Nurturing for Life

2008 Dean’s Report

Education • Research • Service • Patient Care
For the fourth consecutive year, *U.S. News & World Report* “America’s Best Colleges” commends SIUE for our Senior Assignment Program, an integrative learning experience required of all seniors prior to graduation. *U.S. News* also listed SIUE among the top 10 public universities in the Midwest-Master’s category for the second consecutive year and in the top one-third of all public and private Midwestern universities.

While SIUE emerges as a national leader in higher education, the School of Pharmacy continues to gain national recognition as one of the best pharmacy programs in the country. The University’s values of Citizenship, Excellence, Integrity, Openness and Wisdom are evident in the School’s efforts to address the growing need for well-trained pharmacists in a career field that is experiencing rapid and dramatic growth.

This year, SIUE celebrated its first School of Pharmacy graduating class. I encourage you to plan a visit to campus and witness excellence in education as we develop and advance tomorrow’s health care leaders.

Vaughn Vandegrift, Ph.D.  
SIUE Chancellor

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**About SIUE**

Beautifully situated on 2,660 acres, SIUE is a public university offering a broad choice of degrees and programs ranging from liberal arts to professional studies. Undergraduate and graduate degrees are offered in the arts and sciences, business, education, engineering and nursing. Professional degrees are available in dental medicine and pharmacy. More than 13,600 students choose SIUE for the enlightening programs, engaging faculty and convenient location just 25 minutes from St. Louis.
As the only downstate Illinois pharmacy doctorate program, the SIUE School of Pharmacy is addressing the growing need for well-trained pharmacists in a career field that is experiencing rapid and dramatic growth.

From the Dean

“We are prepared to meet the expectations and academic needs of the next generation of students.”

I often have the opportunity to visit with the many supporters of the SIUE School of Pharmacy and am encouraged by the enthusiasm and commitment to both pharmaceutical education and the future of our profession. The continued support of individuals, corporations and foundations has been the single most important factor in our continued success and the principle reason for the optimism that exists among our faculty, staff and students.

Our inaugural class graduated on May 9, 2009. As I considered that milestone, two facts become apparent. First, there is a great need for health care professionals capable of meeting the diverse pharmaceutical care needs of citizens throughout Central and Southern Illinois. Second, the true state of the School is exemplified by the accomplishments of its own. We are prepared to meet the expectations and academic needs of the next generation of students.

On behalf of the SIUE School of Pharmacy faculty, staff and, in particular, students who directly benefit from your support, I offer my sincere thanks to you for helping make this past year so successful. Working together, we can continue our remarkable progress and impact on the region.

Sincerely,

Philip J. Medon
Dean
About the School of Pharmacy

Mission

The mission of the SIUE School of Pharmacy is to prepare health care professionals capable of providing high-quality health care to meet the diverse pharmaceutical care needs of the citizens of Illinois and to serve the profession of pharmacy through a balanced program of education, research, service and patient care. The SIUE School of Pharmacy embraces the educational philosophy of the University, which is dedicated to communication, expansion and integration of knowledge through excellence in its teaching programs; through scholarly, creative and research activity of its faculty, staff and students; and through professional and community service.

Students at a Glance

Number of Students Enrolled: 318
Average Age: 22

Serving Illinois
Number of students from:

<table>
<thead>
<tr>
<th>Region</th>
<th>Number of Students</th>
</tr>
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<tbody>
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<td>Southern Illinois</td>
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<td>Chicago Area</td>
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<td>Central Illinois</td>
<td>77</td>
</tr>
<tr>
<td>Other</td>
<td>41</td>
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</tbody>
</table>

Experiential education comprises approximately 30 percent of the Pharm.D. curriculum. The School of Pharmacy partners with well over 200 pharmacy preceptors, allowing students to apply their skills and gain valuable experience in various patient-care environments: hospital, ambulatory care, acute care, information/wellness, mental health and more. Pictured far left: Pharmacy students Lee Zeller and Kunjal Bhakta.

<table>
<thead>
<tr>
<th>Academic Averages</th>
<th>Class of 2009</th>
<th>Class of 2010</th>
<th>Class of 2011</th>
<th>Class of 2012</th>
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<td>PCAT Score</td>
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</table>
The School of Pharmacy’s laptop program provides each student with a laptop preloaded with course software and all classrooms have wireless network access.

Technology in the Classroom

In Assistant Professor Chris Herndon’s class, student cell phone use is encouraged.

When he wants to gauge his students’ understanding of a particular topic, Herndon asks them to pull out their cell phones and send him a text message. Poll Everywhere, an innovative text message response system, embeds the results into Herndon’s PowerPoint presentation in real time. “It works like text message voting used on popular television shows like American Idol,” Herndon said. “The students love it.”

According to Craig Keigher, system administrator for the School of Pharmacy, Poll Everywhere is just one of the many technology tools faculty members use to enhance the learning environment.

While the University has designated several classrooms as “smart classrooms,” the School of Pharmacy has what Keigher calls; “the smartest classrooms on campus.”

- The classroom lecture capture allows students to review past lectures online and revisit a particularly challenging topic or prepare for an exam. Class content that is projected by way of PowerPoint, Internet, etc., is synced with an audio and video recording of the class and published online daily. Students access the recordings in Blackboard, an online learning management system, and have the option of downloading podcasts.

- Several classrooms are equipped with high-end IP-based video conferencing equipment. This allows faculty who are working in the field to instruct a class from off-site. “It feels very natural to talk and share ideas remotely using this technology,” said Keigher.

- Classrooms are equipped with a control touch panel which allows faculty to switch easily between a podium-based computer, laptop, document camera and video/DVD player. Room audio and wireless microphone levels can be adjusted on the same panel.

- Faculty members may poll their students and get immediate feedback using the classroom response system, or hand-held clickers, which are available in all classrooms.

“Faculty support is what makes our technology programs so successful,” said Keigher. “Faculty members are very willing to use technology and find ways to integrate it into their curriculum.”

“It works like text message voting used on popular television shows like American Idol. The students love it.”

– Chris Herndon

The School of Pharmacy’s laptop program provides each student with a laptop preloaded with course software and all classrooms have wireless network access.
A Lifetime of Learning

As a researcher and educator, William Kolling, associate professor of pharmaceutical sciences, has more than 30 years of experience to offer students in the School of Pharmacy. Currently he is working with his students, investigating ways to treat and prevent bacterial infections in patients with extensive third-degree burns.

Antibiotic creams are most commonly used to treat burn patients. Kolling and his team of students are investigating the use of antibiotic nanoparticles in spray form to minimize burn patients’ exposure to dangerous bacteria.

“Nanoparticles are very small particles; one-tenth the size of the bacterial cell we are trying to kill,” Kolling said. “They have different properties compared to the kinds of particles that are used in creams and oral antibiotics. We can harness the difference in some of those properties, like water solubility, to make more effective antibiotics and increase the patient’s chances of fighting the infection.”

Throughout his career as a pharmacist, Kolling has been an industry leader. Today, he shares the knowledge he has garnered with his students. “I certainly use a lot of stories from my past experience to illustrate points in the classroom,” he said.

That past experience involves co-developing and implementing a pharmacokinetic dosing service, publishing material that has had a direct influence on pediatric drug usage in the United States, working as a clinical pharmacist, researching the treatment of opportunistic infections in pediatric AIDS patients at Children’s Memorial Hospital in Chicago and conducting preformulation studies on anti-malarial medications for the U.S. Army.

“I certainly use a lot of stories from my past experience to illustrate points in the classroom.”

– William Kolling
overabundance of which are common in CF patients—out of cells.

“Oral medications must have a balance of water solubility and lipid solubility,” he said. “CPX had a poor balance. You need to change the chemical structure of the molecule just enough so that the balance is better and still make sure the compound works at the cellular level. With each change it becomes a new compound.”

McPherson and his students soon will test the efficacy of the altered CPX by adding a fluorescent material to the cells to identify the chloride ions. They will watch under a microscope to see if the ions move out of the cells.

“The degree of fluorescence is what we will use to quantify the effectiveness of the compounds,” he said. “It is something you can actually see. If the cells light up really well, that means the compound is working.”

In Search of a Cure

Recipient of the 2008 Outstanding Educator Award by the first-year School of Pharmacy class, Tim McPherson thrives on helping his students share in his passion for research. In fact, students are part of his earnest study of medications to treat cystic fibrosis (CF).

“Research is an invaluable learning experience for students,” McPherson said. “It reinforces the importance of science courses and allows students to apply concepts they have learned to solve real problems that may potentially improve the quality of life for millions of people.”

McPherson, associate professor of pharmaceutical sciences, and his students perform research on a cell line from a person with CF that was purchased from a repository. They create variants of a drug called CPX, which originally was developed as a CF treatment. Unfortunately, the original drug was ineffective because it was insoluble in water.

McPherson engages his students in research, teaching them to synthesize similar drugs in such a way to make them soluble, yet still effective at moving chloride ions—an
Putting A Stop to Cancer

Peering into a microscope, Joseph Schober, assistant professor of pharmaceutical sciences, watches cancer cells move. For more than three years he has researched cell crawling and used a technique called RNA interference to knock down EB1, a protein that is specific to different types of cancer.

“I’m interested in cancer metastasis,” he said, noting that he is particularly curious about melanoma and breast cancers. “It is a real problem when cancer cells spread from their primary site. If we can block the function of EB1 with a drug, it could potentially stop cancer metastasis.”

Second- and third-year students in the School of Pharmacy work with Schober on the leading-edge research initiative. Cancer motility research is extremely popular, Schober said. And the research taking place through the SIUE School of Pharmacy is hands-on, involving quantitative digital imaging and extensive analysis.

“This is something that can propel students’ careers and give them a solid background for pharmaceutical research,” Schober said. “Cancer metastasis is something vital to stop. If it can be stopped, that would be huge.”

“This is something that can propel students’ careers and give them a solid background for pharmaceutical research.”

– Joseph Schober
A Commitment to Research

The American Foundation for Pharmacy Education (AFPE) awarded a 2008-2009 Gateway to Research Scholarship to second-year pharmacy student Lacey Gamblin. She was one of only 15 national scholarship winners from approximately 90 schools of pharmacy across the country.

The purpose of the prestigious scholarship program is to increase the number of students who take on a faculty-mentored research program. The hope is that students decide to pursue a doctorate in pharmaceutical sciences or a career in industry research.

Gamblin spends approximately 10 hours a week in the School of Pharmacy’s state-of-the-art laboratories. “I am happiest when I’m in the lab,” she said. “This scholarship gives me the opportunity to do what I enjoy most.”

Her research focuses on medicinal chemistry, specifically the design and synthesis of target drug molecules—molecules that could one day be used in a drug. “Designing molecules is an extremely long process,” she said. “It takes anywhere from 500 to 1,000 compounds before finding a molecule that is useful.”

Specifically, she is trying to target the body’s somastastatin receptors. Preliminary data shows that activation of this particular type of receptor may slow the progression of Alzheimer’s disease. She works under the advisement of her faculty mentor, Pharmaceutical Sciences Chair Mike Crider, and will submit a final report summarizing her findings to the AFPE in June 2009.

Gamblin hasn’t decided whether she’ll pursue a doctorate or a career in industry after she graduates from SIUE.

“I do know that my future is in the development and delivery of new drug molecules. The more I’m involved in research, the more I know that this is what I enjoy.”

“I am happiest when I’m in the lab. This scholarship gives me the opportunity to do what I enjoy most.”

– Lacey Gamblin
Helping at Home

Chris Lynch, associate professor of pharmacy practice, works with the Southwestern Illinois Visiting Nurses Association (VNA) to foster a proactive approach to patient care and improve medication outcomes for medically disadvantaged, homebound patients.

Fourth-year students spend five weeks at the Southwestern Illinois VNA as part of the advanced pharmacy practice experiences rotation. “The nurses are very receptive to our input,” said Ryan Massey, a fourth-year pharmacy student. “They provide a great example of how an interdisciplinary health care team can collaborate and provide patients with optimal care.”

Lynch teaches his students to mix empathy with the application of science. “As a pharmacist, you can’t have one without the other,” he said. “Being in the patient’s home has a tremendous impact on the students. They interact with patients representing a broad spectrum of income levels and support systems.”

The students are responsible for preliminary chart reviews and scheduling home visits. Once in the home, students take the lead interviewing the patient and checking vitals. Lynch is there to guide them as they conduct a medication review and draft a recommendation for the primary care physician.

“My professional competency has increased greatly after this rotation, as well as my confidence when communicating with patients and other health care professionals,” said Massey. “The rotation was challenging and full of diverse opportunities, all of which will help me become a better pharmacist.”

“Being in the patient’s home has a tremendous impact on the students.”

– Chris Lynch
**Going the Extra Mile**

“I continue to practice as a pharmacist, in addition to my teaching commitment,” said Jessica Kerr, assistant professor of pharmacy practice. “It is so much easier to relate to students.”

Kerr collaborates with physicians and nurse practitioners at the Belleville Veterans Affairs Outpatient Medical Center to provide cardiovascular risk management services to U.S. veterans living in Southern Illinois. In addition to direct patient care, she provides continuing education, drug information and recommendations regarding patients’ medication therapy.

“More than 75 percent of the patients I see have diabetes and other risk factors that can lead to cardiac outcomes,” Kerr said.

“I encourage preventative measures, like weight loss and smoking cessation, to keep people from developing complications. It’s important for me to educate my patients and empower them to take charge of their health.”

Kerr also believes that it is important to empower her students to go the extra mile for their patients. “I think all School of Pharmacy faculty members have that strong belief,” she said. “We all agree that whatever area of pharmacy students choose to work in, they must be able to relate to each patient as they would a parent or grandparent.”

*Pharmacy student Andrea Schutte consults with a patient during her clinical rotation at the Veterans Affairs Medical Center Belleville Outpatient Clinic.*
Keeping a Memory Alive

There is a proverb that says you do not truly understand something until you can explain it to your grandmother. Third-year pharmacy student Tiffany Aboagye embodies that philosophy.

The oldest of six siblings, she often went to the pharmacy to pick up her grandmother’s medications. “My grandmother took many medications. I would try to help her understand them all by explaining the directions on the bottles,” Aboagye said. “I often wonder if patient counseling or a medication review could have made a difference in how she felt or perhaps even prolonged her life.”

That’s where her interest in pharmacy began. “Becoming a pharmacist is a way for me to impact someone else’s life, in memory of my grandmother.”

She is honing her leadership skills through involvement in student service and professional organizations. She is a member of the American Pharmacists Association Academy of Student Pharmacists, and she is serving as treasurer of the newly created Student National Pharmaceutical Association. This educational service association focuses on developing the role of the minority health professional through leadership opportunities.

Aboagye has not yet decided the focus for her career. “There are so many options out there for pharmacists,” she said. “I completed a rotation at Gateway Regional Hospital in Granite City, and the hospital environment was appealing. I’m enjoying my fourth-year rotations and gaining valuable experience.”

As Charles Morse said, “It is into us that the lives of grandparents have gone. It is in us that their history becomes a future.” In Tiffany Aboagye’s case, one person’s history has inspired another person’s future, and many will feel the impact.

“Becoming a pharmacist is a way for me to impact someone else’s life, in memory of my grandmother.”

– Tiffany Aboagye
The attitudes of my professors and fellow students have had a major impact on me.”

– Ben Erwin

All in the Family

Ben Erwin enjoyed high school math and science, did well in his undergraduate pre-pharmacy courses and loved his part-time job at a retail pharmacy. So, when he started classes in the SIUE School of Pharmacy four years ago, he was confident he’d made the right career choice.

Erwin graduated in May 2009 as a member of the School’s inaugural class. “Being part of the School’s inaugural class has been a great experience,” he said. “From the minute I stepped into my first classroom, I had no doubt that I had made the right decision. Our faculty and staff are amazing.”

After graduating in May, Erwin will complete an accredited, one-year pharmacy residency through the American Society of Health-System Pharmacists. “A pharmacy residency will teach me how to best apply the knowledge and skills I’ve learned in school to real patients, situations and settings,” he said. “It is an opportunity to gain an enormous amount of experience in a short amount of time.”

Coming from a family of educators, it’s not surprising that Erwin wants to be a professor of pharmacy practice. His mom is a retired elementary school teacher and principal; his dad is a retired high school biology teacher. Erwin’s goal is to eventually return to SIUE as a member of the School of Pharmacy faculty.

“The attitudes of my professors and fellow students have had a major impact on me,” he said. “Everyone treats each other as a member of the family. We support one another, and faculty members want us to succeed. I know this is the type of environment I want to be in.”
Faculty Scholarly Activity Publications and Grants Received

Publications


**Grants and Contracts**


Herndon, C. M., National Pain and Palliative Care Pharmacy Consensus Project. Mayday Fund of New York, Funded: $152,000 over 3 years. Funded.


Worthington, R., Assay Development for a Biosensor to Minimize Antibiotic Use in Corn-to-Ethanol Manufacturing. National Science Foundation. 3rd year of funding $200,000 (total grant $600,000).
Chris Herndon, assistant professor of pharmacy practice, is planning to bring together multidisciplinary representatives, stakeholders and thought leaders in the field of pain and palliative care. “Building the Future of Pain and Palliative Care in Pharmacy: A Consensus Summit,” will be held Oct. 1-2, 2009, on the SIUE campus.

Jessica Kerr, assistant professor of pharmacy practice, received the Distinguished Young Pharmacist Award from the Illinois Pharmacists Association. The award honors a pharmacist who received his or her entry degree in pharmacy less than 10 years ago and shows tremendous commitment to the profession and his/her community, leadership potential, professional aspirations and involvement in community service.

Radhika Devraj, assistant professor of pharmaceutical sciences, received the American Association of Colleges of Pharmacy New Investigators Award. Her project will focus on health literacy, the basic reading and numerical skills a person needs in order to function in the health care system. This study is the first to examine Illinois pharmacists’ knowledge, attitudes and barriers related to health literacy.

Guim Kwon, assistant professor of pharmaceutical sciences, received a $12,500 grant as winner of the Vaughnie Lindsay New Investigator Award, an inaugural program of the SIUE Graduate School. Kwon’s work examines the effects of diabetes on the pancreas.

In collaboration with the Illinois Poison Control Center, pharmacy students educate more than 8,000 elementary students each year about the dangers of poisons. Pictured: Pharmacy student Oscar Perez.
New Faculty

Jing Yang Fan Hecht, Pharm.D.
Clinical Associate Professor of Pharmacy Practice
Research: cardiology, infectious disease, innovative teaching methods

Keith Hecht, Pharm.D.
Clinical Associate Professor of Pharmacy Practice
Research: hemotoretic growth factor use and side effects, supportive care in oncology, classroom leadership

Maria Kontoyianni, Ph.D.
Assistant Professor of Pharmaceutical Sciences
Research: investigation of protein binding sites and requirements for binding

Cassandra Maynard, Pharm.D.
Clinical Assistant Professor of Pharmacy Practice
Research: cardiovascular services, anticoagulation

Bill Neuman, Ph.D.
Assistant Professor of Pharmaceutical Sciences
Research: Medicinal chemistry

Kate Petkewicz, Pharm.D.
Clinical Assistant Professor of Pharmacy Practice
Research: Diabetes and cardiovascular disease

J. Mark Ruscin, Pharm.D.
Professor of Pharmacy Practice
Research: geriatric pharmacoepidemology

Stacey Thacker, Pharm.D.
Clinical Assistant Professor of Pharmacy Practice
Research: family medicine

Miranda Wilhelm, Pharm.D.
Clinical Assistant Professor of Pharmacy Practice
Research: development and implementation of clinical pharmacy services in community-based practice, health and wellness, disease state education

Cynthia A. Wuller, MS
Clinical Professor of Pharmacy Practice
Capstone Coordinator
Research: over-the-counter medications, sterile products, self-care initiatives

“The SIUE School of Pharmacy truly offers a valuable college experience. The faculty and staff are very supportive and encourage us to succeed.”

– Becky Salmons
Pharmacy Advisory Board

Our sincere thanks go to the following Pharmacy Advisory Board members for their ongoing commitment to the SIUE School of Pharmacy.

Paul Abert, TheBANK of Edwardsville
Elizabeth Cardello, American Pharmacists Association
Charles Dragovich, Pfizer Inc.
Sam Enloe, Omnicare Inc.
Steven Faulkner, Pfizer Inc.
Donald Frailey, GlaxoSmithKline
John Gloss, Christian Hospital, BJC Healthcare
Joseph Gruber
Dennis Hunt, Walgreen Co.
Randy Malan, Bureau of Pharmacy & Clinical Support Services
Karen Matteuzzi, Express Scripts
Scott Meyers, Illinois Council of Health System Pharmacists
Robert Mueller, Schnuck Markets Inc.
J. Michael Patton, Illinois Pharmacist Association
Steve Peipert, Metro East Pharmacists Association, Rinderer’s and Brighton Pharmacy
James Rankin, Family Care Pharmacy
Chris Smith, H.D. Smith
Ron Snow, CVS/Pharmacy
Leighton Wassilak

Gifts from individuals, corporations and foundations provide vital scholarship support and research opportunities to pharmacy students. Pictured: Pharmacy student Jeremy Hanon.
The Accreditation Council for Pharmacy Education and the American Association of Colleges of Pharmacy frequently cite the SIUE School of Pharmacy as a model for both established and new pharmacy education programs.

*Pictured: Pharmacy student Michaela Doss.*