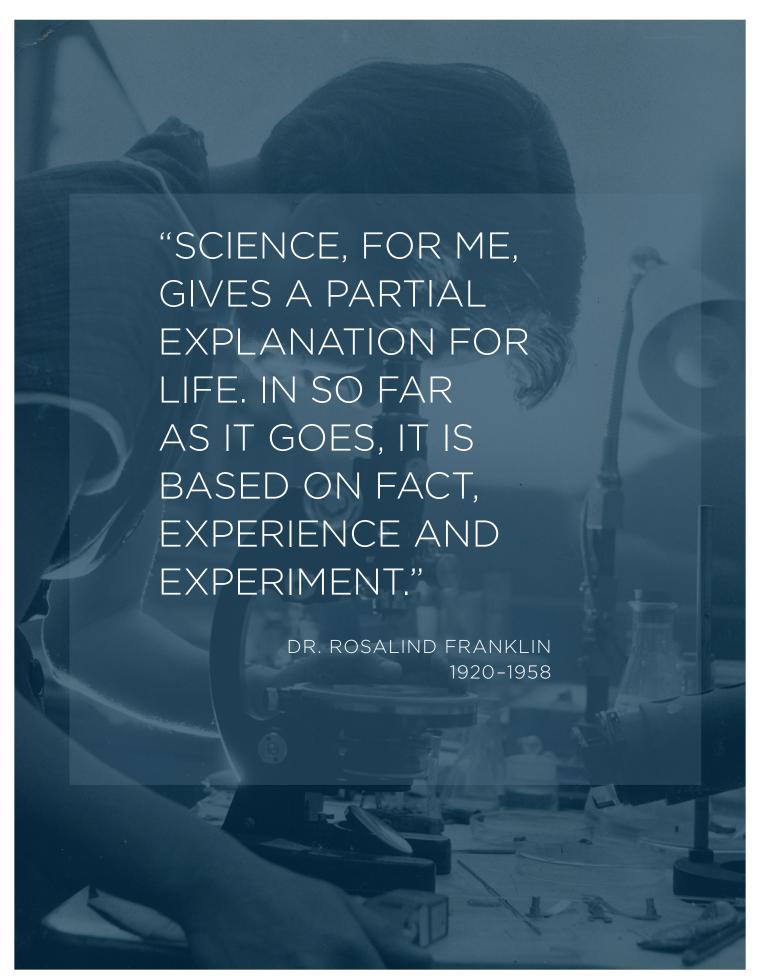


# RESEARCH AND SCHOLARSHIP REPORT

July 1, 2019 - June 30, 2020



# 2,123 STUDENTS 30+ ACADEMIC PROGRAMS 1 UNIVERSITY

## **ACADEMIC ACHIEVEMENT IS IN OUR DNA**

Rosalind Franklin University of Medicine and Science (RFU) is named for Dr. Rosalind Franklin, the pioneering British researcher who captured "Photograph 51" of the "B" form of DNA in 1952 while at King's College London. This photograph revealed the structure of DNA, the key to understanding how the blueprint for every living thing is passed down from generation to generation.

Today, Rosalind Franklin University of Medicine and Science carries on her legacy of inquiry, diligence and academic excellence. Formed in 1912 as the Chicago Hospital-College of Medicine, the university is a national leader in interprofessional medical and healthcare education.

### **OUR MISSION**

The mission of Rosalind Franklin University of Medicine and Science is to serve humanity through the interprofessional education of health and biomedical professionals and the discovery of knowledge dedicated to improving wellness. Today, the university is shaping the future of health care through rigorous education, pioneering biomedical research and innovative community service.

### **OUR VISION**

The vision of Rosalind Franklin University of Medicine and Science is to be the premier interprofessional health sciences university. Sharing our accomplishments and contributing to the evidence base for science, interprofessional education and practice will help build a safer, more responsive, coordinated system of patient care, prevention and wellness.

### **OUR VALUES**

 ${\sf Civility} \cdot {\sf Diversity} \cdot {\sf Excellence} \cdot {\sf Innovation} \cdot {\sf Integrity} \cdot {\sf Scholarship} \cdot {\sf Teamwork}$ 



# THE ROSALIND FRANKLIN UNIVERSITY DIFFERENCE

# INTERPROFESSIONAL EDUCATION

At Rosalind Franklin University of Medicine and Science, we believe in breaking down academic barriers. We take an interprofessional approach to education, so our students learn from and work with peers in other specializations from the beginning of their time here.

That's especially important, as healthcare teams play an increasingly vital role in medicine. At RFU, we prepare students for the future by integrating collaboration and teamwork into education. Having more than 30 graduate health professions and science programs in one university creates great opportunities to do that.

Additionally, each first-year student in our clinical programs takes the Foundations for Interprofessional Practice course during the fall quarter. This class, which acts as the foundation for an integrated interprofessional education experience, brings students from all academic programs together to learn from one another, get oriented to the culture of health care and start interacting in small, interprofessional teams.







# **COLLEGE OF PHARMACY**

The College of Pharmacy (COP) is the newest college at RFU and graduated its first class in 2015. The program focuses on exciting opportunities in a variety of career paths, including community pharmacy, health systems, industry, academia and public health.

As with other schools at RFU, interprofessional education separates the College of Pharmacy from other pharmacy programs. The rapid change in delivery of care is helping to drive the expansion of pharmacy's scope of practice. From the first day, our students attend classes with peers studying other disciplines and they learn from them along with the faculty.

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# INTRODUCTION





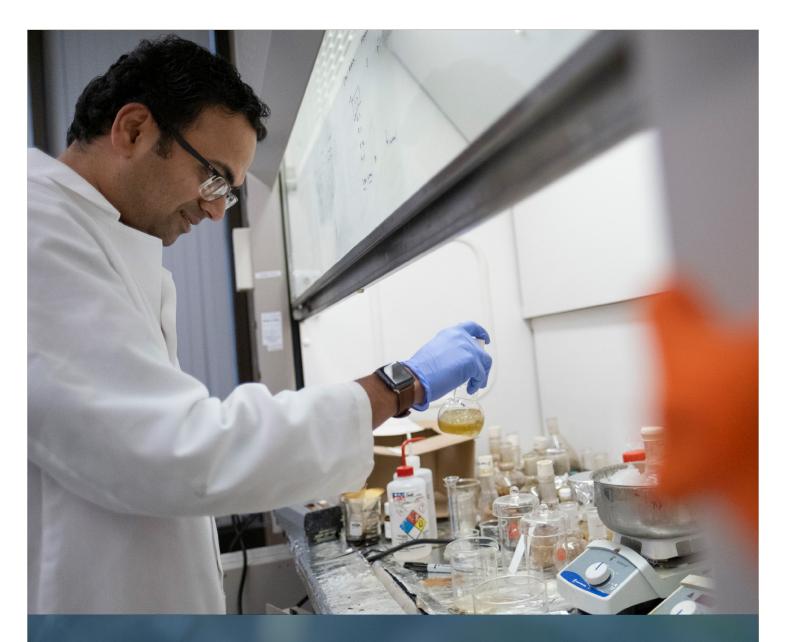
The following pages document the research and scholarship accomplishments of the faculty and students of the College of Pharmacy during the past academic year. The discovery and dissemination of new knowledge is an important part of each faculty member's responsibilities and it is especially satisfying when we can involve our students in these endeavors. Research and scholarship activities in the college cover a wide range of topics, from the laboratory to the clinic to the classroom. This year was particularly challenging, as the COVID-19 virus hindered efforts to meet and to carry out many kinds of research. Nevertheless, a great deal was accomplished in the ninth year of our Summer Research Program.

Each year we also list the names of those who have been invited speakers in our endowed seminar series. We are fortunate to be able to bring in outstanding scientists and clinicians from all over the country, so that they can share their discoveries with us. This is made possible by the generosity of the Haim G. Nagirner Weinstein and Jane Graumann Weinstein endowment.

Throughout this document, we use bold text to indicate College of Pharmacy contributors and an asterisk\* to indicate student, resident and postdoctoral contributors. We use the symbol "^" to indicate interprofessional items.

D. Eric Walters, PhD Associate Dean for Research

Marc S. Abel, PhD Dean, College of Pharmacy



# PEER-REVIEWED PROFESSIONAL PUBLICATIONS

When research and scholarship efforts produce interesting and important results, the scholar submits these results for publication in scholarly journals. But before the results can be published, they must undergo rigorous review by other experts in the field. Peer-reviewed publications have met the standards set by these experts. The following list of peer-reviewed publications represents significant efforts from College of Pharmacy faculty and students.

- ^ S.R. Bunting, **Sarah S. Garber**, R.H. Goldstein, T.D. Ritchie, T.J. Batteson and T.J. Keyes. Student Education About Preexposure Prophylaxis (PrEP) Varies Between Regions of the United States. *J. Gen. Intern. Med.*, published online Feb. 20, 2020.
- ^ Danielle Candelario, Kathleen Cunningham, Luis Solano\*, A. Pabst and Sneha Srivastava. Description of a transitions of care and telemedicine simulation lab activity. Curr. Pharm. Teach. Learn. 2019; 11(11):1184-1189.
- H.H. Desai, **Pengli Bu**, A.V. Shah, X. Cheng and A.T.M. Serajuddin. Evaluation of cytotoxicity of self-emulsifying formulations containing long-chain lipids using caco-2 cell model: Superior safety profile compared to medium-chain lipids. *J. Pharm. Sci.* 2020; 109(5):1752-1764.
- N. Gandhi, **Scott Hanes**, **Danielle M. Candelario**, C. Clough and J. Highland. Impact of a Communication Technique Training on Rates of Naloxone Dispensing. *J. Am. Pharm. Assoc.* 2020; 60(3):S37-40.
- A.K. Ghosh, J.N. Williams, S. Kovela, J. Takayama, H.M. Simpson, **D. Eric Walters**, S.I. Hattori, M. Aoki and H. Mitsuya. Potent HIV-1 protease inhibitors incorporating squaramidederived P2 ligands: Design, synthesis and biological evaluation. *Bioorg. Med. Chem. Lett.* 2019; 29(18):2565-2570.
- **Sean P. Kane, Michael Shuman, Khyati Patel** and **Margaret Olson\***. Characteristics of Drug-Related Podcasts and This Medium's Potential as a Pharmacy Education Tool. *Am. J. Pharm. Educ.* 2019; 83(8):7083.
- M. Kempasiddhaiah, V. Kandathil, R.B. Dateer, B.S. Sasidhar, **Shivaputra A. Patil** and S.A. Patil. Magnetite tethered mesoionic carbene-palladium (II): An efficient and reusable nanomagnetic catalyst for Suzuki-Miyaura and Mizoroki-Heck cross-coupling reactions in aqueous medium. *Appl. Organomet. Chem.* 2019; 33(5):e4846.
- ^ D.M. McCarthy, L.M. Curtis, D.M. Courtney, K.A. Cameron, P.M. Lank, H.S. Kim, L.A. Opsasnick, **Abbie E. Lyden**, S.J. Gravenor, A.M. Russell, M.R. Eifler, S.I. Hur, M.E. Rowland, S.M. Walton, E. Montague, K.-Y.A. Kim and M.S. Wolf. A multifaceted intervention to improve patient knowledge and safe use of opioids: Results of the ED EMC2 randomized control trial. *Acad. Emerg. Med.* 2019; 26(12):1311-1325.
- ^ D.M. McCarthy, A.M. Russell, M.R. Eifler, L.A. Opsasnick, **Abbie E. Lyden**, S.J. Gravenor, E. Montague, S.I. Hur, K.A. Cameron, L.M. Curtis and M.S. Wolf. Implementation Fidelity of Patient-Centered Prescription Label to Promote Opioid Safe Use. *Pharmacoepidemiol. Drug Saf.* 2019; 28(9):1251-1257.
- M. Patil, A. Noonikara-Poyil, S.D. Joshi, **Shivaputra A. Patil**, S.A. Patil and A. Bugarin. Design, synthesis and molecular docking study of new piperazine derivative as potential antimicrobial agents. *Bioorg. Chem.* 2019; 92:103217.

- M. Patil, A. Noonikara-Poyil, S.D. Joshi, **Shivaputra A. Patil**, S.A. Patil and A. Bugarin. New Urea Derivatives as Potential Antimicrobial Agents: Synthesis, Biological Evaluation and Molecular Docking Studies. *Antibiotics (Basel)*. 2019; 8(4):178.
- ^ **Ateequr Rahman**, R. Anjum and **Yelena Sahakian\***. Impact of Caregiving for Dementia Patients on Healthcare Utilization of Caregivers. *Pharmacy (Basel)*. 2019; 7(4):138.
- Ateequr Rahman, Yelena Sahakian\*, Sean Kane, Marc Abel and Rahul Deshmukh. Live-feed Use in the Classroom as an Engagement Tool. *Curr. Pharm. Teach. Learn.* 2019; 11(12):1303-1308.
- Yelena Sahakian\*, Brisilda Bylykbashi\* and Ateequr Rahman. Prescribing Patterns of Antihypertensive Medications in US Ambulatory Care Settings. *Pharmacy (Basel)*. 2019; 7(2):64.
- **Yelena Sahakian\*** and **Ateequr Rahman**. Assessment of Ambulatory Antibiotic Prescribing Trends for Urinary Tract Infections in Infants and Children. *J. Nephrol. Ren. Dis.* 2019; 3:1.
- M. Stratton, A. Ramachandran, E.J.M. Camacho, **Shivaputra Patil**, G. Waris and K.A. Grice. Anti-fibrotic activity of gold and platinum complexes Au(I) compounds as a new class of anti-fibrotic agents. *J. Inorg. Biochem.* 2020; 206:1111023.
- ^ R. Ter Heine, **Sean P. Kane**, A.D.R. Huitema, M.D. Krasowski and E.M. van Maarseveen. Nonlinear protein binding of phenytoin in clinical practice: Development and validation of a mechanistic prediction model. *Br. J. Clin. Pharmacol.* 2019; 85(10):2360-2368.
- ^ **Eris Tollkuci**. Fertility Preservation: An important consideration prior to malignancy treatment. *ACTA Scientific Women's Health*. 2020; 2(2):01.
- ^ **Eris Tollkuci**, A. Chalmers, K. Schultz, S. Basu, S. Dewdney and L. Usha. Clinical outcomes using carboplatin desensitizations in patients with gynecologic cancer. *J. Hematol. Oncol. Pharm.* 2020; 10(2):65-72.
- ^ **Eris Tollkuci**, P. Fitzpatrick, A.N. Seddon, R. Myers, S. Nathan and C. Ustun. Biosimilar infliximab administration for the management of acute graft-versus-host disease. *J. Oncol. Pharm. Pract.* 2020; published online May 2020.
- ^ C. Ustun, J. Baptista, D.A. Marinovic, **Eris Tollkuci**, M. Mozer, A. Rashidi, M. Weber, E. Mutlu, S. Holtan, D. Weisdorf and S. Nathan. Necessity for treatment of steroid refractory severe GIT GVHD: Patience of providers. *Bone Marrow Transplant*. 2020; 55(4):833-835.
- C. Wang and **John K. Buolamwini**. A novel RNA variant of human concentrative nucleoside transporter 1 (hCNT1) that is a potential cancer biomarker. *Exp. Hematol. Oncol.* 2019; 8:18.
- Y. Zhang, Y. Le, **Pengli Bu** and X. Cheng. Regulation of Hox and ParaHox genes by perfluorochemicals in mouse liver. *Toxicology.* 2020; 441:152521.

(**Bold** = College of Pharmacy contributors, \* = Student, resident and postdoctoral contributors, ^ = Interprofessional items)

# ABSTRACTS AND PRESENTATIONS AT EXTERNAL MEETINGS

An important aspect of the sharing of new knowledge is the presentation of that knowledge in oral or poster format. This happens at regional, national and international conferences and in the form of invited seminars. The College of Pharmacy has produced an impressive list of such presentations, listed here.

- B. Almalki, **Kathleen Cunningham**, C. D'Agostino, A. Novak, C. Kane, M. Kapugi, D. Ladner and J. Schulte. Evaluation of Rejection, Infection and Malignancy Outcomes in Elderly Liver Transplant Recipients Compared to a Younger Cohort. Platform Presentation at the Illinois Pharmacy Resident Conference, May 2020; Virtual Poster Presentation at the American Transplant Congress, June 2020.
- ^ T. Batteson, L. Thuente and **Sarah S. Garber**. A Structured Simulation Based on Health Disparities and Social Determinants of Health. National Collaborative for Education to Address the Social Determinants of Health, Northwestern University, April 2020 (accepted, not presented).
- R. Bibi, R. Klein, J. Mayor, R. Marr, **Shivaputra A. Patil** and R.S. Kaplan. Role of plasma membrane citrate transporter (PMCT) in metabolic diseases: Which methodology effectively inhibits PMCT activity? 7th Annual Robert B. Glassman Memorial Brain, Mind and Behavior Symposium. Lake Forest College, Lake Forest, IL, Nov. 7, 2019.
- **Pengli Bu**, C. Zheng and X. Cheng. Perfluorinated compounds decrease expression of a key steroidogenic enzyme in Leydig cells. Society of Toxicology (SOT) Annual Meeting. Anaheim, CA, March 2020.
- **Pengli Bu**, C. Zheng and T. Fadlou Allah. Bisphenol A induced steroidogenic enzyme Hsd17b2 through activation of orphan nuclear receptor ERR gamma V1. Society of Toxicology (SOT) Annual Meeting. Anaheim, CA, March 2020.
- ^ Danielle M. Candelario, Sneha Baxi Srivastava, A. Pabst, Luis Solano\* and Kathleen Cunningham. Description of a Transitions of Care and Telemedicine Simulation Lab Activity.

- American Association of Colleges of Pharmacy (AACP) Annual Meeting. Chicago, IL, July 2019.
- ^ M. Chen, C. Scott, N. Siddiqi, V. Swamy, K. Schneider and **Danielle M. Candelario**. Integration of four co-located services for an underserved population in a student-led pro bono clinic. Integrative Medicine for the Underserved (IM4US) Annual Conference. Santa Clara, CA, August 2019.
- J.L. Crosby, M.E. Murphy, A.N. Seddon and **Eris Tollkuci**. Impact of obesity on patient outcomes in acute myeloid leukemia (AML) induction chemotherapy with 7+3 regimen. ASHP Midyear Clinical Meeting. Las Vegas, NV, December 2019.
- D. Ibrahim, J.A. Mayor, **Shivaputra A. Patil** and R.S. Kaplan. Phenylsulfonylpiperazines as Plasma Membrane Citrate Transporter (PMCT) Inhibitors. DePaul University, 17th Annual STEM Research Showcase. Chicago, IL, Nov. 8, 2019.
- **Karen Juco\***, **Scott Hanes**, S. Miller and Z. Mazur. Implicit Professional Bias in Interprofessional Peer Evaluations. AACP Annual Meeting. Chicago, IL, July 2019.
- K. Lang, **Kathleen Cunningham**, C. D'Agostino, M. Kapugi, C. Kane, A. Novak, J. Leventhal and J. Schulte. Evaluation of Infectious and Malignant Complications in Elderly Kidney Transplant Recipients Receiving Alemtuzumab Compared to Basiliximab. Platform Presentation at the Illinois Pharmacy Resident Conference, May 2020; Platform Presentation at the American Transplant Congress, June 2020.
- ^ P. Lorenz, **Danielle M. Candelario** and M. Chen. Design and Implementation of a Safety Event Reporting Procedure at a Student-Led Free Clinic. Society of Student-Run Free Clinics (SSRFC). Orlando, FL, March 2020.

C. Majkowski, J. Fisher, N. Hilal, R. Myers, A. Seddon, B. Seyboth, Eris Tollkuci, Z. Click and K. Schultz. Impact of a Pharmacist in Stem Cell Transplant Clinic. HOPA Annual Conference. Tampa, FL, March 2020.

Krista Paplaczyk\*, Kathleen Cunningham, C. D'Agostino, D. Pinelli, A. Tambur, J. Schulte and A. Shetty. Conversion to a belatacept based immunosuppression regimen in renal transplant recipients. Platform Presentation at the American Transplant Congress, June 2020.

S.N. Patel, R. Golakiea, A.N. Seddon and Eris Tollkuci. Impact of obesity on patient outcomes in acute myeloid leukemia (AML) induction chemotherapy. ASHP Midyear Clinical Meeting. Las Vegas, NV, December 2019.

Renukadevi Patil. O. Powrozek. N. Sharma-Walia and Shivaputra A. Patil. Identification of new inflammatory breast cancer (IBC) agents. 32nd Annual Scientific Meeting, Great Lakes Chapter American Society for Pharmacology and Experimental Therapeutics. Midwestern University, Downers Grove, IL, June 21, 2019.

Ateegur Rahman and Yelena Sahakian\*. Attitudes of Pharmacy Students Toward Gun Violence on Campus. Business and Health Administration Association (BHAA) Annual International Meeting. Chicago, IL, March 2020.

Angelina Raimonde\*, A.N. Seddon and Eris Tollkuci. Obesity's impact on patient outcomes in acute myeloid leukemia (AML) receiving consolidation therapy with HiDAC (high-dose cytarabine). ASHP Midyear Clinical Meeting. Las Vegas, NV, December 2019.

- J. Schulte, C. Kane, Kathleen Cunningham, C. D'Agostino, M. Kapugi, A. Novak, A. Shetty, J. Leventhal and J. Friedewald. Pharmacokinetic Evaluation of a De Novo Envarsus XR (Tacrolimus Extended Release) Dosing Strategy in Kidney Transplant Recipients. Virtual Poster presented at the American Transplant Congress, June 2020.
- J. Schulte, S. Mehta, E. Vargas and Kathleen Cunningham. Evaluation of Optimization of Workflow for Timing of Inpatient Therapeutic Drug Monitoring of Maintenance Immunosuppressive Drugs in Abdominal Transplant Recipients. Poster Presentation at the American Transplant Congress, June 2020.

M. Shukla, A. Mehra, R. Motan, F. Khaleq, P. Shah, A.N. Seddon and Eris Tollkuci. Evaluation of dose reductions in high-dose cytarabine (HiDAC) consolidation in acute myeloid leukemia. ASHP Midyear Clinical Meeting. Las Vegas, NV, December 2019.

Sneha Baxi Srivastava. Evaluation of In-Room Versus Live Stream Evaluation Methods During a P1 Practical Assessment. AACP Annual Meeting. Chicago, IL, July 2019.

Sneha Baxi Srivastava, Danielle M. Candelario and Viktorija **Barr**. Pharmacy students' perception of an in-room evaluation versus live-video stream remote evaluation during a practical assessment. American Association of Colleges of Pharmacy (AACP) Annual Meeting. Chicago, IL, July 2019.

- ^ L. Thuente, T. Batteson and Sarah S. Garber. Teaching Social Determinants of Health to Interprofessional Healthcare Students. Beyond Flexner Conference. April 2020 (accepted, not presented).
- D. Tyler, K. Karpowitsch, K. Caruso and Abbie Lyden. Emergency Department Management of Acute Venous Thromboembolism in Obese Patients with Intravenous Unfractionated Heparin and Anti-Xa Monitoring, Platform Presentation at Illinois Pharmacy Resident Conference, May 2020.
- ^ Patrick Vollmer\*, Sarah Ziny\*, Khyati Patel, Danielle M. Candelario, Ateegur Rahman and M. Chen. Evaluation of Immunization Practices at the Rosalind Franklin University Interprofessional Community Clinic. Illinois Pharmacist Association (IPhA) Annual Meeting, Springfield, IL, October 2019; Society of Student-Run Free Clinics (SSRFC), Orlando, FL, March 2020.
- J. Wooster, L. Bethishou, R. Mansukhani, P. On. O. Shoair. Danielle M. Candelario and A. Uppula. Assessment of intraprofessional communication between inpatient and outpatient pharmacists during transitions of care (TOC). American College of Clinical Pharmacy (ACCP) Annual Meeting. New York, NY, October 2019.
- ^ Sarah Ziny\*, Patrick Vollmer\*, Khyati Patel, Danielle M. Candelario, M. Chen and Ateequr Rahman. Impact of an Additional Immunizing Pharmacist at the Rosalind Franklin University Interprofessional Community Clinic. Annual American Pharmacist Association (APhA) Annual Meeting. May 2020.

(Bold = College of Pharmacy contributors,

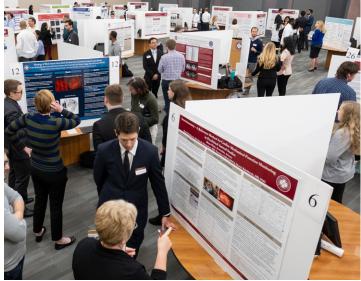
- \* = Student, resident and postdoctoral contributors,
- ^ = Interprofessional items)





# PRESENTATIONS WITHIN THE UNIVERSITY







Elaf Alsalamy\*, Todd Smith\* and Suzanne Molino. Review of Inappropriate Antibiotic Prescribing for Acute Upper Respiratory Infections at a Federal Health Care Center (FHCC). RFUMS Summer Research Poster Session, Dec. 4. 2019.

Pengli Bu. PLP-J, Bisphenol A and testicular steroidogenesis. Clinical Immunology Laboratory, Chicago Medical School, Jan. 31, 2020.

Alyshah Ismaili\* and Kristen Ahlschwede. Usability and Preference of FDA Approved Epinephrine Auto-injectors. RFUMS Summer Research Poster Session, Dec. 4, 2019.

^ L. Karson, Justin Bladecki\*, K. O'Mara and P. Kallio. Preoperative Opioid Use as a Predictor of Postoperative Complications: Evidence to Include Patient Opioid Use as a Factor in Risk Assessment Prior to Surgery. RFUMS Summer Research Poster Session, Dec. 4, 2019.

# Shujie Lin\*, Kristy Shanahan and John K. Buolamwini. Assessing the Functions of Mitochondrial hTERT. RFUMS

Summer Research Poster Session, Dec. 4, 2019.

Karolyn Mosbacher\* and Lisa Michener. Review of Student and Preceptor Attitudes of Longitudinal Advanced Pharmacy Practice Experiences, RFUMS Summer Research Poster Session, Dec. 4, 2019.

Sabrina Najibi\* and N. Sharma-Walia. 15-Deoxy-12-14-Prostaglandin J2 (15d-PGJ2) in Kaposi Sarcoma-Associated Herpes Virus Infection. RFUMS Summer Research Poster Session, Dec. 4, 2019.

^ Shruti Patel\*, K. O'Mara and P. Kallio. Predicting Risk with Preoperative Use of APACHE II in Adult ICU Patients Undergoing Planned Procedures. RFUMS Summer Research Poster Session. Dec. 4, 2019.

# Daria Polyarskaya\*, Vanessa Rivera\* and John K. Buolamwini.

Drug Design, Synthesis and Biological Testing of Novel Anticancer Agents Targeting STAT3. RFUMS Summer Research Poster Session, Dec. 4 2019.

## Yelena Sahakian\*, Shayda Ashraf\* and Ateequr Rahman.

Assessment of Ambulatory Antibiotic Prescribing Trends for Urinary Tract Infections in Infants and Children. RFUMS Summer Research Poster Session, Dec. 4, 2019.

Yelena Sahakian\*, Amber Klankowski\* and Ateegur Rahman. Attitude of Pharmacy Students by Gender and Ideology Toward Gun Violence on Campus. RFUMS Summer Research Poster Session. Dec. 4, 2019.

Patrick Vollmer\*, Sarah Zinv\*, Danielle Candelario, Ateegur Rahman and Khyati Patel. Evaluation of Immunization Practices at the Rosalind Franklin Interprofessional Community Clinic. RFUMS Summer Research Poster Session, Dec. 4, 2019.

Sarah Ziny\*, Patrick Vollmer\*, Danielle Candelario, Ateequr Rahman and Khyati Patel. Evaluation of the Impact of an Immunizing Pharmacist at the Rosalind Franklin University Interprofessional Community Clinic. RFUMS Summer Research Poster Session, Dec. 4, 2019.

(Bold = College of Pharmacy contributors,

- \* = Student, resident and postdoctoral contributors,
- ^ = Interprofessional items)

# EXTERNAL SEMINAR AND CONTINUING EDUCATION PRESENTATIONS

**Lauren B. Angelo** and **Sneha Srivastava**. Invited Speaker, APhA's Pharmacy-Based Immunization Delivery Certificate Training Program, for the Illinois Pharmacists Association. Chicago, IL. Nov. 14, 2019.

**John K. Buolamwini**. Design and discovery of small molecule drug/probe leads against targets in heart disease, cancer and AIDS. University of Arkansas Medical for Sciences, Department of Pharmaceutical Sciences, College of Pharmacy Little Rock, AR. Sep. 6, 2019.

**Kathleen Cunningham** and A. Eisenhart. Novel Strategies and Best Practices in Navigating the Continuing Drug Shortage Epidemic. Webinar for the American Society of Transplantation. Nov. 5, 2019.

**Kathleen Cunningham**, J. Fose, M. Gillespie, L. Lourenco and K. Szempruch. Best Practices in Immunosuppression Management During the COVID-19 Pandemic. Webinar for the American Society of Transplantation. May 5, 2020.

**Sean P. Kane**. When, How and How Much: Optimal Vasopressor Strategies in Septic Shock. Virtual CE for the Illinois Critical Access Hospital Network (ICAHN). Oct. 15, 2019.

**Abbie Lyden**. How to Safely Decrease the Number of Medications in Older Adults. Geriatrics for Advanced Practice (GAP) Series. February 2020.

**Shivaputra A. Patil**. Part I — Discovery of novel anticancer and antiviral agent; Part II — Cardiovascular drugs: Diuretics for Hypertension. Medical College of Wisconsin School of Pharmacy, Milwaukee, WI. Oct. 2, 2019.

**Sneha Srivastava**. Examining the Role of Serotonin and Unique Approaches to Treating Chronic Idiopathic Constipation. Two Webinars for Directions in Pharmacy. Sep. 12, 2019.

**Sneha Srivastava**. Role of SGLT2 Inhibitor Therapy in Diabetes Management. Webinar for the American Pharmacists Association Diabetes Special Interest Group. March 11, 2020.

**Sneha Srivastava**. Use of Fixed Ratio GLP-1RA Combination Therapies to Safely and Effectively Meet Glycemic Targets. Directions in Pharmacy — Live, Virtual Presentation. April 4, 2020; April 25, 2020; May 16, 2020; June 13, 2020.

**Janeen S. Winnike**. Provide Meaningful Learning Opportunities in Pharmacy. CPE Webinar for Collaborative Education Institute. May 20, 2019.

(**Bold** = College of Pharmacy contributors)

# BOOKS, BOOK CHAPTERS AND OTHER PUBLICATIONS

L. Bethishou, P. Boylan, K. Calabro, Danielle M. Candelario, E. Englin, G. Eusantos, S. Gibson, R. Mansukhani, P. On, R. Patel, A. Porter, Y. Prados, B. Sadiq, M. Sourial, G.L. Lloyd, H. Taylor, C. Tetuan, R. Took, A. Uppala and W. Wooster. APhA Transitions of Care Special Interest Group (SIG) Committee Members, Transitions of Care Toolkit, www.pharmacist.com/ transitions-care. January 2020.

- ^ S.R. Bunting, Sarah S. Garber and D. Ducar. The Knowledge Gap: Improving Nursing Education About Pre-Exposure Prophylaxis for HIV Prevention. Dean's Notes, 2020; 41:3.
- ^ Jessica M. Cottreau and A.B. Christensen. Newly Approved Antimicrobials. Orthop. Nurs. 2020; 39(1):53-58.
- ^ N. Ferrara, J. Vantrease, M. Loh, Jolee A. Rosenkranz and J.A. Rosenkranz. Protect and harm: Effects of stress on the amygdala. In Handbook of Amygdala Structure and Function, J.H. Urban and J.A. Rosenkranz, Eds. Handbook of Behavioral Neuroscience Series, 2020, Academic Press.
- ^ M. Kapugi and Kathleen Cunningham. Corticosteroids. Orthop. Nurs. 2019; 38(5):336-339.

Emily Lammers\* and Sneha Baxi Srivastava. Constipation Treatment: A Review. Orthop. Nurs. 2020; 39(3):194-198.

Khyati Patel. Obesity Treatment: A Focus on Pharmacotherapy of Weight Management. Orthop. Nurs. 2020: 39(2):121-127.

James J. O'Donnnell III and J.T. O'Donnell. Drug Induced Falls. In G.M. Bakken, C. LaRue and H.H. Cohen, eds. Slips, Trips, Missteps and Their Consequences. 3rd ed. Tucson, AZ: L&J Publishing; 2020, in press.

James J. O'Donnell III, J. Somberg, V. Idemyor and J.T. O'Donnell, eds. Drug Discovery and Development. 3rd Ed. Boca Raton, FL: Taylor & Francis Publishing: 2020.

James J. O'Donnell III, J.C. Somberg and J.T. O'Donnell. Introduction to Drug Discovery and Development. In James J. O'Donnell III, J. Somberg, V. Idemyor and J.T. O'Donnell, eds. *Drug Discovery and Development*. 3<sup>rd</sup> Ed. Boca Raton, FL: Taylor & Francis Publishing: 2020.

**Sneha Baxi Srivastava**. Is there a prescription to treat pediatric obesity? Am. J. Lifestyle Med. 2019; 14(1):36-39.

Sneha Baxi Srivastava, N. Fluegel and R.P. Mansukhani. Pharmacologic management of rheumatoid arthritis. Orthop. Nurs. 2019; 38(6):393-395.

Eris Tollkuci. Toxicity Management for Immune Checkpoint Inhibitors. Hematology Oncology Pharmacy Association (HOPA) News. 2020; 17(2):15-19.

D. Eric Walters. Orexin Antagonists: A Wake-Up Call for Medicinal Chemists? J. Med. Chem. 2020; 63(4):1526-1527.

(Bold = College of Pharmacy contributors, ^ = Interprofessional items)

# GRANTS

Research and scholarship takes many forms and it often requires significant resources. Success in competition for research funding can provide such resources and further the discovery of new knowledge.

# The following list highlights such successes by College of Pharmacy faculty:

**Kristen Ahlschwede**. Formulation and characterization of a novel self-emulsifying drug delivery system. Academic Pharmaceuticals Inc., 9/2019 - 12/2020.

**Kristen Ahlschwede**. Formulation and characterization of various lipid emulsion systems. Academic Pharmaceuticals Inc., 7/2019 - 7/2020.

**John K. Buolamwini** and G.E. Stutzmann. Novel Drug Discovery for AD Targeting Ryanodine Calcium Channels. NIH/NIA, 8/2016 - 7/2021.

**John K. Buolamwini** and G.E. Stutzmann. Optimization of Novel Ryanodine Receptor Modulatory Compounds for Alzheimer's Disease. NIH/NIA, 5/2018 - 4/2020.

R. Gazmuri, Pl, **John K. Buolamwini** and **D. Eric Walters**, Co-investigators. Cyclophilin-D: A Regulator of Mitochondrial Oxidative Phosphorylation. Veterans Administration, 10/2017 - 9/2021.

Arun K. Ghosh, Pl and **D. Eric Walters**, Co-investigator. Design & synthesis of nonpeptide protease inhibitors. NIH/GMS, 4/1/1996 - 8/31/2021.

**Khyati Patel** and **Jolee Rosenkranz**. A Way Out — Program Evaluation. Bureau of Justice Assistance.

**Ateequr Rahman**. Just in Time Inventory Management — A Strategic Planning Tool for Pharmaceutical Distribution System. MAKS Pharma and Diagnostics, NY.

(**Bold** = College of Pharmacy contributors)

# ACHIEVEMENT AWARDS

The College of Pharmacy Outstanding Achievement in Research Award. Each year, just prior to Commencement, an award is presented to a graduating College of Pharmacy student for Outstanding Achievement in Research. This year the award was presented to Yelena Sahakian.

**Dr. Yelena Sahakian** worked with Dr. Ateequr Rahman on several projects throughout her time at the RFU College of Pharmacy. Her research projects included the area of clinical and social and administrative sciences, involving development of assessment tools, drug utilization review, quality of life and educational assessments. She developed a prolific research profile in the field of pharmacoeconomic and health outcomes studies assessing the cost and quality of life of various disease states such as hypertension, urinary tract infections, Alzheimer's disease and dementia. Additional areas of research comprise scholarship of teaching and learning (SOTL), public health and safety, and healthcare policy.

She published extensively in national and international peer-reviewed journals both as a primary author and co-author. She has also presented her research findings at national and international conferences and received numerous awards for best papers and poster sessions. She is a reviewer for several peer-reviewed journals and an active member of various pharmacy and healthcare organizations. She is currently a clinical resident at the Swedish Covenant Hospital in Chicago.

2015 Monal Punjabi

2016 Andrew Ruettiger

Previous Winners: 2017 Shannon Riley

2018 Tiffany Chairudin

2019 Alexandria Henry, Soyoung Chang

2020 Yelena Sahakian

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# **BUOYED BY YOUR SUPPORT, we are:**

- Strengthening programs and partnerships: We are teaching future healthcare professionals how to transform systems of care through our innovative curriculum, use of state-of-the-art technology and expansion of clinical affiliates and community partnerships.
- Impacting the community: We are committed to improving health, wellness and access to educational opportunities in underserved communities.
- Expanding biomedical, clinical and social determinants of health research: We are continually investing in the discovery of new treatments and therapeutics, including in the fields of neuroscience, cancer and genetic and infectious diseases.
- **Improving scholarship support:** We are decreasing the economic barriers to students' aspirations.

Together we can strengthen our healthcare workforce and advance the discovery of knowledge dedicated to improving wellness.

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Our seminar program is generously supported by an endowment from Haim G. Nagirner Weinstein and Jane Graumann Weinstein. Dr. Nagirner was a research scientist at the North Chicago Veterans Administration facility and a Chicago Medical School faculty member with interests in geriatric health care and pharmacy.

## **TUESDAY, SEPTEMBER 10, 2019**

DR. SHARON W. AYD, CEO, AYD BIOPHARMA CONSULTING GROUP HER FANTASTIC JOURNEY — A TRUE STORY OF HOW YOU CAN CHANGE THE WORLD AND LEAVE A LEGACY WITH A CAREER IN BIO/ PHARMACEUTICALS

## **TUESDAY, OCTOBER 15, 2019**

DR. PAUL TRIPPIER, UNIVERSITY OF NEBRASKA MEDICAL CENTER SMALL MOLECULE AKR1C3 INHIBITORS TO COUNTER DRUG RESISTANCE IN CANCER

# MONDAY, NOVEMBER 11, 2019

DR. TERESA A. BEAM, MANCHESTER UNIVERSITY PHARMACOGENOMICS IN CLINICAL PRACTICE — CURRENT PERSPECTIVES AND FUTURE PROMISE

## MONDAY, DECEMBER 16, 2019

DR. EHAB A. ABOURASHED, MEDICAL COLLEGE OF WISCONSIN SCHOOL OF PHARMACY CNS — TARGETING SECONDARY METABOLITES FROM TWO 'BRAINY' BOTANICALS

# **TUESDAY, JANUARY 28, 2020**

DR. PENGLI BU, ROSALIND FRANKLIN UNIVERSITY ORIGIN OF A RAPIDLY EVOLVING PROLACTIN PARALOG PROGRAMMING TESTIS FUNCTION IN MICE

# MONDAY, FEBRUARY 24, 2020

DR. JOHN S. SCHNEEKLOTH, NATIONAL CANCER INSTITUTE-FREDERICK TARGETING STRUCTURALLY AND FUNCTIONALLY DIVERSE RNAS WITH DRUGLIKE SMALL MOLECULES





Through experiential rotations, student pharmacists learn the possibilities their degree has to offer.



The College of Pharmacy focuses on opportunities in a variety of career paths, including community pharmacy, health systems, industry, academia and public health. Individual attention in a small class size, as well as experience in a state-of-the-art patient simulation laboratory, puts students at the forefront of modern pharmacy practice.

As with other schools at RFU, interprofessional education separates the College of Pharmacy from other pharmacy programs. The rapid change in delivery of care is helping to drive the expansion of pharmacy's scope of practice. From day one, students collaborate in teams, learning about, from and with one another's profession and how, together, they each impact the future of health care.

# **EXCELLENT MEDICAL CARE** IS THE PRODUCT OF A GREAT TEAM

We teach that patients are not only at the center of the model of care, but also an active member of that team. Students learn that outcomes improve through positive patient interactions and clear communication. During their training, students sharpen those interactions, along with critical reasoning and communication skills, in simulation labs. Our program provides immunization training and puts students in contact with actual patients early in their first quarter.

## STATE-OF-THE-ART FACILITIES

The RFU 97-acre campus is home to cutting-edge technology used throughout the curriculum and even has a Department of Healthcare Simulation. Examples of advanced systems that RFU students use include:

PHARMACY SKILLS LAB: Dedicated to learning communication and technical skills needed in the pharmacy field, this new lab gives students hands-on experience in many areas of contemporary pharmacy practice such as clinic, hospital or neighborhood pharmacy.

THE EDUCATION AND EVALUATION CENTER: Students perform clinical histories and patient assessments on standardized patients within this safe, learner-centered environment.

THE SIMULATION AND SKILLS LAB: This is home to several full-body mannequin simulators that can mimic dilating pupils, breathing and circulation. These allow students to have realistic experiences on an interprofessional team in a risk-free setting.

INNOVATION AND RESEARCH PARK: Opened in Spring 2020, includes 100,000 square feet of space designed to increase interaction, a free exchange of ideas and sharing of expertise and scientific tools.

