



# The Dean's Newsletter



From  
College of Pharmacy Dean  
Gary Pollack, Ph.D.

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Dear Friends and Colleagues:

Two watershed events in the life cycle of Washington State University's Health Sciences campus in Spokane occurred in September. While neither of these was related directly to our College of Pharmacy, both are important to us programmatically and to me personally.

On September 18, the WSU Board of Regents approved changing the name of the university's College of Medical Sciences to the Elson S. Floyd College of Medicine. The naming of the college is a significant and lasting tribute to a president who had a significant and lasting impact on our university. Elson is, and will continue to be, missed by many within WSU and around the state.

The establishment of a college of medicine has unique importance to the university, to Eastern Washington, and to our college of pharmacy. Academic organizations like to believe that their success is attributed to their unique mission, the skills and dedication of their faculty and staff, and the quality of the students they recruit. Our college is no different. However, there is no denying the profoundly positive impact that a medical school has on the other health professions programs that surround it, including pharmacy. The WSU College of Pharmacy is an obvious example. In the most recent QS World University rankings, we placed 21st among all pharmacy programs nationally, which represents a significant improvement for our program over the past few years. However, among pharmacy schools that do not share their campus with a medical school, we are ranked second (behind only Purdue University and tied with Northeastern University). How far can we go when we have a medical school with which to partner? Time will tell.

The second significant event was the naming of Dr. John Tomkowiak as founding dean of the Elson S. Floyd College of Medicine. I had the privilege of chairing the search committee for this position, and am delighted that John has agreed to make this the next step in his career. Although he will have his hands full preparing for accreditation of his college's medical education program and building the faculty and infrastructure necessary

to welcome an inaugural class in August 2017, John has expressed significant interest in interprofessional education, instructional innovation, and population-based research, areas in which our college also has significant interests. Despite the fact that he roots for Chicago's south-side baseball team, Dr. Tomkowiak will find our college to be an enthusiastic partner, and we look forward to his arrival in early October.

Best wishes,



Gary M. Pollack  
Dean  
Washington State University College of Pharmacy

## Prescribing independence

### *Sixth Avenue Medical Pharmacy grows with compounding, packaging*

By: Mike McLean, Spokane Journal of Business



Dr. Erik Nelson, WSU alumnus 2013, photo courtesy of the Spokane Journal of Business

During an era in which neighborhood pharmacies are being displaced by big chain drug stores, Erik Nelson has struck up a plan that's making the Sixth Avenue Medical Pharmacy a strong independent.

It started as a purely academic exercise when, as a student in the Washington State University College of Pharmacy, Nelson worked on a team that developed a business plan for a modern independent pharmacy and entered it in the National Community Pharmacy Association's annual business plan competition.

"The basic plan was to take an independent pharmacy that has

deep roots in the community, bring it back up to the standard technologies of the big chains, update the compounding area, and also keep the good old-fashioned customer service the store was founded on," says Nelson, who's now 34 years old.

Though Sixth Avenue Pharmacy was the model for the plan, Nelson said he had no intention of buying the pharmacy until his team's entry won the national competition.

"Prior to that, I only worked in a hospital setting and didn't realize that ownership was a possibility," he says. "I never thought in my wildest dreams that I would be a pharmacy owner right out of pharmacy school."

After impressing judges with the business plan, however, Nelson convinced owner Jerry Stocker that he was up to buying and running the 50-year old Spokane pharmacy.

Nelson had four employees when he took the helm at Sixth Avenue Pharmacy last year. The pharmacy occupies 2,500 square feet of space on the main floor of the Sixth Avenue Medical Center building, at 508 W. Sixth.

Within nine months, Kelly Armstrong, owner of the Fifth & Browne Pharmacy, approached Nelson about buying the assets of that 60-year-old business.

The acquisition doubled Sixth Avenue Pharmacy's customer base overnight, Nelson says.

"We took on two great employees and got some pretty longstanding history now that we're merged into one," he says. Now, Sixth Avenue Pharmacy has eight employees, including one other pharmacist and a registered dietitian who can help patients with weight loss and nutritional goals, he says.

Nelson has invested in performance-tracking and clinical-information technology that he says compares with technology at pharmacy chains. Even so, independent stores such as his struggle to stay competitive on price.

"Huge chains have big buying power compared to what I have," he says.

Chain stores also often have dedicated resources to handle back-office operations, he says, adding, "I'm responsible for human resources, purchasing, and paying bills." One of the advantages of operating an independent pharmacy, however, is that the owner can adjust procedures for taking care of specific patients without having to check for corporate approval, Nelson says.

"One of our goals is to know patients on a first-name basis," he says.

Sixth Avenue Pharmacy specializes in packaging and compounding services that pharmacy chains don't offer, Nelson asserts.

"There's only about three Spokane pharmacies still doing it," he says. "It's an area we really wanted to grow here. We invested a lot and put in a clean room so we can do everything to today's standards of practice."

Compounding is the personalized preparation of medications tailored to meet the needs of individual patients. It can include mixing medications into creams, liquids, or chewable forms rather than conventional pill form, Nelson says.

"Compounding allows us to create a dosage that's more appealing to patients and that might not be available from a commercial drug manufacturer," he says. "Some people may not absorb pills well or they need a cream or slow-release capsule. We can do any type of dosage form any type of strength."

Nelson estimates 25 percent of the store's revenue comes from compounding services, and most compounding is for pet medications.

“I’ve seen people all scratched up from trying to give their cat medicine,” he says. “We can make liver-flavored treats, or beef-flavored liquids, or we can make medicine that can be rubbed onto the pet’s skin where it’s absorbed.”

Sixth Avenue Pharmacy’s specialty-packaging niche includes making capsules and organizing medications into personalized blister packs and medisets that make it easier for people to follow their medication schedule.

“We have some packaging that can help people live in their homes longer,” he says.

The pharmacy also has partnered with Specialty Homecare Lifeline Inc., of Spokane, to provide an automated medication-dispensing service that can contact a family member if an elderly client has missed a medication.

Nelson attributes much of his initial success to mentor Linda Garrelts MacLean, associate dean for advancement and clinical professor at the Washington State University College of Pharmacy, now based in Spokane.

“She helped set up a network of support,” Nelson says.

Now, Sixth Avenue Pharmacy offers internships to WSU pharmacy students on a rotating basis.

Nelson says the WSU program is adept at producing pharmacists who not only understand the clinical aspects, but also the business operations.

“That’s what even chain pharmacies are looking for,” Nelson says. “They want pharmacists who are able to manage in a way that’s profitable for them.”

Nelson’s next plan is to own multiple stores.

“I would love to expand into more locations as the need arises,” he says. “I have a goal of having more than one store in the future, but it’s got to be the right opportunity at the right time.”



# Importance of patient–provider communication

## *Education next step in helping elderly manage medications*



Dr. Joshua Neumiller

Being handed the diagnosis of a chronic medical condition can have a profound impact on a person’s daily life. It could mean the overhaul of diet and exercise habits to combat the onset of diabetes, or rearranging a daily routine to make it easier to remember to take medication that brings high blood pressure under control.

For patients who have two, three or more medical conditions, the impact on their lives is multiplied two, three or more times. According to the American Society of Consultant Pharmacists, about one in seven Americans is over the age of 65 (43.1 million people) and nearly 92 percent of these older adults have at least one chronic medical condition—77 percent have at least two ([ASCP Fact Sheet](#)).

“Persons who take multiple medications create an identity around medication use that affects lifestyle, well-being, physical and psychological health,” said Joshua Neumiller, a pharmacist and clinical researcher at Washington State University. This is part of his recent research findings from a study he conducted with a team of his health sciences colleagues in Spokane, Washington.

The interdisciplinary research team included faculty from the WSU Colleges of Pharmacy, Nursing and Communication, and health care providers from Providence Medical Research Center and Providence Health Care in Spokane. They came together to study the impact of managing multiple chronic medical conditions in older populations.

“We recruited participants who were at least 65, currently taking at least five medications and who were getting a new medication from their healthcare provider,” said Neumiller, who was one of two primary investigators on the project. Participants were provided an iPad and kept an electronic diary every day, recording their feelings, perceptions, struggles or successes, side effects, or other ideas regarding their daily medication regimens. The team also selected 15 participants for in-depth interviews, said Neumiller.

“We discovered that for a large portion of the participants, their doctor is one of the most important people in their lives. Some study participants even said they wouldn’t consider relocating, even if it would mean being closer to family or friends, because they ‘couldn’t leave their doctor’,” said Neumiller.

Participants in the study reported one of the most common barriers to taking medications as prescribed was not being able to fill the prescription (reasons given for this included lack of transportation and financial difficulties). The second-largest barrier reported was simply forgetting to take the medication, said Neumiller.

“Identifying barriers and facilitators to proper use of medications and better understanding the practitioner-provider exchange are key to optimizing appropriate medication use,” he said.

Neumiller, Roxanne Vandermause from the WSU College of Nursing, and Katherine Tuttle, nephrologist and

executive director for research at Providence Health Care, presented the initial findings at the National Kidney Foundation annual meeting in Dallas last March.

The initial research was funded by a \$230,000 grant from the Patient-Centered Outcomes Research Institute (PCORI). The research team just received an additional \$49,960 from PCORI over the next four months to develop a set of educational resources that will be made available to both health care providers and patients.

The goal of this educational “toolkit” is to empower older persons with multiple chronic conditions to better communicate with their health care providers regarding their medication therapies, with the aim of improving quality of life and reducing interactions and adverse side effects, said Neumiller.

“As a health care system, we often approach problems like this from the perspective of how we can improve the system, but including patients’ perspectives is what has been missing. Working with patients as members of the research team provides more insight into this problem that we didn’t have before. The patient-centered focus adds that perspective and helps us achieve the end goal,” said Neumiller.

The next phase of the project will involve conducting focus groups with patients who have similar conditions. Nurses, physicians and pharmacists will also be present to provide feedback about best practices for communicating with these specific patient groups.

“This will be a two-pronged approach to try to break down some of these barriers between patients and providers,” said Neumiller. The Toolkit will be tailored to match the form that will be the easiest for older adults to access and use.

Neumiller is aiming to have the initial Toolkit resources developed by the end of November. Once developed, the research team has established community partnerships in Spokane to facilitate the dissemination of the Toolkit.

“Medication safety is something our whole team is passionate about and is something we hope to improve through this study’s findings and the development of these educational tools,” said Neumiller.

Neumiller is a Spokane native. He obtained his Bachelor of Science and Doctor of Pharmacy degrees from WSU and has been studying management of chronic diseases since his postgraduate pharmacy residency in geriatrics in 2007. He also completed a clinical research fellowship with an emphasis in endocrinology in 2008. He is currently an associate professor in the Department of Pharmacotherapy at the WSU College of Pharmacy, and is a certified diabetes educator (CDE) and a fellow of the American Society of Consultant Pharmacists (FASCP).



# Dr. Alyson Blum

## *Pharmacy obstetrics specialist joins WSU College of Pharmacy*



Obstetrics (OB) specialist and WSU alumna Alyson Blum, Pharm.D., is a new clinical assistant professor for the Doctor of Pharmacy program at Washington State University Health Sciences Spokane.

“Pregnant women can be an underserved population,” she said. Any practitioner might feel intimidated providing care to a pregnant woman due to the potential for complications with the baby, she said. “We want our graduating pharmacists to feel more comfortable with them.”

Blum will guest lecture, inserting pregnancy topics into many courses. Eventually she will instruct the [online OB course](#) that WSU offers to students as an elective and to health care practitioners for continuing education.

Her research focus also will be obstetrics: she will study the cost effectiveness of having a pharmacist in charge of managing a patient’s diabetes medication therapy. Pharmacists typically have more time than physicians for patient education, she said, freeing doctors to focus on diagnosis and complex cases. This translates into better patient care, which is what she aims to show through her research.

### **Alumnus funds OB residency**

Blum’s interest in OB began as she was earning her doctor of pharmacy degree at WSU. It became her specialty as she worked with Gerald Briggs, WSU pharmacy alumnus and OB expert, during a one-year, post-graduate specialty residency in OB.

“As a student pharmacist I had a strong interest in diabetes and pediatrics,” she said. “The OB residency blended the two, since having good control of blood sugar levels during pregnancy is so important and can have such a huge impact on babies.”

Briggs personally funded the WSU OB pharmacy residency that Blum participated in last year. His goal is to demonstrate the value of a pharmacist on OB teams and develop a “best practice” model of care that can be duplicated in other hospitals.

“High blood sugar is so toxic for baby,” said Blum. “Pregnant women need and want someone who really understands insulin. A drug expert (pharmacist) makes a good fit in that role.”

### **WSU pharmacists inspired attendance**

Blum’s faculty appointment is part of a pilot project also sponsored by Briggs.

Blum obtained her bachelor’s degree in cellular and molecular biology from the University of Washington and worked as a pharmacy technician at Costco for six years before pursuing her doctor of pharmacy degree at WSU.

“Working as a tech, hands down my favorite pharmacists to work with got their degrees from WSU,” she said. “So I knew I wanted to come to WSU for my pharmacy education.

“WSU has a great community and does a lot to support their student pharmacists and give them as many opportunities as possible to be great leaders and practitioners,” she said. “Now I am really excited to contribute to that.”

In addition to teaching and research, Blum will serve as a faculty preceptor for student pharmacists on fourth-year rotations. She just finished her fourth year participating at Camp STIX in Spokane, a rotation that gives student pharmacists the opportunity to serve kids with diabetes.

She also will be a preceptor for a specialty rotation in March to Guatemala, where students participate on a cleft lip and palate surgery team.



## Other College News

### FACULTY SCHOLARSHIP

#### Publications

- Pharmacotherapy Associate Professor and Director of Experiential Services **Joshua J. Neumiller** and one co-author published, “Management of hyperglycemia in diabetic kidney disease,” in the journal Diabetes Spectrum, a peer-reviewed publication from the American Diabetes Association (2015;28(3):214-219). [read abstract](#)
- Pharmacotherapy Clinical Associate Professor and College of Pharmacy Director of Assessment **Brenda S. Bray**, Pharmacotherapy Clinical Associate Professor **Megan N. Willson**, and two co-authors published, “High-fidelity simulation: preparing dental hygiene students for managing medical emergencies,” in the Journal of Dental Education, a peer-reviewed publication from the American Dental Education Association (2015; 79(9):1074-1081). [read article](#)
- Pharmaceutical Sciences Associate Professor **Grant Trobridge** and four co-authors published, “A novel retroviral mutagenesis screen identifies prognostic genes in RUNX1 mediated myeloid leukemogenesis.” in the multidisciplinary journal Oncotarget on September 12, 2015 (Epub ahead of print). [read abstract](#)
- Pharmaceutical Sciences Research Associate **Anil K. Singh**, Pharmaceutical Sciences Postdoctoral Research Associate **Sadiq Umar**, Pharmaceutical Sciences Associate Professor **Salah-uddin Ahmed**, and two co-authors published, “Regulation of TAK1 activation by epigallocatechin-3-gallate in RA synovial fibroblasts: suppression of K63-linked autoubiquitination of TRAF6,” in the peer-reviewed journal Arthritis & Rheumatology, a publication from the American College of Rheumatology (In press).

#### Presentations

- **Joshua Neumiller** presented, “Basal insulin therapy in the treatment of insulin resistant Type 2 diabetes,” at the Idaho Society of Health-System Pharmacists (ISHP) annual meeting in Sun Valley, Idaho, on September 27, 2015.
- **Joshua Neumiller** presented the webinar, “Medication effectiveness: how do Type 2 medications compare?” for members of the American Association of Diabetes Educators (AADE) on September 29, 2015.



## Service

- **Joshua Neumiller** was appointed to the Steering Committee for the Medscape educational program “Hot topics in diabetes management.” The program is available online at [medscape.org](http://medscape.org).
- Pharmaceutical Sciences Professor and Associate Dean of Graduate Education **Kathryn E. Meier** visited Capitol Hill in Washington, D.C., on September 21, 2015, as a member of the Science Policy Committee for the American Physiological Society to discuss the need for increased and sustainable funding for biomedical research. Meier met with staff members in the offices of Washington state Senators Maria Cantwell and Patty Murray, and Representative Derek Kilmer.
- **Joshua Neumiller** was appointed to serve as the director for the WSU College of Pharmacy Office of Experiential Services.

## Grants

- Pharmaceutical Sciences Professor **Jiyue Zhu** received \$400,888 over two years by the National Institutes of Health (R21) for the project, “Development of mouse strains with human-like telomerase regulation.” The project aims to develop a better mouse model for human aging, cancer, and other diseases by creating mouse strains with human-like telomere homeostasis.

## Awards

- Pharmaceutical Sciences Postdoctoral Research Associate **Joseph Ashmore** received a Best Poster award at the WSU College of Pharmacy Research Day, on August 21, 2015, in Spokane, Washington.

# STUDENT ACHIEVEMENT

## Doctor of Philosophy (Ph.D.) students

- **Diana Browning** (Trobridge lab, molecular biosciences) received a Best Poster award at the WSU College of Pharmacy Research Day, on August 21, 2015, in Spokane, Washington.
- **Alexander Little** (Meadows/Zhang lab, pharmaceutical sciences) received a Best Poster award at the WSU College of Pharmacy Research Day, on August 21, 2015, in Spokane, Washington.
- **Faya Zhang** (Meadows/Zhang lab, pharmaceutical sciences) received a Best Poster award at the WSU College of Pharmacy Research Day, on August 21, 2015, in Spokane, Washington.
- **Emily Johnson** (Marsh lab, experimental and systems pharmacology) presented, “Anti-diabetic effects of class 1 histone deacetylase inhibition in a rodent model of Type 2 diabetes mellitus,” as part of the WSU College of Pharmacy Graduate Research Seminar Series on September 18, 2015, at WSU Health Sciences Spokane. [read abstract](#)
- **Dustin Rae** and **Victor Bii** (Trobridge lab, pharmaceutical sciences), faculty co-author Grant Trobridge, and two others published, “A novel retroviral mutagenesis screen identifies prognostic genes in RUNX1 mediated myeloid leukemogenesis.” in the journal *Oncotarget* on September 12, 2015. [read abstract](#)

## Doctor of Pharmacy (Pharm.D.) students

- **Rachel Sullivan** received a Best Poster award at the WSU College of Pharmacy Research Day, on August 21, 2015, in Spokane, Washington.

# Coming Events

- October 7, 2015  
The WSU College of Pharmacy Research Seminar Series will host Cliff Berkman, professor in chemistry at WSU, who will present, “Enzyme inhibitors as platforms for cancer diagnostic and therapeutic agents,” at 12:10 p.m. in the Walgreens Auditorium, PBS 101.
- October 14-15, 2015  
WSU Health Sciences Spokane will host the 3rd Annual Health Sciences Career Fair in Spokane, Washington.

## JOBS

- [Assistant Professor](#)  
Experimental and Systems Pharmacology, Spokane, Washington



College of Pharmacy

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