

# The Dean's Newsletter



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

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## In This Issue...

- Drug regimens
- New research faculty
- Rx Impact Day
- Other news

Dear Friends and Colleagues:

Of note last month was the decision by the College Board to substantially modify the Scholastic Aptitude Test (the oft-feared SAT). Long-standing criticism of the SAT (and other tests of its ilk) has focused on the fact that performance in prior coursework (high school GPA, for example) is a much better predictor of a student's future academic success than is the score on a standardized test. According to the New York Times, the effort by the College Board to revise the SAT is an attempt to "make the test reflect more closely what students did in high school". Indeed.

Two issues often are lost in the discussion of admission to academic programs, and academic pharmacy is no different in this regard. The first is the desire to have an accurate and precise predictor of eventual student success. Academia seems unable to come to grips with the fact that the attempt to develop such a predictor is a fool's errand. We certainly understand that a "standardized student" does not exist, and in fact value (or profess to value) diversity, in all of its forms, among students. Why, then, would we continue to rely so heavily on standardized predictors of future behavior, when those predictors are simultaneously limited and high-stakes for all concerned?

Our college recently committed to coupling competency-based delivery of our curriculum with competency-based assessment of student performance. This seemingly logical approach has raised several issues, ranging from what defines "competency" (for a particular skill or item) to what student characteristics might be best suited for this educational approach. While we (as do other programs) struggle with the latter issue, our "formula" is to look for evidence that the student can handle the rigors of a pharmacy curriculum, has a well-rounded background, and can communicate complex ideas effectively. Admittedly, this does not reduce the student to a single numerical "predictor". We feel that's a good thing.

The second, and more important, proposition is that how a program works with a student is a much more

impactful determinant of future success than the test-taking abilities (or even classroom performance) prior to admission. Most faculty can recite examples of “superstar” students who did not live up to expectations. Most faculty also can fondly recall students who were perhaps not at the top of the admissions list, but flowered under their tutelage. Many of us feel that we have made a difference in bringing along the student who struggled at first, but persisted and persevered. This is, after all, what educators do.

With best wishes,



Gary M. Pollack  
Dean, Washington State University College of Pharmacy

## Research project looks at drug regimens after hospital stay

*Complexity index could help hospital readmission, allow early action*



Dr. Megan N. Willson

Is it possible to predict which hospital patients will be readmitted within 30 days after discharge because of a problem with their prescription drugs?

Clinical Assistant Professor Megan Willson and two colleagues studied a year’s worth of data from Spokane’s four hospitals and added their observations to the ongoing national discussion by recently publishing a paper in the *Annals of Pharmacotherapy*.

“What surprised me was that the medication added during the hospital stay was not a factor that significantly affected the readmission rate,” Willson says. “The primary predictor of a readmission was the overall complexity of the patient’s home medication regimen.”

There is more than one definition of medication complexity being used

in this type of research, and the medication regimen complexity index Willson and her colleagues used included number of medications, number of times per day the medications were to be taken as well as route of administration and additional directions. They assigned medication complexity scores to regimens to determine if the scores would predict which patients might be at risk for hospital readmission due to an adverse drug event. They did.

Willson and her co-authors concluded that the complexity of a medication regimen is a good target for efforts

to try to prevent readmission to the hospital. Those efforts could include hospital pharmacists reviewing medications and talking with patients about their medication habits, their adherence to taking drugs as



Megan Willson does patient rounds in internal medicine at Providence Sacred Heart with this team of medical and pharmacy professionals. Back from left: Dr. Darryl Potyk, pharmacist Megan Willson, medical residents Erin Parkinson and Lacy Bland, medical student Minna Wang. Front from left: medical resident Jason Anderson, pharmacy student Chris Sperry, pharmacy resident Spencer Chin, and pharmacy student Rachel Ellis.

prescribed and helping patients understand their diseases. Willson’s research project touches every aspect of her professional life with WSU. First, she is the pharmacist on the internal medicine patient care team at Providence Sacred Heart Medical Center in Spokane, where she provides patient care, manages discharge regimens and mentors pharmacy students and pharmacy residents. In the classroom at WSU, Willson teaches pharmacy students the very communications skills pharmacists need to learn to talk with people from different age groups and cultures and backgrounds about taking their medications correctly and about their diseases.

“What I really like about my job is that it is always changing,” Willson said. “There are new patients, new questions, new problems. One day I am teaching and the next day I am talking to patients.”

Willson was age 17 when she shadowed a physician because she was interested in medicine, and among the topics he covered was pharmacy. Then her mother encouraged her to look into the field, and when they toured the St. Louis College of Pharmacy in her home state of Missouri, it felt like a good fit for her.

After graduating with her Doctor of Pharmacy, she completed a residency at St. Luke’s Hospital in Chesterfield, Mo. She and her husband moved to Spokane seven years ago when she took her job with WSU. Willson also is an active member of the Human Patient Simulation team where the faculty explore various ways to use manikins in their teaching.

Willson’s co-authors on her paper were Christopher L. Greer, a pharmacist at St. Luke’s Rehabilitation Institute in Spokane, and Douglas L. Weeks, a senior research investigator at Inland Northwest Health Services.

# New researchers join the College of Pharmacy

*Pharmaceutical sciences department welcomes three research faculty*



Dr. Jiyue Zhu



Dr. Shuwen Wang



Dr. Zhenjia Wang

Three new research-active faculty recently joined the College of Pharmacy – two from the Penn State University College of Medicine and one from the University of Illinois School of Medicine at Chicago.

Jiyue Zhu and Shuwen Wang, who are husband and wife, worked for the past 14 years at Penn State University where he was a professor in the Department of Cellular and Molecular Physiology and she was an associate professor in the Departments of Cellular & Molecular Physiology and Microbiology & Immunology.

Zhu has a Ph.D. in biochemistry from Dartmouth Medical School in New Hampshire and a bachelor's degree in biochemistry from Fudan University, Shanghai, China. His research is currently funded by the National Institute of General Medical Sciences, a National Institutes of Health agency. Zhu's research focus is on the studies of the telomerase gene that plays a crucial role in the formation of most human cancers as well as aging. Zhu is now a full professor in the Department of Pharmaceutical Sciences at WSU.

Shuwen Wang also obtained her Ph.D. in biochemistry from Dartmouth Medical School and a bachelor's degree in electrophysiology and biophysics from Beijing University in Beijing, China. While at Penn State, she closely collaborated with Zhu, focusing on telomerase gene regulation in the context of stem cell research. She has joined the Department of Pharmaceutical Sciences as a clinical associate professor, assuming responsibilities of teaching for the College and directing the new Functional Genomics Core Facility on campus.

Zhenjia Wang spent the past six years at the University of Illinois before joining WSU as an assistant professor in the Department of Pharmaceutical Sciences. He has a Ph.D. in physics from the Chinese Academy of Sciences in Changchun, China. His current research is funded by the National Heart, Lung and Blood Institute, which is an agency of the National Institutes of Health, and is focused on designing and creating nanoparticle-

based drug delivery systems to prevent and treat cardiovascular inflammatory diseases. Nanoparticles are valued for their potential to differentiate cells and tissues, release drugs in a controlled manner, and efficiently deliver a combination of different drugs.

## Rx Impact Day

### *Student pharmacist on Capitol Hill gains experience in pharmacy advocacy, leadership*



Alyssa Del Palacio

Third-year student pharmacist Alyssa Del Palacio was on Capitol Hill in Washington, D.C., on March 13 with the National Association of Chain Drug Stores (NACDS) for their annual legislative day on the Hill. Her trip was sponsored by NACDS and her employer, Bartell Drugs.

“As a future health care provider, I believe we have to take the lead when it comes to advocacy for our profession,” Del Palacio said. “I plan to spend my career in community pharmacy because I enjoy working in an environment which has one of the largest impacts on a patient’s health.”

The experience was “very eye opening,” she said.

“Rx impact Day allowed not only me, but 50+ students from other states to collaborate with professionals from various community settings in order to advocate for pressing issues that are challenging everyone in our careers,” Del Palacio said.

On March 12, all those involved went through the NACDS Rx Impact Academy which focused in part on proper speaking techniques and briefed everyone on each bill so there were no inconsistencies between members.

“Overall, this day not only made me prepared for advocacy during Rx Impact day, but it also provided valuable tools that every professional can use to educate others about the progression of pharmacy.”

## Other College News

### FACULTY SCHOLARSHIP

#### **Publications**

- Pharmacotherapy Associate Professor **Joshua J. Neumiller** co-authored with two colleagues, “Treatment of Type 2 Diabetes in the Older Adult: Unique Aspects of Patient Care,” a continuing education activity through the American Society of Consultant Pharmacists accredited for 1.5 contact hours.
- Research Associate and Specialty Resident in Drug Information Practice **Kyle Ingram**, Associate Dean for

Professional and Continuing Education and Pharmacotherapy Professor **Danial Baker**, and one co-author published, “Drug Evaluation – Ibrutinib (Imbruvica): Updated Evaluation,” in Wolters Kluwer Health’s The Formulary Monograph Service (FMS) in February. Wolters Kluwer Health is a drug and health information provider, the FMS is a resource database for hospitals and managed care pharmacists that provides information on recently released and investigational drugs.

- Pharmacotherapy Clinical Professor **Terri Levien** and **Danial Baker** published, “Drug Evaluation – Simeprevir (OLYSIO): Updated Evaluation,” in The Formulary Monograph Service in February.
- Specialty Resident in Drug Information Practice **Jasen Cong** and **Danial Baker** published, “Drug Evaluation – Sofosbuvir (Sovaldi),” in The Formulary Monograph Service in February.
- **Danial Baker** published, “Drug Utilization Evaluation – Sofosbuvir, Peg-Interferon alfa, and Ribavirin Therapy,” in The Formulary Monograph Service in February.
- **Kyle Ingram**, Pharmacotherapy Clinical Assistant Professor **Shannon Panther**, and **Danial Baker** published, “Drug Evaluation – Secukinumab: Preliminary Evaluation,” in The Formulary Monograph Service in March.
- **Terri Levien** and **Danial Baker** published, “Drug Evaluation – Sucroferric oxyhydroxide (Velphoro): Updated Evaluation,” in The Formulary Monograph Service in March.
- **Kyle Ingram** and **Danial Baker** published, “Drug Evaluation – Edoxaban: Preliminary Evaluation,” in The Formulary Monograph Service in March.
- **Danial Baker** published, “Drug Utilization Evaluation – Fentanyl Transdermal System – Safety Issues,” in The Formulary Monograph Service in March.
- **Kyle Ingram**, **Danial Baker** and one co-author published, “Drug Evaluation – Umeclidinium bromide & vilanterol trifenate inhalation powder (Anoro Ellipta),” in The Formulary Monograph Service in March.
- **Terri Levien** and **Danial Baker** published, “Dolutegravir,” in the peer-reviewed journal Hospital Pharmacy (2014;49(2):184-195).
- **Danial Baker** published, “Approvals, Submission, and Important Labeling Changes for U.S. Marketed Pharmaceuticals,” in Hospital Pharmacy (2014;49(2):199-205).
- Pharmaceutical Sciences Associate Professor **Grant Trobridge** and 10 co-authors published, “Intravenous injection of a foamy virus vector to correct canine SCID-X1,” in the March 18 edition of Blood, a weekly peer-reviewed journal from the American Society of Hematology.

## **Presentations**

- March 7, 2014  
Experimental and Systems Pharmacology Postdoctoral Associate **John Barr** presented a research poster at the Inland Northwest Research Symposium.
- March 7, 2014  
Experimental and Systems Pharmacology Assistant Research Professor **Vanessa Gonzalez-Perez** presented a research poster at the Inland Northwest Research Symposium.
- March 12, 2014  
Experimental and Systems Pharmacology Professor and Chair **K. Michael Gibson** presented, “GABA and Mitophagy: Novel Pathomechanisms in Disorders of GABA Metabolism,” at the annual meeting of the Society for Inherited Metabolic Disorders in Pacific Grove, Calif.
- March 16, 2014  
**Josh Neumiller** presented, “Drugs as Friend and Foe – When to Use Antihyperglycemics and How to

Adjust,” to the Washington chapter of the American Nephrology Nurses’ Association (ANNA) in Spokane, Wash.

- March 19, 2014

Pharmaceutical Sciences Associate Research Professor **Gang Chen** presented, “The Pharmacogenetics of Nicotine and Tobacco Specific Nitrosamine Metabolisms,” for the Washington State University College of Pharmacy Research Seminar Series, on the WSU Health Sciences campus in Spokane, Wash.

## **Service**

- **K. Michael Gibson** was appointed to the Allen I. White endowed professorship in the WSU College of Pharmacy on March 5, 2014. Dr. Allen I. White, professor of pharmaceutical chemistry from 1940 to 1979 and dean of the College from 1960 to 1979, believed, taught and modeled that pharmacists are not just health care professionals but leaders with responsibilities to their profession and to society.
- Nutrition Exercise & Physiology Clinical Associate Professor **Judy Knuth** and Pharmacotherapy Clinical Associate Professor **Lisa Woodard** delivered a continuing education program titled, “Diabetes Prevention without Adverse Drug Effects,” to 45 pharmacists at the Spokane Pharmacy Association March 11-12, 2014.
- Experimental and Systems Pharmacology Associate Professor **Sue Marsh** has been admitted as a fellow of the cardiovascular section of the American Physiological Society.
- **Vanessa González-Peréz** received a travel award to attend the 2014 National Post-Doctoral Association meeting in St. Louis, Mo., April 4-6. González-Peréz is the diversity officer for the association.
- **Lisa Woodard** has been selected as the 2014 chair-elect for the Washington State Department of Health’s Diabetes Leadership Team.
- Director of the Coordinated Program in Dietetics, and Nutrition Exercise & Physiology Clinical Assistant Professor **Janet Beary** has been selected for the Washington State Academy of Nutrition and Dietetics (WSAND) “Outstanding Dietitian of the Year” award. This is the highest honor at the state level in the field of dietetics. As former president of WSAND, Beary is being recognized for her contributions to the dietetics profession. She will receive this honor at the WSAND State Convention on April 8.
- Pharmaceutical Sciences Associate Research Professor **Hui Zhang** received the 2014 American Association of Immunologists (AAI) Laboratory Travel Grant, which will enable him to attend the AAI Annual Meeting, May 2-6, where he and Pharmaceutical Sciences Professor **Gary Meadows** will present their research.

## **STUDENT ACHIEVEMENT**

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

- **Heidi Medford** presented, “Absence of Cardia O-GlcNAc Transferase Reduces Postoperative Survival,” at the Inland Northwest Research Symposium on March 7.
- **Emily Cox** presented, “A Systematic Review of Fetal Genes as Biomarkers of Cardiomegaly in Rodent Models of Diabetes,” at the Inland Northwest Research Symposium on March 7.
- **Emily Cox, Brandon Gufford, Garrett Ainsley, and Kara Vogel** presented research posters at the Inland Northwest Research Symposium on March 7.

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

- **James Leonard**, with faculty co-author **Danial Baker**, published, “Drug Evaluation – Hydrocodone Extended-Release (Zohydro ER),” in The Formulary Monograph Service in February.
- **James Leonard**, with faculty co-author **Danial Baker**, published, “Drug Evaluation – Eslicarbazepine (Aptiom),” in The Formulary Monograph Service in February.
- **James Leonard**, with faculty co-author **Danial Baker**, published, “Drug Evaluation – Luliconazole (Luzu),” in The Formulary Monograph Service in March.
- **Jared B. Kavanaugh** and **Pierce J. Robledo** were elected president and vice president, respectively, of the Associated Students of Washington State University in Spokane.
- **Sean Leonard**, **Kendall Brenton**, and **Alex Palmer** participated in the national Student Pharmacist Compounding Competition held at the University of Florida in Grainseville March 22-23. The team placed third overall of the 20 participating colleges of pharmacy.

## Coming Events

- April 29, 2014  
**Sue Marsh** and **Heidi Medford** will co-chair the symposium, “Novel Mechanisms of Transcriptional Regulation in Cardiac Hypertrophy,” at the Experimental Biology 2014 Meeting in San Diego, Calif.
- April 29, 2014  
**Sue Marsh** has been invited to present a paper titled, “Posttranslational Signaling and Transcriptional Regulation of Cardiac Hypertrophy,” at the Experimental Biology 2014 Meeting in San Diego, Calif.
- May 2-6, 2014  
The American Association of Immunologists (AAI) has invited **Gary Meadows** and **Hui Zhang** to present their research, “Chronic Alcohol Consumption Decreases the Survival and Compromises the Antitumor Immune Response of Mice Bearing Estrogen Receptor Positive E0771 Breast Cancer,” at the AAI Annual Meeting in Pittsburgh, Pa.
- May 11, 2014  
The International Society for the Study of Xenobiotics has invited Experimental and Systems Pharmacology Associate Professor **Mary Paine** to present, “Predicting Herb-drug Interactions via an Integrated in Vitro-in Silico-in Vivo Approach,” at the 5th Asia Pacific ISSX Meeting in Tianjin, China.
- May 13, 2014  
**Mary Paine** has been invited to present, “Quantitative Prediction of Dietary Substance-Drug Interactions: Challenges and Opportunities,” at the Shanghai Institute of Materia Medica, Shanghai, China.
- May 14, 2014  
GlaxoSmithKline Investment Co., Ltd., has invited **Mary Paine** to present the lecture, “Herb-Drug Interactions,” in Shanghai, China.
- May 30, 2014  
**Sue Marsh** has been invited to present a paper titled, “O-GlcNAc and Epigenetics in Cardiac Hypertrophy” at the American College of Sports Medicine Annual Meeting in Orlando, Fla.
- July 12, 2014  
The National PKU Alliance (NPKUA) has invited **K. Michael Gibson** to present at the 2014 NPKUA

Conference July 10-13, 2014, in Salt Lake City, Utah.

- September 21, 2014

USTUR Associate Research Professor **Sergei Tolmachev** has been invited to present research findings at the 2014 Radiation Research Society Meeting in Las Vegas, Nev.



College of Pharmacy

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