Pharmacist-Led Interventions to Promote Influenza Immunization for Health Care Workers

Diana Vinh, Pharm.D., assistant professor in the Department of Clinical Pharmacy, and Betsy Elswick, Pharm.D., clinical associate professor in the Department of Clinical Pharmacy, were awarded a grant from the American Society for Health System Pharmacists to implement innovative pharmacist-led strategies to improve rates of immunization for influenza of health care workers. The study will be conducted at West Virginia University Hospitals as a cooperative effort between the WVU School of Pharmacy, WVUH Employee Health, and WVUH Department of Pharmaceutical Services.

“A recent study showed that only 49% of health care workers receive the seasonal influenza vaccination,” said Vinh. “This creates risks for not only the unimmunized individual, but also increases infection risks of other individuals with whom they come in contact, including patients.”

Other members of the research team include Douglas Slain, Pharm.D., clinical associate professor in the Department of Clinical Pharmacy; Arif Sarwari, M.D., associate professor in the WVU School of Medicine, Department of Medicine - Section of Infectious Diseases; Ashley Ross, Pharm.D.; Ann Smithmyer, R.N., M.S.N., APRN; Justin Hare, Pharm.D.; and Frank Briggs, Pharm.D., MPH.

Vinh, Elswick, and their research team will study the attitudes and behaviors of health care workers regarding vaccinations, implement a social networking campaign to encourage vaccinations, and evaluate the impact of the intervention on health care workers’ influenza vaccine rate.

The goal of the study is to achieve a target of 80% influenza vaccination rate for health care workers at the West Virginia University Hospitals. The campaign is also expected to increase the visibility of pharmacists as leaders and advocates for influenza immunization among health care workers.
SoP Kicks Off American Pharmacists Month with Research Day

To highlight the importance of pharmacists to the healthcare system and their role as medication experts, the WVU School of Pharmacy kicked off a month of celebrating the profession of pharmacy by showcasing research taking place at the School.

The second annual Research Day featured podium presentations by eminent WVU faculty and trainees in the areas of pharmacy, cancer, and exercise physiology.

A careers panel comprised of Patricia Chase, Ph.D., dean of the WVU School of Pharmacy; Islam Younis, Ph.D., a 2008 alumni of our graduate program and clinical pharmacologist at the Food and Drug Administration; and Michelle Rainka, Pharm.D., a clinical pharmacologist at a private research foundation. The panelists shared their experiences with the audience and provided career development advice to the students.

The highlight of the event was a poster session featuring over 60 presentations from undergraduates, graduate students, basic scientists, and clinicians from across the Health Sciences Center and NIOSH.

The event was coordinated by a group of graduate student organizers that included Jason Healy, Therwa Hamza, Elvonna Atkins, Neel Shah, Michael Seminerio, and Matthew Robson.

Two PPS Graduate Students Awarded WVNano Fellowships

The WVNano fellowship program at WVU supports Ph.D. graduate students from under-represented classes in science, technology, engineering, and math (STEM) disciplines in the initial years of study to increase STEM diversity at WVU and ensure lifetime career success through comprehensive career training. Each year, approximately six graduate students receive the fellowship award for research in bionanotechnology. The fellowships are awarded on a competitive basis, and the recipients for this year include two students in the Graduate Program in Pharmaceutical and Pharmacological Sciences (PPS).

Christina “Nikki” Byrne-Hoffman, a second-year student, will work on nano-based cytotoxicity assays. Her major advisor is Rae Matsumoto, Ph.D., associate dean and professor in the Department of Basic Pharmaceutical Sciences. The work will be conducted in collaboration with Yon Rojanasakul, Ph.D., professor in the Department of Basic Pharmaceutical Sciences.

Andrea Armstead, a second-year student, works under the mentorship of Bingyun Li, Ph.D., assistant professor in the Department of Orthopedics. Her research addresses the need for targeted therapies for cancer and diseases caused by intracellular pathogens. These diseases are difficult to treat because most drugs do not enter the compromised cells very well. Armstead's research involves the development of novel, nanotechnology-based intracellular drug delivery systems which would enable encapsulated drugs to be easily taken up into a variety of cells.

The program includes a strong team-building component that provides experiences in learning how to achieve team success. These activities include: real-world problem solving, community mentoring, and social events.

The awards are supported through the National Science Foundation.

To view earlier issues of the Research Quarterly, please visit our website at http://www.hsc.wvu.edu/sop/ and click on the Research tab.

The Research Quarterly is a publication of the WVU School of Pharmacy Office of Research and Graduate Programs. For more information, please contact 304-293-1450.

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SoP Welcomes Eleven New Graduate Students

The Graduate Program in Pharmaceutical and Pharmacological Sciences (PPS) continues to thrive and grow! PPS is the largest biomedical Ph.D. program at WVU, with training provided through two pathways: Health Outcomes, and Pharmaceutical and Pharmacological Sciences. The Health Outcomes pathway, which emphasizes research in health policy and population sciences, welcomes five first-year students to Morgantown.

**Mayank Ajmera** earned his master’s degree from the University of Sciences in Philadelphia, Pennsylvania, prior to joining WVU.

**Omar Attarabeen** is a graduate of the Jordan University of Science and Technology.

**Sandipan Bhattacharjee** received his master's degree from the University of Houston in Texas.

**Rini Vohra** graduated from Guru Gobind Singh Indraprastha University in India.

**Yun Wang** is an alumna of China Pharmaceutical University in Nanjing, China.

Interim advisors for these students include Kimberly Kelly, Ph.D.; Usha Sambamoorthi, Ph.D.; Virginia “Ginger” Scott, Ph.D.; and Cindy Tworek, Ph.D., all from the Department of Pharmaceutical Systems and Policy.

The Pharmaceutical and Pharmacological Sciences pathway, which focuses on basic laboratory research, welcomes seven new students. Four second-year students are joining the program after successfully completing their first year through the Interdisciplinary Graduate Program in Biomedical Sciences.

**Andrea Armstead**, a graduate of Washburn University in Topeka, Kansas, is working with Bingyun Li, Ph.D., assistant professor in the Department of Orthopedics.

**Christina “Nikki” Byrne-Hoffman**, who graduated from West Virginia University, is working with Rae Matsumoto, Ph.D., associate dean and professor in the Department of Basic Pharmaceutical Sciences.

**Isha Pradhan**, a graduate of Morgan State University in Baltimore, Maryland, is working with Mohammed Nayeem, Ph.D., assistant professor in the Department of Physiology and Pharmacology.

**Alaina Smith**, a graduate of Allegheny College in Meadville, Pennsylvania, is working with Jason Huber, Ph.D., associate professor in the Department of Basic Pharmaceutical Sciences.

In addition, two graduate students are transferring into the Pharmaceutical and Pharmacological Sciences pathway as they join the School of Pharmacy along with their mentor and new faculty member in the Department of Basic Pharmaceutical Sciences, Letha Sooter, Ph.D.

**Anthony Giovengo** is a second-year graduate student, and an alumnus of WVU.

**Ryan Williams**, a graduate of the University of Virginia, is currently a third-year graduate student at WVU. We welcome all of our new colleagues into the school and look forward to a stimulating and productive year.

**ABOUT THE PROGRAM**

Four to five years are typically required to earn the Ph.D. degree. Students complete core and elective courses, pass a candidacy exam (written and oral), undergo a dissertation proposal defense, and complete and defend their dissertation research. Students entering the Health Outcomes pathway apply directly to the School of Pharmacy. Students in the PPS pathway initially enter WVU through the Interdisciplinary Graduate Program in Biomedical Sciences. For more information contact us at:

SoP Research & Grad Programs
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304-293-8236
WVU President James Clements recently confirmed that research will be the driving force of the university’s 2020 strategic plan, stating that, “By 2020, West Virginia University will grow in national research stature thereby enhancing educational attainment, global engagement, diversity and the vitality and well-being of the people of West Virginia.” The WVU School of Pharmacy has been actively involved in all aspects of the strategic planning process. Three SoP faculty members co-chair working groups for the Health Sciences Center strategic planning process, including the research subcommittee; numerous faculty serve on the HSC and university wide committees; and the school is also represented on the university’s 40-member strategic planning council.

In addition to actively contributing to the strategic planning efforts at the HSC and university levels, the school has been actively involved in the recruitment of a new Vice President for Research at the HSC. Three members of the WVU School of Pharmacy serve on the search committee for this position.

Thus far, four outstanding VP for Research candidates have visited the campus, meeting with faculty, students and administrators. Each candidate has provided his or her vision for research and growth of the enterprise at the HSC.

Together with the ongoing strategic planning efforts at the HSC and university levels, the potential for developing exciting new initiatives is around the corner. We look forward to working with our campus-wide colleagues to use research as a tool to build an even stronger university, continuing our commitment to deliver high quality education and promote the health and well being of the people we serve.

Rae Matsumoto, Ph.D., is the Associate Dean for Research and Graduate Programs. She may be contacted at: rmatsumoto@hsc.wvu.edu for questions or comments regarding this column.

Notes from Dr. Matsumoto

Students Featured at STaR Symposium

Four students affiliated with the WVU School of Pharmacy were among 26 undergraduate and graduate students invited to present their research at West Virginia’s Science, Technology and Research (STaR) Symposium. The students were selected from over 500 submissions.

Michael Seminerio, a fourth-year graduate student in the Pharmaceutical and Pharmacological Sciences (PPS) pathway, presented his research, “Characterization of optimized CM156 analogs: A potential aid in the treatment of psychostimulant-induced complications.” Mr. Seminerio works with Rae Matsumoto, Ph.D., associate dean and professor in the Department of Basic Pharmaceutical Sciences.

Matthew Robson, a third-year graduate student in the PPS pathway, presented his work on “SN79, a sigma ligand, attenuates cocaine-induced convulsions and stimulant activity when orally administered in an animal model.” Mr. Robson also works as part of the Matsumoto research group.

Anurag Mishra, a third-year graduate student in the PPS pathway, showcased his results on “Assessment of pulmonary fibrogenic potential of carbon nanotubes using in vitro and in vivo methods.” Mr. Mishra conducted his research at the National Institute on Occupational Safety and Health (NIOSH) in Washington, DC under the mentorship of Liying Wang, Ph.D.

Abagail Rosen, who conducted summer research in the WVU School of Pharmacy through ARRA funding, will be entering her junior year at Wesleyan University. She worked on a project, “Method for screening sigma receptor ligands: 96-well plate radioligand binding assays as an alternative to traditional harvesting methods.”

The symposium, which is held each year, is intended for members of the state’s business and research communities, and showcases cutting edge research being conducted in West Virginia.