



School of

# PHARMACY

**Dean's Report 2019**

[siue.edu/pharmacy](http://siue.edu/pharmacy)





## MESSAGE FROM THE DEAN

I am thrilled to have the opportunity to serve as the Dean of the SIUE School of Pharmacy. As you will see throughout this report, our faculty, students and alumni continue to shine, and their impacts are tangible.

Whether it is through recognitions for professional achievements, practice advancements, leadership, community engagement or advancing research, the School is living its mission. Innovations come in numerous forms and the School is stepping up to contribute on many fronts.

We remain well positioned for continued success, and our strategic plan outlines six major goals:

- Advancing research and scholarship initiatives
- Fostering diversity, inclusiveness and global understanding
- Promoting student recruitment and retention
- Developing and enhancing high-quality curricula
- Strengthening and growing community engagement and partnerships
- Enhancing personal and professional development and leadership skills for students, alumni, faculty and staff

As part of this endeavor, we have launched a new mental health and wellness initiative that recognizes the value of embracing well-being and resilience for healthier and more productive lives. This enterprise is yet another way that the School is taking the lead in addressing the growing personal and professional demands inherent with the profession of pharmacy. As we contemplate the School's position for future success, we must consider its role in providing for the health of the profession as a whole.

More innovations to come!

Best wishes,

Mark S. Luer, PharmD, FCCP  
Professor and Dean

## ABOUT SIUE

SIUE awards degrees in undergraduate, graduate and doctoral programs encompassing the arts, sciences, nursing, education, health, human behavior, business and engineering. The Schools of Dental Medicine and Pharmacy award doctor's first-professional degrees in dental medicine (DMD) and pharmacy (PharmD). Doctoral programs are available in nursing practice and educational leadership. Cooperative PhD programs in history, engineering science, environmental resources and policy, and computer engineering are offered with SIU Carbondale.

## ABOUT THE SCHOOL OF PHARMACY

The SIUE School of Pharmacy offers students an interprofessional, integrated and team-based learning approach to pharmacy practice and pharmaceutical science education. Students gain invaluable experience in real-world settings through the School's experiential approach to education. They work side-by-side with faculty members and preceptors who have gained national recognition for industry experience, research innovations and educational leadership.

## SCHOOL OF PHARMACY GOALS

- Advance innovative education, service and scholarship programs
- Promote faculty and staff development and support
- Foster prospective pharmacy students
- Expand and support professional growth of students and alumni
- Cultivate diversity and inclusiveness
- Identify, develop and sustain external relations and financial support

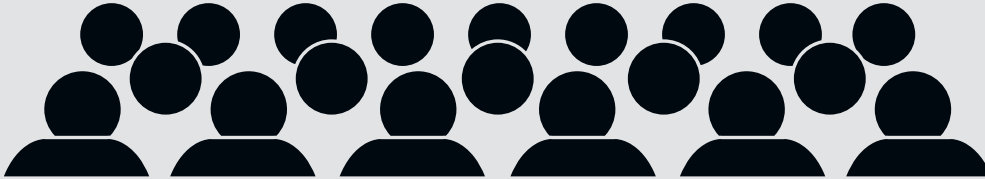


## SCHOOL OF PHARMACY MISSION

The SIUE School of Pharmacy is an interdisciplinary educational community dedicated to the preparation of pharmacy professionals, scholars and leaders to improve the health and well-being of the region and beyond.



**Total Alumni: 850**



**62%** **SIUE Undergraduates**

**38%** **Non-SIUE Undergraduates**



## Graduation Rate:

**90%**  
on-time

**96%**  
overall

## Residence

**76% of students are Illinois residents**  
**24% of students are out-of-state residents**

**95.9%**

NAPLEX pass rate  
for first-time test-takers  
(2009-2018 average)

**92.1%**

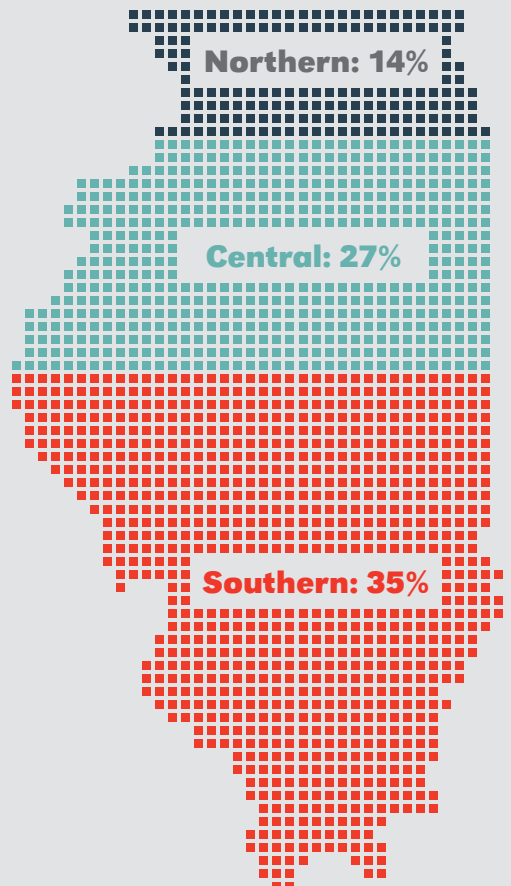
Illinois MPJE pass rates  
for first-time test-takers  
(2009-2018 average)

**3.53**

Matriculation Average  
Cumulative GPA  
(Class of 2023)

**53**

Average PCAT  
(Class of 2023)



**“Through successes in student performance, patient care, community engagement and research, SIUE’s pharmacy program has earned a reputation for excellence. I am happy to have been a part of its development.”**

Mark Luer, PharmD, FCCP, Dean



## **LUER NAMED SCHOOL OF PHARMACY DEAN**

Mark Luer, PharmD, FCCP, was named dean of the School of Pharmacy in May. Luer served as interim dean since July 2018 when his predecessor, Gireesh Gupchup, PhD, FAPhA, stepped down after having served as dean since 2010. Gupchup is now serving the pharmacy school and the University in other strategic roles.

“Dean Gupchup was a driving force in the School’s rise to regional, national and international prestige,” said Provost and Vice Chancellor for Academic Affairs Denise Cobb, PhD. “Along with excellent outcomes for students, the School’s commitment to experiential learning, global initiatives and innovative research flourished during his tenure.”

“The SIUE School of Pharmacy continued its outstanding record of accomplishment during Dr. Luer’s service as interim dean,” said SIUE Chancellor Randy Pembroke, PhD. “His passion for students, his recognition for what is happening nationally in the field, and his knowledge of our program and our people ensure a bright future for the School.”

“I am grateful for the opportunity and appreciate the confidence that Chancellor Pembroke, Provost Cobb and my colleagues across the University have shown by selecting me as dean of the SIUE School of Pharmacy,” Luer said.

Luer is highly regarded as a collaborative and inclusive leader who is strongly committed to the School’s advancement. Under his leadership, the School has continued to produce pharmacy candidates who are among the nation’s best in

board pass rates and assessments. Among the School’s other major accomplishments have been advancements in the areas of diversity and inclusion.

Luer is a professor of pharmacy practice, and previously served as chair of the Department of Pharmacy Practice and director of clinical programs. He completed the Academic Leadership Fellows Program in 2005-06 at the American Association of Colleges of Pharmacy, was inducted as a fellow of the American College of Clinical Pharmacy in 2004, and is a current member of the Leadership Council of the American Cancer Society in Madison County.

Luer’s clinical interests include neurology, neurocritical care and pharmacokinetics. He has been an investigator on related grants totaling more than a half-million dollars in extramural support and has published more than 70 manuscripts, book chapters and abstracts.

Before joining the School of Pharmacy, he served on the faculties at the University of Illinois Chicago College of Pharmacy and the University of Arkansas for Medical Sciences College of Pharmacy.

He earned a bachelor’s and doctor of pharmacy from the St. Louis College of Pharmacy. Additionally, he completed a clinical pharmacy residency, a critical care specialty residency and neuroscience fellowship at the University of Kentucky Medical Center.

## SCHOOL ENHANCES CURRICULUM

To stay current with the changing profession and in compliance with new accreditation standards, the School of Pharmacy's PharmD curriculum has undergone changes. Through an in-depth review process of the original curriculum, alumni, pharmacists and peers were solicited for their opinions on the School's strengths and opportunities for improvement. The various constituencies concurred that the School produces quality graduates with excellent board pass rates.

"With that feedback, we did not want to completely overhaul the curriculum, but certainly we identified areas that we could improve upon," said Jingyang Fan, PharmD, assistant dean of academic affairs and clinical associate professor in the Department of Pharmacy Practice.

The most notable change rolled out in fall 2018 was the addition of a pharmacy skills lab sequence. In the previous curriculum, students were assessed on lab skills performance at the end of the third year. The revised curriculum incorporates weekly practice in the skills lab and two performance-based assessments each semester. Stephanie Hunziker, newly hired clinical skills coordinator, oversees the skills lab for first- through third-year students.

Other updates include incorporating a personal professional development sequence to prepare students for their advanced practice experience and refining the integrated pharmacotherapeutics course content so that each course is now four credit hours, where previously some were three.

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## PERSEVERANCE PAYS FOR PHARMACY STUDENT



Now a second-year pharmacy student, Christian Watts vividly recalled his own experiences at SIUE's Healthcare Diversity Summer Camp as he interacted with this year's camp participants. The annual program exposes underrepresented high-school students to career opportunities in the healthcare industry, and is hosted by the SIUE School of Pharmacy, in collaboration with the Schools of Nursing and Dental

Medicine, and the School of Education, Health and Human Behavior's nutrition program.

That exposure encouraged Watts to pursue a pharmacy degree at SIUE. Admitted to the University in fall 2014, Watts began pre-pharmacy studies and served as an undergraduate research assistant for SIUE's Department of Biological Sciences, as well as a National Robert Noyce Science intern with the SIUE STEM Center. Funded by the National Science Foundation, the national program funds internships for qualified students who are interested in STEM careers.

"It was an exciting few years as an undergrad," said Watts, a St. Louis native. "I was involved in organizations and study groups, as well as research on creating algae from biodiesel fuel. All of that helped with my application to the School of Pharmacy, but getting admitted was definitely not easy."

Though Watts made the Dean's List each semester, his Pharmacy College Admission Test (PCAT) score was too low for admission into the School of Pharmacy program.

"I knew there were online classes available to help improve PCAT test scores, but when I looked at the tuition cost, the prices were really steep," he said.

Watts was stunned to receive an email from Monica Kempland, School of Pharmacy director of student services, informing him he had been selected for a scholarship to take the PCAT supplemental course through Kaplan University.

Kempland works with Kaplan representatives each year to obtain a certificate for a free PCAT preparation class. After reviewing applicants whose PCAT scores are not representative of their abilities, student services staff identify those who would benefit from taking the prep class.

"What a miracle that I was able to take that class," Watts said. "I improved my PCAT score by 37%, reapplied the following semester and received acceptance into the School of Pharmacy."

"Christian exemplifies diligence and effort, both in his preparation to apply to the PharmD program and in his studies," Kempland said. "He has not had an easy path, but I think that builds resilience and has set him up for success."

Watts is now pursuing a specialization in pharmacy education and volunteers annually as a chaperone for the healthcare diversity summer camp.

**"Work on that area you need to improve, and don't give up on getting where you want to go."**

Christian Watts, Second-year, SIUE School of Pharmacy

## STUDENTS RANK AMONG TOP 20 NATIONALLY

School of Pharmacy students continue to enhance their academic profile among the nation's best in board pass rates and assessments.

### North American Pharmacist Licensure Examination® (NAPLEX) First Attempt Board Pass Rate

The NAPLEX exam measures a student's knowledge of the practice of pharmacy.

National Average	84.4%
Illinois Average	89.5%
Class of 2018 Average	97.3%

Ranked  
**19<sup>th</sup>**  
nationally  
among 135  
pharmacy schools

Number  
**1** in both  
Missouri  
& Illinois

### Pharmacy Curriculum Outcomes Assessment (PCOA)

The PCOA is generally administered to third-year pharmacy students prior to their experiential rotations during their fourth year and intends to measure students' knowledge base and readiness for their experiential rotations.



Ranked  
**16<sup>th</sup>**  
nationally  
among 135  
pharmacy schools

## MOST DIVERSE CLASS IN SCHOOL'S HISTORY



**“Interacting with peers from diverse backgrounds can develop students’ cultural competence and further prepare them to interact with diverse patients as future pharmacists.”**

Lakesha Butler, PharmD, Clinical Professor, Department of Pharmacy Practice, and Diversity and Inclusion Coordinator

The School of Pharmacy has fallen short of the national average of minority pharmacy students since it's opening in 2005. While 9% is the national average of underrepresented minority students, the School averaged only 4-6%. Desiring to change that statistic, the School made intentional efforts to diversify the student body.

“Diversity and inclusion has to be an intentional priority with specific actions in order for results to manifest,” said Lakesha Butler, PharmD, clinical professor in the Department of Pharmacy Practice and diversity and inclusion coordinator.

Recruitment efforts for the class of 2022 included having interview candidates interact with Butler and currently enrolled minority pharmacy students during campus visits. Additional points of contact were made after the interview to answer questions and encourage prospective students to choose SIUE. Minority faculty and students were available to serve as mentors to prospective and admitted students as well.

These intentional efforts yielded incredible return. With a 23% underrepresented minority student enrollment, the class of 2022 is the most diverse pharmacy class in the School's history.



## PHARMACY STUDENT EARNS NATIONAL APHA SCHOLARSHIP

School of Pharmacy second-year student Brett Norvell, of Moro, Ill., received the Pharmacists Mutual Community Pharmacy Scholarship from the American Pharmacists Association (APhA) Foundation in March.

The scholarship honors student pharmacists who have demonstrated academic excellence and a commitment to advancing the future of community pharmacy in the U.S.

“This scholarship will help support my future goals by alleviating some tuition costs,” Norvell said. “This also provides extra motivation for me to continue to work hard in school and in the community to become the best resource I can to those around me.”

Norvell serves as president-elect for the School’s APhA-Academy of Student Pharmacists (ASP) chapter and as missions promoter for the School’s Christian Pharmacists Fellowship International chapter. Additionally, he works as a community pharmacy technician at Walgreens and a hospital pharmacy technician at Alton Memorial Hospital, both in Alton, Ill.

In her recommendation letter, Jessica Kerr, PharmD, interim associate dean and SIUE APhA-ASP chapter advisor, expressed her confidence in Norvell’s “abilities to serve as an outstanding role model and a natural leader.”

“From our discussions in and out of the classroom, it is evident that he is a man of service,” Kerr noted. “His goal when starting college was to immerse himself in as many populations as possible. I highly support Brett as a well-rounded, forward-thinking, intelligent, yet humble individual.”

Following graduation, Norvell plans to complete a two-year pediatric residency. He aspires to work in a setting where he can be of service to a diverse patient population of varying abilities and health needs.

## NEW FACES

The School of Pharmacy recently welcomed the following new faculty and staff members:



Jazmin Pitts,  
Personal and Professional  
Development Coordinator



Tessa Keys,  
Program/Student Advisor



Stephanie Hunziker,  
Clinical Skills Coordinator,  
Department of Pharmacy Practice



Trisha Simmons,  
Director of Business Affairs



## STUDENTS FINISH AMONG TOP 10% NATIONWIDE IN RESEARCH COMPETITION

A team of three second-year pharmacy students finished as a finalist in the American College of Clinical Pharmacy (ACCP) Clinical Research Challenge (CRC). The team offered strong showings through three rounds of competition to land among the final eight teams nationally, and top 10%, of the 82 participating schools.

The ACCP CRC is a unique competition that invites teams of three students to compete by participating in an online journal club and submitting a letter of intent and a clinical research proposal.

The SIUE team comprised Kristin Engelhardt, of Lincoln, Lauren Ratliff, of Wood River, and Kristen Ingold, of Freeburg. The students earned the opportunity to represent the School by achieving the highest scores from an internal journal club review exam.

“Encouraging students to participate in these co-curricular competitions is incredibly important,” said the team’s faculty mentor Terri Poirier, PharmD, MPH, professor and senior scholar in the Department of Pharmacy Practice. “The motivation of students to participate and learn beyond what is addressed in the curriculum is commendable and reflects the quality of our student body.”

The trio’s research proposal asked the question: Would pharmacy involvement in continuum of care for patients with type 2 diabetes result in reduced disease-related hospital readmission rates and ER visits, and improve quality of life and clinical outcomes?

Along with Poirier, the students were assisted by McKenzie Ferguson, PharmD, BCPS, associate professor in the Department of Pharmacy Practice and director of the Drug Information and Wellness Center.

“Our study looked at pharmacy involvement in inpatient-to-outpatient transition of care by utilizing point-of-care testing, medication reconciliation, and appropriate discharge counseling and follow up for the duration of 12 months,” Ingold explained. “Many studies have shown the benefit of pharmacy involvement in the transition from hospital to home care, and we wanted to highlight this benefit further in patients with type 2 diabetes.”

Ratliff emphasized how the experience fostered her love for data-based decision-making and problem-solving, and helped prepare her for future success.

“My ability to critically evaluate medical literature has greatly improved, and I have newfound clinical writing and study-design skills, all of which I’m eager to use in my future career,” Ratliff said.



Team captain Engelhardt noted how their choice of exploring a “hot topic” in pharmacy presented not only challenges, but also great reward and academic development.

“As future pharmacists, we wanted to choose a topic that would show the value of our knowledge in patient care,” Engelhardt explained. “I have gained a lot of knowledge from this competition, and I am confident it will prove immensely useful throughout the remainder of my academic endeavors, in my fourth-year capstone research project and in my professional career.”

This marks the School’s best finish in the national competition to date.

**“These students have learned so much about clinical research through this process without actually yet participating in research. Hopefully, this will encourage students to further explore pursuing research as part of their careers.”**

Terri Poirier, PharmD, MPH, Professor and Senior Scholar, Department of Pharmacy Practice



## BUTLER NAMED NPHA PRESIDENT

Lakesha Butler, PharmD, BCPS, has been named president of the National Pharmaceutical Association (NPhA). Butler is a clinical professor in the Department of Pharmacy Practice and diversity and inclusion coordinator

Her vision for the two-year term is ACTION in Excellence. She plans to lead her colleagues with a focus on Advocacy, Collaboration, Transformational Branding, Inclusion, Operational Excellence and Next Generation Preparation.

“The National Pharmaceutical Association is dedicated to representing minority pharmacists and underserved communities on crucial issues affecting healthcare and pharmacy, which I am truly passionate about. I see my presidential role as a service to my profession, but more importantly, to patients.

“Leading an organization and working with a variety of persons on my board and general membership allows me to hone my communication skills and motivate others to do their best,” she said. “Additionally, I get to further practice my leadership style of coaching and modeling, which I use when teaching students.”

Butler has been a strong leader who makes a positive influence on her students. She has served as the faculty advisor for the Student National Pharmaceutical Association (SNPhA) SIUE chapter for more than 10 years.

**“Service is not an option, it is a responsibility, and I can be an example to my students and patients by showing the importance of impact through service in this national leadership position.”**

Lakesha Butler, PharmD, Clinical Professor, Department of Pharmacy Practice, and Diversity and Inclusion Coordinator

## Faculty Promotions

Congratulations to the following School of Pharmacy faculty members on their recent promotions:



Katherine Newman, PharmD, Clinical Associate Professor



Kelly Gable, PharmD, Professor



Maria Kontoyianni, PhD, Professor



Marcelo Nieto, PhD, Professor



Joseph Schober, PhD, Professor



William Neumann, PhD, Professor



*Chris Smith, Immediate Past Chair, School of Pharmacy Advisory Board*

## ADVISORY BOARD ESTABLISHES SCHOLARSHIP

At the May School of Pharmacy Advisory Board meeting, Chris Smith, immediate past chair, and Steve Peipert, chair, moved to establish an endowed scholarship fund, and board members voted unanimously in support.

“The entire School of Pharmacy community is grateful for the philanthropic leadership of our board members,” said Mark Luer, PharmD, dean. “They have selflessly created a legacy to benefit our most talented and deserving students, as well as the future of pharmacy practice and pharmaceutical sciences in perpetuity.”

The board is comprised of prominent representatives from a diverse array of professions and organizations, including community pharmacies, hospitals, businesses and professional associations. Since the School’s inception, the board has contributed to its ongoing success and impact in this region and beyond.

## 2019 School of Pharmacy Advisory Board

**Chair:** Steven Peipert, Owner, Brighton Pharmacy, Brighton, Ill.

**Vice Chair:** Heather Fitzgerald, Healthcare Specialty Supervisor, Walgreens, Springfield, Ill.

**Immediate Past Chair:** Chris Smith, President, Smith Family Holdings, Springfield, Ill.

**Secretary:** McKenzie Ferguson, Associate Professor, Pharmacy Practice, SIUE School of Pharmacy

### Members:

Aneesh Asokan, Student, SIUE School of Pharmacy

Paul Abert, Executive Vice President, Community Bank President – Edwardsville, Town and Country Bank, Edwardsville

Julie Bickers, Healthcare Supervisor, Walgreens, Earth City, Mo.

Ryan Birk, PharmD ’13, Pharmacy Manager, Memorial Hospital East, Shiloh, Ill.

David Braasch, President and CEO, Alton Memorial Hospital, Alton, Ill.

Elizabeth Cardello, Senior Director, Corporate Alliances, American Pharmacists Association, Geneva, Ill.

Dawn Dankenbring, PharmD ’11, Director of Pharmacy, HSHS St. Elizabeth’s Hospital, O’Fallon, Ill.

Brian Doty, Vice President, Research, Mallinckrodt, Hazelwood, Mo.

Dan Fieker, Owner, Family Care Pharmacy, Highland, Ill.

Brett Gilliland, Founder & Chief Executive Officer, Visionary Wealth Partners, Edwardsville

Catherine Gilmore, Student, SIUE School of Pharmacy, Edwardsville

John Gloss, Retired Administrator, Shriner’s Hospitals for Children, St. Louis

Bill Kolling, Associate Professor, Pharmaceutical Sciences, SIUE School of Pharmacy

Chris Lanctot, VP Independent Sales, Central Region Cardinal Health, Saint Charles, Mo.

Christina Lindsay, Senior Manager, CVS Health, Kansas City, Mo.

Mike Lloyd, Director, Medical Outcomes Specialist, Pfizer, Inc., Maryville, Ill.

Scott Meyers, Executive Vice President, Illinois Council of Health System Pharmacists, Loves Park, Ill.

Bob Mueller, VP East Group Sales, Strategic Initiatives, Letco Medical, Godfrey, Ill.

Garth Reynolds, Executive Director, Illinois Pharmacists Association, Springfield, Ill.

Bobby Sandage, Jr. PhD, President & CEO, Euclises Pharmaceuticals, Inc., Creve Coeur, Mo.

J. Cody Sandusky, PharmD ’12, Pharmacist, Plum Street Pharmacy, LLC, Carmi, Ill.

Noah Tennyson, Director of Specialty Pharmacy, Schnucks Markets, Inc., St. Louis

Travis Willeford, PharmD ’09, Staff Pharmacist, CVS Caremark Corporation, Springfield, Ill.

Harry Zollars, PharmD ’13, Pharmacy Leader, Maryville, Ill.



## WITT RECEIVING RENEWED FUNDING FOR NIH ALZHEIMER'S GRANT

Alzheimer's disease is a devastating neurodegenerative disorder of the brain, which robs individuals of their memory and eventually their capacity for performing the necessary tasks of daily living.

Alzheimer's is not a part of normal aging but progresses over time. The degeneration of neurons in the brain eventually culminates in Alzheimer's disease.

More than five million Americans currently are living with Alzheimer's. By 2050, this number could rise as high as 16 million. The sixth leading cause of death in the U.S., Alzheimer's kills more than breast cancer and prostate cancer combined, according to the Alzheimer's Association.

To date, Alzheimer's has no cure and current medications have only short-term benefit. Without the development of better disease-modifying drugs, the financial, societal and emotional costs of this disease will continue to grow.

Focused efforts to combat this devastating disease are at the forefront of research in the SIUE School of Pharmacy. Ken Witt, PhD, professor of pharmaceutical sciences, has been the principal investigator leading a team of researchers composed of medicinal chemists, pharmacologists and pharmaceuticals experts on a 5-year, \$2.65 million RO1 grant from the National Institute of Aging, a division of the National Institutes of Health (NIH). They have been working to develop a drug for the treatment of Alzheimer's. Initial investigations by the research team began more than 10 years ago.

"The work of Dr. Witt and his colleagues in the SIUE School of Pharmacy is immensely important as they are evaluating a new biological target that may be involved in Alzheimer's disease," said Mark Luer, PharmD, FCCP, dean and professor. "Investigators in the Department of Pharmaceutical Sciences are exploring the development of new medications to address disease processes that are not already being adequately treated."

Renewal of the grant enables Witt and his team to continue this critically important research.

**"Dr. Witt's research is very exciting and could be the focus of a whole new drug discovery program."**

Mark Luer, PharmD, FCCP, Dean



## STUDENT RESEARCHERS EARN IPHA ACCLAIM

The School of Pharmacy's emphasis on fostering research opportunities and its faculty's commitment to living the teacher-scholar model were on full display during the Illinois Pharmacists Association's (IPhA) September 2018 meeting.

Ronald Worthington, PhD, professor in the Department of Pharmaceutical Sciences, and two student researchers, Brentsen Wolf, of Belleville, and Gregory Takacs, of Trenton, received statewide acclaim at the IPhA meeting. Their research, "Association of Synonymous Mutation Codon Frequency Changes with Levels of Protein Expression in Breast Cancer Cells," earned first place for scientific merit.

Wolf is a second-year pharmacy student and Takacs is a senior biological sciences major with an emphasis in genetics and cell biology. Takacs participated in the project through SIUE's unique Undergraduate Research and Creative Activities (URCA) program. Wolf was previously an URCA assistant.

"I am thrilled that my students received such acclaim from IPhA," Worthington said. "They have been eager participants and contributed brilliant insights that were completely original to my thinking on the project."

Both Wolf and Takacs have been involved in this research for more than two years, gaining an understanding of scientific practice, literature and application.

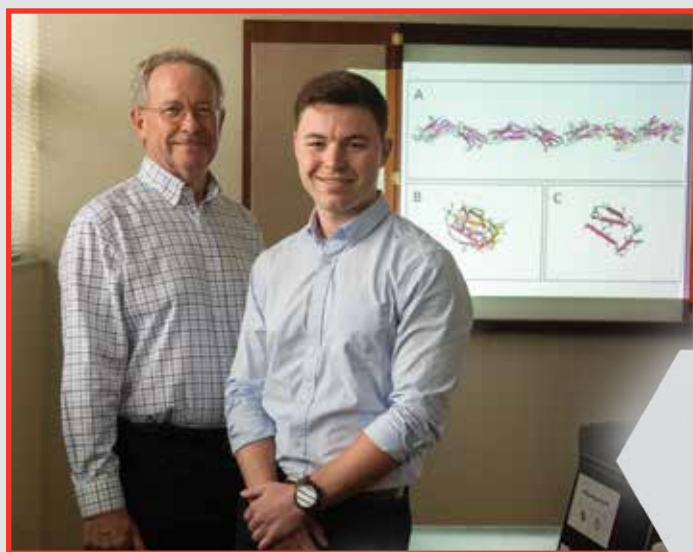
"The majority of my involvement entailed collecting data, creating figures and spreadsheets, and most importantly, utilizing bioinformatics as a tool to predict synonymous mutation effects in respect to breast cancer," Takacs explained. "This research kindled my desire for science."

"It is a fantastic feeling to be involved in scientific collaboration," Wolf added. "I was highly involved in the biological application of the data and, in particular, helping create bridges between the data and pharmacologic applications."

It is Worthington's teaching and mentorship that Wolf and Takacs say has prepared them for successful futures.

"Perhaps the most valuable trait Dr. Worthington brings to the team is that of taking student input seriously," Wolf said. "He regards our comments, suggestions and questions highly, and never fails to further our understanding in response to each."

"Both Brentsen and I strive to be well-rounded scientists like Dr. Worthington," Takacs said. "The major takeaways from this research project are that hard work pays off, research is important for the understanding and growth of complex issues, and research allows you to grow into a more resilient scientist."



*Ronald Worthington, PhD, Professor, Department of Pharmaceutical Sciences, and Brentsen Wolf, Second-year Student*

**"Our students are remarkably talented and driven by their interest in science and larger societal goals of improving medicine and human lives."**

*Ronald Worthington, PhD, Professor, Department of Pharmaceutical Sciences*



## ALUMNA AWARDED FOR ADVANCEMENTS IN DIABETES PATIENT CARE



A member of the School of Pharmacy's first graduating class, Diana (Jason) Isaacs, RPh, PharmD '09, has always found diabetes to be fascinating.

"Almost 10% of the population has diabetes and this percent continues to rise, which means there are many opportunities to help," Isaacs said. "I'm inspired by

knowing that with the right treatment, people can live long and healthy lives."

The Ohio Pharmacists Association (OPA) honored Isaacs as a distinguished Under 40 Award recipient for professional achievements and vision in the practice of pharmacy at its 141st Annual Conference in April.

"We are pleased to recognize Diana Isaacs who has exemplified leadership, excellence and vision in her practice," said Ernest Boyd, OPA executive director. "She is a valued member of the association, and we look forward to her future contributions to the profession."

In August, Isaacs was again acknowledged, this time receiving the Educator of the Year Award from the American Association of Diabetes Educators (AADE) at its general session. The award honors a diabetes educator who has made a special contribution to the field of diabetes self-management and education through dedication, innovation and sensitivity in patient care.

"Dr. Isaacs has always had a passion for diabetes," said Jessica Kerr, "As a past instructor of hers, I am always impressed by the level of energy she brings when she educates other healthcare professionals on hot topics in the

diabetes world. I have had the honor to work with her as a colleague, and she is at the forefront in service and impactful patient care projects."

After earning a PharmD, Isaacs worked for six years at the Chicago State University College of Pharmacy before moving to Ohio. She currently practices as an endocrine clinical pharmacy specialist and continuous glucose monitoring (CGM) program coordinator at the Cleveland Clinic Endocrine and Metabolism Institute Diabetes Center.

Isaacs has advanced diabetes patient care through clinical services, professional organization involvement and scholarly activities. She has initiated many new services at her health system to help people with diabetes, including a continuous CGM shared medical appointment program and a pharmacist-run insulin dose adjustment service for post-transplant patients. She holds many leadership roles in diabetes organizations, which include serving as president of the Ohio AADE Chapter and communication director for the American Diabetes Association Pregnancy and Reproductive Health Interest Group.

"My passion for diabetes education began in the SIUE School of Pharmacy," Isaacs said. "There is a tremendous amount to learn with all the different medications, technology, lifestyle factors and psychological aspects. I was fortunate to learn a great deal from amazing and passionate faculty like Dr. Jessica Kerr."

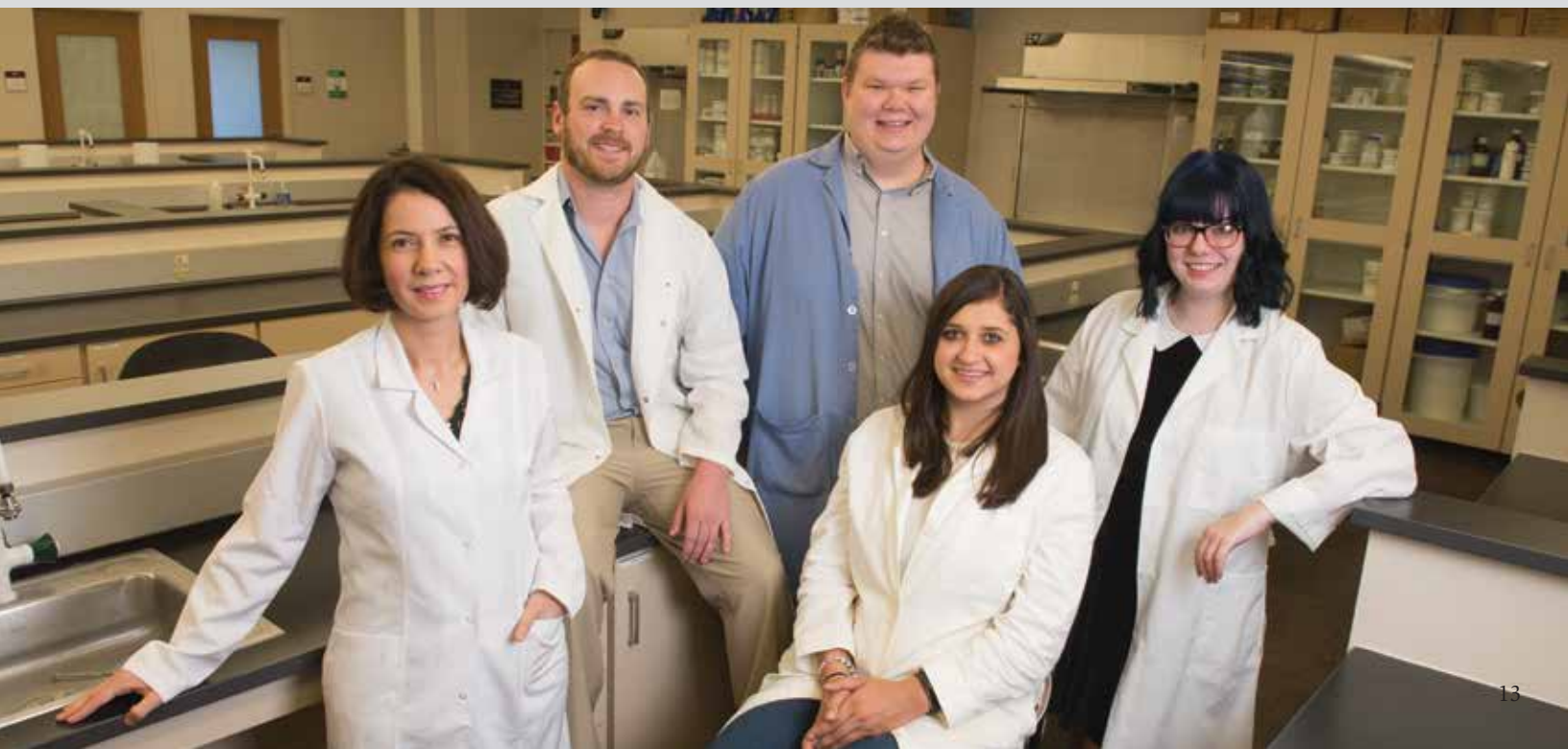
**"What continues to motivate me is that every day I use my skills and knowledge to make a positive impact in people's lives. It's the most rewarding career I could ever imagine."**

Diana Isaacs, RPh, PharmD '09

## MASTER'S GRADUATES ADVANCING PHARMACEUTICAL SCIENCES RESEARCH

The School of Pharmacy is the only school in Illinois and the St. Louis metropolitan region to offer a master's in pharmaceutical sciences. Although still a young program, graduates have already had a significant impact in advancing research productivity in the School. As evidenced by the titles of the theses from our two most recent cohorts of graduates, the breadth of topics encompass the pharmaceutical sciences and include pharmaceutics, pharmacology and medicinal chemistry.

Name of Graduate	Thesis Title	Major Professor	Year
Stephen Kukielski	Design Synthesis and Evaluation of 3,4,5-Trisubstituted-1,2,4-Triazoles as Selective SST4 Agonists for the Treatment of Alzheimer's Disease	Bill Neumann	2018
Michael Cusack	Development of Focused Library of C2 and C5 Modified 4-Chromanone Derivatives as Potential Antimicrobials	Marcelo Nieto	2018
Deniz Demirer	Investigation of Reactive Oxygen Species (ROS) Generation by Dispersed Primary Rat and Human Islet Cells	Guim Kwon	2018
Prapanna Bhattarai	Stability Study of Olmesartan Medoxomil Extemporaneous	Bill Kolling	2019
Jahnavi Polina	Modulation of Microglial Cell Activity by Somatostatin Receptor Agonist NNC 26-9100	Joe Schober	2019
Suyesha Bhandari	Impact of Sigma-1 and Sigma-2 Receptor Ligand on Microglial Inflammatory Response	Ken Witt	2019
Ashok Silwal	Novel Somatostatin Receptor Subtype-4 Agonist Mitigates Microglial Inflammatory Activation	Ken Witt	2019
Melinda Schnietz	Developing Potential Somatostatin Subtype-4 Receptor Agonists (3-Thio-1,2,4-Triazoles)	Mike Crider	2019



## SCOUTING FOR SOLUTIONS TO COMBAT OPIOID ABUSE

Recognizing the School of Pharmacy's commitment to serving the public good, the Boy Scouts of America requested a partnership initiative to address the growing epidemic of opioid abuse among adolescents.

In response, Jessica Kerr, PharmD, interim associate dean, and Chris Herndon, PharmD, professor in the Department of Pharmacy Practice, along with fourth-year pharmacy students Jazmine Rosales of Elgin and Paris Smith of Chicago, developed a new curriculum. The program, which launched in October, uses active learning to educate scouts on the dangers of misuse and abuse of prescription drugs and over-the-counter medications.

"Dr. Herndon has been instrumental in taking our vision to the next level by creating an online portal for the Boy Scouts to be able to take this five-module training," Kerr said. "Boy Scouts in 5th-8th grade can take the interactive training for a regional badge completion."

"There are national resources available to educate youth on the dangers of prescription and over-the-counter drug abuse, but many agencies and organizations are at a loss as to how to address the issues," Herndon said. "This program incorporates activities for troop leaders to discuss with their scouts."

The collaborative project received funding through a Meridian Society award. As an auxiliary organization of the SIUE Foundation, the Meridian Society invests in SIUE community-based projects.

**"This program has the potential to educate thousands of scouts and troop leaders."**

Chris Herndon, PharmD, Professor,  
Department of Pharmacy Practice



## STUDENTS TAKE OUTREACH TO HEART

Area women were treated to Zumba classes, blood pressure and depression screenings, educational information, and giveaways from more than 20 vendors at the School of Pharmacy's Ladies Night Out: Heart Health and Wellness Expo.

Ladies Night Out, held in April at The Weingarten in Belleville, was organized by the School's American Pharmacists Association-Academy of Student Pharmacists (APhA-ASP). The event provided public awareness and education about women's heart health and wellness and promoted the profession of pharmacy and pharmacists' role as a women's health resource.

"Pharmacists are the public's most accessible health care provider," said event organizer and APhA-ASP Operation Heart Chair Sarah Surmeier, a third-year pharmacy student from Belleville. "Therefore, if we increase our presence in the community, then we build relationships and trust with patients. Our outreach events allow us the opportunity to help address unmet public health needs in our community and communicate with patients to find out how we can best serve them."

The YMCA and Hospice Volunteer Initiative sponsored the successful event. Proceeds were donated to the American Heart Association.





**“I was extremely impressed with the care our students provided to the patients. It was great to watch them work and to share these enlightening experiences with them.”**

Carrie Vogler, PharmD, Clinical Associate Professor, Department of Pharmacy Practice



## **STUDENTS GAIN CULTURAL COMPETENCY IN GUATEMALA**

A team of School of Pharmacy students returned from an immersive clinical and cultural experience in Antigua, Guatemala, feeling excited about and prepared for the mission ahead of them as doctors of pharmacy.

Five students participated in a five-week Advanced Pharmacy Practice Experience (APPE) from mid-February to mid-March, including David Felts, of Belleville, Ill., Nikolina Golob, of St. Louis, Ashley Riley, of St. Charles, Mo., Abbey Rodeghiero, of Morton, Ill., and capstone student Carlos Pardo, of St. Louis. This was the first year the students conducted depression (PHQ-9) screenings during clinic, an addition that was part of Pardo's capstone work.

Students participated in ambulatory care clinics where they honed their skills in cultural competence and medical Spanish. This enlightening experience also expanded their perspective on health literacy and health disparities.

The students' travels were also filled with weekend cultural immersion experiences and excursions to the Guatemalan sites of Lake Atitlán, the ancient Mayan city of Tikal and the active complex volcano Pacaya.

“My favorite part of the APPE was the hands-on impact we made by presenting on health topics, completing clinical pre-consultations, and hosting pop-up clinics at schools and other local settings,” Felts said. “We were able to flex our physical assessment muscles, practicing blood pressure readings, blood glucose screenings and counseling patients, all the while speaking and taking medical notes in Spanish.”

“The people of Antigua were incredibly nice and grateful to be receiving medical care and information,” Golob said. “My Spanish was conversational before this rotation, but this experience greatly enhanced my medical terminology. Being bilingual or trilingual would be helpful in any medical setting, as you can better communicate and troubleshoot the problems presented.”

While in Guatemala, the team saw more than 900 patients for pre-consultations and conducted nearly 500 blood pressure screenings and more than 380 blood glucose screenings. The students also hosted presentations on such health topics as depression, stress, hypertension, sleep hygiene and diabetes.

Guiding the students during the APPE were Misty Gonzalez, PharmD, and Carrie Vogler, PharmD, both clinical associate professors in the Department of Pharmacy Practice. Gonzalez and Vogler received a Global Education Grant to support their participation and the purchase of clinic supplies.

The APPE elective in Antigua was implemented in 2015. A significant amount of the APPE's success was due to a partnership with Lissette Ortega, of Antigua, who facilitated medical Spanish tutoring through Spanish 2tor and organized clinical activities with local Guatemalan partners.

# FACULTY RESEARCH AND SCHOLARSHIP SUMMARY

## Publications

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- Patents**
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- Grants and Contracts Received**
- Devraj, R.;** Cain, J. Evaluation of a serious game prototype to improve learning outcomes, American Association of Colleges of Pharmacy, \$4,000.
- Wolf, B. American Foundation for Pharmacy Education Gateway to Research, \$5,000. (**Worthington, R.** Research Mentor).
- Witt, K.A.** Lead optimization of somatostatin-based therapeutic for Alzheimer's Disease, National Institutes of Health. National Institute of Aging, 2015-2020, \$2,650,659.
- Ferguson M.C.** Analgesic, Anesthetic, and Addiction Clinical Trial Translations, Innovations, Opportunities, and Networks (ACTTION), \$7,500.
- Neumann, W.L.** Synthetic studies of benz[e]indole analogues: total synthesis of cycloclavine. SIUE Seed Grant for Transitional and Exploratory Projects, \$15,616.
- Neumann, W.L.,** Nie, D., **Crider, M.** TMEM/Sigma 2 Receptor Modulators as Cancer Therapeutics. SIUC/SIUE/SOM Collaborative Grant, \$10,000.
- Santanello, C.;** Barber, C. Learning by leveling, SIUE Innovation Grant, \$4,300.
- Hecht K.A., Herndon C.M.** Development and implementation of a flipped classroom model using customized, interactive, online learning modules and interactive case-based active learning. SIUE Excellence in Undergraduate Education, \$5,700.
- Rosselli J., Kerr J.L., Herndon C., Gupchup G.** Improving the Lives of Illinoians through Chronic Disease Prevention. Contract with Illinois Pharmacists Association for collaboration on CDC-RFA-DP1815PPHF18, \$35,000.
- Kerr J.L., Herndon J.,** Voss E., Rosales J., Smith P. SIUE School of Pharmacy and Scouts of America – Opioid Education (Substance Abuse Safety Chip). Development & Implementation of a 'Drugs of Abuse' Prevention Education for Boy Scouts project. Meridian Society, \$5,000.
- Newman K., Poirier T., Ronald K.** Assessing the Impact of Visual Thinking Strategy (VTS) on Student Tolerance for Ambiguity and Observation Skills, SIUE SOP Research Grant, \$990.
- Siganga, W.** CE Education for Specialty Pharmacy-Pharmacists, KloudScript, Inc., \$9,400.
- Siganga, W.** Society for Pain and Palliative Care Pharmacists (Continuing Education), Journal Club Spring Series, \$800.
- Siganga, W.** Society for Pain and Palliative Care Pharmacists (Continuing Education), Virtual Conference, \$1,200.

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