuses," Frost said. "The difference is that the para-educators on those two campuses are offered undergraduate degree programs, but this one is for people who already have undergraduate degrees and want the teaching credential."

Demand for the traditional MIT program in Spokane has declined over the last several years due to the difficulty of balancing a job while enrolled in the program, and so adjusting the timing of courses to better support working professionals was a goal of this adapted program.

In addition to their work with new teachers, faculty in Spokane have expertise in math and science education, educational psychology, and educational leadership and participating in teaching classes via videoconference to students on other WSU campuses. Several also participate in operating the Health Sciences STEM Education Research Center on campus and a professional development program for teachers of science—Project Lead the Way.

For more information about degrees and credentials available from the WSU Spokane campus, go to spokane.wsu.edu/academic/education. ■


OUR LIVES BEGIN TO END THE DAY WE BECOME SILENT ABOUT THINGS THAT MATTER
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UPDATE

By Judith Van Dongen

Nutrition and Exercise Physiology students and Professor Pablo Monsivais at My Fresh Basket. From left: Jon Lanman, Dr. Monsivais, Rita Evans and Wendy Ellison.

Scientist Explores

Social, Economic Influences on Diet

Poor diets can cause obesity and increase our risk of developing chronic diseases such as diabetes and stroke.

That much we've known, but what scientists are still figuring out is what aspects of our diets affect our health and what factors drive us toward consuming a poor diet in the first place.

Pablo Monsivais

The latter is the research focus of **Pablo Monsivais**, Ph.D., an associate professor in Nutrition and Exercise Physiology in the Elson S. Floyd College of Medicine. He studies how social and environmental factors influence people's diets, exploring associations between diet and factors such as income level, employment status, and neighborhood access to different types of food outlets.

Monsivais recently joined WSU from the University of Cambridge in the United Kingdom. While there, he led several studies related to the Dietary Approaches to Stop Hypertension (DASH) diet, an evidence-based, balanced eating plan designed to promote healthy blood pressure. Using data from U.K. cohort studies and surveys, he and his team found that people who ate out more were less likely to have a DASH-accordant diet and more likely to be obese. Further analysis of the data by type of food establishment showed that their finding was only significant for fast food outlets.

In another study that examined supermarket accessibility, they showed that people who lived farther from a supermarket or had a limited budget for food were less likely to consume diets consistent with the DASH dietary pattern.

"We tend to underestimate the importance of neighborhoods and economic factors on our health," Monsivais said. "But if we can measure their impact, this could inform policy changes that could improve people's living circumstances and positively influence their health."

New Study to Evaluate Implicit Bias Training in Police Officers


Lois James

In an effort to build public trust in police, law enforcement agencies are turning to implicit bias training to help officers recognize and address subconscious prejudices. But does this training actually achieve the intended benefit? That question will be addressed in a new, three-year WSU study to evaluate the effectiveness of implicit bias training provided in different formats.

"We want to find out whether implicit bias training actually makes a difference in how officers behave and make decisions on the street, as well as how they are perceived by arrestees and the public," said lead investigator **Lois James**, Ph.D., an assistant professor in the College of Nursing.

Conducted in collaboration with the Ohio Peace Officer Training Commission, the study will include 300 police officers based in the city of Toledo and in Lucas County, Ohio. Officers will receive classroom- or simulation-based training or a combination of both. Some will be assigned to a control group that will not receive training until the end of the study. The simulation-based training will be Counter Bias Training Simulation (CBTsim). Developed by James, CBTsim lets officers interact with realistic scenarios projected onto a screen that involve violent and nonviolent encounters with people with different demographic characteristics.

The research team will analyze body camera footage and other blinded data collected for 12 months before and after the training phase. They will look for differences in officer behavior and public perceptions pre- and post-training and between groups to determine the effectiveness of each training method and find out how long any training effects last.

The project is funded by a $750K grant from the National Institute of Justice.


Researcher Lois James interacts with a simulation scenario used to train police officers on implicit bias.

Breakthrough Finding Focuses Search for Autism Risk Factors


Lucia Peixoto

A landmark study by scientists at WSU and elsewhere has brought focus to the search for genetic links to autism spectrum disorder, which affects an estimated 2 million Americans. Published in the Jan. 16 issue of *Science Signaling*, the study identifies more than 2,000 areas of DNA that are active when mice learn a new task and are strongly associated with autism. Taking a closer look inside one of those areas, the researchers found a genetic mutation that is associated with increased risk of developing autism.

About half of people with autism have learning disabilities, which is why the researchers looked at DNA changes triggered by learning and memory to see whether the areas affected by those changes could be linked to autism. **Lucia Peixoto**, Ph.D., an assistant professor in the Elson S. Floyd College of Medicine who conducted the study, said their approach could also be used to identify areas of DNA involved in other behaviors that are disturbed in autism—such as sleep and social interaction—and to find mutations within those regions.

She said their findings help scientists focus the search for autism risk factors within the vastness of our genome, which comprises more than three billion nucleotides—or building blocks—of DNA. Down the line, this could lead to accelerated diagnoses; better predictions of severity; improved timing and effectiveness of behavioral interventions; and the development of drugs that could mitigate the effects of genetic mutations linked to autism.

"Ultimately, our goal is to find ways to reduce the burden on families and help individuals with autism to be more functional and have a better, happier experience," Peixoto said.

New Research to Test Sleep Technology in Chronic Insomnia


Devon Grant

Researchers in the WSU Sleep and Performance Research Center will lead a new study to test the effectiveness of a novel sleep tracking system in individuals with chronic insomnia—i.e., those who experience disrupted sleep at least three nights a week for more than three months.

Known as SleepScore Max, the system uses a non-contact sensor that sits next to a sleeper's bed and measures timing, quantity, and quality of sleep. It pairs with a smartphone app that shows users details on their sleep and uses built-in sleep coaching functionality to provide individualized suggestions for improving sleep.

"If our study shows that this technology could effectively track and improve sleep in insomniacs, that could help expand cost-effective therapy options available to this undertreated population," said lead investigator **Devon Grant**, Ph.D., a postdoctoral researcher in the Elson S. Floyd College of Medicine. She said the technology has been validated in healthy sleepers and people with obstructive sleep apnea, but has not been tested in those with chronic insomnia.

In collaboration with the University of Washington, the researchers will recruit 90 participants with chronic insomnia and 30 healthy sleepers, who will be monitored in their home environment for two months. Study data will be analyzed to determine whether the technology accurately measures participants' sleep. In addition, the research team will evaluate the effectiveness of the system's built-in coaching functionality in treating insomnia as compared to participation in an online program for cognitive behavioral therapy for insomnia, the current standard of treatment for chronic insomnia.

The study is funded by a grant from the Institute for Translational Health Sciences' Multidisciplinary Clinical Research Career Development program.


Postdoctoral researcher Devon Grant talks with Sleep and Performance Research Center Director Hans Van Dongen.

Researcher Studies Effect of Common Toxin on Liver Disease


John Clarke

Up to 40 percent of U.S. adults are affected by a disease you have likely never heard of: nonalcoholic fatty liver disease, a buildup of fat in liver cells that is unrelated to alcohol. Most commonly seen in people with obesity, diabetes, and other diet-related chronic conditions, it's a silent disease that causes few symptoms initially. However, its advanced stage—nonalcoholic steatohepatitis (NASH)—can lead to cirrhosis and liver cancer.

John Clarke, Ph.D., an assistant professor in Pharmaceutical Sciences, is studying the interaction between NASH and microcystin-LR (MCLR), a common toxin produced by blue-green algae found in lakes and reservoirs. Consuming water, fish, or shellfish contaminated with MCLR causes liver damage. Previous studies have suggested that having NASH makes people more susceptible to the harmful effects of environmental toxins. NASH has also been associated with higher rates of chronic kidney disease, which may be due to exposure to MCLR.

In collaboration with colleagues at WSU and the University of Arizona, Clarke is now looking to determine whether MCLR exposure exacerbates liver and kidney damage in NASH and, if so, what molecular mechanisms are involved. Supported by a five-year, $897K grant from the National Institute for Environmental Health Sciences, their study uses an animal model to investigate the effects of one-time and repeated MCLR exposures on healthy individuals and those with diet-induced liver disease.

"If our study finds that microcystin-LR exposure accelerates the progression of NASH, that knowledge could be used to change regulations on allowable levels in our food and water and to identify patients with liver disease as an at-risk population for MCLR toxicity," Clarke said. ▪

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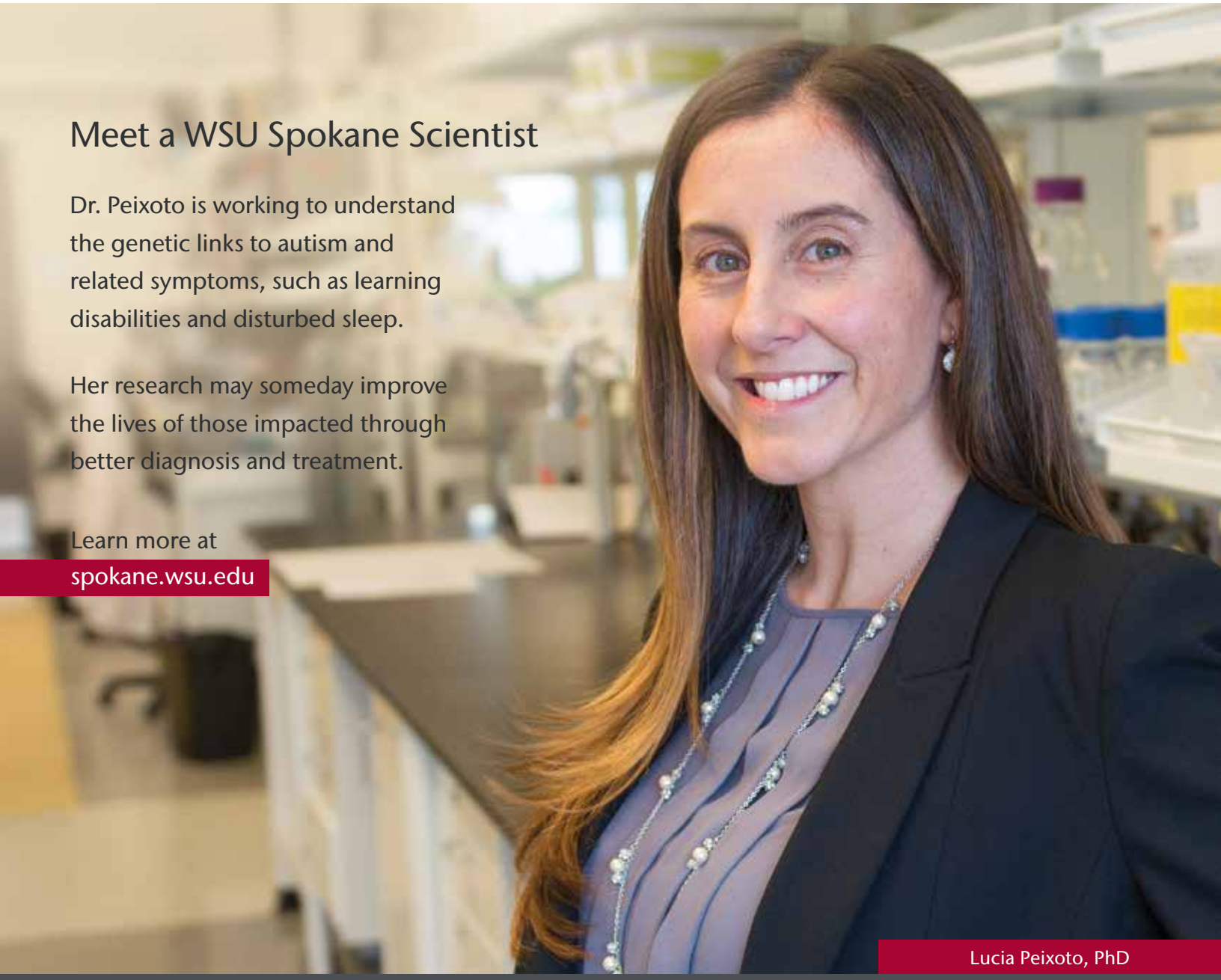

Meet a WSU Spokane Scientist

Dr. Peixoto is working to understand the genetic links to autism and related symptoms, such as learning disabilities and disturbed sleep.

Her research may someday improve the lives of those impacted through better diagnosis and treatment.

Learn more at
spokane.wsu.edu

Lucia Peixoto, PhD

#SpokaneCougs

Neuroscientist and Computational Biologist | Elson S. Floyd College of Medicine