



The Dean's Newsletter



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

March 2016

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Dear Friends and Colleagues:

I recently had the opportunity to meet with leaders of several universities and discuss a variety of issues in higher education. A phrase that was mentioned repeatedly was “transformative student experience,” which is a component of Washington State University’s strategic plan and a value statement for our college. (As an aside, we aspire to having our college be transformative for all of its members, faculty and staff as well as students.)

In its original context, “transformative learning” referred to a transformation in how a student views herself or himself, as well as the world around her or him. In its contemporary use, the transformative student experience is perhaps more commonly interpreted as leading to an actual transformation in the student (in terms of abilities and aspirations as well as mindset).

In order to provide “transformative” experience, several conditions must be met. First, students must have access to the learning environment. Our college has addressed this fundamental requirement by increasing the number of seats in our Doctor of Pharmacy program, by establishing a program extension in Yakima, and by investing heavily in our Doctor of Philosophy program to provide opportunities for a larger number of students.

Second, the learning environment must be transformative; it must engage students in a manner that leads them to view themselves or the world differently than they did previously, or than they would if they had pursued a different educational experience. We have addressed this requirement by embracing a comprehensive active-learning approach in our professional program, one that focuses on building students’ abilities and not simply their knowledge base. In our graduate program, we have successfully recruited internationally-recognized faculty to serve as mentors and role models for the next (and future) generations of pharmaceutical scientists.

Third, and arguably most importantly, the learning environment must allow students to experience just how good they can be. This includes modeling a leadership role and supporting students’ aspirations to explore and

pursue leadership opportunities. We are fortunate to have a number of faculty, [such as Kay Meier](#), our associate dean for graduate education, capable of providing such support and an abundance of students who wish to take advantage of the opportunity.

A few notable recent examples include student pharmacists Erin McCarthy and Juliet Nguyen, who are highlighted below, and graduate students Kari Gaither and Ana Vergara, who you will read about in an upcoming newsletter.

It is a privilege to work in an environment in which personal growth is at the center of everything we do, and it is a pleasure to see the investment we make in people yield such an outstanding return.

Best wishes,



Gary M. Pollack
Dean
Washington State University College of Pharmacy

Dr. Salah-uddin Ahmed

Compound in green tea found to block rheumatoid arthritis



Dr. Salah-uddin Ahmed

Washington State University is deploying its land-grant mission to achieve broad societal impact in today's world. With this commitment to public service top of mind, WSU is focusing its research, innovation and creativity in the specific areas of sustaining health, sustainable resources, opportunity and equity, smart systems, and national security in order to target critical national and global problems.

WSU pharmacy faculty contribute to these initiatives through research that protects, promotes and improves human health. Recently making steps toward developing new treatments that address the onset and progression of disease, Pharmaceutical Sciences Associate Professor Salah-uddin Ahmed and his research team at the WSU College of Pharmacy in Spokane have identified a potential new approach to combat the joint pain, inflammation, and tissue damage caused by

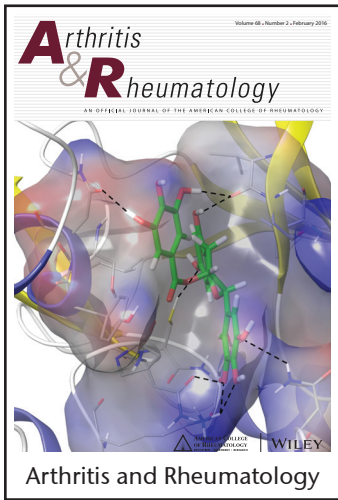
rheumatoid arthritis.

Their discovery is featured on the cover of *Arthritis and Rheumatology*, a journal of the American College of Rheumatology, in print Tuesday, February 16.

Rheumatoid arthritis is a debilitating autoimmune disorder that affects the quality of life for an estimated

1.5 million Americans. It mostly affects the small joints of the hands and feet. It causes painful swelling that progresses to cause cartilage damage, bone erosion, and joint deformity.

“Existing drugs for rheumatoid arthritis are expensive, immunosuppressive, and sometimes unsuitable for long-term use,” said Ahmed.

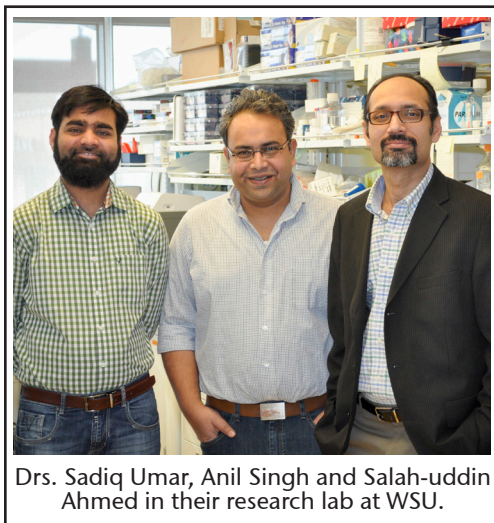


His team evaluated a phytochemical called epigallocatechin-3-gallate (EGCG), which is a molecule found in green tea with anti-inflammatory properties. Their experimental study suggests that EGCG has high potential as a treatment for rheumatoid arthritis because of how effectively the molecule blocks the effects of the disease in synovial fibroblasts, a cell type that is actively involved in causing joint destruction in rheumatoid arthritis.

They also confirmed this finding in pre-clinical animal model of human rheumatoid arthritis, where ankle swelling in the animals given EGCG in a 10-day treatment plan was markedly reduced.

“Our findings provide a scientific rationale for targeting TGF β -activated kinase 1 (TAK1) in the treatment of rheumatoid arthritis using EGCG as a ‘small-molecule’ inhibitor or developing more selective and potent inhibitors of TAK1. TAK1 is an important signaling protein through which pro-inflammatory cytokines transmit their signals to cause inflammation and tissue destruction in rheumatoid arthritis,” said Ahmed.

Ahmed has focused his research on studies related to rheumatoid arthritis for the last 15 years.



The WSU team, which includes researchers Anil Singh and Sadiq Umar, have been studying rheumatoid arthritis and other inflammatory diseases at the WSU College of Pharmacy in Spokane, Washington, since 2014. They teamed up with researchers from the National Institute of Pharmaceutical Education and Research in Hajipur, India, for this project.

Their work was funded in part by the National Institute for Arthritis and Musculoskeletal and Skin Diseases (NIAMS), which is part of the National Institutes of Health (AR-063104), the Arthritis Foundation, and Washington State University.

“Our obvious next step will be to understand the bioavailability of EGCG using different routes of administration, and study the potential EGCG-conventional drug interactions for safety evaluation in pre-clinical studies,” said Ahmed. “Success of these pre-clinical safety pharmacology studies will provide rationale to move forward for the clinical testing of EGCG.”



Preparing leaders in health care

WSU pharmacy student gains experience through advocacy



Erin McCarthy, class of 2017

Washington State University is preparing pharmacists who practice at the top of their education to meet the expanding health care needs of patients today and tomorrow. WSU pharmacists and researchers tackle the nation's health care problems and collaborate on solutions to make our world a happier, healthier place.

WSU student Erin McCarthy is passionate about health care policy. She is actively involved in advocacy and professional leadership while completing her Doctor of Pharmacy degree at WSU.

She first got interested in health care advocacy during her first year of pharmacy school. As a result of connections through the WSU College of Pharmacy, McCarthy landed a summer internship with Washington Congresswoman Cathy McMorris Rodgers.

Part of her duties in the internship were assisting the head of Congresswoman's health care subcommittee to collect and compile information on the key health care concerns and goals discussed during the Congresswoman's constituent meetings.

"I represented the Congresswoman at a variety of hearings on health care issues that are directly affecting Eastern Washington," said McCarthy.

McCarthy helped to spearhead, and served as the health care policy advisor for, the Millennial Republican Task Force for the Congresswoman's office. The task force developed and implemented creative ideas to bridge generational gaps and better communicate health care policy to millennials. The team's initiatives included events to educate college-aged students on the basics of insurance programs and seminars on informed decision-making skills.

"I found out the importance of networking," said McCarthy. "I was able to network and build personal relationships with all these offices [Congressman Denny Heck, Congressman Dan Newhouse and Congresswoman Cathy McMorris Rodgers], giving them a reliable source and trustworthy contact for the profession of pharmacy."

McCarthy has been active in advocacy across both the state and the nation. In February she accompanied pharmacy colleagues from WSU and the Washington State Pharmacy Association to meet with state legislators in Olympia, and has been on several trips to Washington, D.C. for both leadership and advocacy meetings through the American Pharmacists Association, of which she is a member of the WSU student chapter (APhA-ASP).

"My D.C. internship opened the doors in showing me that I really wanted to pursue my passion for policy and started me looking for ways to make more of a difference, especially in APhA-ASP."

McCarthy was able to participate in these leadership and advocacy opportunities because of the education, professional support, and mentoring she receives from the WSU College of Pharmacy.

“There is much more to being a pharmacist than passing your NAPLEX, law exam, and filling out a license application. To be a pharmacist is to be a leader. WSU College of Pharmacy really strives to cultivate quality leaders and professionals,” said McCarthy.

McCarthy was born in Vacaville, California. Her parents moved from California to Texas to Pennsylvania before arriving in Washougal, Washington. McCarthy completed her bachelor’s degree in physiology at the University of Washington, and she is currently in her third year of the WSU Doctor of Pharmacy program. As a pharmacist, McCarthy plans to work in hospital setting and is interested in focusing on operating room pharmacy.

In addition to being active in APhA-ASP, McCarthy is also in the WSU College of Pharmacy Student Ambassador Program, the Kappa Psi Beta Pi pharmaceutical fraternity, the WSU Professional Pharmacy Student Organization, and the American Society of Health System Pharmacists.

“I definitely have a huge passion for policy and advocating for our patients and the profession. I see myself always being active in the political field,” said McCarthy.

When asked what she’s looking forward to this year: “I look forward to making a difference in the profession of pharmacy and meeting so many inspiring and exciting people,” says McCarthy.



Juliet Nguyen to contribute to US health standards

WSU student pharmacist to serve on national expert panel for health literacy



Juliet Nguyen was appointed in January to serve a five-year term on the U.S. Pharmacopeial Convention’s (USP) Health Literacy Expert Panel. Her term will run through 2020.

“As a member of the expert panel, I am looking forward to contributing to the creation of evidence-based public health standards that are far reaching and make a difference in the lives of patients on a national level,” said Nguyen.

Nguyen is in her second year of Washington State University’s Doctor of Pharmacy program in Spokane, Washington.

The Health Literacy Expert Panel is a subgroup that provides additional expertise to the USP’s Healthcare Quality Expert Committee, which develops and revises health care quality standards related to the use of medications in the U.S. In addition, the committee maintains the USP Medicare Model Guidelines and other USP General Chapters.

The College of Pharmacy's Associate Dean Danial Baker is currently a member of the Healthcare Quality Expert Committee.

Nguyen is from Everett, Washington. She completed a bachelor's degree in biochemistry from the University of Washington before starting her Doctor of Pharmacy degree at WSU. As a pharmacist, she wants to work in a field where she can make an impact both locally and nationally, but has not chosen a specialty yet.

"I was immediately drawn to the health literacy panel," said Nguyen. "Prior to pharmacy school, I was a project director at the UW School of Nursing where I recruited low health literacy patients to modify USP pictograms using a real-time graphic artist. With my prior experience with health literacy, clinical trials, pharmacy, and the USP, I felt I could make significant contributions to the panel."



Other College News

FACULTY SCHOLARSHIP

Publications

- Pharmaceutical Sciences Associate Professor **Grant Trobridge** and five co-authors published, "Insulated foamy viral vectors," in Human Gene Therapy, a peer-reviewed journal.
- **Grant Trobridge** and one co-author published, "Insulators to improve the safety of retroviral vectors for HIV gene therapy," in Biomedicine, a peer reviewed open access journal.
- 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 transforming growth factor β -activated kinase activation by epigallocatechin-3-gallate in rheumatoid arthritis synovial fibroblasts," in the journal Arthritis and Rheumatology, a publication of the American College of Rheumatology, in February 2016.
- Pharmacotherapy Clinical Associate Professor **Brenda Bray** and two co-authors published, "Implementation and use of the Pharmacy Curriculum Outcomes Assessment at US schools of pharmacy," in the American Journal of Pharmaceutical Education.
- Experimental and Systems Pharmacology Clinical Assistant Professor **Jeannie Padowski** co-authored with nine others the article, "Central nervous system uptake of intranasal glutathione in Parkinson's disease," published February 25, 2016, in npj Parkinson's Disease, an online open-access journal published in partnership between Nature Publishing Group and Parkinson's Disease Foundation.

Service

- **Grant Trobridge** served as the RNA virus vectors abstract category chair for the 19th annual meeting of the American Society of Gene and Cell Therapy to be held in Washington, D.C., on May 4-7, 2016.
- Pharmacotherapy Clinical Professor and Associate Dean for Advancement **Linda Garrelts MacLean** was sworn in as a fellow of the American College of Apothecaries in February 2016.

Grants

- Pharmaceutical Sciences Clinical Assistant Professor **Travis Denton** has been awarded \$446,233 over three

years from the National Institutes of Neurological Disorders and Stroke for the project, “New compounds to study neurological disorders related to autophagic dysfunction.”

- Experimental and Systems Pharmacology Clinical Assistant Professor **Jeannie Padowski** has been awarded a sub contract of \$6,528 over two years from Bastyr University for the project, “Phase IIB study of intranasal glutathione.” Padowski will be assisting with research looking into the effects of increasing antioxidant levels in the brain to help alleviate symptoms and preserve quality of life for patients with Parkinson’s Disease.
- Pharmacotherapy Clinical Assistant Professor **Julie Akers** received \$234,372 in additional funding for a total of \$769,372 over the next four years from the National Association of Chain Drug Stores Foundation in support of her previously reported project, “Increase access to quality patient care in community pharmacies for minor illnesses in Washington state.”

STUDENT ACHIEVEMENT

Doctor of Philosophy (Ph.D.) students

- **Diana Browning** (Trobridge lab, molecular biosciences) and **Dustin Rae** (Trobridge lab, pharmaceutical sciences) with faculty co-author **Grant Trobridge** and three others published, “Insulated foamy viral vectors,” in the journal Human Gene Therapy. The paper is currently available as an Epub ahead of print. [read abstract](#)
- **Diana Browning** with faculty co-author **Grant Trobridge** published, “Insulators to improve the safety of retroviral vectors for HIV gene therapy,” in the online journal Biomedicines. The review will be published as part of a special issue on gene therapy strategies for HIV/AIDS. [read abstract](#)
- **Kari Gaither** (Liu lab, pharmaceutical sciences) presented, “Regulation of ATF5 expression by MicroRNA,” as part of the WSU College of Pharmacy Graduate Research Seminar Series on February 5, 2016.
- **Sabrina Fechtner** (Ahmed lab, pharmaceutical sciences) presented, “Characterizing cannabinoid receptors for normal targeted therapeutic approaches in rheumatoid arthritis,” as part of the WSU College of Pharmacy Graduate Research Seminar Series on February 12, 2016.
- **Alexander Little** (Zhang lab, pharmaceutical sciences) presented, “Chronic alcohol consumption exacerbates MCMV infection via impairing NK cell function in mice,” as part of the WSU College of Pharmacy Graduate Research Seminar Series on February 19, 2016.
- **Ana Vergara** (Lazarus lab, pharmaceutical sciences) presented, “Potential role of the uridine diphosphate glycosyltransferase 3A family in tobacco carcinogen metabolism,” as part of the WSU College of Pharmacy Graduate Research Seminar Series on February 26, 2016.

Coming Events

- March 2, 2016 | 12:10 p.m.
Allen I. White Lecture Series: Paul B. Watkins, M.D., from the University of North Carolina, Chapel Hill, will present, “Why good drugs are sometimes bad for the liver,” at 12:10 p.m. in the Walgreens Auditorium on the WSU Health Sciences campus in Spokane, Washington. The purpose of the annual lecture is to discuss the scientific, social or political aspects of pharmacy or related matters.
- March 4, 2016 | 12:10 p.m.
Sara Dumit (Tolmachev lab, pharmaceutical sciences) will present, “Plutonium decorporation following complex exposure: inception,” as part of the WSU College of Pharmacy Graduate Research Seminar Series at 12:10 p.m. in the Student Academic Center, room 147.
- March 6, 2016 | 5:30 p.m.
WSU College of Pharmacy Alumni and Friends Reception: The college is hosting a reception at the APhA Annual Meeting in Baltimore, Maryland.
- April 22, 2016 | 5:30 p.m.
Donor Appreciation & Awards Night: The college’s annual night of celebrating generosity for its alumni and donors, along with the CougaRx Alumni Community annual meeting, will take place starting at 5:30 p.m. on the WSU Health Sciences campus in Spokane, Washington.

