

WSU | SPOKANE

Spring/Summer 2015 • Volume 3

An inside look at WSU's health sciences campus



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Cover photo by Cori Medeiros: Yiyong (Ben) Liu, Ph.D., WSU Spokane Genomics Core Lab

A Letter from the Chancellor

Dear Friends of WSU Spokane,

What a year it's been! Our silver anniversary year turned out to be even more exciting than we expected last spring when we kicked off our 25th festivities.

As I write this, we have just celebrated the signing of legislation allowing WSU to have a medical school in Spokane. Governor **Jay Inslee** signed into law a bill that amends a 98-year-old state statute that gave exclusive rights to provide medical education to the University of Washington. A bill by Senator **Michael Baumgartner** was nearly unanimously approved March 25 by the Senate; that followed an 81-17 vote in the House earlier in the month on the bill by Rep. **Marcus Riccelli**. We now await approval for start-up funds from the legislature and Gov. Inslee.

This is truly a milestone in the history of Spokane, comparable indeed to Expo '74. Yet none of this would have been possible without the support of community leaders. It was because of those leaders' efforts, combined later with the vision of WSU President **Elson Floyd** and the University's Board of Regents, that the campus had its start and has developed into WSU's designated health sciences campus. Our 50 acres along the Spokane River, once abandoned railroad lines and a contaminated rail yard, have been transformed. Community vision and public and private investments over two decades have created a campus with several state-of-the-art teaching and research facilities.

It all began in 1987 when a group of leaders in Spokane brainstormed how to improve the local economy and came up with the idea of graduate level higher education. That same year the state's Higher Education Coordinating Board called for Washington State University and the University of Washington to build branch campuses. In 1989 Governor **Booth Gardner** signed legislation creating the campuses and the first class of WSU Spokane students began.

Now, 25 years later, this campus is a major education and research hub, shared with Eastern Washington University. We are educating the next generation of physicians, nurses, pharmacists, and other health professionals. You can read about our plans for medical education and how we got to this place in history in this issue of *WSU Spokane*.

I hope you'll also take time to read about the research occurring here. The photo of **Yiyong (Ben) Liu** on the cover is representative of the collaborative nature of our campus. Dr. Liu is shown in our genomics core lab which provides resources and expertise for faculty. But the lab is also available to other researchers in the community, including those from other universities, to perform DNA sequencing. The instruments in this lab, paid for by the Health Sciences and Services Authority of Spokane County, use next-generation sequencing to decode DNA and can sequence an entire genome in just 27 hours. In 2001 it took the Human Genome Project 10 years to sequence one person's genome. Read more on page 23.

Please accept my invitation to visit WSU Spokane periodically to see how beautiful and productive our health sciences campus has become.

Sincerely,



Lisa Brown, Chancellor, Washington State University Spokane



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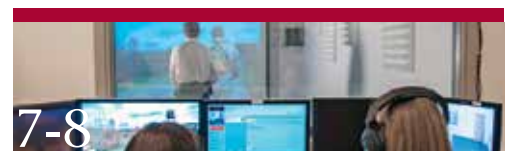
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Cougs Celebrate Medical School Approval

By Doug Nadvornick

Bill signing ceremonies conducted by governors are often joyous occasions that formalize legislative achievements. But rarely do they lead to spontaneous pep rallies, as happened on April 1.

As Washington Governor **Jay Inslee** put pen to paper and gave WSU the authority to create its own medical school, state Sen. **Michael Baumgartner**—a WSU alum—began an impromptu version of the Cougar fight song.

“Fight, fight, fight for Washington State.....”

A few people in the crowd circling the governor joined him while WSU President **Elsin S. Floyd** stepped forward to shake Inslee’s hand.

The bill the governor signed was simple in its scope. It essentially adds one sentence to a 1917 state law that gave the University of Washington exclusive rights to offer public medical education in the state. There was no money attached to the bill. Still, the process of building support for, and passing it, was not an easy one and it represents one small and important step toward alleviating a physician shortage in parts of rural Washington.

An intense year

It’s been about a year since Floyd and WSU Spokane Chancellor **Lisa Brown** told Spokane business and medical leaders that the University was interested in creating its own medical school, in addition to continuing in its role as an affiliate of the University of Washington’s WWAMI (Washington Wyoming Alaska Montana Idaho) medical education program.

The University hired the consulting firm MGT of America to study the feasibility of a WSU College of Medicine. Its report released last summer concluded the University has the tools and experience it needs to operate its own medical school.

With study in hand, Floyd, Brown and College of Medical Sciences Acting Dean **Ken Roberts** asked the Board of Regents in September for permission to pursue a medical school. The Regents endorsed the proposal.

“The Washington State University Board of Regents made a historic decision this morning,” was how Floyd announced the vote in an online column he released that day. It was historic because Washington has had only one publicly-funded medical school during the last 70 years, thanks to the 1917 law. It accepts about 120 students from Washington per year, one of the lowest ratios of medical students-to-population in the nation. (A private school, Pacific Northwest University, opened in Yakima; its first class began in 2008.)

Before WSU could create a new College of Medicine, the University needed the legislature to change that 98-year-old state law.

Through the fall and early winter, Floyd, Brown and Roberts traveled the state to gather support from legislators, health care and local elected officials. They focused their message on a few points:

- Washington needs more doctors, especially in rural areas. The state’s population has grown, but the number of medical students trained in the state’s publicly-funded institutions has remained flat during the last few decades.
- With the Affordable Care Act giving more people the opportunity to buy insurance, there’s more demand for care. Nurse practitioners and physician assistants are filling some of that demand, but not all. Many patients, especially older people in fragile health, are looking for doctors who are accepting new patients and having a hard time finding them.
- The physician workforce in Washington is aging. Doctors are leaving at a faster rate than they can be replaced.

Two Spokane legislators, Baumgartner

and Rep. **Marcus Riccelli**, sponsored bills in their respective chambers that would change the 1917 law. Riccelli signed up 64 co-sponsors in the 98-member House; Baumgartner signed up 17 co-sponsors in the 49-member Senate. Their non-partisan stewardship in guiding the bills through several hearings and votes gave the WSU medical school bill big majority support in both chambers.

With the governor’s signature on the bill, the next step is funding. WSU has asked lawmakers for \$2.5 million over the next two years to begin the accreditation process for the new school.

Meanwhile, Roberts and his administrative team have begun the work of creating a medical school. They are identifying and developing the curriculum they plan to teach. They are working to create the infrastructure for a WSU College of Medicine, including the support systems students will need. They are also talking with potential partners who would teach third- and fourth-year medical students in clinical settings in Spokane, the Tri-Cities, Vancouver and Everett, where WSU has established branch campuses.

The excitement that led to the singing of the Cougar fight song in the governor’s office has spread. Potential students from as near as Spokane and as far away as Pakistan have begun asking questions about when they can apply for admission. WSU can’t begin recruiting or admitting students until it attains a certain level of accreditation. That’s not expected until at least next year.

But for those who dream about attending medical school in Spokane and perhaps careers as physicians in small Northwest communities, the opportunity may not be far away. ■

Thank You to Our Early Donors

As word has circulated about WSU’s plans to create a new medical school in Spokane, public support for the concept has grown. People, from physicians to legislators, have written letters to their local newspaper editors or their legislative representatives.

Others, including WSU alum **Mikal Thomsen**, have opened

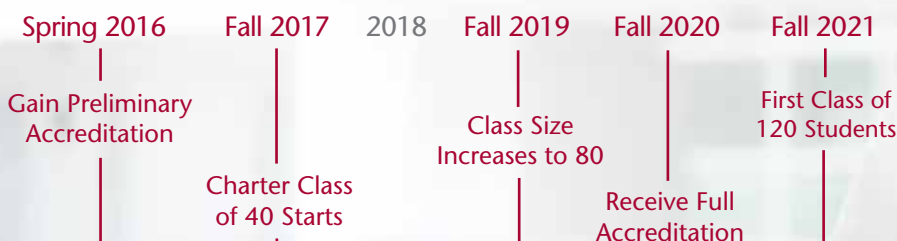
their wallets to help cover the cost of creating the new WSU College of Medicine.



Mikal Thomsen

Thomsen, co-founder and partner at Trilogy Equity Partners in Bellevue, has committed \$100,000. He has been joined by at least one other donor. Tacoma attorney **David McGoldrick** says he will contribute \$10,000 to help the University with “in my opinion, one of the most transformative events in the history of Washington State University.”

If you’d like to donate to the WSU Medical School fund, please contact Nancy Fike, WSU Spokane’s director of campus and regional development, at 509-358-7616 or nancy.fike@wsu.edu.





Justin Duke is a research intern in Medical Sciences.

Research Impact is Growing

By Terren Roloff

Most people think of research as improving lives. Spokane leaders know it is also changing our economy.

Consider WSU Spokane.

Research dollars on campus have nearly doubled in the last few years.

We've received close to \$142 million in grant and contract funding since 2005, including \$40 million from the National Institutes of Health. (For every dollar in NIH funding an institution attracts, approximately \$2.21 in local economic growth is generated.)

Our health sciences research portfolio has grown significantly, now encompassing genetics, cancer, kidney disease, diabetes, addictions, neuropharmacology, exercise physiology, mental health, sleep, neuroscience, behavioral health and molecular biosciences.

Employment has increased dramatically, accompanied by a payroll that

contributes to the economy through rents and mortgages, household purchases, and entertainment outings.

The last two years, in particular, have seen significant economic impact to Spokane with the move of the College of Pharmacy to Spokane from Pullman and the recruitment of several new renowned researchers.

Recruitment Begets Recruitment

Some of the new recruitments were made possible by grants from the Health Sciences and Services Authority (HSSA) of Spokane County. Since 2012, HSSA has committed \$3.2 million for high-end laboratory equipment and for startup packages for national-level researchers.

The first researcher to arrive through HSSA was **Mike Gibson**, Ph.D., leader of Experimental & Systems Pharmacology in the College of Pharmacy, who studies rare inherited disorders related to metabolism and how they are affected by diet, drugs and cellular treatments.

Philip Lazarus, Ph.D., chair of the College's Department of Pharmaceutical Sciences, followed. He examines the role

of genetics in the activity of the enzymes that metabolize drugs and carcinogens.

Between them, Gibson and Lazarus have brought almost \$3 million in external funding to the campus. They have also spearheaded recruitment efforts that have attracted six new tenure-track faculty who have in turn brought a number of other research faculty and staff members with them.

Since the two arrived, Pharmacy has received more than \$17.5 million in new funding, of which at least \$14 million is attributable in part to HSSA as a result of the new recruits who brought grants with them as well as grants that use HSSA-funded equipment. "That \$14 million is a huge return on HSSA's investment," said Dean **Gary Pollack**, Ph.D.

Within the next two years, HSSA's recruitment of Gibson and Lazarus and two other highly regarded researchers will result in even more research-intensive faculty, research staff (technicians, postdoctoral fellows, and research-track faculty) and Ph.D.-seeking graduate students moving to Spokane.

Two years ago the College employed 26 people in Spokane. Now it has 156

staff and faculty. This includes more than 40 faculty and graduate students who have relocated to Spokane as a result of the recruitment efforts by Pharmacy alone. Most of the rest are a result of Pharmacy's move to Spokane from Pullman. The total payroll for the College is \$11.5 million.

As the College grows, the faculty, staff and students buy or rent homes, shop at local stores, attend cultural events, and contribute to the community by participating in their children's schools, their places of worship and their civic groups.

In many cases, they also work to commercialize their research.

Commercialization is Key

Mark VanDam, Ph.D., assistant professor of the Department of Speech and Hearing Sciences, is another example of a researcher who moved to Spokane. He is in the College of Medical Sciences and is hoping his work will lead to health benefits for those suffering from Parkinson's disease, of which there are an estimated 22,000 in Washington and 1,600 in Spokane County.

VanDam's speech and voice biofeedback device will help improve Parkinson's patients' lives by giving them the ability to engage more fully. The wearable, real-time vocal biofeedback device alerts the wearer to adjust speech and voice production characteristics such as speaking volume. Someday it might be commercialized.

Hans Van Dongen, Ph.D., director of the Sleep and Performance Research Center, is a step or two further along than VanDam. He has received gap funding from the WSU Office of Commercialization that will help get his patented drowsiness driver detection technology ready for commercialization.

The Office of Commercialization helps WSU researchers navigate the path from innovation to the marketplace. "We ensure their valuable discoveries are protected where possible, and prepared for startup generation or potential licensing by third parties," said **Anson Fatland**, associate vice president of Economic Development for WSU.

Fatland says it takes both a vibrant community and university to recruit researchers like internationally

respected Van Dongen to support their commercialization efforts. "The University needs to have a strong infrastructure of labs and equipment and the community needs to have a strong economy, good schools, entertainment options and activities that appeal to faculty."

Once these prerequisites are in place, productive researchers form teams that compete successfully for funding from federal sources or organizations like the Life Sciences Discovery Fund (LSDF) or HSSA. "That's exactly what is happening at WSU Spokane," said Chancellor **Lisa Brown**.

John Roll, Ph.D., is one of two researchers from WSU Spokane to receive a LSDF grant. LSDF invests monies from the state's Master Tobacco Settlement Agreement and from private and corporate donors in research and development projects across Washington that demonstrate the strongest potential for delivering health and economic returns to the state.

Roll's grant for more than \$4 million covers opiate addiction and chronic pain in rural communities, among other subjects, and gives more than 200 physicians and nurses better training to combat addiction. Some estimate that substance abuse treatment yields \$3.77 in economic benefit for every dollar spent on treatment costs. Roll is the senior vice chancellor for academic affairs and research, and holds faculty positions in the College of Nursing and other programs. He is the most well-funded researcher on campus.

The research of **Weihang Chai**, Ph.D., focuses on understanding the molecular and cellular processes for initiation of cancer and premature aging. "We study how various proteins interact with genome DNA and protect genome stability. It is our hope that our findings will be applied in therapeutic research for facilitating the cure of cancer and age-related disease," said Chai.

Like their colleagues in the College of Pharmacy, Roll's and Chai's work in the colleges of Nursing and Medical Sciences, respectively, have resulted in the recruitment of several other researchers to Spokane as well.

The Future is Indeed Bright

Chai is part of a growing cadre of faculty in the new College of Medical Sciences and in what WSU plans to be part of the new medical school.

The likelihood of a WSU medical school in Spokane increases research and economic impact opportunities. Medical schools are economic engines that attract federal research dollars and create jobs and the potential for new spin-off companies.

Universities with medical schools are most likely to fully realize their research potential and commercialize biomedical research, says **Andrea Lazarus**, Ph.D., assistant vice president for research. "A medical school in Spokane will enhance the reputation of area hospitals and the health systems that will train medical students and residents, attracting patients to seek care at those institutions."

Greater Spokane Incorporated's President **Steve Stevens** says this about Spokane's economy: "We want to fully realize what we dreamed of many years ago, which is doctors being trained in Spokane and research coming to Spokane that would ultimately turn into commercialization, which means jobs. That's companies and jobs being created by virtue of research."

(Research continued to page 23)

JP Morgan Chase Helps Commercialize Research

JP Morgan Chase has partnered with WSU Spokane, Empire Health Foundation, Greater Spokane Incorporated and HSSA on development and implementation of a strategy for commercialization of research done on a health sciences campus. The goal of this strategy is to move faculty scholarship in the biomedical sciences toward entrepreneurial activity and job development.

Research Roundup

By Judith Van Dongen

Dr. Éva Szentirmai is researching the link between obesity and sleep loss.



Research Explores Link Between Obesity and Sleep

Recent studies have linked obesity and chronic sleep loss, but scientists still don't know how the two are related. **Éva Szentirmai**, M.D., Ph.D. (pictured above), an assistant professor in the College of Medical Sciences, is looking at brown fat to help find the answer. She and her colleagues recently received a five-year, \$1.8 million grant from the National Institutes of Health to study this beneficial fat, which helps us burn the calories stored in white fat and regulates our body temperature.

Until recently, it was thought that only newborns have brown fat. Scientists now know that nearly all adult humans have brown fat, but its activity level varies with age and other factors. Earlier studies conducted by Dr. Szentirmai in mice showed that sleep loss activates brown fat, and that this increase in brown fat activity triggers a sleep response. When allowed to sleep, mice without brown fat got less sleep overall and less deep sleep than mice with normal brown fat activity.

In this new study, Dr. Szentirmai is looking to find out how brown fat interacts with the brain to regulate sleep. She will look more closely at specific neuronal and cellular mechanisms that she thinks play a role based on previous findings. Her work could open the door to the development of new drugs to combat obesity, metabolic syndrome, and chronic sleep loss.

"If we can restore normal brown fat activity, that could lead to weight loss and normal sleep activity," Dr. Szentirmai said.

Patented Technology Measures Pain in Premature Infants

Life is tough for premature infants in the neonatal intensive care unit (NICU). On top of the wide range of health problems these babies experience, they undergo an average of 12 painful



Martin Schiavenato

procedures in their first two weeks, said **Martin Schiavenato**, Ph.D., an associate professor of nursing and a former NICU nurse. Worse yet, they have no way to clearly communicate their level of pain.

"No other population is as vulnerable," he said. "Their central nervous system is not fully developed yet, and there's mounting evidence that pain contributes to brain deficiencies that may lead to blindness, cerebral palsy, cognitive disabilities, and other conditions."

For more than six years, Schiavenato has worked with medical engineers to develop technology to objectively measure and communicate the level of pain and distress in infants. A patent for their pain measurement system was granted in 2014. They are still refining their prototype

device and hope to see it start appearing in hospital NICUs within three to five years.

The device will measure three signals that indicate pain or distress in newborns: hand flexing, heart rate variability, and facial grimacing. It uses a baseline measurement taken while babies are at ease and communicates changes through an attached LED bulb that changes color depending on the pain level detected.

Schiavenato said the device will help NICU staff improve pain management. He said the currently used pen-and-paper pain assessment scales are subjective and time-consuming and provide only a snapshot of the pain experienced.

Schiavenato's pain management technology could also be adapted for future use with nonverbal adult patients.

Melanoma Risk Tied to Circadian Clock

Avoiding sunburn is important, as too much exposure to the ultraviolet (UV) radiation in sunlight can increase your risk of developing melanoma and other skin cancers. Newly published research



Shobhan Gaddameedhi

by a WSU scientist suggests that the circadian clock—the molecular mechanism that keeps our bodies on a 24-hour

cycle—plays a role in how well the skin can defend itself from the sun’s harmful effects.

Shobhan Gaddameedhi, Ph.D., an assistant professor in the College of Pharmacy, studied mice that were exposed to the same dose of UV radiation at different times of the day. He found that early-morning UV exposure—between 4 a.m. and 9 a.m.—caused the most cell death and skin inflammation. Gaddameedhi said that this is because the repair function of their skin cells is at its lowest during that timeframe, while DNA replication is at its highest. He noted that since mice are nocturnal, the opposite should be true for us humans, suggesting that late afternoon sun exposure may put us at the greatest risk of skin cancer.

Gaddameedhi said that although further studies are needed to confirm the validity of his findings in humans, his work helps to fill a considerable gap in the science on melanoma.

“Once we know the mechanism by which the circadian clock influences tumor development and we can identify the biomarkers, we can use that knowledge to improve diagnosis and prevention efforts,” he said.

His paper was published in the April 2015 issue of the *Journal of Investigative Dermatology*.

Criminal Justice Researchers Evaluate Novel Corrections Approach



Zachary Hamilton



Jacquie van Wormer

Driven by rising correction costs and shrinking budgets and backed by the Obama administration, states are turning to ‘smart justice’ approaches to maintaining public safety. In 2012, Washington state became the first in the nation to implement one such approach

on a statewide level: the swift-and-certain sanction model for offenders who violate the terms of their community supervision (parole or probation). Now, with grant funding from the Laura and John Arnold Foundation, a team of WSU criminal justice faculty is evaluating the model as other states are watching with interest.

Based on a highly successful pilot program in Hawaii, Washington state’s swift-and-certain program calls for quick, automatic punishment for low-risk violations. Failing a drug test or missing a parole meeting will land offenders in jail for a couple of days, whereas previously they could rack up countless violations before facing a much longer prison stay. The new approach is based on the premise that the immediacy and certainty of a sanction have more impact than the length of confinement.

“Offenders are held accountable for every single violation they commit and learn their lesson quickly,” said Assistant Professor of Criminal Justice **Zachary Hamilton**, Ph.D., who leads the study with Assistant Professor of Criminal Justice **Jacqueline van Wormer**, Ph.D.

With help from Assistant Research Professor **Alex Kigerl**, Ph.D., Hamilton and van Wormer are comparing prison days, reconvictions, cost, and other outcomes for offenders released to the community before and after implementation of the new model. Preliminary results suggest that the new approach helps reduce violations and reconfine-ments in the nearly 17,000 offenders currently supervised by the state.

Researchers Show How Fatty Acids Fight Prostate Cancer

By Eric Sorensen

Pharmacy researchers have found a mechanism by which omega-3 fatty acids inhibit the growth and spread of prostate cancer cells. The findings, which are at odds with a 2013



Kathryn Meier

study asserting that omega-3s increase the risk of prostate cancer, point the way to more effective anti-cancer drugs.

Scientists have long known that omega 3s reduce inflammation and have anti-diabetic effects, and some recently discovered how this happens.

“But we’re the first to show that they work this way in cancer,” said **Kathryn Meier**, Ph.D., a professor of pharmacy at WSU Spokane. “The attention has mostly been on inflammation and diabetes, and we were the first to show this mechanism in any cancer cell at all.”

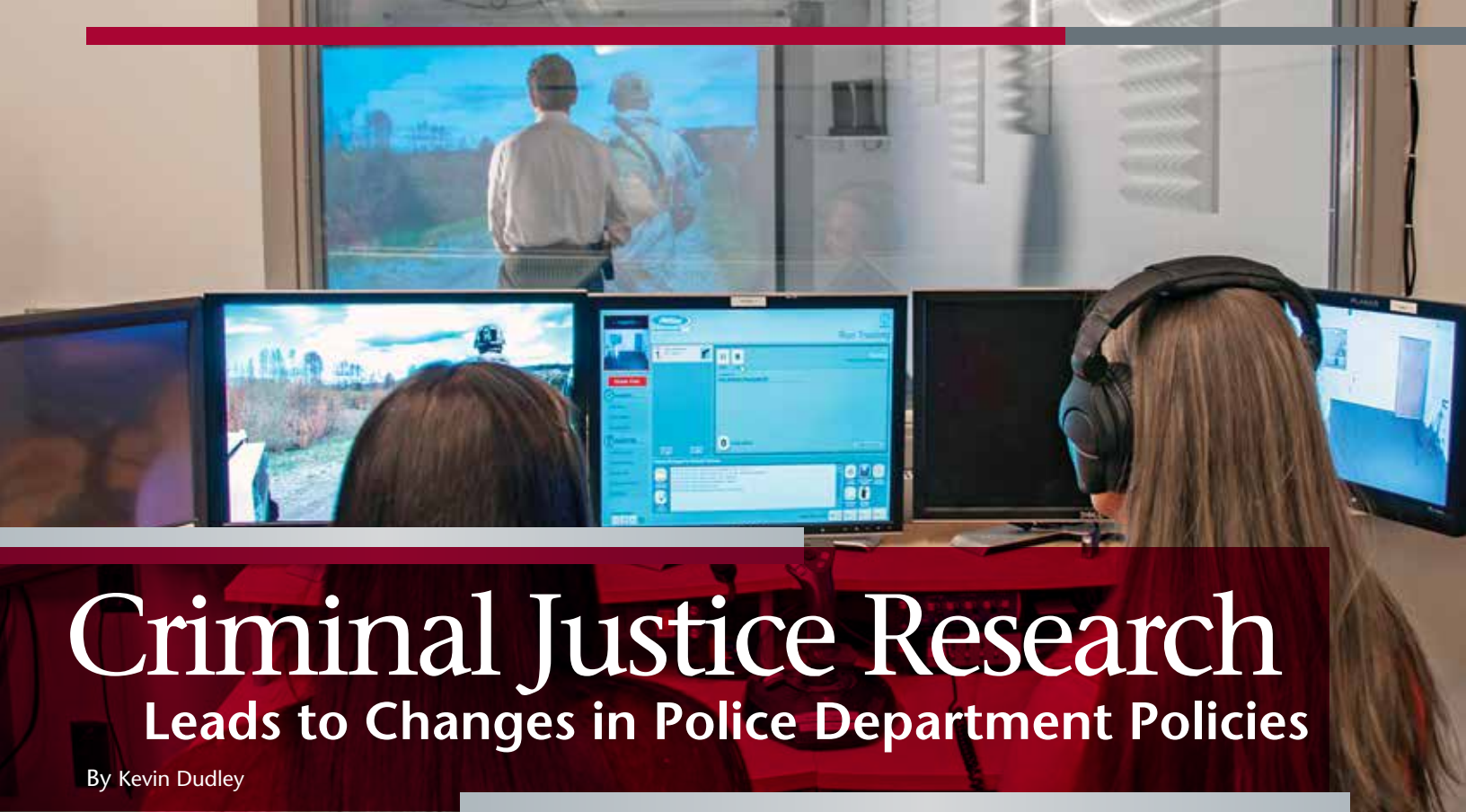
The 2013 study found that men with higher levels of omega-3 fatty acids in their blood had a greater risk of developing prostate cancer. It was not clear if the fatty acids came from food or supplements like fish oil.

Working with prostate cell cultures, Meier and two students, **Ze Liu** and **Mandi Hopkins**, found the fatty acids bind to a receptor called FFA4, for “free fatty acid receptor 4.” Rather than stimulating cancer cells, the receptor acts as a signal to inhibit growth factors, suppressing proliferation of the cancer cells.

“This kind of knowledge could lead us to better treat or prevent cancer because now we know how it works,” Meier said. The study also found that a drug mimicking the action of omega 3s can work as well or better than fatty acids in suppressing the cancer cells. The study appears in the *Journal of Pharmacology and Experimental Therapeutics*.

Meier said it is still unclear if the effect can be obtained by taking dietary supplements like fish oil. Moreover, the effect of fish oil could fade as it is digested, while data from this study suggest that an omega-3 drug needs to be in a cancer cell all the time to have an effect.

“It’s very difficult in dietary studies to tell how much to take or what form to take,” Meier said. “Once you have a drug, you can test very precisely whether it works or not in a certain disease and you would know exactly how much to give people.” ■



Criminal Justice Research Leads to Changes in Police Department Policies

By Kevin Dudley

Research conducted in the Criminal Justice program at WSU Spokane has succeeded in changing practices and policies of local and national law enforcement agencies, as well as connected local law enforcement more strongly to the University.



Steve James

Steve James, a researcher in Criminal Justice, recently landed a contract with the Spokane Police Department (SPD) to help the department learn why force is used in certain situations.

The SPD is implementing changes to training and policies to ensure best practices based on 42 recommendations from the Department of Justice, and is working with WSU Spokane to improve its training and policies.

"It's science that is informing training, which in the policing world is somewhat novel," James said.

Bryan Vila, Ph.D., a professor in the Criminal Justice program, leads the research team, which also includes **Lois James**, Ph.D., an assistant research professor in the Sleep and Performance Research Center and the College of Nursing. Lois James holds a doctorate from the Criminal Justice department.

Past research conducted by other entities had participants simply pressing a "shoot" or "don't shoot" button when presented with a possibly deadly encounter. The research on the WSU Spokane campus is much more realistic and measures the way the brain works, reaction time and more.

"We kind of flipped that on its head and said, 'no, that's not realistic enough,'" Lois James said. "So we came up with a new way of looking at bias and decisions to



Bryan Vila



Lois James

shoot, which is testing people in deadly force judgment and decision-making simulators."

The research used video simulations of the types of encounters police officers often face, like vehicle stops and domestic disturbances. Participants used modified firearms and other equipment that are connected to the research team's computers to measure various things like reaction time and brain activity.

Participants must offer commands to the suspect on the video screen, draw their firearm and decide whether to pull the trigger – exactly the type of decisions police officers must make on the streets.

"This method of investigating police officer behavior is what we believe is the most realistic and complex one that we can

achieve in a lab setting," Lois James said.

Vila, a former police chief himself, has published research looking at police officers and distracted driving. It has been cited as the basis for policy changes in various police and sheriff departments across the country.

A common police squad car has all of the features a normal vehicle would, plus a lot of additional features, including a full-size laptop. Officers need this equipment to do their job properly, but with that technology comes drawbacks.

All over the country officers are involved in accidents due to their use of the technology inside their vehicles while driving.

Vila and his team used state-of-the-art simulators to measure how police officers' driving is impacted by the distractions within the vehicle.

Los Angeles County sheriff's officials recently introduced new policies that restrict the use of in-car computers.

The policy is the result of a deadly accident caused by an officer using his in-car computer.

Vila told the *Los Angeles Daily News* that the policy change is "consistent with the best scientific evidence."

The work of Vila and Steve and Lois James has also resulted in Frontier Behavioral Health, the SPD and WSU Spokane joining together to hold a conference in July on campus to provide training to about 250 first responders, mental health professionals, mental health consumers and family members.

The change occurring because of the research on the WSU Spokane campus gives the criminal justice system an opportunity to be better understood.

"When (the criminal justice system) is talked about in the media, it's often talked about as a faceless, nameless entity," Steve James said. "One of the things our research does is try to bring back the fact that these are real human beings making decisions in real time under real stressors."

So far, it's working. ■



Bryan Vila's research has gained national media attention. Here, he sits down with CNN reporter Gary Tuchman for a segment on Anderson Cooper 360.



Clinic will be Model for Inter-Professional Health Care

By Lorraine Nelson

With their vision of true inter-professional education in mind, teaching faculty from medicine, nursing and pharmacy are spending many hours together designing the interior spaces and work flow plan for the soon-to-be-built University District Health Clinic.

They envision a patient entering the clinic with the possibility of being seen by a physician, nurse, pharmacist or a combination all in one appointment—and even meeting with a physical therapist, social worker or occupational therapist on the spot if that is necessary.

“This collaboration of health educators has set the standard for how they will work together in the clinic,” said **Traci Couture**, operations director of the clinic



being constructed on the WSU Spokane campus. “I believe they will create a model for inter-professional health-care delivery that will be unique in the country and used by others.”

The clinic itself was born of a collaboration between WSU, Providence Health Care and Empire Health Foundation when leaders of those organizations realized a teaching health center would qualify for new federal funding for more doctor residency positions in Spokane. All newly graduated physicians must spend at least three years in a residency, also known as graduate medical education.

The three groups formed a consortium

to oversee most medical residencies in Spokane and almost immediately received federal funding for six more residencies, raising the number from 74 to 80. The goal is to reach 125 slots for Spokane. Currently, there are 1,600 residencies in Washington state, and only 110 of those are in central and eastern Washington.

The consortium is advocating in Congress for the re-appropriation of federal funds for these residencies this year, Couture said.

Meanwhile, the clinic is a little larger than it might be because every place there is a chair for a professional health worker there is another chair for a student to sit beside them, said **Cindy Fitzgerald, Ph.D.**, director of the Doctor of Nursing Practice program at WSU Spokane.

“Nursing has been built into the clinic as a full and equal partner,” Fitzgerald said. The nurse practitioners and their students will be involved in providing care, and the registered nurses and nursing students will perform the duties typically handled by the nurses in a clinic. They also could play



the new role of “patient-care navigator” for those patients who would benefit by having a nurse assigned to them to explain in more detail the health care plan designed for them.

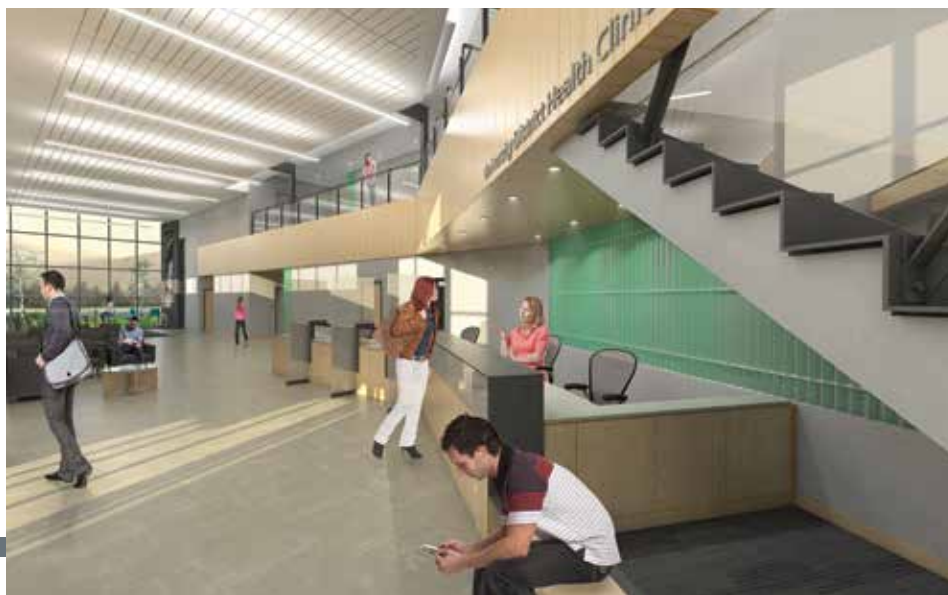
The idea behind patient-care navigators is that patients will benefit from better care coordination because fear and misconception can slow down the healing process, Fitzgerald explained.

“I have researched this and believe no

other clinic in the country has so many different disciplines together,” Couture said. The medical residents, nurses, pharmacists and students will work together on the first floor of the clinic, while Eastern Washington University students in physical therapy, social work and occupational therapy will be on the second floor.

The new clinic is expected to have 48 medical residents, most of them currently located in the family medicine and internal

medicine clinics in the Fifth and Browne Medical Building, which will move to the new teaching clinic in the late spring of 2016. The two clinics served 35,000 low-income patients last year and the new clinic is expected to serve a similar population. Although most of the medical residencies are in family or internal medicine, there will be three in psychiatry, and there also is a one-year sports medicine fellowship for residents in the family medicine track.



Public Welcome to Groundbreaking May 6

Fundraising is under way for this two-story, 42,000-square-foot teaching health clinic to be built on the southeast edge of the WSU Spokane campus. WSU is financing the construction through the sale of up to \$16.25 million in general revenue bonds, but we have naming opportunities for many of our spaces and many other ways you can help. Contact Nancy Fike at 358-7616 or nancy.fike@wsu.edu. Groundbreaking is at 9 a.m. east of The Bookie, 412 E. Spokane Falls Blvd. ■

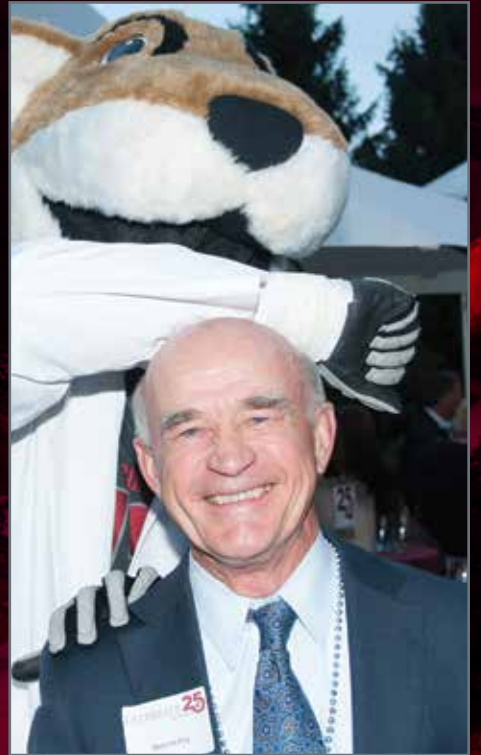




CELEBRATE 25

SPOKANE

A community celebration marking the 25th anniversary of creation of the Washington State University Spokane campus was held on Sept. 25, 2014.





History of our Campus

From Rail Yard to Health Sciences Education and Research Campus, WSU Spokane Celebrates 25 Years

By Terren Roloff

From as far back as Spokane's early years, the 50 acres a few blocks east of downtown were anything but pretty.

By the 1960s, when community leaders realized that area and the rail yards downtown had become a blight on the community, those 50 acres were plagued by waste and neglect.

Fortunately, it wasn't too long after that realization that things changed for the better.

The City of Spokane's hiring of a community development director named **King Cole** in the late '60s was the first of many actions to significantly alter Spokane's landscape. Cole's idea to host the world's fair—Expo '74—led to the revitalization of downtown, the jumpstarting of the local economy, the development of Riverfront Park and the performing arts center, and a focus on ensuring the Spokane River would always be a point of pride for the community.

The '80s brought another economic slump and another desire by community leaders to do something dramatic to improve the local economy. While the river had been accentuated during Expo '74, there was plenty of it that flowed through some ugly landscape, including those 50 acres that were still a pocket of blight. As leaders gathered in 1987 to brainstorm solutions to the economic

problem brought on because mining and timber projects were starting to disappear as Spokane's mainstay industries, the effects of Expo '74 were top of mind.

Led by **Paul Redmond** of Washington Water Power, **Bill Cowles** of Cowles Publishing, **Mike Murphy** of Central Pre-Mix, and **Dave Clack** of Old National Bank, Momentum '87—as they called their strategy—brought more than 100 business people and 10 elected officials together to come up with ideas to improve the economy.

According to **Susan Meyer**, CEO of Spokane Transit Authority (STA), one idea that gained traction was that the riverbanks east of downtown, close to Gonzaga University and below the medical district, might prove ideal for higher education projects. While private universities were in Spokane, and Eastern Washington University was in nearby Cheney, community leaders wanted a public university, preferably with graduate level opportunities and a research component, to be based in Spokane and connected to health sciences. Many health professionals increasingly required more clinical experience and the thought was

that experience could not be accessed in towns the size of Pullman or Cheney.

While community leaders worried about the local economy and the blight that still remained along the Spokane River, the state of Washington was planning to restructure its entire public education system, maintaining that it had a responsibility to ensure reasonable access to education beyond high school for all of its citizens. Accessibility meant geographic proximity, and for Washington residents who could not leave the state's growing cities, that meant bringing the universities to the cities.

The state also had long been interested in collaboration. A cooperative venture completed in 1968 had brought WSU, EWU, Whitworth, local hospitals and Fort George Wright College together to open the Intercollegiate Center for Nursing Education (ICNE), a first-of-its-kind arrangement in the U.S.

Later, a state Council on Higher Education report concluded that intercollegiate cooperation, in the style of the ICNE, offered the city its best choice in increasing graduate education opportunities.

The WSU Spokane health sciences campus sits along the Spokane River on the east end of downtown Spokane. Photo courtesy of Isaacson Aerial Photography.

In 1987 the state's Higher Education Coordinating Board (HECB) called for Washington State University and the University of Washington to build branch campuses. This mandate spurred the creation in 1989 of campuses in Bothell and Tacoma for the UW, and Spokane, Vancouver and the Tri-Cities for WSU. The state authorized both WSU and EWU to offer programs in Spokane and created the Joint Center for Higher Education to oversee the venture. Governor **Booth Gardner** signed the legislation.

Longtime community leader **Don Barbieri** was on Governor Gardner's Economic Development Board, chairing the Quality of Life Task Force and holding hearings around the state. "The bill for the campus was the biggest goal for us to get Spokane a chance for quality of life jobs through a state university in downtown," he said. "I'm so happy we had a friend in the governor. It was certainly one of my happiest days in leadership."

That same year WSU set up its first Spokane office and started offering classes. It moved to a downtown bank building where EWU also was offering classes. Because Spokane was an important regional medical market, it especially offered advantages for health sciences disciplines. As the pharmacy profession became more clinical, for instance, pharmacy students needed Spokane's hospitals, clinics and doctors. With considerations like these in mind, the campus' founding chief academic officer, **Fred Peterson**, focused on programs whose upper-division and graduate work would prosper in a city.

WSU's President **Sam Smith** appointed **William Gray** to be WSU Spokane's first dean (the title later became chancellor). The two men worked to put a face on the University's presence in Spokane by holding high-profile events in the city, placing WSU employees on civic boards, and sending faculty north from Pullman as often as possible.

The mission of the branch campuses was to serve place-bound students and promote economic development, responding to the needs of local business and supporting the region through research. By 1991 WSU Spokane was accepting graduate students

in criminal justice, education, engineering, nutrition and speech pathology.

In the fall of 1992, the Joint Center for Higher Education released a master plan to guide the development of what was named the Riverpoint Campus. The blueprint called for five to seven buildings that would allow Eastern and WSU to move from their leased downtown space to the old rail yard east of downtown.

The campus was meant to be a place where a number of institutions could work cooperatively. Accordingly, the first building, the Spokane Intercollegiate Research and Technology Institute (SIRTI) building, dedicated in 1994, had "intercollegiate" in its name. Matrical, a company that developed products used in life science research, was among the early biotech ventures that took advantage of SIRTI.

The plan for academic facilities began to materialize in January 1996 with the opening of a structure known simply as "Phase One." State Senator **Jim West**, who later became the senate majority leader and then Spokane's mayor, saw WSU as having a central role in the Spokane campus because its research and graduate capabilities would ultimately be good for the economic development of Spokane. In 1998, the HECB made WSU the fiscal agent for the joint campus.

In 2002, the Health Sciences Building (HSB) opened and EWU and WSU celebrated the wet and dry labs, clinical spaces, office areas and classrooms. The scientists who helped design the facility exulted that, "nothing else like it existed

in the country." The HSB now provides a home for a long list of health programs, including two reduced-cost clinics: the WSU-EWU University Hearing and Speech Clinic and the EWU Dental Hygiene Clinic.

In the early 2000s, WSU Spokane's Design Institute, with students in interior design, landscape architecture and architecture, grabbed on to an earlier idea to create a university district around Gonzaga and the shared WSU/EWU campus. The concept caught the eye of then-State Senator **Lisa Brown** and other legislators for its ability to stimulate Spokane's economy and educational environment. Moreover, the students had taken their ideas to Washington D.C., and secured \$1 million in funding through Senator **Patty Murray**.

Around this time, U.S. Representative **George Nethercutt** of Spokane began investigating possibilities for duplicating WSU Pullman's successful Institute for Shock Physics (ISP) in Spokane. Funded with national defense money, ISP research centered on physics experimentation and was seen as having significant economic development potential. The congressman was not alone in this work. Civic leaders like **Jon Eliassen** and **Stacey Cowles** saw the momentum Seattle, Austin and Palo Alto enjoyed because of successful research and development and wanted that for Spokane. The Applied Sciences Laboratory opened in 2004 as part of the SIRTI Technology Center, which marketed the building as home for biomedical and research-related organizations.



Gov. Booth Gardner signing Engrossed Senate Bill No. 6095, March 23, 1989, establishing WSU Spokane as a branch campus of Washington State University.



William Gray

Rom Markin

Nicholas Lovrich

Brian Pitcher

Lisa Brown

Chancellor Gray retired in 2003 and was followed by two WSU veterans—**Rom Markin**, professor and dean of the College of Business and Economics, and then **Nicholas Lovrich**, a professor of political science and former director of WSU's Division of Governmental Studies. **Brian Pitcher** became chancellor in January 2005. Appointed by President **Lane Rawlins**, Pitcher was known as a consensus builder and an expert in organizational change—a fitting preparation for his role in guiding the development of WSU Spokane on the multi-institutional campus it shared with EWU. The campus was flourishing and Pitcher went on the lead three significant capital projects during the seven years he served as chancellor.

An old structure, the South Campus Facility (SCF), provided a direct link with the site's history. Made of brick and heavy timber, the SCF began life in 1938 as a Montgomery Ward store. In 2005, much of the SCF was renovated and its new use included the Sleep and Performance Research Lab as well as The Bookie.

Backed by state lawmakers and civic

leaders, the campus was gaining facilities at a relatively steady pace with two new buildings in the works: the Academic Center, to house a library and be the administrative building intended to serve as the heart of the campus, and a new building to house the College of Nursing. The Academic Center opened in 2006.

In 2008, WSU Spokane began educating first year students in the UW's WWAMI (Washington Wyoming Alaska Montana Idaho) program. The Nursing Building opened in 2009.

Around this time, local leaders began advocating for construction of a building that would be large enough for the entire WSU pharmacy program, half of which was still located in Pullman. Supporters also wanted enough space in the building for possible expansion of the UW's medical education program on the WSU Spokane campus. **Rich Hadley**, from Greater Spokane Incorporated, and then-Senate Majority Leader Lisa Brown worked hard to bring the building to fruition.

Originally slated for construction in 2015, WSU's President **Elson S. Floyd**, then-WSU

Spokane Chancellor Brian Pitcher, and Spokane-area leaders and legislators—led by Senator Brown—convinced the legislature in 2009 to accelerate the building project by two years. State Senators **Linda Evans Parlette** and **Derek Kilmer** figured out how to structure the state's debt capacity to do more during the downturn in the economy that was occurring at the time and less in a future upturn.

While buildings were going up rapidly and the campus was turning into a place of beauty and enlightenment, a significant decision by the Board of Regents, which included Spokane native and community leader **Betsy Cowles**, occurred in 2010: designation of the Spokane campus as the University's health sciences campus. That key development continues to impact the direction of the campus today.

In 2013, the College of Pharmacy moved the last year of its multi-year degree program to the new Pharmaceutical and Biomedical Sciences Building. Also sharing that building are students in medical sciences. Generous donors made second-year medical education possible, contributing more than \$2 million in seed money to fund the start-up costs. The Empire Health Foundation made an initial \$850,000 grant. Community leaders **Marty Dickinson** and **Tom Quigley** joined Greater Spokane Incorporated to lead a campaign in which 14 local corporations and charitable organizations pledged another \$1.45 million. Other community support came from an organization that

1989 1990 1991 1992 1993 1994 1995 1996 1997 1998 1999 2000 2001 2002

Governor Booth Gardner signs legislation creating WSU Spokane along with other new campuses around the state

First class of WSU Spokane graduates celebrate Commencement



Construction begins on the Phase I Classroom Building and the Riverpoint Campus is born



Phase I Classroom Building dedicated (February 21)

Construction begins on the Health Sciences Building



Health Sciences Building dedicated (February 22)

calls itself Friends of WWAMI, under the leadership of **Dave and Mari Clack**.

In early 2013, former Senator Lisa Brown was named chancellor of the campus. In her short tenure Chancellor Brown has led the addition of a third WSU college to be based on the campus—the College of Medical Sciences—and the consortium called Spokane Teaching Health Center with leaders from Empire Health Foundation and Providence Health Care. STHC has already generated additional medical residency slots in Spokane and will complete a clinic in 2016 for patients who will be seen by the residents as well as health sciences students on campus, using an innovative, team-based, multi-disciplinary approach. Most significantly, Brown has been a key leader in bringing a medical school to Spokane.

The dream of a research campus, a home for WSU and EWU's urban education efforts, as well as a collaboration with the area's community colleges (Community Colleges of Spokane's administrative office is located within the University District) and a connection with Spokane's two private universities (Whitworth has a University District classroom and Gonzaga's campus is within the district), not only came to life, it came together much more quickly than expected. Momentum '87 developed a campus master plan with a 50-year buildout. Instead, 25 short years later, the campus is developed with phased expansion planned.

Today, WSU Spokane educates over 1,400 students, preparing future health

professionals and housing world-class research that leads to healthier people and communities. Academic offerings on the Spokane campus include undergraduate degree completion, graduate, and professional programs in medical sciences, nursing, pharmacy, nutrition and exercise physiology, speech and hearing sciences, health policy and administration, criminal justice and education.

In 2013-14 WSU Spokane was awarded nearly \$20 million in grants and contracts.

The internationally known Sleep and Performance Research Center is a cornerstone of WSU Spokane's growing research portfolio. It has brought over \$35 million in extramural funding to WSU and produced more than 350 scientific publications. Faculty are active in education, outreach and the translation of science to policy and federal rulemaking. The center brings together researchers from six of WSU's 12 colleges.

WSU Spokane is truly a collaborative campus, sharing its 48 acres with EWU and its research and outreach efforts with rural areas, tribal communities and underserved populations around the world.

The distinctive campus has a park-like feeling. The river flows nearby and sidewalks crisscross from red brick building to red brick building. WSU nursing students in scrubs cross paths with their white-jacketed counterparts in the pharmacy program as well as with EWU's dental hygiene, physical and occupational therapy majors. On the top floors of the newest of the structures,

researchers are investigating genes, cancer, diabetes, sleep, diet and pharmacotherapies.

Meanwhile, students enjoy a variety of volunteer opportunities, from Saturday morning sessions at Spokane's House of Charity homeless clinic to spring and summer breaks caring for patients in rural clinics in countries such as Guatemala and Peru.

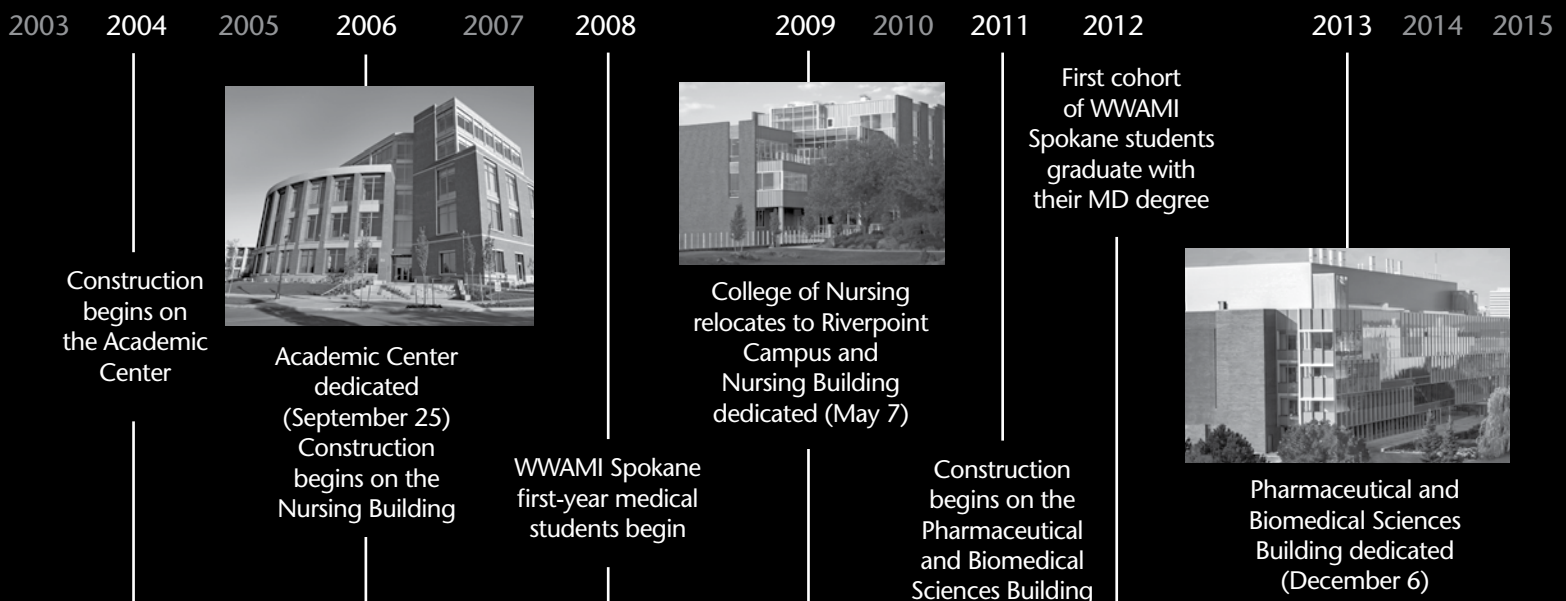
And just as community leaders were involved in the implementation of the campus, they similarly are hopeful that the four-year medical education and research university WSU is pursuing will jumpstart Spokane's economy now.

With a greatly expanded campus, strong academic program, community relationships, and thriving research ventures, WSU Spokane, in its 25th year, has done much to benefit the Inland Northwest and looks forward to contributions of even more significance in the future.

The success of this campus is truly the result of the community of leaders who worked together all those years ago to make it happen.

So much has changed at WSU Spokane since the signing in 1989 of state legislation that created branch campuses for Washington State University in the Tri-Cities, Vancouver and Spokane. One thing, however, remains consistent: the future of this campus is intertwined with the vision of the community leaders. ■

Sources: "A History: Washington State University Spokane 1919-2010"; "For the Health of a City," Washington State Magazine, Fall 2014; WSU Spokane 2009 Commencement Program





Competition Set Aside for Good of Communication Disorders Students

By Doug Nadvornick

Students from the WSU and EWU speech and hearing sciences and communications disorders programs share an American Sign Language class.

On Spokane's health sciences campus, where most of the departments complement each other, the University Programs in Communication Disorders (UPCD) is a unique case.

The UPCD partners—WSU's Speech and Hearing Sciences (SHS) and EWU's Communication Disorders programs—compete for undergraduate and graduate students who want to train to become speech-language pathologists and audiologists. But once the students are enrolled, they're embraced by both institutions.

"We've grouped students together. Faculty have taught together," said **Roberta Jackson**, EWU's graduate program director for Communication Disorders. "Often teachers don't know which university their students are from. It's irrelevant."

The two institutions' programs have worked well together. Staff, faculty and alumni of the programs celebrated UPCD's 25th anniversary last spring. Students enjoy 100 percent placement after graduation.

"It's the only program in the country that is cooperative with two partners as equals," said Jackson.

Though the partnership goes back more than a quarter century, the programs have only been housed on the health sciences campus

since 2002. Initially, they were based on their respective campuses in Pullman and Cheney. However, in the late 1980s, both WSU and EWU moved their graduate programs in Speech and Hearing Sciences and Communications Disorders to Spokane, occupying shared space in the WSU Spokane facilities in downtown Spokane and formally launching their UPCD program.

"Some of my colleagues realized it might be better for students if the program was based in Spokane because there were far more opportunities for clinical practice here," said Professor **Charles Madison**, Ph.D., who has been with WSU for 44 years and coordinates its SHS graduate program.

Around that time, he says, administrators from the two universities began to

talk about cooperation. In the fall of 1988, UPCD was born when graduate students from both programs took a class together on the campus of Gonzaga University, where students received instruction via a televised distance learning system.

In 2002 the two graduate programs moved into the new Health Sciences building on the Spokane campus. Then a few years ago both universities moved their undergraduate programs there as well. Presently, WSU students spend their first two years in Pullman and EWU students in Cheney, then shift to Spokane for their final two years of undergraduate study and their two years of graduate school.

The two programs not only share a teaching mission, they also collaborate on research. This past spring, WSU Clinical Assistant Professor **Georgina Lynch** and EWU Professor **Donald Fuller**, Ph.D., worked together to mentor an EWU graduate student as he conducted autism research for his master's thesis. The student later presented his research at the national convention of the American Speech-Language-Hearing Association. Lynch says she used their findings from this research to adapt the autism treatment provided in the UPCD's Hearing and Speech Clinic.

Gail Chermak, Ph.D., the chair of WSU's program, says the programs have grown considerably, in students, faculty and research capabilities, to become one of the largest on campus. She says the two-university collaboration gives students exposure to faculty with a broad range of expertise and research programs.

UPCD's community impact

The University Programs in Communication Disorders provides services to the community with a variety of programs for all ages, from pre-school children to senior citizens. While recent access to health care insurance has increased demand, there is still room in most of the programs, and with graduate students needing 400 hours of clinical experience, the services are varied.

In many cases they are a one-stop shop for families. "WSU Spokane prides itself in teaching our students in an inter-professional manner," says Chermak. "That means our patients can take advantage of a variety of clinical professionals, not to mention cutting-edge research, without having to drive all over the city or across the mountains to Seattle."

Many rooms feature one-way windows so parents, family members and students can watch patients interact with their therapists without interrupting.

Unless otherwise noted, the UPCD programs are located in the Health Sciences building:

- The University Hearing and Speech Clinic, a shared EWU/WSU facility open to the community, provides evaluation and therapy to children and adults with speech, language and hearing problems. First-year graduate students work under the supervision of nationally-accredited and state licensed faculty members.
- The HOPE (Hearing Oral Program of Excellence) School is a non profit auditory-verbal preschool that works with children who are deaf and hard of hearing and who use modern technologies such as cochlear implants and digital hearing aids. The program is the only one of its kind in eastern Washington. Graduate students help prepare children for a mainstream K-12 education. The school is the charity of choice for Bloomsday 2015.
- A Friday morning cooperative preschool serves children referred by Spokane Public Schools. The program welcomes young children whose speech is unintelligible. WSU and EWU students work with children in group and one-on-one settings.
- Autism clinics help people of a variety of ages. UPCD students and faculty partner with the Northwest Autism Center to

provide services for young children, from early evaluation and diagnosis to intensive social language interventions, in settings such as the center's former Domino Early Learning Center in Cheney and the Northwest Autism Center ABA Clinic. A clinic on the Spokane campus provides social skills training for adolescents and young adults. First-year graduate students provide direct clinical services while also serving as mentors and role models.

- Student delegations participate in week-long clinics in a rural mountainous region in eastern Guatemala during spring break and in August. Their work, in cooperation with the medical mission group Hearts in Motion, supports local physicians and other health professionals who perform cleft palate surgeries. The UPCD students provide assessment and speech therapy to clients and education for teachers and families impacted by speech, language, feeding and hearing disorders in a variety of settings (e.g., special language programs, rehabilitation centers, a hospital, nutrition center, and senior center). Students from other programs, including pharmacy, occupational therapy, physical therapy, nursing, dental hygiene, and nutrition and exercise physiology, perform additional services.
- WSU Speech and Hearing Sciences actively recruits Native American students and provides them with culturally-appropriate training to work effectively with people in their home communities.
- Camp Candoo is an intensive speech therapy and literacy summer camp for children ages 4-8 with severe speech disorders. The nine-day camp on the Spokane campus allows graduate students and Speech and Hearing Sciences faculty members to assess and provide intense speech therapy for the campers, many of whom come from out of state.
- EWU operates a three-week summer Successful Stuttering Management Program on its campus in Cheney.
- WSU hosts an annual public forum that addresses issues related to amyotrophic lateral sclerosis, or ALS, also known as Lou Gehrig's disease. ■



UPCD students work with children who wear cochlear implants and digital hearing aids in the non-profit HOPE School.



Nursing Students Gain Experience Treating Mental Illness and the Homeless

By Alli Benjamin and Kevin Dudley

The National Alliance on Mental Health

estimates nearly 19 percent of adults experience mental illness in a given year. Between 26 and 46 percent of homeless adults live with mental illness.

Treating those individuals requires a certain kind of care.

The WSU College of Nursing includes several fields in nursing, from Bachelor of Science nurses who provide basic health care to nurse practitioners who have a master's or doctorate. Both levels and in between are working with the homeless.

In most cases, a nurse is the frontline provider for mental health and psychiatric conditions of homeless individuals when they come to a clinic or a hospital.

Psychiatric/mental health nurse practitioners (PMHNPs) have the potential to blend counseling with the medical management and ongoing assessment that can occur in treating those with chronic mental illness.

Cindy Fitzgerald, Ph.D., is the director of the Doctor of Nursing Practice program at the WSU College of Nursing in Spokane. Fitzgerald emphasizes the holistic approach psychiatric nurse practitioners use when working with patients suffering from a mental illness.



Cindy Fitzgerald

"They can assess, diagnose, and treat families and individuals with psychiatric disorders," she said. "Essentially, they manage mental health with medication or therapeutic intervention such as group therapy, one-on-one therapy, or other types of counseling."

Education and training for the PMHNP role is also important and can be fairly specialized.

Most nurse practitioners begin with earning their master's or doctorate specializing in this area, and then complete the national exam. From there, ongoing education is mandatory, and this is where individuals choose techniques and methods to specialize in: private practice, community health clinics, or hospitals.

"I am hopeful that we will see an expanded appreciation on the roles PMHNP can play as we move into a more inter-professional care model where the patient is the center of the care plan," Fitzgerald said. "Psychiatric nurse practitioners understand how to engage with patients around making behavior change. We can all learn a lesson about that."

The mental aspect nurses treat is one part of the job when caring for the homeless. Treating physical needs is another.

Students Get a Dose of Reality

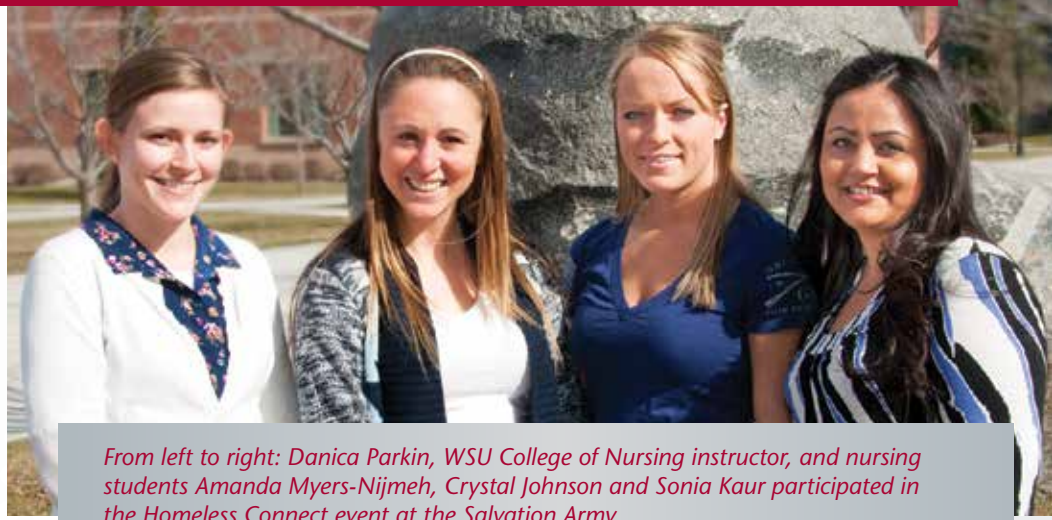
At a January event called “Homeless Connect” at the Salvation Army, students from the WSU College of Nursing got a glimpse into what they will be doing in hospitals and clinics after graduation. Homeless Connect offers a “one-stop shop” for homeless, at-risk and low-income families, said **Danica Parkin**, an instructor in the College of Nursing.

“Our nursing students go because it’s a good experience for them to come in contact with homeless people and see what kinds of barriers they’re facing and hear about their experiences,” she said.

The event is put on by the Spokane Homeless Coalition, which is comprised of various nonprofits, churches, social services and other community groups.

“We recognize that our services are spread out,” said James Ochiltre of SNAP, a member of the coalition. “We’re all doing similar things but working all over the place. (At Homeless Connect) we’re in the same location for a day.”

Students helped check blood sugar levels and blood pressure, answered general health questions, and conducted foot care, which often involved washing



From left to right: Danica Parkin, WSU College of Nursing instructor, and nursing students Amanda Myers-Nijmeh, Crystal Johnson and Sonia Kaur participated in the Homeless Connect event at the Salvation Army.

feet, providing clean socks, clipping toe nails and more.

Parkin’s students attended the event as part of their clinical group.

“After participating in Homeless Connect, I realized just how essential preventative care is when using a holistic approach to improve the health of the homeless population,” said Katherine, one WSU nursing student who participated in the event (and asked that her last name be withheld).

Parkin said this event is a great opportunity for students because as

nurses they will encounter underserved populations in one way or another.

“The reality is, homeless people come to the hospital,” she said. “They end up in the ER, they go through ICU. You’re going to come in contact with them if you work in health care, so it’s good to have an understanding of their situation.”

Treating both the mental and physical impacts homelessness has on a person is something nursing students at WSU Spokane are learning with real-world experiences and advanced degree opportunities. ■



WSU Spokane nursing students train in the state-of-the-art simulation lab on campus in an interdisciplinary setting.



Pharmacy Program Expands to Yakima, Incorporates Innovative Curriculum

By Lori Maricle

The WSU College of Pharmacy and the private Pacific Northwest University of Health Sciences (PNWU) recently finalized an agreement to offer the WSU Doctor of Pharmacy (Pharm.D.) degree on the PNWU campus in Yakima, beginning in August.

The collaboration between the public and private universities is fairly unique, according to **Linda Garrelts Maclean**, associate dean of the college. "It will allow WSU student pharmacists and PNWU students of osteopathic medicine to learn to care for patients as a team, an important aspect of WSU's health sciences philosophy."

The goal of this collaboration is to prepare pharmacists who specifically want to care for patients in new and different ways, particularly in



underserved populations in rural settings. An innovative curriculum model and grading system will also assist in this effort.

Pharmacy's transition to an "Honors-Satisfactory-Fail" curricular grading model that began in fall 2013 in Spokane will be extended to the new Yakima students.

The traditional grading model (also known as grading on a curve) evaluates student performance relative to the performance of other students in the class. With the Honors-Satisfactory-Fail (HSF) grading model, one student's success is not dependent on the poor performance of another student, and the model allows faculty to measure student competency and achievement on well-defined learning objectives.

After the first year of the HSF grading model in Spokane, it is clear that the college is doing something right. Traditionally, students are most likely to fall behind between the fall and spring semesters of their first year, meaning they would not be allowed to move forward as the result of failing a class. Pharmacy would normally see about 10 percent of students falling behind within the first year, with the majority falling behind between the first and second semesters.

With the new HSF grading model, every first-year student pharmacist moved forward after the first semester with only one student required to be held back at the end of the first year, giving the Class of 2018 an attrition rate of only one percent after their first year.

Innovative Teaching Precedes National Plan

The Yakima extension provides the college an opportunity to adopt a new curricular model, which aligns with its commitment to the best possible educational experience for all students.

College faculty have agreed to move forward with a "flipped" classroom model, where content will be recorded ahead of time, and other reading and coursework is assigned prior to class. Faculty will be present in both Spokane and Yakima to lead classroom time that is focused on assessing understanding of pre-class material, clarifying concepts and answering student questions, working on problem-based activities, engagement in team-based learning, or active participation in case discussion that provides context for the learning that occurred prior to class.

Classroom time is therefore "freed" from the traditional lecture model, and the college can dedicate the liberated classroom to improving the learning experience not just for Yakima student pharmacists, but everyone. Lectures are poorly suited to the likes of collaboration, problem-solving, engagement, active-learning, peer-instruction, discussion,

or discovery, said **Stuart Muller**, Ph.D., extension project manager, and yet these are the key ingredients for better learning, higher learning, and happier learning. Instead of offering classes of lectures, the College will offer classes that deliver all of these components.

"Though the territory is new to many of us, we are blazing a well-marked trail," Muller said. "The proposed classroom model follows a clear trend in higher education toward learner-centered teaching, and is built upon sound pedagogical knowledge. Integrating this flipped classroom with a competency-based HSF grading model equates to a learning environment that is truly innovative and effective."

The Accreditation Council for Pharmacy Education (ACPE) released a draft of their revised standards for accreditation in February 2014. These new accreditation standards will go into effect in the fall of 2016, and will require all Pharm.D. programs across the country to adopt elements of learner-centered teaching methods that are focused on educational outcomes.

"The WSU College of Pharmacy is just ahead of the curve, no pun intended," Muller said. ■

Butler-Haney Hall on the PNWU campus in Yakima is a 46,000-square-foot facility on the 42.6-acre campus that includes fully-equipped classroom, laboratory, research, media, library, and office spaces.



Brian Pitcher and his wife Cindy pose with Butch T. Cougar.

(Continued from page 4)

Research Facilities Open to External Users

WSU Spokane has five new core research facilities in various stages of availability for external users. These were funded in full or part by the Health Sciences and Services Authority (HSSA) of Spokane County.

According to **Andrea Lazarus, Ph.D.**, assistant vice president for research, the core facilities provide for efficient use of resources. "All researchers have access to them, allowing us to spend our money wisely instead of duplicating equipment."

HSSA required, as part of its investment in the core facilities, that the equipment be available to both public and private researchers from the area at a small rental cost. In addition to saving resources, the requirement encourages collaboration among researchers, a key condition of HSSA. For more information about all core research facilities, visit research.wsu.edu/instrument-access.

Farthest along is the genomics lab where DNA can be sequenced and analyzed with the help of expertise from faculty. The state-of-the-art instruments can decode DNA and sequence an entire human genome in one day. In 2001 it took the Human Genome Project 10 years to sequence one person's genome.

A person's DNA can provide information about individual disease predisposition and response to medications, and can help scientists decipher how genes coordinate with tissues and organs, how the body develops, and how environmental factors affect genetic profiles.

Differences in individuals' DNA are responsible for the development of many human conditions and determine how the body responds to toxins and drugs.

In the near future, by tailoring recommendations to each person's DNA, health care professionals can focus on the specific strategies most likely to maintain or restore health for that particular individual—from diet to high-tech medical surveillance.

For more information, contact Spok.GenomicsCore@wsu.edu or visit labs.wsu.edu/genomicscore. ■

Pitcher Led Campus Expansion

By Lorraine Nelson

Brian Pitcher, Ph.D., is retiring June 1 from Washington State University after 10½ years in senior administration. Pitcher was provost at the University of Idaho when he was appointed WSU Spokane chancellor in January 2005.

Pitcher was chosen for the position by WSU President **Lane Rawlins**. He was recognized as a consensus builder and an expert in organizational change. Both were needed for guiding the next phase of the development of a campus that was flourishing. During his eight-year tenure, there were significant capital improvements made:

- In 2005, much of the South Campus Facility was renovated and its new use included the Sleep and Performance Research Lab as well as The Bookie.
- In 2006, a new building opened as the Academic Center, housing a library, campus administration and intended to be the heart of the campus.
- In 2009, a new building opened for the College of Nursing and nursing students moved from an off campus location to the campus.

- Pitcher also led the campus in partnership with Spokane community leaders to persuade the Washington Legislature to fund a new research building on campus to accommodate the College of Pharmacy and to expand the medical education program. The initiative was successful; the building opened in 2013.

During Pitcher's tenure as chancellor, WSU Spokane refined its focus to become a highly competitive graduate and professional research institution in the health sciences.

WSU President **Elson S. Floyd** said he appreciates the many contributions Pitcher made during his tenure at WSU.

"I want to thank him for the significant progress he made for WSU during his time as chancellor in Spokane and more recently through his focus on programs at all our campuses."

In January 2013 Pitcher became the WSU vice provost for regional programs with responsibilities for coordinating WSU academic affairs across all urban branch campuses. Pitcher will retire as chancellor emeritus. ■

Faculty Leadership Transitions

By Lorraine Nelson



Gregory Belenky

Gregory Belenky, M.D., was director of the Division of Neuroscience at the Walter Reed Army Institute of Research and a colonel in the U.S. Army Medical Corps before he was recruited to join

the faculty at WSU Spokane. At WSU he founded the sleep research program in 2004 with funding from a Congressional appropriation secured by former U.S. Rep. **George Nethercutt**.

A year later Dr. Belenky recruited Hans Van Dongen, Ph.D., from the sleep research program at the University of Pennsylvania, and Bryan Vila, Ph.D., from the U.S. Department of Justice, and in 2008, the three transitioned the sleep research program to what is now the Sleep and Performance Research Center at WSU Spokane.

Dr. Belenky served as the center's founding director until last year when he handed the position to Van Dongen and returned to his research. Dr. Belenky was one of the pioneers in the field of sleep and human performance and helped to develop the tools scientists all over the world use to collect sleep/wake data.

During Dr. Belenky's stewardship, the sleep program grew in national and international stature. The center has brought more than \$35 million in extramural funding to WSU and produced more than 350 scientific publications. It

now employs more than 50 people, with 14 core faculty and seven affiliated faculty.

Dr. Belenky received his M.D. from Stanford University, studying with the "father of sleep research," Dr. William Dement. Dr. Belenky has a B.A. in psychology from Yale University, and he is a Fellow of the American Psychiatric Association and a member of the American Academy of Sleep Medicine, the Sleep Research Society, and the European Sleep Research Society. He served on the board of directors of the National Sleep Foundation.



Patricia Butterfield

Patricia Butterfield, Ph.D., served as dean of the College of Nursing from July 2007 until she returned to teaching and research in April 2015. She announced her

decision to make the change last October.

Butterfield is a strong proponent of research. During her tenure the college increased its research portfolio more than four-fold and launched the doctor of nursing practice.

She is a nationally recognized environmental and public health leader, and a public health nurse with expertise in environmental health interventions, rural environmental health, and sustainable nursing and healthcare practice. In 2013, Butterfield received the top national nursing award from CleanMed, a national

organization focused on health care sustainability, and she was an invited participant at World Health Organization meetings addressing green health purchasing systems.

Butterfield received her Ph.D. in nursing from Oregon Health and Science University and a Master of Nursing Science degree from the University of Colorado Health Sciences Center. Her postdoctoral work was completed at OHSU's Center for Research on Occupational and Environmental Toxicology. She held the positions of director of the Office of Research and Scholarship at the Montana State University College of Nursing and as director of the Occupational & Environmental Health Nursing Program at the University of Washington before becoming the chair of the Department of Psychosocial and Community Health Nursing at the UW, which was the position she had immediately prior to joining WSU Spokane in 2007. In 2006, she was invited to give the commencement address for the Yale School of Nursing.

Butterfield recently chaired a taskforce for the American Association of Colleges of Nursing focusing on environmental sustainability in U.S. Colleges of Nursing. She also received NIH funding to conduct the nation's first randomized controlled trial addressing an environmental health intervention delivered by rural public health nurses.

Cindy Corbett, Ph.D., is the interim dean pending a search for Butterfield's replacement. ■



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Please contact Nancy Fike, director of
campus and regional development,
at 509-358-7616, or nancy.fike@wsu.edu.