

PHPR GRAD NEWS

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Major Spring Conferences

ASCPT Annual Meeting

12-17 March – Washington DC

ISPOR Annual Meeting - May

18-22 May - New Orleans, LA

APhA Annual Meeting

March 22-25 - Seattle, WA

Jenkins/Knevel Symposium and Poster Presentation

Congratulations to Elena Tomaselli Muensterman and Kristin Villa who were recognized at the Jenkins/Knevel Symposium this year! Elena received the Jenkins/Knevel Award for Outstanding Graduate Research, while Kristin received the Kienly Award for Outstanding Graduate Student Teaching.

Reflection on 2018

Elena Muensterman Tomaselli, President of the Graduate Student Body

As another year ends, it's a time to step back and reconsider how our graduate program has evolved during 2018. During the past year, our graduate students received considerably more academic achievements compared to the previous years. Numerous competitive research and travel awards were granted to our students, who were able to present their research in the form of poster as well as podium presentations at a variety of national and international conferences such as the American Pharmacist Association Annual Meeting, the International Conference of Pharmacoepidemiology and American Heart Association Annual Scientific Session. Furthermore, two of our students were selected to complete competitive summer internships in the pharmaceutical industry. The challenge of creating a more cohesive graduate group was addressed by introducing "International Graduate Dinners." These dinners, which have been held once a month in Indianapolis and West Lafayette interchangeably as team-building events, have allowed graduate students to bond, to learn about other cultures and strengthen relationships within our department. These events will continue in 2019 and are open to faculties. To further promote cultural diversity, a new position of leadership was created in the department. Omolola (Lola) A. Adeoye has done a fantastic job so far at addressing important issues related to diversity and inclusion. Dr. Overholser, as the chair of the graduate student's program, has put great effort in addressing limitations of the program and recruiting new talent. For the past two years, he met with each graduate student and their

advisors to ensure that each student is successfully progressing through the program in a timely manner. As the president of the graduate students, I further made myself available to meet with any graduate student who requires further guidance and mentorship in regards of selecting classes, preparing for the preliminary exam and effectively navigating the PhD program. The primary goal for the coming year will be to ensure that our graduate students continue to receive strong mentorship by the president of the graduate students' body, faculties and primary advisors to best prepare themselves for a future career as independent scientists.

The New PHPR Approach to Diversity

Adeoye Omolola A, VP of Diversity and Inclusion

I am delighted to serve in this newly created leadership role to further promote diversity and inclusion among PHPR graduate students and beyond. This past year, a couple noteworthy events took place:

Cross Cultural Leadership Development (CCLD) training

- In summer of 2018, Kristin Villa, Jenny Beal and I volunteered to participate in AACP's CCLD training. This training program aims to "empower the next generation of student leaders by encouraging the understanding of various cultural perspectives, providing an opportunity for self-reflection, and developing skills to implement in their professional career." We hope to host a workshop for PHPR graduate students during the 2019 spring semester, and subsequently train student leaders at the University of Houston. Be on the lookout for further communication!

Purdue College of Pharmacy Diversity and Inclusion Committee

- In fall of 2018, I humbly accepted the invitation to participate as a member on the Diversity and Inclusion Committee. The purpose of this Committee is to "provide vision and make recommendations for creation and implementation of College programs related to diversity and inclusion."

Celebrating our Students' Culture and Diversity

Name: Omolola Adeoye;

Nationality: Nigerian/American;

Program: MS HSOP

What my name means:

Omolola – *a child is wealth*

Adeoye – *a crown of title*

Favorite parts about my culture:

Strong value of family and our food



New Additions to the PHPR Family

Enoch Amarah

What is your educational background?

I did my pre-pharmacy at Tufts University and completed my PharmD at MCPHS University.



Why are you pursuing a PhD and why were specifically interested in this program?

My long-term goal is to be an expert in translational science; pursuing a PhD in Clinical Pharmaceutical Science here at Purdue will provide me with the skills to needed to achieve this goal.

What skills do you hope to gain during your graduate training?

Clinical research, teaching, and grant writing are some of the skills I hope to gain in this program.

What do you hope to go on to do after completion of your PhD?

I hope to get into academia and continue my research after completing this program.

What is an interesting fact about you?

I love to travel the world to learn about different cultures. As of today (9/18/2018), I have been to 10 countries; my goal is to visit 50 countries by the age of 50.

Prajakta Waghmare

What is your educational background?

I completed my Bachelor of Pharmacy from Bombay College of Pharmacy after which I worked for a year in Clinical Research Department and part-time as a community pharmacist. I then did my Master's in Social and Administrative Pharmacy from Creighton University.

Why are you pursuing a PhD and why were specifically interested in this program?

I was always interested in research which made me pursue my Masters. My thesis project was finding out the perception of Creighton University students towards influenza vaccination. Health Services Outcomes research has a capability of causing a direct impact on the society and that made me pursue this area. The program at Purdue has an interdisciplinary approach to research with topics on patient safety, epidemiology and health policy.



What skills do you hope to gain during your graduate training?

I would like to gain skills in advanced statistics, grant writing, analyzing healthcare databases and teaching. The skills that would help me become an independent researcher.

***What is an interesting fact about you?***

I am a brown belt in Karate and trained in using nunchaku.

Khalid Alamer***What is your educational background?***

I got a bachelor's degree in pharmacy from King Saud University and a PharmD degree from MCPHS university.

Why are you pursuing a PhD and why were specifically interested in this program?

To transfer and improve pharmaceutical practice in Saudi Arabia. Our program provides a variety of academic, training, clinical and internship opportunities which will in return open a lot of opportunities for me in the future.

What skills do you hope to gain during your graduate training?

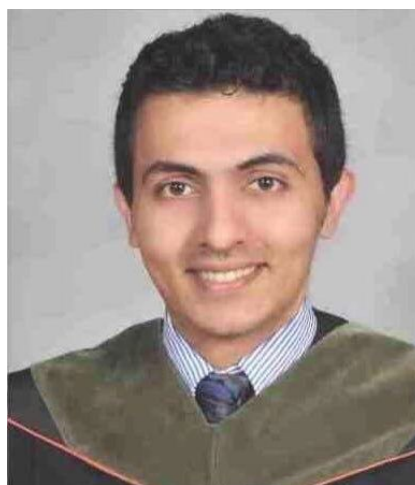
Research skills, interprofessional communication and patient engagement.

What do you hope to go on to do after completion of your PhD?

Work in academia.

Rakan Alanazi***What is your educational background?***

Doctor of Pharmacy, Pharm.D. from Ohio Northern University

***Why are you pursuing a PhD and why were specifically interested in this program?***

The reason is quite simple. It matches my interest unquestionably when I read about various faculty members who traches here. It is a major research university known for discoveries in science and technology and ranked 12th among universities granted US patents. When it comes to diversity, Purdue comes as fourth largest in housing international student population in any university in the United State. The Department of Pharmacy here has longstanding claim to national prominence, and I know that the Graduates of the Purdue program are in great demand. The main reason behind this might be attributed to the core fact that the students here are exposed to the principles and practices of research and are encouraged to acquire skills through course work and supervised experience.

What skills do you hope to gain during your graduate training?

To be a clinical scientist/investigator

What do you hope to go on to do after completion of your PhD?

Academia and pharmaceutical industry

What is an interesting fact about you?

I truly believe in the following quote “The only person you are destined to become is the person you decide to be” by Ralph Waldo Emerson.

Summer Internship Experiences

This summer, I had an amazing experience to work with Vertex Pharmaceuticals as Clinical Pharmacology intern at Boston. Vertex is a biotechnology-based company with research focused on developing molecules for rare diseases. The projects I worked on gave me opportunity to expand my theoretical understanding and practical experience with regards to pharmacokinetic and pharmacodynamic principles and various modeling and simulation tools. Besides this, ‘Lunch and learn’ sessions were organized for interns, where speakers from different departments at the company shared their journey from graduate school to their current position, their job responsibilities and challenges they face. Also, there were regular ‘Science and Medicine seminars’ that had people from industry and academia talk about their work. This coupled with interaction with people from diverse knowledge backgrounds and a great working environment added to an overall valuable experience!

Chandrali Bhattacharya, PhD candidate

Clinical Pharmacology, Vertex Pharmaceuticals, Boston

This past summer, I had to opportunity to complete a summer internship in global regulatory affairs at Takeda Pharmaceuticals Co., in Cambridge. While this internship did not directly teach me new scientific skills, it was a very valuable experience. It helped understand what it really takes to get a drug approved and to patients. As a scientist in training, it was my belief that a novel drug only needed to display a great efficacy and safety profile to be approved. That is often not the case. It the responsibility of the regulatory affairs team to ensure that throughout the drug development process, the appropriate studies are conducted in specific populations to demonstrate that the drug in development is superior to other drugs already on the market for the targeted patient population. During the internship, I helped develop a regulatory strategy for the development and approval of new neuroscience compounds for rare epilepsy in children.

Elena Tomaselli Muensterman, PharmD, PhD Candidate

Global Regulatory Affairs, Neuroscience, Takeda Pharmaceuticals, Cambridge

2018 Faculty Spotlight

**Ahmed Nader, PhD,
Associate Director, Clinical
Pharmacology and Pharmacometrics,
AbbVie
&
Adjunct Professor
Department of Pharmacy Practice
Purdue University College of Pharmacy**



What is your educational background and professional experience?

I earned my BSc degree in Pharmaceutical Sciences in 2004 from Ain Shams University in Egypt. After that, I joined Purdue PHPR in 2008 where I completed my MSc and PhD degrees in Clinical PK in 2013. Following that I worked as an Assistant Professor of Clinical PK at Qatar University for 2 years and then joined AbbVie Clinical Pharmacology and Pharmacometrics in 2014.

Why did you decide to pursue a career in the pharmaceutical industry?

I was inspired by the key role clinical pharmacology plays in drug development; ensuring the right drug in the right dose is prescribed for optimal benefit-risk balance for the patients we treat. In pharmaceutical industry, you are taking part in shaping the future of medicine and defining tomorrow's best therapies.

What is your role in the pharmaceutical industry? Please briefly describe the duties of your current job.

My role as a clinical pharmacology scientist at AbbVie includes support for all phases of pharmaceutical research and development from Discovery to Development to On Market Support for new molecular entities or marketed products. This includes selection, design and interpretation of Phase 1 studies including first in human, bioavailability, drug interaction, special population, pharmacogenetics and immunogenicity studies. It also involves characterization of exposure-response relationships for drug efficacy and safety outcomes to support election of doses for Phase 2 and 3 studies.

What is the favorite part of your current job?

My favorite part of my current job is the challenges and learning opportunities that come with it. In drug development, you are constantly faced with new challenges and interesting questions that require innovation and cross-functional collaboration to answer. Such challenges often offer great opportunities for learning and professional development.

What skills and expertise can you offer students and faculties in our department? What are you hoping to gain from these collaborations?

My goal with the collaboration with Purdue PHPR faculty and graduate students is to enhance scientific exchange and shared expertise across these two different disciplines with the aim to increase student understanding of the drug development process and help prepare the next wave of clinical pharmacology scientists. This can include skills such as clinical trial design, population PK/PD modeling and simulation studies, innovative approaches for dose selection and individualization, etc.

Dr. Nader can be contacted at ahmed.nader@abbvie.com

2018 Faculty Spotlight

Alissa L. Russ, PhD, UXC
Assistant Professor
Department of Pharmacy Practice
Purdue University College of Pharmacy



What is your educational background and professional experience?

I have a bachelor's degree in biochemistry (Iowa State) and a PhD in biomedical engineering (Purdue).

After graduation, I was a Researcher with the U.S. Department of Veterans Affairs for about 10 years. There, I specialized in human factors engineering, a field devoted to designing systems and tools to support human performance and safety. My research specifically focused on the design of medication alerts for patient safety.

Why did you decide to pursue a career in the academia?

After 10 years of full-time research, I wanted some new opportunities for growth, such as teaching. My research had also become specialized in medication safety and academia offered more mechanisms to collaborate on pharmacy related research.

What were difficulties that you encountered along the path of becoming a professor?

Initially, I was not excited about completing a post-doctoral fellowship after graduate school. But that fellowship turned out to be

one of the most fun times in my career and also a turning point that helped me gain new skills and launch my research path. When applying for academic positions later on, there was some difficulty with knowing what type of department might be the best fit, since my research is highly interdisciplinary. Given my expertise in medication safety and the needs of PHPR, Purdue was a great match!

What is the favorite part of your current job?

I really enjoy the flexible schedule of academia and also working with pharmacy students, graduate students, and fellows on research projects. The direct interaction is a nice break from computer-based tasks, and I really enjoy the interaction with students on projects. They make the work more fun!

What is the best piece of advice you would a student aspiring to work in the academia?

Start working on your time management skills, including work-life balance, as a graduate student. That is the approach I took as a graduate student: I wanted my work schedule to be sustainable long-term. Those patterns tend to persist as your career advances, and time management is key for success in academia. It's an area where I continue to grow and that I believe everyone can continue to improve upon.



Graduate Student Accomplishments

Publications

Adeoye OA, Lake LM, Lourens SG, Morris RE, Snyder ME. What predicts medication therapy management (MTM) completion rates? The role of community pharmacy staff characteristics and beliefs about MTM (2018) J Am Pharm Assoc; 58(4s):S7-S15.e5.

Adhikari, Saugat et al. "Elucidation of the orientation of selected drugs with 2-hydroxypropyl- β -cyclodextrin using 2D-NMR spectroscopy and molecular modeling." International journal of pharmaceutics 545.1-2 (2018): 357-365.

Assiri A, Shugg T, Overholser B. Factors contributing to Drug-induced diseases. In: Tisdale JE, Miller DA (eds). Drug-Induced Diseases: Prevention, Detection and Management, 3rd. Bethesda; American Society of Health-System Pharmacists.

Assiri A, Overholser B. Sex and Gender Differences- Kinetics and Dynamics. In: O'Connell MB, Smith J(eds). Women's Health Across the Lifespan – A Pharmacotherapeutic Approach, 2nded. Bethesda; American Society of Health-System Pharmacists.

Perrault EK, **Beal JL**. The Effect of Pharmacy Setting and Pharmacist Communication Style on Patient Perceptions and Selection of Pharmacists (2018) J Am Pharm Assoc; 58(4):404-411.

Chandralli Bhattacharya, Danielle Kirby, Michael Van Stipdonk, Robert E. Stratford. Comparison of In Vitro Stereoselective Metabolism of Bupropion in Human, Monkey, Rat, and Mouse Liver Microsomes (2018) Eur J Drug Metab Pharmacokinet. <https://doi.org/10.1007/s13318-018-0516-4>

Elena Tomaselli Muensterman, James Tisdale (2018). Predictive Analytics for Identification of Patients at Risk for QT Interval Prolongation - A Systematic Review. Pharmacotherapy, 38(8):813-821.

Oral Presentations at Professional Meetings

Adeoye OA- Podium at Midwest Social and Administrative Pharmacy Conference, Madison, Wisconsin (08/2018) on "*Medication Therapy Management: Behaviors and Delivery Strategies that Distinguish the Highest Performing Community Pharmacies*".

Beal JL- Podium presentation at the APhA Annual Meeting (03/2018) "*The Effect of Pharmacy Setting and Pharmacist Communication Style on Patient Perceptions and Selection of Pharmacists*"

Jenny Beal JL - Podium presentation at the Midwest SAPH Conference (08/2018) "*The Impact of Incorporating a Cultural Awareness Digital Badge on Student Empathy*"

Graduate Student Accomplishments

Elena Tomaselli Muensterman – Podium Presentation at the 8th Annual Indiana Clinical and Translational Sciences Institute (CTSI) Symposium on Disease and Therapeutic Response Modeling and Simulation, Indianapolis, IN (11/2018) on “*Progesterone-to-Estradiol Ratio (P/E): A Predictor of Progesterone-Mediated Attenuation of Drug-Induced QT Interval Prolongation*”

Sariya Udayachalerm - Podium at Midwest Social and Administrative Pharmacy Conference, Madison, Wisconsin (08/2018) on “*Opioid-related factors affecting mortality in Indiana*”.

Abstracts at Professional Meetings

Adeoye OA, Vlashyn OO, Plake KS, Woodyard JL, Weber ZA, Litzelman DK, Russ AL. The Benefits of a Teaching Electronic Medical Record in Pharmacy Education: Perspectives of Student Pharmacists, Poster presentation at the Midwest Medication Safety Symposium. Indianapolis, IN, September 2018.

Adhikari Saugat, Robert Stratford “Mechanism-Based Pharmacokinetic-Pharmacodynamic (PK/PD) Model Describing Dopamine Response in Rat Striatum and Cortex Following a Single Dose of Dextroamphetamine by Several Routes of Administration” Great Lake Drug Metabolism and Disposition Group Meeting, Indianapolis, 2018.

Adhikari Saugat, Chandrali Bhattacharya, Robert E. Stratford “Development of a translational model to predict amphetamine exposure and dopamine response in human brain” 9th American Conference on Pharmacometrics, San Diego, 2018.

Mahmud Hasan, Mohamed Akmal Marzouk, **Adhikari Saugat**, Thomas Wright, Benton Miller, Brianna Peckich, Spencer Yingling, Robert Stratford, Darius Zlotos, Jane Cavanaugh and Paula Witt-Enderby " Melatonin-tamoxifen hybrid ligands and their effects on breast cancer" at AACR Annual Meeting 2018, Chicago, USA

Assiri A, Mourad N, Shao M, Kiel P, Skaar T, Overholser B. MicroRNAs regulation of hERG Channels in Breast Cancer. American Society For Clinical Pharmacology and Therapeutics. Orlando, FL. March 21-24, 2018

Kanuri S, Chen P, **Assiri A**, Liu W, Tisdale J, Kreutz R, Overholser B. Identifying a microRNA fingerprint to predict QT prolongation. American Society For Clinical Pharmacology and Therapeutics. Washington, DC. March 13-16, 2019

Graduate Student Accomplishments

Muensterman ET, Nader A, **Assiri A**, Quinney S, Overholser B, Jaynes H, Tisdale J, Sowinski K. Pharmacokinetic-Pharmacodynamic (PKPD) modeling to identify predictors of response to the effect of progesterone on attenuation of drug-induced QT interval lengthening. *J Pharmacokinetic Pharmacody* (2018) 45:S3-S134

Elena Tomaselli Muensterman, Kevin M. Sowinski, Heather A Jaynes, Brian R. Overholser, Richard J. Kovacs, James E. Tisdale. "Transdermal Testosterone Administration Attenuates Drug-Induced QT Interval Lengthening in Older Men". Presented at the 2018 American Heart Association (AHA) National Meeting, Chicago, IL (November 11th, 2018)

James E. Tisdale, Heather A. Jaynes, Brian R. Overholser, Kevin M. Sowinski, Mark D. Fisch, Jo E. Rodgers, Ahmed Aldemerdash, Chia-Chi Hsu, Nan Wang, **Elena Tomaselli Muensterman**, Vijay Rao, Richard J Kovacs." Enhanced Response to Drug-Induced QT Interval Lengthening in Patients with Heart Failure with Preserved Ejection Fraction". Presented at the 2018 American Heart Association (AHA) National Meeting, Chicago, IL (November 11th, 2018)

Elena Tomaselli Muensterman, Ahmed Nader, Abdullah Assiri, Sara Quinney, Brian R. Overholser, Heather A. Jaynes, James E. Tisdale, Kevin M. Sowinski. "Pharmacokinetic-Pharmacodynamic (PKPD) Modeling to Identify Predictors of Response to the Effect of Progesterone on Attenuation of Drug-Induced QT Interval Lengthening". Presented at the 2018 American Conference of Pharmacokinetics (ACoP), San Diego, California (October 8th, 2018)

Sariya Udayachalerm. "Opioid-related factors affecting mortality in Indiana". Presented at the International Society of Pharmacoepidemiology Conference (ICPE) in Prague, Czech Republic (September 2018)



Awards

Omolola Adeoye - AcademyHealth Diversity Scholars Network Scholarship 2018

Omolola Adeoye - Midwest Social and Administrative Pharmacy Conference – Consortium for Research in Administrative Pharmacy Award 2018

Omolola Adeoye - ACCP Health Outcomes PRN Travel Award 2018

Abdullah Assiri - ASCPT Travel award, Orlando, FL. March 21-24, 2018

Abdullah Assiri - Purdue Research Foundation (PRF): Research grant one year (2018)

Beal Jenny- Purdue Graduate Student Government's Travel Grant for \$500

Elena Tomaselli Muensterman – 2018 Jenkins-Knevel Award for Outstanding Graduate Research granted in recognition of the abstract titled “Administration of Sex Hormones as Drugs to Attenuate Drug-Induced Lengthening of Ventricular Repolarization”.

Elena Tomaselli Muensterman - ASCPT 2019 Presidential Trainee Award granted in recognition of the ASCPT abstract entitled “Transdermal Testosterone Administration Attenuates Drug-Induced Lengthening of Both Early and Late Ventricular Repolarization in Older Men.”

Elena Tomaselli Muensterman - 2018 Chaney Graduate Travel Award granted the amount of \$1,500 to assist with attending the 2019 Annual Meeting of the American Society for Clinical Pharmacology and Therapeutics (ASCPT) in Washington, DC, March 13-16, 2019

