



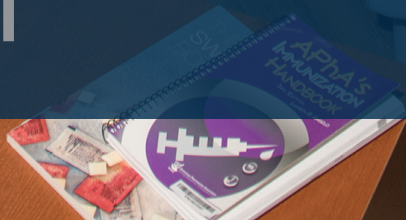
ROSALIND FRANKLIN
UNIVERSITY
of MEDICINE AND SCIENCE

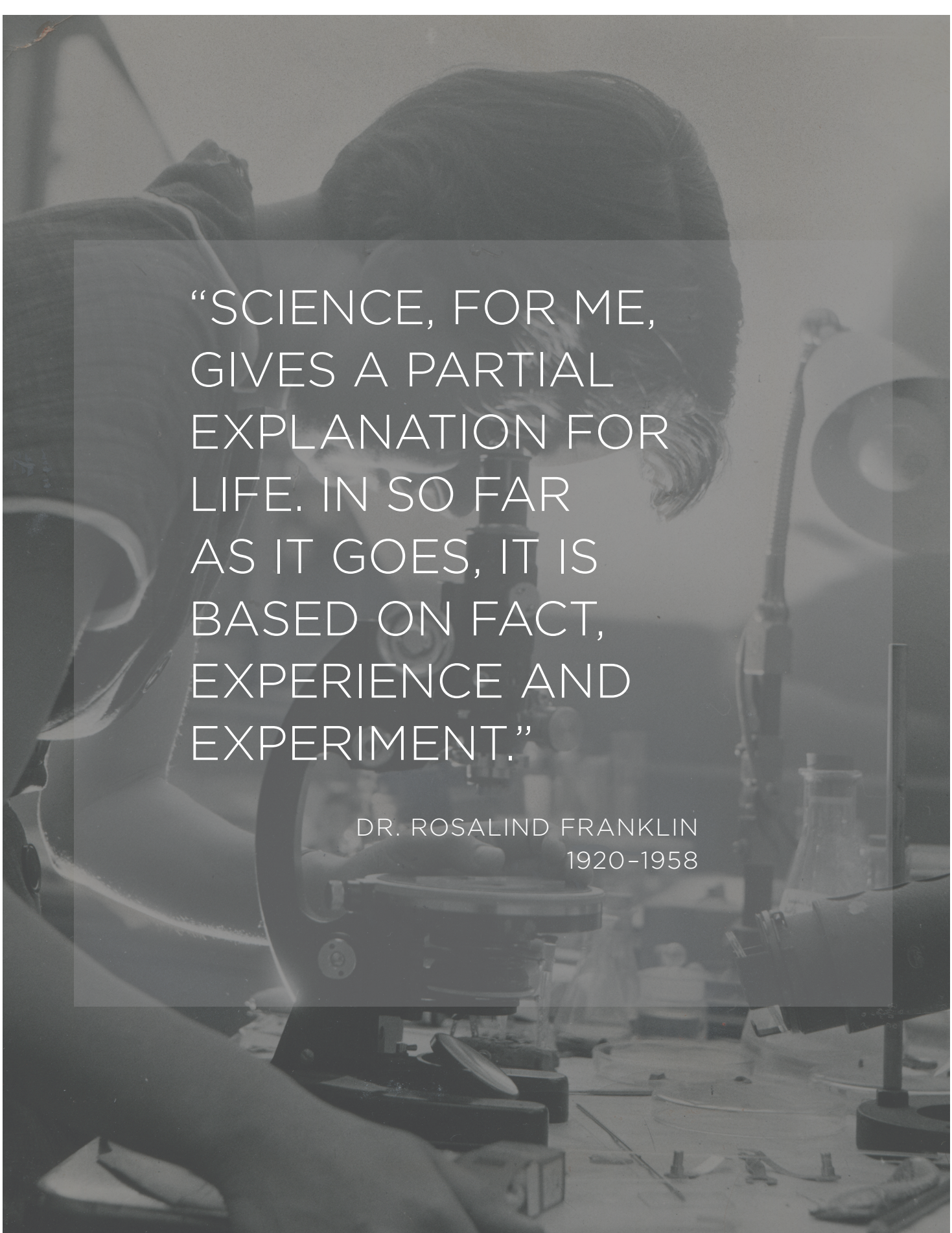
COLLEGE OF PHARMACY



RESEARCH & SCHOLARSHIP REPORT

July 1, 2016–June 30, 2017





“SCIENCE, FOR ME,
GIVES A PARTIAL
EXPLANATION FOR
LIFE. IN SO FAR
AS IT GOES, IT IS
BASED ON FACT,
EXPERIENCE AND
EXPERIMENT.”

DR. ROSALIND FRANKLIN
1920-1958

2,145 STUDENTS 30+ ACADEMIC PROGRAMS 1 UNIVERSITY

ACADEMIC ACHIEVEMENT IS IN OUR DNA

The Rosalind Franklin University of Medicine and Science (RFUMS) 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 in 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 the population through the interprofessional education of health and biomedical professionals and the discovery of knowledge dedicated to improving the wellness of its people**. 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 achieve national recognition as 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

Civility · Diversity · Excellence · Innovation · Integrity · Scholarship · Teamwork



ROSALIND FRANKLIN
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of MEDICINE AND SCIENCE

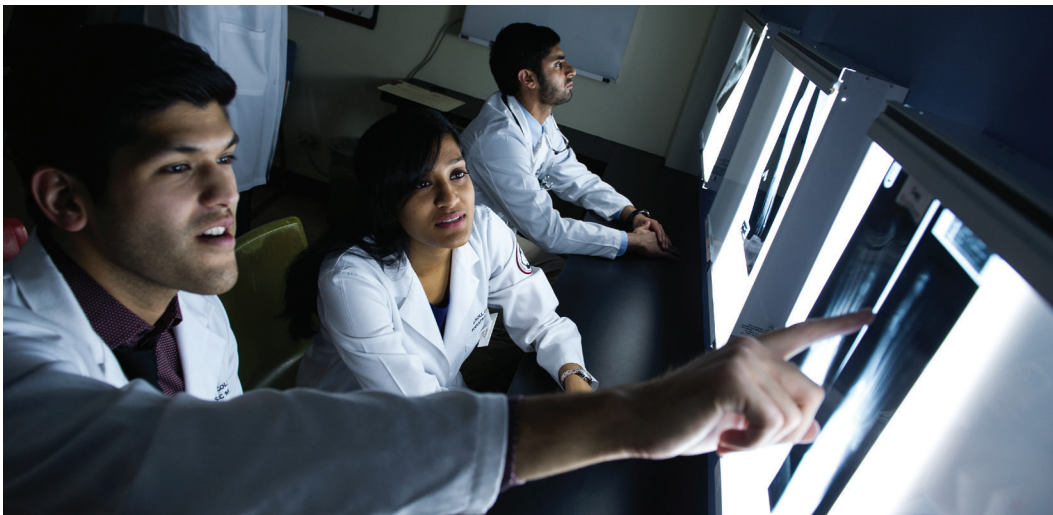
THE ROSALIND FRANKLIN UNIVERSITY DIFFERENCE

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 programs from the beginning of their time here.

That's especially important, as healthcare teams play an increasingly vital role in patient care. At RFUMS, 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 introduction for an integrated interprofessional education experience, brings students from virtually all academic programs together to learn from one another, get oriented to the culture of health care and start interacting in small, interprofessional teams.



ROSALIND FRANKLIN
UNIVERSITY
of MEDICINE AND SCIENCE

COLLEGE OF PHARMACY

The College of Pharmacy (COP) is the newest college at RFUMS 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 RFUMS, 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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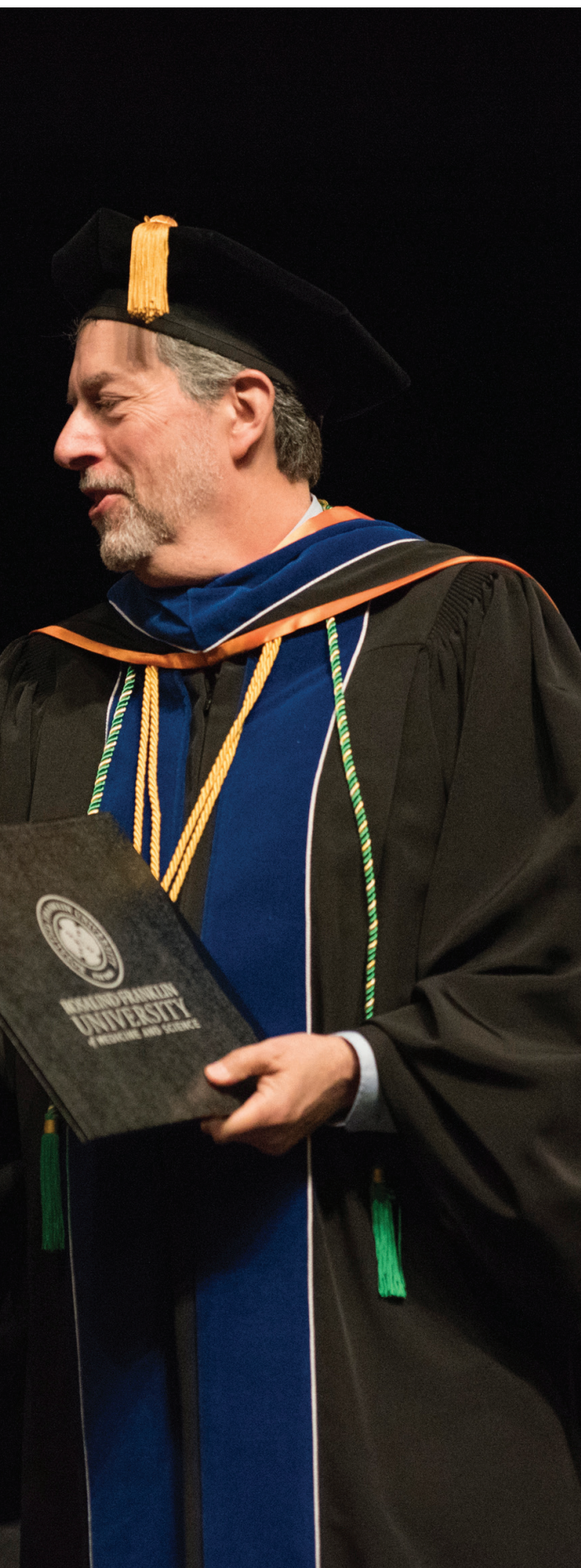
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**ROSALIND FRANKLIN
UNIVERSITY**
of MEDICINE AND SCIENCE

INTRODUCTION





From its inception, one of the missions of the College of Pharmacy has been to foster the research and scholarship efforts of our faculty and students. For our faculty, research/scholarship is one of the three criteria on which we are evaluated (the others are teaching and service). For our students, research offers a taste of the gratification that comes from uncovering a new revelation or insight. This booklet documents our research and scholarship achievements of the past academic year (July 1, 2016 - June 30, 2017). In these pages you will find the peer-reviewed scientific publications, books, book chapters, reviews, presentations at scientific meetings and research grant accomplishments of our faculty and students. We also list the nationally prominent speakers who have visited RFUMS as speakers in our Haim G. and Jane Graumann Nagirner Weinstein endowed seminar series.

This year, for the first time, we include contributions from an alumna, Alyssa Christensen, who has presented work as a resident, co-authored with our faculty. Throughout this booklet, we use bold text to indicate College of Pharmacy contributors, and an asterisk* to indicate student, resident and postdoctoral contributors.

We are proud to share with you the research and scholarship contributions of our college.

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.

Jennifer L. Beem* and **Ramia Safi***. Cardiovascular Drug Updates. *J. Pharm. Soc. Wisconsin*, 2016; 19(4):37-39.

Brian S. Bogdanowicz*, M.A. Hoch, and **Megan E. Hartranft**. Flipped script for gefitinib: A reapproved tyrosine kinase inhibitor for first-line treatment of epidermal growth factor receptor mutation positive metastatic nonsmall cell lung cancer. *J. Oncol. Pharm. Pract.* 2017; 23(3):203-214. Apr 2017.

Danielle M. Candelario, V. Vazquez, W. Jackson, and T. Reilly. Completeness, accuracy, and readability of Wikipedia as a reference for patient medication information. *J. Amer. Pharm. Assoc.* 2017; 57:197-200. Mar-Apr 2017.

Hemant Kumar Deokar*, H.P. Barch, and **John K. Buolamwini**. Homology Modeling of Human Concentrative Nucleoside Transporter 1 and Virtual Screening Study to find Novel hCNT1 Inhibitors. *Drug Des.* 2017; 6(1):146.

S.P. Ferreri, L.B. Cross, **Scott D. Hanes**, T. Jenkins, D. Meyer, and A. Pittenger. Academic Pharmacy: Where is our influence? *Am. J. Pharm. Educ.* 2017; 81:article 63. May 2017.

Megan E. Hartranft, A.B. Clemmons, D.L. DeRemer, and V. Kota. Evaluation of romiplostim for the treatment of secondary failure of platelet recovery among allogeneic hematopoietic stem cell transplant patients. *J. Oncol. Pharm. Pract.* 2017; 23(1):10-17. Jan 2017.

Sean P. Kane and **Scott D. Hanes**. Unexplained increases in serum vancomycin concentration in a morbidly obese patient. *Inten. Crit. Care Nurs.* 2017; 39:55-58. Feb 2017.

C.R. Kent, M. Bryja, H.A. Gustafson, M.Y. Kawarski, G. Lenti, E.N. Pierce, R.C. Knopp, **Victor Ceja***, **Bhabna Pati***, **D. Eric Walters**, and C.E. Karver. Variation of the aryl substituent on the piperazine ring within the 4-(piperazin-1-yl)-2,6-di(pyrrolidin-1-yl)pyrimidine scaffold unveils potent, non-competitive inhibitors of the inflammatory caspases. *Bioorg. Med. Chem. Lett.* 2016; 26:5476-5480. October 2016.

F. Krapp, J.L. Grant, S.H. Sutton, E.A. Ozer, and **Viktorija O. Barr**. Treating complicated carbapenem-resistant enterobacteriaceae infections with ceftazidime-avibactam: A retrospective study with molecular strain characterization. *Int. J. Antimicrob. Agents*, 2017; 49(6):770-773.

A. Kulshrestha, S.A. Ibrahim, G.K. Katara, **Renukadevi Patil**, **Shivaputra A. Patil**, and K.D. Beaman. Microtubule inhibitor SP-6-27 exhibits anti-proliferative activity and inhibits angiogenesis in ovarian cancer. *Oncotarget*, 2017; 8(40):67017-67028.

B.J. Lee, S.N. Rao, S.K. Wang, L.Y. Lee, I.Y. Lakada, E.M. Gilber, **Viktorija O. Barr**, M.J. Postelnick, S.H. Sutton, T.R. Zembower, M.K. Bolon, M.H. Scheetz, and N.J. Rhodes. Implementation of a cefazolin-based stewardship pathway for methicillin-susceptible *Staphylococcus aureus* bloodstream infections paired with infectious diseases consultation. *Int. J. Antimicrob. Agents*. Dec 2016; 49(5):650-654.

Renukadevi Patil, A. Ghosh, **Phoebus Sun Cao***, R.D. Sommer, K.A. Grice, G. Waris, and **Shivaputra A. Patil**. Novel 5-Arylthio-5H-Chromenopyridines as New Class of Anti-fibrotic Agents. *Bioorg. Med. Chem. Lett.*, 2017; 27(5):1129-1135.

Renukadevi Patil, S.A. Patil, K.D. Beaman, and **Shivaputra A. Patil**. Indole molecules as inhibitors of tubulin polymerization: Potential new anticancer agents, an update (2013-2015). *Future Med. Chem.* 2016; 8(11):1291-1316.

Shivaputra A. Patil, J.K. Addo, **Hemant Deokar***, S. Sun, J. Wang, W. Li, D.P. Suttle, W. Wang, R. Zang, and John K. Buolamwini. Synthesis, Biological Evaluation and Modeling Studies of New Pyrido[3,4-b]indole Derivatives as Broad-Spectrum Potent Anticancer Agents. *Drug Des.*, 2017; 6:143.

S.A. Patil, **Shivaputra A. Patil**, and **Renukadevi Patil**. Magnetic Nanoparticles Supported Carbene and Amine Based Metal Complexes in Catalysis. *J. Nano Res.*, 2016; 42:112-135.

S.A. Patil, **Shivaputra A. Patil**, and **Renukadevi Patil**. Medicinal Applications of (Benz)imidazole and Indole-Based Macrocycles. *Chem. Biol. Drug Des.*, 2017; 89(4):639-649.

S.A. Patil, V. Patil, **Renukadevi Patil**, K. Beaman, and **Shivaputra A. Patil**. Identification of novel 5,6-dimethoxy indan-1-one derivatives as antiviral agents. *Med. Chem.*, 2017; 13(8):787-795.

V. Patil, E. Barragan, **Shivaputra A. Patil**, S.A. Patil, and A. Bugarin. Direct Synthesis and Antimicrobial Evaluation of Structurally Complex Chalcones. *ChemistrySelect*, 2016; 1(13):3647-3650.

T. Reilly, W. Jackson, V. Berger, and **Danielle M. Candelario**. Accuracy and completeness of drug information in Wikipedia medication monographs. *J. Amer. Pharm. Assoc.* 2017; 57:193-196. Mar-Apr 2017.

V.V. Soriano, E.P. Tesoro, and **Sean P. Kane**. Characterization of free phenytoin concentrations in end-stage renal disease using the Winter-Tozer equation. *Ann. Pharmacother.* 2017; 51(8):669-674.

T.V. Subramanya Prasad, C.R. Shahini, **Shivaputra A. Patil**, X. Huang, A. Bugarin, and S.A. Patil. Non-symmetrically p-nitrobenzyl- and p-cyanobenzyl-substituted N-heterocyclic carbene-silver(I) complexes: Synthesis, characterization and antibacterial studies. *J. Coord. Chem.*, 2017; 70(4):600-614.

S. Sun, P. Yue, M. He, X. Zhang, D. Paladino, Y. Al-Abed, J. Turkson, and **J.K. Buolamwini**. An Integrated Computational and Experimental Binding Study Identifies the DNA Binding Domain as the Putative Binding Site of Novel Pyrimidinetrione Signal Transducer and Activator of Transcription 3 (STAT3) Inhibitors. *Drug Des.* 2017; 6:142.

S.K. Swaminathan, **Kristen M. Ahlschwede**, V. Sarma, G.L. Curran, R.S. Omtri, T. Decklever, V.J. Lowe, J.F. Poduslo, and K.K. Kandimalla. Insulin differentially affects the distribution kinetics of amyloid beta 40 and 42 in plasma and brain. *J. Cereb. Blood Flow Metab.* 2018; 38(5):904-918. Epub June 1, 2017.

S. VanderPloeg, Y. Tsao, S. Kim, and **Abbie Lyden**. Ventricular tachycardia followed by cardiac arrest associated with chronic loperamide abuse. *J. Pharmacol. Clin. Tox.* 2016; 2(2):86-90.

K. Vishal, B.D. Fahlman, B.S. Sasidhar, **Shivaputra A. Patil**, and S.A. Patil. Magnetic Nanoparticle-Supported N-Heterocyclic Carbene-Palladium(II): A Convenient, Efficient and Recyclable Catalyst for Suzuki-Miyaura Cross-Coupling Reactions. *Catalysis Lett.*, 2017; 147(4):900-918.



BOOKS, BOOK CHAPTERS & OTHER PUBLICATIONS



M. Anderson and **Viktorija O. Barr**. Treatment of Vancomycin-Resistant Enterococcus Urinary Tract Infections. *MAD-ID Newsletter*. 2016; 6(3). Fall 2016.

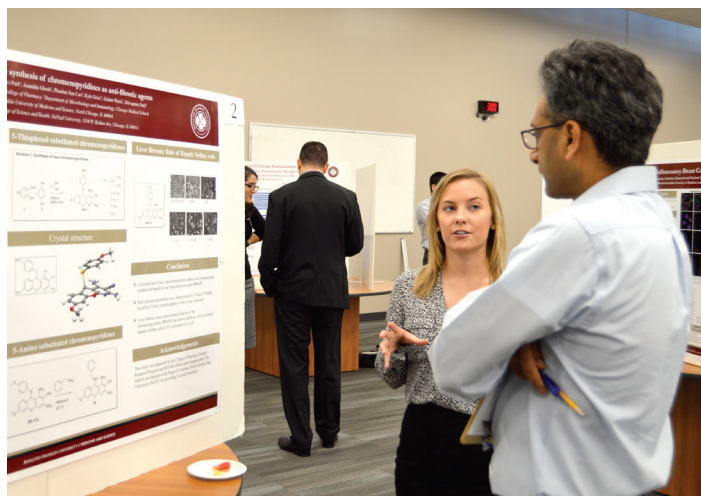
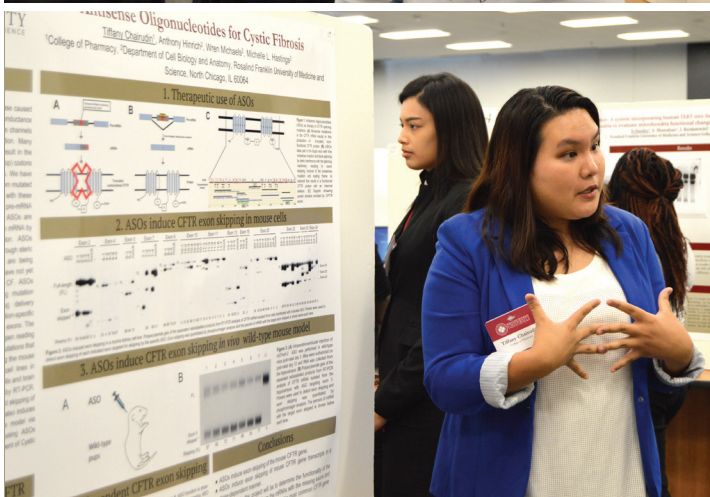
Lauen B. Angelo. Immunization update 2017. *Pharm. Today*. 2017; 23(5):56-64. May 2017.

J. Cruz, **Danielle M. Candelario**, B.M. Mitzyk, and L. Volino. Exploring the role of natural treatments in wound healing: a focus on calendula. *Pharm. Times*. 2017; 83:77-85. Feb 2017.



ABSTRACTS & PRESENTATIONS

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.



Marc S. Abel, Lauren B. Angelo, P.E. Funk, P. Knott, Jolee Rosenkranz, Kevin O. Rynn, and D. Eric Walters. Recruiting Students via a Strategic Alliance: The DePaul University – Rosalind Franklin University Pathways Honors Program. American Association of Colleges of Pharmacy, Annual Meeting, Anaheim, CA, July 23-27, 2016.

M.V. Anderson, **Viktorija O. Barr**, N.J. Rhodes, R. Maxwell, and M.J. Postelnick. Impact of reported beta-lactam allergy on inpatient outcomes. Great Lakes Pharmacy Residency Conference. April 2017

M. Anderson, M.J. Postelnick, **Viktorija O. Barr, Daniel Dickson*, Marica Laketic***, P. Greenberger, D. Martin, D. Kotis, and S. Sutton. Revisiting the incidence of reported antimicrobial allergies in hospitalized patients. American Society for Microbiology, Microbe 2017, June 1-5, 2017, New Orleans, LA.

T. Batteson, **Sarah S. Garber**, and L. Thuente. Assessing constructs underlying interprofessional competencies. Interprofessional Care for the 21st Century: Redefining Education and Practice; Conference — Jefferson Center for InterProfessional Education (JCIFE), 2016.

C. Braggs, R. Helfrich, **Shannon Riley***, N. Kapeki, **Hemant Deokar***, S. Chakroborty, J. McDaid, R. Marr, **John K. Buolamwini**, and G. Stutzmann. Targeting Early Calcium-Mediated Pathology for AD Therapeutics in Animal and Human Neuronal Models. Alzheimer's Association International Conference, July 24-28, 2016, Toronto, Canada.

Danielle M. Candelario, R. Durie, and J. Louie. Impact of a centralized interdisciplinary discharge unit on readmission rates and transitional care services in high risk patients. American Pharmacists Association Annual Meeting, March 2017, San Francisco, CA.

Danielle M. Candelario, F. McLaughlin, J. Henn, and D. Ciufu. The effect of an interdisciplinary centralized discharge unit on reducing readmission & improving transitional care. ANCC National Magnet Conference. October 2016. Orlando, FL.

K. Caruso, E. Zdyb, and **Abbie Lyden**. Efficacy and safety of intravenous labetalol and hydralazine in hypertensive patients in the emergency department. Great Lakes Residency Conference. May 2017.

Alyssa B. Christensen*, **Jessica M. Cottreau**, E. Lim, **Abbie Lyden**, K. Allen, E. Zdyb, and **Viktorija O. Barr**. Treatment of health-care associated pneumonia: An analysis of antibiotic use, transitions of care, and patient outcomes. Great Lakes Pharmacy Residency Conference. April 2017.

Alyssa B. Christensen*, M.J. Postelnick, A.K. Gibson, D.W. Martin, N.J. Rhodes, M.H. Scheetz, **Viktorija O. Barr**, **Jessica M. Cottreau**, M. Malczynski, C. Qi, T.R. Zembower, M.K. Bolon, and S.H. Sutton. Reduction of inappropriate hospital-onset *Clostridium difficile* testing through pre-authorization of PCR *Clostridium difficile* lab orders. American Society for Microbiology, Microbe 2017, June 1-5, 2017, New Orleans, LA.

Hemant Deokar*, S. Gallagher, S.A. Connolly, and **John K. Buolamwini**. Design and development of novel herpesvirus entry inhibitors directed at the glycoprotein B (gB) fusion protein. 35th National Medicinal Chemistry Symposium. Chicago, IL. July 2016.

Daniel Dickson*, P. Nguyen, E. Zdyb, and **Abbie Lyden**. Impact of discharge anticoagulation education by pharmacists in the emergency department. ASHP Midyear Clinical Meeting, December 2016, Las Vegas, NV.

S. Furbish, **Michael Shuman**, and Y. Alaka. Evaluating rates of metabolic monitoring for second generation antipsychotics after implementation of a new pop-up alert. American Society of Health-System Pharmacists (ASHP) Midyear Clinical Meeting, December 2016, Las Vegas, NV.

S. Gallagher, S.A. Connolly, **Hemant Deokar***, and **John K. Buolamwini**. Developing Small Molecule Inhibitors of the Herpesvirus Fusion Protein Glycoprotein B. 41st Annual International Herpesvirus Workshop, July 23-27, 2016, Madison, WI.

S. Gallagher, **Hemant Deokar***, **John K. Buolamwini**, and S.A. Connolly. Inhibition of the Herpesvirus Fusion Protein Using Targeted Small Molecule. Experimental Biology 2017. Chicago, IL.

S. Gallagher, **Hemant Deokar***, **John K. Buolamwini**, and S.A. Connolly. Targeting the herpesvirus fusion protein with small molecule inhibitors. 36th Annual Meeting of the American Society for Virology. Madison, WI.

V. Kandathil, S.A. Patil, and **Shivaputra A. Patil**. Magnetic Nanoparticle Supported Palladium-Based Nanocatalysts. American Chemical Society National Meeting, Fall 2016, Philadelphia, CATL 242.

M. Kohute, G. Roerhig, R. Durie, P. Kooker, and **Danielle M. Candelario**. Fixed dose tranexamic acid in patients undergoing primary unilateral total hip or knee arthroplasty. American College of Clinical Pharmacy Annual Meeting, October 2016, Hollywood, FL.

E. Lim, K. Allen, E. Zdyb, **Alyssa B. Christensen***, **Jessica M. Cottreau**, and **Abbie Lyden**. Assessing the appropriateness of empiric broad spectrum antibiotics in healthcare associated pneumonia patients in the emergency department: A retrospective epidemiologic study. Great Lakes Residency Conference. May 2017.

R. Nemire, J. Damici, R. Noria, and **Sarah S. Garber**. Mimycx: A tool for interprofessional education. Interprofessional Care for the 21st Century: Redefining Education and Practice; Conference — Jefferson Center for InterProfessional Practice & Education (JCIPE), 2016.

M.W. Neville, L.P. Cross, C.L. Garwood, **Sean P. Kane**, K. O'Neal, A.M. Persky, T.L. Schwinghammer, and A.L. Smith. Pharmacy Practice Section Programming: Ins and outs of academia juggling teaching, SOTL, billing and more. American Association of Colleges of Pharmacy (AACP) annual meeting. June 2016. Anaheim, CA.

J.N. O'Donnell, C.M. Miglis, N.J. Rhodes, T.R. Zembower, B.M. Hoff, **Viktorija O. Barr**, E.M. Gilbert, M.K. Bolon, M. Malczynski, L. Catovic, J. Gener, M.J. Postelnik, S. Sutton, and M.H. Scheetz. A randomized controlled trial of a stewardship intervention (ASI) paired with Matrix Assisted Laser Desorption Ionization Time of Flight (MALDI-TOF) in patients with positive blood cultures. American Society for Microbiology, Microbe 2017, June 1-5, 2017, New Orleans, LA.

Renukadevi Patil, A. Kulshrestha, G.K. Katara, K. Beaman, and **Shivaputra A. Patil**. Discovery of dihydrobenzofuran substituted chromene analog as a potent anticancer agent for ovarian cancer. American Chemical Society National Meeting, Fall 2016, Philadelphia, MEDI 332.

Renukadevi Patil, A. Kulshrestha, A. Tikoo, S. Fleetwood, G. Katara, W. Seibel, A. Gilman-Sachs, **Shivaputra A. Patil**, and K. Beaman. Identification of vacuolar (H⁺)-ATPase modulators by virtual screening process. American Chemical Society National Meeting, Spring 2017, San Francisco, CA, USA, April 2-6, MEDI 155.

V. Patil, S.A. Patil, and **Shivaputra A. Patil**. Design, synthesis and characterization of novel thiazole based molecules. American Chemical Society National Meeting, Spring 2017, San Francisco, CA, USA, April 2-6, ORGN 777.

M. Postelnick, N.J. Rhodes, D. Martin, M. Scheetz M, **Viktorija O. Barr**, and S. Sutton. Impact of an EMR-directed structured antibiotic timeout on fluoroquinolone consumption on general medicine units in an academic medical center. American Society for Microbiology, Microbe 2017, June 1-5, 2017, New Orleans, LA.

Keith Riley*, **Ruth Nartey***, K. Cousins, M. Hoch, and **Megan Hartranft**. Novel combination therapy with cisplatin, paclitaxel, and cetuximab in advanced head and neck cancer. American Society of Health-System Pharmacists (ASHP) Midyear Clinical Meeting, December 2016, Las Vegas, NV.

V. Sarma, S. Swaminathan, K. Kandimalla, **Kristen Ahlschwede**, G. Curran, K. Kalari. Alzheimer's Disease A-beta Peptides Impair the Dynamics of Insulin Transport across at the Blood-Brain Barrier. American Association of Pharmaceutical Scientists (AAPS), Annual Meeting. November 2016, Denver, CO.

EXTERNAL SEMINAR & CONTINUING EDUCATION PRESENTATIONS

Lauren B. Angelo. 2017 Immunization Update for Pharmacists. CPE Presentation. North Suburban Pharmacists Association Meeting. May 2017. North Chicago, IL.

Lauren B. Angelo. Treat yourself: Updates in self-care and nonprescription medications — 2016. Illinois Pharmacist Association Meeting. September 2016. Normal, IL.

Lauren B. Angelo, J. Goad, and M. Majmudar. Integrating Immunizations into the Patient Care Process. American Pharmacists Association 2017 Annual Meeting & Exposition. March 2017. San Francisco, CA.

Lauren B. Angelo and **Khyati Patel.** CAM of worms: Complementary and alternative medicine for diabetes. Illinois Pharmacists Association Meeting. September 2016. Normal, IL.

John K. Buolamwini. Design and Discovery of and Probes and Potential Drug Leads for Heart Disease, Cancer, and Viral Diseases. Department of Medicinal Chemistry, College of Pharmacy, University of Michigan, Ann Arbor, MI. April 6, 2017.

John K. Buolamwini. Design and Discovery of Potential Therapeutic Agents and Probes for Heart Disease, Cancer, Viral Diseases, and Alzheimer's Disease. Department of Pharmaceutical Sciences, College of Pharmacy, Southern Illinois University at Edwardsville, Edwardsville, IL. November 4, 2016.

Danielle M. Candelario. PharmTalk: Transitions of care. American Pharmacists Association 2017 Annual Meeting & Exposition. March 2017. San Francisco, CA.

Danielle M. Candelario and J. Cruz. Calendula: A natural treatment for wound healing. Webinar presented: Pharmacy Times Continuing Education Webinar for Pharmacist and Nurse Practitioners; February 15, 2017; Plainsboro, NJ. <https://www.pharmacytimes.org/landing/934>. Accessed June 13, 2017

Bradley Cannon and **Lisa Michener.** Successful management of difficult learning situations. Preceptor Development Workshop. May 2017. Evanston, IL.

Jessica Cottreau. Update on intra-abdominal infections, meningitis and endocarditis. American College of Clinical Pharmacists Annual Meeting — Clinical Reasoning Series. October 2016. Hollywood, FL.

Sarah S. Garber. Working with Senior Management and Upper Administration: Expectations, Motivations, Agendas. Academic Leadership Fellows Program, AACP Interim Meeting. Puerto Rico, 2017.

Sarah S. Garber. Structures and Processes, Strategic Planning, and Organizational Effectiveness. AACP Spring Institute: Developing a Culture of Sustainable Assessment; 2017

Megan Hartranft and Y. Lai. Mentoring pearls for the hematology/oncology practitioner. Hematology/Oncology Pharmacy Association 2017 Annual Conference; March 2017. Anaheim, CA.

Megan Hartranft and A. Seddon. Creating competent cancer care clinicians: Incorporating hematology/oncology topics into pharmacist education. Hematology/Oncology Pharmacy Association 2017 Annual Conference; March 2017. Anaheim, CA.

Frank Hughes and **Lisa Michener**. Effective selection, analysis and statistical design methods of learner projects. Preceptor Development Workshop. May 2017. Evanston, IL.

Sean P. Kane. Vasopressors and Antiarrhythmics. Advocate Condell Medical Center. March 2017. Libertyville, IL.

Sean P. Kane. Antihypertensives: An in-depth review of oral & IV medications. Advocate Condell Medical Center. March 2017. Libertyville, IL.

Sean P. Kane. Catheter directed thrombolysis: Clinical pearls for the ICU pharmacist. Chicagoland Critical Care Conference (C4) Annual Conference. August 2016. Chicago, IL.

Abbie Lyden, S. Patel, and J. Sternbach. Meeting the standards for preceptor development. ASHP Midyear Clinical Meeting, December 2016. Las Vegas, NV.

Abbie Lyden, J. Sternbach, and S. Patel. Preceptor development: Are you up to the standard? ASHP National Pharmacy Preceptor Conference. August 2016. Washington, DC.

Lisa Michener. Preceptor Development Workshop: Precepting Different Levels of Learners. James A. Lovell Federal Health Care Center Department of Pharmacy. May 2016, North Chicago, IL.

Khyati Patel. WI PDMP 2017 Update for RN and MA Caregivers. Aurora Medical Center — Kenosha. March 2017. Kenosha, WI.

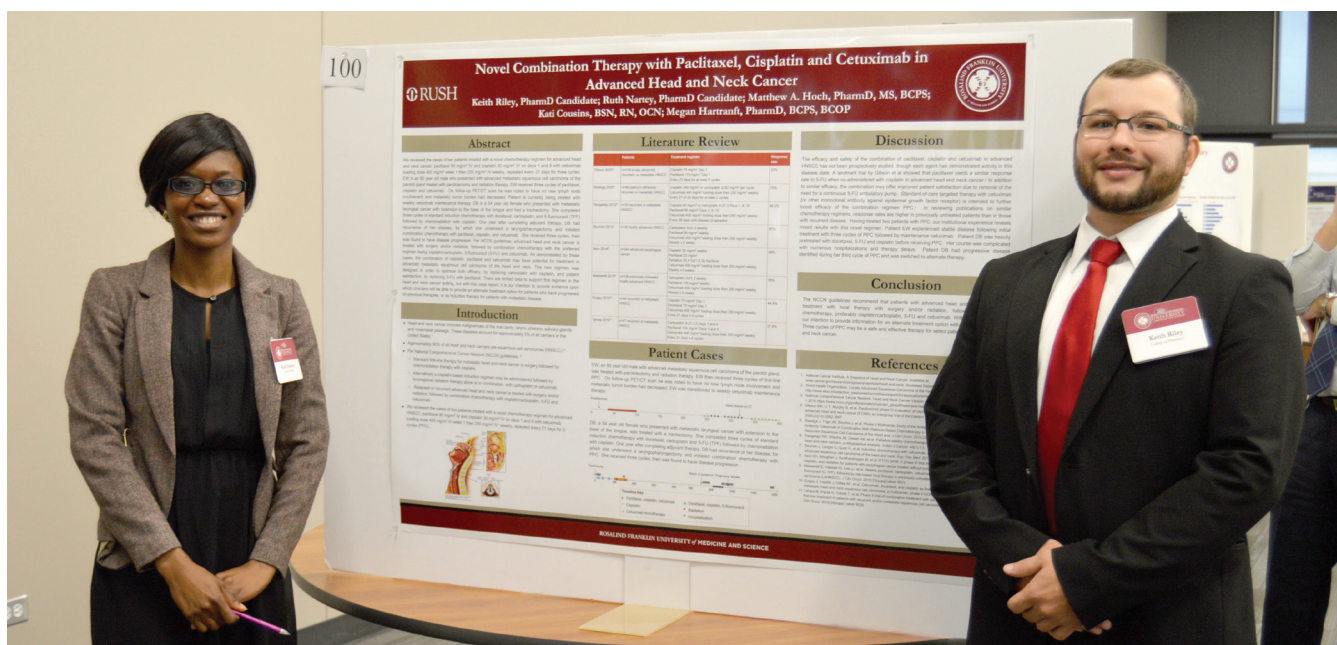
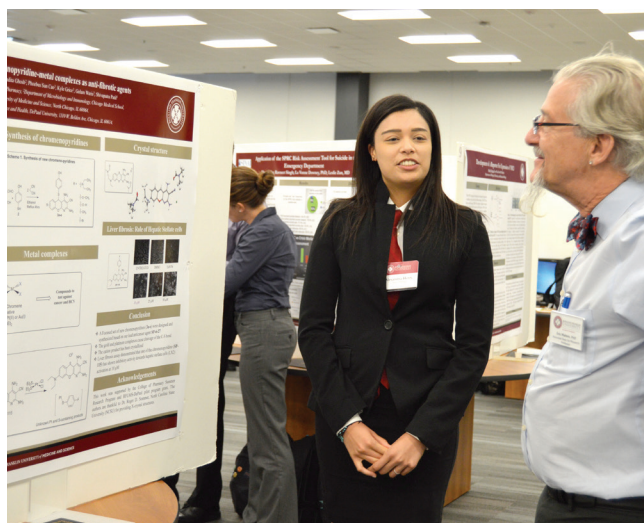
Ateequr Rahman. The impact of caregiving in dementia patients on the healthcare utilization of caregiver and its economic impact. Midwest Teacher Scholar Retreat. November 2016. North Manchester, IN.

Janeen S. Winnike. Helping your students get ready for interviews. Webinar presented at: Collaborative Education Institute. October 2016; <http://www.gotocei.org/#Preceptor>. Accessed June 14, 2017.

Janeen S. Winnike. How to evaluate a CV. Webinar presented at: Collaborative Education Institute. October 2016; <http://www.gotocei.org/#Preceptor>. Accessed June 14, 2017.

Janeen S. Winnike and R. Van Den Broek. State collaboration in promoting the profession. AACP Annual Meeting. July 2016. Anaheim, CA.

PRESENTATIONS WITHIN THE UNIVERSITY



Mark Abadines*, Lisa Michener, Bradley Cannon, Jolee Rosenkranz, and Kevin Rynn. Attitude Assessment of a Longitudinal Advanced Pharmacy Practice Experience at Health-Systems-Continuation. All School Research Consortium (ASRC) March 15, 2017, Poster 1, RFUMS, North Chicago, IL.

Mark Abadines*. Attitude Assessment of a Longitudinal Advanced Pharmacy Practice Experience at Health-Systems-Continuation. All School Research Consortium (ASRC), March 15, 2017, Oral Presentation, RFUMS, North Chicago, IL.

Tiffany Chairudin*, A. Hinrich, W. Micheals, and M.L. Hastings. Antisense Oligonucleotides for Cystic Fibrosis. Summer Research Poster Session, October 19, 2016, Poster 3, RFUMS, North Chicago, IL; All School Research Consortium (ASRC), March 15, 2017, Poster 20, RFUMS, North Chicago, IL.

Danielle Candelario. The Whole Patient: An IP Approach to Caring for Patients with Co-morbid Mental Illness. Depression Panel Member, part of an Interprofessional CE Program. November 2016. RFUMS, North Chicago, IL.

Tiffany Chairudin*. Antisense Oligonucleotides for Cystic Fibrosis. All School Research Consortium (ASRC), March 15, 2017, Oral Presentation, RFUMS, North Chicago, IL.

A. Ghosh, **Renukadevi Patil**, **Phoebus Sun Cao***, K. Grice, **Shivaputra A. Patil**, and G. Waris. Molecular design and synthesis of chromenopyridines as anti-fibrotic agents. Fourth Annual DePaul/RFUMS Research Retreat. September 16, 2016; All School Research Consortium (ASRC), March 15, 2017, Poster 41, RFUMS, North Chicago, IL.

Alexandra Henry*, **Renukadevi Patil**, A. Ghosh, **Phoebus Sun Cao***, K. Grice, G. Waris, and **Shivaputra A. Patil**. Design and synthesis of chromenopyridine-metal complexes as anti-fibrotic agents. Summer Research Poster Session, October 19, 2016, Poster 6, RFUMS, North Chicago, IL; Summer Research Poster Session, October 19th, 2016, Poster 6, RFUMS, North Chicago, IL.

Sean P. Kane, **Khyati Patel**, **Michael Shuman**, and **Margaret Olson***. Descriptive Analysis of Drug-Related Podcasts and Their Authors. Summer Research Poster Session, October 19, 2016, Poster 101, RFUMS, North Chicago, IL; All School Research Consortium (ASRC), March 15, 2017, Poster 133, RFUMS, North Chicago, IL.

Erinn Larsen Van Alstine*, **Renukadevi Patil**, A. Ghosh, **Phoebus Sun Cao***, K. Grice, G. Waris, and **Shivaputra A. Patil**. Multicomponent one-pot synthesis of chromenopyridines as anti-fibrotic agents. Summer Research Poster Session, October 19, 2016, Poster 2, RFUMS, North Chicago, IL.; All School Research Consortium (ASRC), March 15, 2017, Poster 66, RFUMS, North Chicago, IL.

Danielle D. Nunley*, **Kristy Shanahan**, and **John Buolamwini**. A construct: A system incorporating human TERT into *Saccharomyces cerevisiae* mitochondria to evaluate mitochondria functional changes upon drug exposure. Summer Research Poster Session, October 19, 2016, Poster 4, RFUMS, North Chicago, IL; All School Research Consortium (ASRC), March 15, 2017, Poster 89, RFUMS, North Chicago, IL.

Keith Riley*, **Ruth Nartey***, K. Cousins, M. Hoch, and **Megan Hartranft**. Novel combination therapy with cisplatin, paclitaxel, and cetuximab in advanced head and neck cancer. Summer Research Poster Session, October 19, 2016, Poster 100, RFUMS, North Chicago, IL.

Lisander Vainiko* and J. Cannon. Key Opinion Leader Mapping. All School Research Consortium (ASRC) March 15, 2017, Poster 120, RFUMS, North Chicago, IL.

Nathan Van Veldhuizen*, **Athena Chukwu***, **Jeremy Massey***, **Stephanie Okoye***, and **Michael Shuman**. Using FDA Adverse Effect Reporting System to Find Evidence of Mirtazapine Induced Insomnia. Summer Research Poster Session, October 19, 2016, Poster 5, RFUMS, North Chicago, IL; All School Research Consortium (ASRC), March 15, 2017, Poster 121, RFUMS, North Chicago, IL.

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 and Rahul Deshmukh.

Development and characterization of a novel lipid emulsion formulation. Academic Pharmaceuticals Inc., 6/15/2017 – 12/15/2017.

John K. Buolamwini and G.E. Stutzmann, Pls.

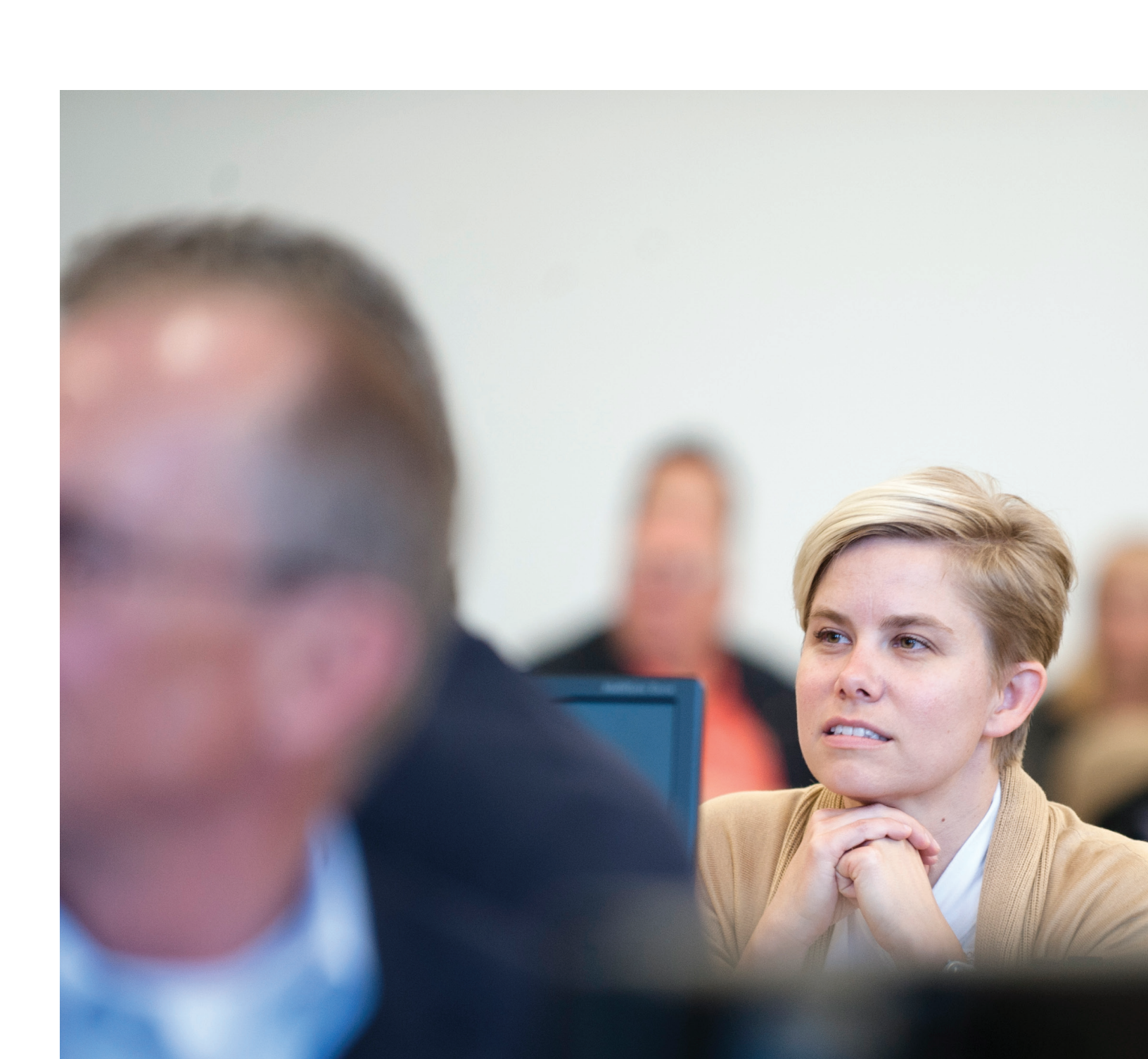
Intracellular Ca²⁺ channels as a therapeutic target for AD drug discovery. Alzheimer's Association, 10/2015 – 9/2018.

John K. Buolamwini and G.E. Stutzmann, Pls. Drug development and optimization of compounds stabilizing ryanodine calcium channels for AD. Alzheimer's Drug Discovery Foundation, 1/2016 – 12/2018.

Arun K. Ghosh, PI. Design & synthesis of nonpeptide protease inhibitors. **D. Eric Walters**, Co-investigator. NIH/GMS, 4/1/1996 – 8/31/2017.

D.M. McCarthy, PI. EHR-Based Medication Complete Communication (EMC2) Strategy to Promote Safe Opioid Use. **Abbie E. Lyden**, Co-investigator. AHRQ, 9/12/14 – 8/31/17.

R. Zhang, PI. Novel Small Molecule MDM2 Inhibitors for Pancreatic Cancer Therapy. **John K. Buolamwini**, Co-investigator. NIH/NCI, 8/1/14 – 2/28/19.



THE HAIM AND JANE NAGIRNER WE CENTENNIAL SYMPOSIUM SERIES

2016-2017



EINSTEIN

Our seminar program is generously supported by an endowment from Haim G. Nagirner Weinstein and Jane Grauman 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.

MONDAY, AUGUST 29, 2016

DR. WILLIAM SOLIMAN, APOTHEKER GROUP

THE EVOLUTION OF THE PHARMACEUTICAL INDUSTRY: LIFE SCIENCES FOR SCIENTIFIC PROFESSIONALS

WEDNESDAY, FEBRUARY 1, 2017

DR. VALERIE L. TOKARS, NORTHWESTERN UNIVERSITY

STRUCTURAL BIOLOGY SOLUTIONS FOR BASIC AND TRANSLATIONAL WORK: ADDRESSING FUTURE NEEDS

MONDAY, APRIL 10, 2017

DR. CARRIE HASKELL-LUEVANO, UNIVERSITY OF MINNESOTA

CHEMICAL NEUROSCIENCE OF THE GPCR MELANOCORTIN PATHWAY AND OBESITY: TREATMENT BY DRUGS OR EXERCISE?

TUESDAY, APRIL 25, 2017

DR. AMY HAUCK NEWMAN, NATIONAL INSTITUTES OF HEALTH

IDENTIFYING MEDICATION TARGETS FOR DRUG ADDICTION: REDIRECTING THE DOPAMINE D3 RECEPTOR HYPOTHESIS

MONDAY, MAY 1, 2017

DR. JEANETTE ROBERTS, UNIVERSITY OF WISCONSIN

OPTIMAL PATIENT OUTCOMES START WITH INTERPROFESSIONAL EDUCATION





HANDS-ON FUTURES

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

THE PERSONAL SIDE OF HEALTH CARE

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 RFUMS, 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 RFUMS 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 RFUMS 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.



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