DEAR FRIENDS

College is making a transformational impact

Greetings from the SDSU College of Pharmacy. This issue is filled with stories highlighting people and programs that are having a transformational impact on our college and university.

On Sept. 25, South Dakota State University launched SDSU Health, a transformational initiative aimed at improving the health and wellness of the SDSU community. SDSU Health is a consortium of the university’s health science programs, student health and counseling services, and health system and community partners committed to innovations in education, practice and research across health professions and health-related programs. The article in this issue will provide you with an overview of our collaborative work to create a culture of health across our campus.

Our publication includes a story on the five-year anniversary celebration of the Avera Health and Science Center on campus. The late September program recognized the transformational impact that the facility has had on teaching and learning within our academic programs and our research productivity. The piece you will read will describe the impact that the building has had on our college in greater detail.

A truly historic and transformational milestone for the College of Pharmacy was achieved Oct. 23 with the Investiture Ceremony of Wenfeng An as the inaugural Markl Scholar in Cancer Research. As you read about the investiture, I am sure that you will be moved by the generosity of Barry and Sharon Markl and the commitment that they have made to South Dakota State University and its College of Pharmacy.

Additional stories in this issue of our publication describe the goal of a transformational new scholarship supported by Cardinal Health, will introduce you to our Distinguished Alumnus for 2015, and update you on student and faculty news.

In closing, I would like to say thank you to our many volunteer preceptors, loyal alumni and other stakeholders for the outstanding support provided to the college throughout 2015. As you will see on the pages that follow, your investment of time, talent and treasure is helping transform the College of Pharmacy in a positive way.

Best wishes for the new year.

Dennis D. Hedge, Pharm.D.
Dean and Professor
SDSU College of Pharmacy
The Avera Health and Science Center, the college’s home, has been open for five years. The facility is a hub of education and professional development for students.

Wenfeng An is officially introduced as the Markl Faculty Scholar in Cancer Research.

Fall convocation keynote speaker addresses struggles with developing drugs for youth.

Class of 2016 MLS students receives white coats.

College of Pharmacy joins other colleges to address the wellness of the campus community.

Joshua Ladwig’s trip to Ghana as an exchange student with the International Pharmaceutical Students’ Federation got off to a rocky start.

Assistant Professor Emeritus Gary Van Riper is honored as national adviser of the year.

Cardinal Health’s donation creates scholarship and program to develop students’ entrepreneurial skills.

MLS program receives site visit.

Faculty Jacobson, Kidoo, Nelsen and Reineke join the college’s faculty.

College of Pharmacy joins other colleges to address the wellness of the campus community.

Joshua Ladwig’s trip to Ghana as an exchange student with the International Pharmaceutical Students’ Federation got off to a rocky start.

Assistant Professor Emeritus Gary Van Riper is honored as national adviser of the year.

Cardinal Health’s donation creates scholarship and program to develop students’ entrepreneurial skills.

Accreditation update.

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With nearly 250 people in attendance, the College of Pharmacy celebrated five years of being in the Avera Health and Science Center Sept. 30. In addition to comments from SDSU President David L. Chicoine, Assistant Dean Dan Hansen, chemistry Associate Professor Adam Hoppe and Avera Health President/CEO John Porter, Haylee Brodersen, a P4 student from De Smet, talked about the impact the building has had on her education.

In 2008, Avera Health committed $15 million to enable South Dakota State University to move forward with construction of the Avera Health and Science Center. As the single-largest gift ever made to the SDSU Foundation, Avera’s investment created momentum for the university’s historic comprehensive campaign, “It Starts with State,” which eventually raised $255 million.

Avera’s investment provided SDSU with a state-of-the-art health sciences facility that is used by 7 out of every 10 students.

“This building serves as a hub of education and professional development for myself and my classmates,” said Brodersen, noting the pharmacy resource room, study spaces, lecture halls and laboratories. “The Avera Health and Science Center provides large, sweeping spaces where student pharmacists not only acquire a wealth of
knowledge that pharmacists need to know, but also where we participate in innovative and unique learning opportunities that were not possible with our previous space.”

Brodersen also talked about the benefits of being in the same facility as the college’s faculty, a benefit not seen with most colleges.

“This access gave me the ability to run upstairs and ask a question or review an old test before, between or after classes without having to trek across campus and track down the professor,” she said. “Along this theme of accessibility are the research opportunities with faculty this building gives us. Students involved in research appreciate these opportunities for their independent learning component. It allows them to develop problem-solving skills, as well as challenge them in new ways.”

Brodersen also mentioned how the facility has enabled peer-based learning, simulation and interprofessional activities to take place.

“The lessons learned from all of these activities and more have shaped us into well-rounded student pharmacists with the tools and knowledge to accomplish all that rotations and the “real world” have in store for us,” she said. “And we won’t forget where we acquired our solid foundation, right here, in this building.”

Matt Schmidt
Patience is a virtue, we often have been told. However, the College of Pharmacy has found virtue in the impatience of Barry and Sharon Markl. The 1968 grads created a charitable remainder trust in 2009 to benefit oncology research at SDSU through an endowed professorship. But the Phoenix Valley, Arizona, couple later realized they would be “pushing up daisies” before their gift went to work.

Therefore, in 2013 they began making annual contributions equal to the expected amount from their planned gift to start the oncology research program.

That allowed Dean Dennis Hedge to start the search for an endowed professor in cancer research. He found that in Wenfeng An (pronounced anne), who joined the Department of Pharmaceutical Sciences Nov. 3, 2014.

While he was profiled in the Winter 2015 issue of the College of Pharmacy magazine, An was officially recognized as the Markl Faculty Scholar in Cancer Research at an Oct. 23, 2015, ceremony in the Avera Health and Science Center.

The half-hour ceremony drew some 60 people, filling the third-floor study area overlooking Sylvan Green.

Hedge called the creation of the college’s first endowed scholar a “transformational” move for the college.

“Endowed faculty positions are very important to the success of academic programs at South Dakota State University and all of academia. They are important because they allow us to do things that we otherwise would not be able to do in our quest for academic and research excellence. “They are also important symbolically because they attest to the stature of the university and the quality of its faculty,” Hedge said.

An works with human genome
Where there is quality faculty, quality student researchers follow.

An noted in his remarks that his lab team has already grown to nine members.
with grad student Simon Newkirk serving as head recruiter.

His research focuses on a section of the DNA strand that represents 17 percent of the human genome. He used the analogy of a book to describe long interspersed elements, Type 1 (L1). “They are like words that come up again and again. When these words come up out of order or randomly, they cause great problems,” An said.

He explained earlier, “There is an increased expression of L1 proteins in many types of cancer. L1 movement has also been observed in several cancer types, most notably, colorectal cancer and lung cancers.

“When does L1 move, how frequently does it move, and how much does it contribute to cancer progression? Finding answers to these important questions is an active area of research. My own lab is very well positioned in this regard. We are one of only a few labs specialized in mouse models of L1 movement.”

He said at this stage his work would be considered more foundational research than translational research but he sees translational potential if new compounds are identified to suppress L1 activities, especially through collaboration with medicinal chemists and pharmaceutical scientists within the College of Pharmacy.

**Cancer has personal interest for Markls**

The Markls wanted to devote funding to cancer research because both of their mothers had cancer some 10 years ago. Today, they are 93 and 88 years old. “Cancer affects all of us in some manner or another,” he said.

The impact of the Markls’ generosity will spread well beyond those immediately involved in An’s research, Provost Laurie Nichols told the gathering on the afternoon before Hobo Day. “SDSU is a primary economic engine for South Dakota. We help create a prosperous future for our state and one of the ways is through the transfer of research. Endowed positions like this will allow us to create productive scholars,” Nichols said.

She detailed that endowed scholars:

- **Bring recognition to a program, college and university;**
- **Provide valuable resources in a flexible manner so faculty members can grow research; and**
- **“Most importantly, it allows us to recruit talent who become faculty leaders in their discipline.”**

**Career begins, ends with Walgreens**

Markl used his five-year Bachelor of Science degree to become a leader in retail pharmacy. He began as a retail pharmacist with Walgreens in Beloit, Wisconsin.

After nine months of training, it was on to Kenosha, Wis., as a store manager. Five years later (1974) he was transferred to a large store in Odessa, Texas, as a store manager. In 1978, he became a district manager in Orlando, Florida, for 1 ½ years.

In late 1979, Markl was transferred to Milwaukee because Walgreens had just bought a chain of pharmacies and needed Markl to oversee a district. In 1986, he was promoted to regional vice president at corporate headquarters in Deerfield, Illinois.

Markl served as vice president of store operations from 1986 to 2004, when he became senior vice president of store operations before retiring in March 2007 after 40 years with Walgreens.

The former Pipestone, Minnesota, farm boy said his connection to Walgreens began when he got a scholarship from the company in his third year of schooling. “Without that, I would have had to borrow additional money,” he said earlier. It was sure better than the dishwashing job he had in Grove Commons at $1.25 per hour his freshman year.

The scholarship also included a postgraduation job offer and loan forgiveness if he stayed with the leading retailer.

“My thought was to gain drug store experience and then open my own store” because even if he left Walgreens, he could pay back the loan interest-free.

However, “Walgreens was a great ride. All of my supervisors always treated me fairly and options for promotion were readily available. It seemed like the timing for advancements always placed us in towns with good schools for our two sons.”

**Reconnected with college in 2000**

Later in his career, he reconnect with the college through service on the Dean’s Advisory Committee (2000-05, working with Danny Lattin and Brain Kaatz).

“That was really about the first time I ever did anything to give back to the college,” Markl said. “I found it extremely interesting. One of the main issues was retaining the professors. You could make more working for Walgreens for 40 to 42 hours per week than you could being a professor.”

Understanding the college’s financial needs made it easy for him to co-chair the College of Pharmacy Committee as part of the universitywide “The Future is Now” fundraising campaign in 2002-04.

Markl also served on the SDSU Foundation’s Phoenix Regional Campaign Committee for the “It Starts with STATE” campaign that raised $255.7 million from Jan. 1, 2007, to April 24, 2013. The Markls also made a donation to sponsor the student resource center when the Avera Health and Science Center was built in 2010.

In addition, they continue to sponsor a Jackrabbit Guarantee Scholarship, which awards $1,000 per year to qualifying undergraduate students attending classes on the Brookings campus.

By creating the endowed professorship, Markls’ gift will allow the college to:

- Enhance an existing budgeted position’s salary;
- Supplement funding for operational expenses and equipment;
- Provide startup funds and facility improvement to the scholar;
- Fund graduate students, postdoc fellows and staff to support the researcher’s activities; and
- Fund travel associated with activities relating to the work of the scholar.

**Medallion symbolic of generosity, commitment**

At the Oct. 23 ceremony, Markl and his wife, Sharon, who earned an associate of arts degree in secretarial science, were presented a replica of the Markl Medallion that was later bestowed upon An.

Hedge called the medallion “symbolic of your generosity, confidence in our college and your commitment to our university.”

Markl opened his remarks with this simple message: “Sharon and I are very humbled to be at this event and very blessed by God to do what we’ve done.”

*Dave Graves*
FALL CONVOCATION

Challenges of pediatric drug development

Pharmacy students and faculty members got an insight on the unique struggles of pediatric drug development when Dr. Anne Zajicek delivered the Keo Glidden Smith Fall Convocation address in the Volstorff Ballroom Oct. 26, 2015.

Zajicek is chief of obstetrics and pediatric pharmacology with the National Institute of Child Health and Human Development in Bethesda, Maryland.

In addressing the gathering of some 350 students from every level as well as pharmacy faculty, Zajicek said pediatric drug development has traditionally been a pharmaceutical orphan as companies pursue the more lucrative adult market and avoid the additional pitfalls that pediatric drug development requires.

While legislation now requires testing for juveniles as well, there remains a massive backlog of drugs for which patent protection has expired and testing has not been done on juvenile usage.

Just defining juvenile usage is a challenge as one can imagine the physical and mental developmental differences between neonatal patients and 17-year-olds. While 18 is considered the legal age for an adult, some physical and emotional maturing may not arrive until age 26, Zajicek said.

Conducting clinical trials for those under age 18 requires refinement of accepted standards for adults, she said. For example, blood samples must be smaller than for adults, and because of the smaller sample size, the assays used to analyze the blood samples must be more sensitive, said Zajicek, who is both a pediatrician and a pharmacist.

The health-care professionals working in the medical trials need to be familiar with working with children, Zajicek said.

The formulating pharmacist also has a role. “Children won’t take medicine that tastes bad, so there is the end of your trial,” she said. A tablet that adults could swallow may not be practical for children, Zajicek said. For babies, the permeability of their skin and cerebral system also compounds the challenge.

The effectiveness of dosages can also be a challenge. For example, how does one evaluate the effectiveness of pain relievers in children who aren’t verbal or are intubated? Zajicek asked.

Adult market dwarfs pediatric

She noted that there are 12,000 new cases of pediatric cancer per year. However, that is but a fraction of the nearly 1.7 million new cases of adult cancer diagnosed each year. So naturally pharmaceutical companies are more drawn to the larger market, said Zajicek, who has worked with the National Institute of Child and Human Development since 2003 and has held her current post since 2010.

She explained a legislative effort to make the juvenile market more lucrative to drug makers.
Pharmaceuticals designed for the sub18 set for neglected diseases can be granted a priority voucher from the FDA, which the company can sell to another drug manufacturer, that guarantees a full review of another new medication within six months, an unheard of timeframe otherwise. She cited a recent case in which a voucher was sold for $350 million.

One of the functions of Zajicek’s office is to prioritize drugs for study as pharmaceuticals in the juvenile market.

The branch is responsible for the implementation of the Best Pharmaceuticals for Children Act, which was enacted to improve pediatric labeling for drugs already on the market. It manages a portfolio of basic, translational and clinical research, and training grants in obstetric and pediatric pharmacology.

The entire process takes 8 to 10 years with at least three years devoted to recruiting participants, Zajicek said.

Dave Graves

2015 marks 25th annual convocation Dwivedi reflects on growth of research event

Row after row of 4-foot high trifold poster boards line the west half of the Volstorff Ballroom for the annual Pharmacy Research Presentations.

Advanced students explain their efforts to faculty judges in the two hours preceding the Keo Glidden Smith Fall Convocation. Working with faculty advisers, they tackle an array of complicated studies. This year’s 19 presentations at levels ranging from undergraduates to postdoctoral students included study of the L1 retrotransposons found in the human genome and the bioavailability of curcumin.

While this scene from the 25th anniversary of a research presentation event Oct. 26, 2015, mirrors that of the recent past, Distinguished Professor Emeritus Chandradhar Dwivedi said it hasn’t always been that way.

Speaking at the beginning of the convocation, Dwivedi noted that he was hired in 1987 by Dean Bernard Hietbrink to start pharmaceutical research in the college. For a couple of years, he was the only one in the college doing research.

“We didn’t have a graduate program or a six-year Pharm.D. program. I paid fourth-year students in the five-year B.S. program $0.50 more than minimum wage (then $3.35/hour) and treated them with pizza on Friday to serve as my research assistants. Time came that I had more students than I could pay and other faculty also started doing research,” Dwivedi told a gathering of 350 students and faculty members.

So in 1990, to give the researchers a chance to display their new knowledge, Dwivedi said he organized a poster presentation that drew eight or nine students.

“From that simple beginning that started with undergraduates working in the summer and after school, we now have Ph.D. students and postdoctoral fellows working,” Dwivedi said.

Nelson gift aids research

He said the undergraduates were competitive at the national level and thus were able to receive stipends for summer research from the American Society of Pharmacology and Therapeutics, American Association of Colleges of Pharmacy and American Foundation for Pharmaceutical Education.

He added that undergraduate research received a major boost when the Joseph F. Nelson Undergraduate Research Mentorships were created through a $1 million endowment left by Nelson’s death in 1995.

Each spring, 8 to 10 applicants from across campus are selected to receive $3,000 and spend a summer doing hands-on research under the guidance of a veteran faculty scientist. Annually, there were two or three recipients from the College of Pharmacy.

In the early days, the research presentation was held in the Guilford Gross Pharmacy Annex (Room 131) of Shepard Hall.

“We collected poster boards from other colleges, each had a poster board. Some of the bigger colleges had two. We asked for both of them. Faculty members would go around the day before to collect poster boards. I thought, why don’t we invite Rho Chi Honor Society members to help and buy some more pizza,” Dwivedi said.

So in 1991 Rho Chi began organizing the event with a national level keynote speaker.

“This provided an opportunity to our chapter to receive the Outstanding Chapter Award from the national Rho Chi Honor Society and for myself to be named Outstanding Adviser,” Dwivedi said.

While Rho Chi still organizes the fall convocation, the poster boards used by the presenters in the Volstorff Ballroom at the 2015 event come from the University Student Union.

“When we started the event, other schools (of pharmacy) didn’t have an event like this. Even today, most schools don’t,” Dwivedi said.

Programs aids faculty also

He added that the event has not only raised the recognition of student research, it also has aided faculty members in receiving grants because they have a reliable source of undergraduate research assistants.

“Some day I will die and I hope 25 years from now, there will still be a research presentation. It will bring my soul a great joy,” Dwivedi said.

The convocation was named after Keo Glidden Smith in 1996. She is a 1937 graduate from the College of Pharmacy living in Rapid City. In 1989, she created an endowment to fund the fall gathering.

Dave Graves
One of the most recognized symbols of the medical laboratory science profession is the white coat, according to David Ficek ’11. “But for students and professionals in the field, it’s much more than a lab coat—it’s a jacket of confidence,” Ficek said.

Ficek was the keynote speaker at the Medical Laboratory Science White Coat and Lambda Tau National Medical Laboratory Science honor society Induction Ceremony, which marked the fifth anniversary of the current MLS program model and accreditation. College of Pharmacy Dean Dennis Hedge gave the opening remarks, followed by a welcome and introduction from medical laboratory science program director Pat Tille.

“Medical laboratory science is helping people in a more direct way,” said Ficek, who works as a medical laboratory scientist at the Hennepin County Medical Center in Minneapolis. “Hospital labs are equipped with direct access equipment to work with the brightest minds in medicine.”

Ficek works in the emergency room laboratory where, “I have seen a lot, and I get emotional thinking about it. Everything takes a lot of team effort because we treat patients who most hospitals don’t want to touch.”

Ficek spoke of the necessity of medical laboratory science professionals due to the rapid evolution of technology today. “I think of medical laboratory science as a career, and not really a job,” Ficek said. “Everything we do is related to the promotion and progression of well-being.”

After Ficek’s speech, instructor Stacie Lansink introduced the 2016 graduating seniors and Tille presented each student with a white laboratory coat. “’A jacket of confidence’

In addition to the presentation of the white coats, the annual event also includes the induction of the students into the Lambda Tau National Medical Laboratory Science Honor Society. The Rho Chapter of Lambda Tau president Tiffany Montalvo ’15 and Tille presented certificates and honors cords to inductees Amanda Horn, Alisa Neigel, Michael Semerad, Adeline Wiertzema and Brianne Weber. In addition to student inductees, faculty members Lansink, Nelsen and Stephanie Jacobson were also approved for induction by the organization’s student members. Eligibility for induction requires a GPA of 2.8 in two semesters of the medical laboratory science program, and evidence of service and dedication to the profession.

The event was well attended by family and friends of the graduating seniors who

The White Coat: ‘A jacket of confidence’
will be entering their final state of the MLS program in January 2016. The students will be completing their clinical experiences at a variety of affiliated laboratories across Minnesota and South Dakota.

“It’s exciting to be entering a career that is quickly advancing in the technical field,” Wiertzema said. “A point that really stuck with me from the keynote speech was that this field is in high demand due to the current professionals nearing retirement age. It was reassuring to hear Coral (Bonnemann) say that MLS professionals must always keep accuracy and compassion with them when caring for patients they are directly or indirectly working with.”

Horn, who serves on the ASCLS National Student Patient Safety Committee, gave closing remarks, and spoke of the quirks and memories of each classmate.

“I am looking forward to helping people in a different way,” said MLS student Andrea Wittmayer. “Clinical lab scientists are not who people see when they are at the clinic or hospital, but they play a huge role in helping diagnose patient diseases and disorders. I liked how David Ficek reiterated the importance of medical laboratory technicians. I think that was exactly what our senior class needed to hear being so close to clinicals.”

Karissa Kuhle

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**Pledge to the Profession**

As a clinical laboratory professional, I will strive to:

- Maintain and promote standards of excellence in performing and advancing the art and science of my profession;
- Preserve the dignity and privacy of others;
- Uphold and maintain the dignity and respect of our profession;
- Seek to establish cooperative and respectful working relationships with other health professionals; and
- Contribute to the general well-being of the community.

I will actively demonstrate my commitment to these responsibilities throughout my professional life.
Campus leadership understands that improving student wellness can result in fewer class absences, improve student retention and instill healthy living habits that last a lifetime, according to Dennis Hedges, dean of the College of Pharmacy.

That’s why a team of campus leaders—Nancy Fahrenwald, dean of the College of Nursing; Jill Thorngren, dean of the College of Education and Human Sciences; Hedges and Doug Wermedal, interim vice president for student affairs—is excited about the launch of SDSU Health, an initiative designed to improve the health and wellness of students, faculty and staff members.

SDSU Health’s goal is to create a campus culture of health where a balanced lifestyle is emphasized, personal responsibility to be well is encouraged and physical and mental health is fostered.

The program, which brings together the university’s health science programs, student health and counseling services, and community partners, kicked off Sept. 25. Colleen Coffey, who has dealt with mental health issues including anxiety, depression and disordered eating, gave the keynote address at the event, held at the Coolidge Sylvan Theatre.

Coffey spoke of physical and mental struggles that dotted her high school and college years, with the overarching message being to seek help and know that recovery is possible. The event culminated with a 2-mile walk and picnic lunch. Participants received an SDSU Health T-shirt.

“We’ve created a schedule of activities that fall under the umbrella of SDSU Health, and we have more programs planned,” Hedges said. “Many of the activities will be provided through partnership with student organizations, and our goal
is to host events and education sessions that not only interest students, but the faculty and staff as well.”

SDSU Health aims to bring health and wellness efforts together to form a more cohesive message. “We recognize that a lot of people across our campus are working on health and wellness initiatives and a priority of ours is to bring them together,” Hedge said. “Many academic units have clubs and organizations committed to the promotion of health and wellness. We do not want to take away from what these organizations are doing. We do hope to help them become more connected in their work.”

Community connection

SDSU Health plans to connect with the campus and Brookings communities through a space in the SDSU Wellness Center known as the SDSU Health HUB (an abbreviation for healthy university and beyond). The SDSU Health team is currently working with the university as it reviews plans to increase the size of the Wellness Center, not only for fitness space, but also clinical spaces—student health services, counseling services, nutrition services, medical laboratory services and pharmacy care services. The environment created within the SDSU Health HUB will be specifically designed to enhance interprofessional education opportunities within the health sciences and also include telehealth capabilities to improve student health services for off-campus students.

Student initiatives

This fall, the Medical Laboratory Science Club held a “Be the Match” bone marrow drive as part of the initiative. The Academy of Student Pharmacists held booths in the University Student Union educating on topics including influenza immunization, over-the-counter medication, sun protection, diabetes and smoking. The group also held blood pressure and glucose screenings.

“We recognize that a lot of people across our campus are working on health and wellness initiatives and a priority of ours is to bring them together.”

—Dennis Hedge, dean of the College of Pharmacy

Hedge said the leadership team and student groups plan to continue to roll out incentives to keep the campus community engaged with health and wellness goals. “We eventually want to create an SDSU Health app where students, faculty and staff can track personal health goals and outcomes,” Hedge said. “We view SDSU Health as a transformational entity that expands learning opportunities for students and promotes campus community health.”

Karissa Kuhle
A series of unfortunate events preluding Joshua Ladwig’s pharmacy exchange experience made him wonder if he made the right choice to spend six weeks of his summer vacation in Kumasi, Ghana.

The study abroad trip came about through the College of Pharmacy’s chapter of American Pharmacist Association Academy of Student Pharmacists, which represents the International Pharmaceutical Students’ Federation. Through the Student Exchange Program, pharmacy students enrolled in an APhA-ASP chapter may spend time learning pharmacy practices in a foreign country of their choice.

On a flight from Minneapolis to New York, Ladwig ‘15 met a man from Ghana. “It was a huge relief to be with someone who could help me around,” said Ladwig, a Minnesota native. When Ladwig and his new Ghanaian friend arrived in Ghana, the man’s brother gave them a ride from the airport to the bus station. After Ladwig was on his own, he realized he’d forgotten one of his bags in the driver’s car.

The bus ride to Kumasi took three hours longer than he’d thought, and it was night when he arrived. When Ladwig got off the bus, he said a group of taxis were waiting, and the drivers were shouting “let me help you, let me help you.”

“I had no idea where I was going,” Ladwig said, noting that his loose directions were to get off the plane, find a taxi to the bus station, take a bus to Kumasi and find the pharmacy. “So, I just took a second to collect my thoughts.” He wandered down a little alley and, with the help from the locals, found the pharmacy. “My phone didn’t work and all my money was American, which definitely added to my stress,” he said.

In general, Ladwig said the people of Ghana were much more laid back than those of the United States. “From what I experienced, the people of Ghana live in the moment, and seem to think less about the future,” Ladwig said. “That translated into customer service not being anything like it is in America. I was in complete culture shock, and it didn’t help that my first evening there was really stressful.”

After the first-day hoopla, Ladwig said his experience in Ghana played out as he had hoped. Prince, a host at the pharmacy, served as Ladwig’s mentor during the trip. At the hospital, Ladwig worked in various areas and met many pharmacy students. “Typically, the hospitals host second- and third-year students, and I was a fourth-year, so most of the material they were teaching I had already learned,” Ladwig said. “It was fun to get in on some of the educating.”

Exploring pharmacy practices in Ghana
Summer exchange program takes student to Kumasi pharmacies
Learning the culture

For Ladwig, taking the trip to Ghana wasn’t about gaining more pharmaceutical knowledge, but rather to learn about the culture and foreign pharmacy practices. “I wanted to get to know the people and learn about myself through the experience,” Ladwig said.

“Having our students meet and interact with international students helps broaden their exposure to other cultures,” said assistant pharmacy professor Brittney Meyer. “Shared discussion helps students understand what goes on in the field of pharmacy in other parts of the world.”

Ladwig is the College of Pharmacy’s only student to take advantage of the student exchange program through IPSF. “Three years ago, we started hosting international pharmacy students,” Meyer said, noting that participating universities must host students in order to exchange students abroad. Last summer, State hosted two students—one from Poland and one from Portugal. “There are always applicants who want to come here. Our students take the exchange students out to eat and show them around, then they typically stay with a family in Brookings or Sioux Falls, and work alongside pharmacists in hospitals, community pharmacies and other pharmacy settings as well.

“Right now, 84 countries are involved in the student-run exchange program, and I would like to see our students take advantage of this opportunity to learn the pharmacy practices of other countries.”

Ladwig chose Ghana because friends from the Delta Chi fraternity visited the country prior and recommended it. “I think people get caught up in the cost of travel, but I really look at it as an investment and something I can put on my CV,” Ladwig said. “It may be expensive up front, but it’s totally worth it learning about a different culture.”

Ladwig’s responsibilities rotated from day to day, working in pediatrics, the HIV and tuberculosis clinic, and pharmacy critical care. Although the hospital did not have the advanced technology like the United States, Ladwig was amazed by how well the system worked. “They still paper charted, and it just showed me that just because we are more advanced with technology doesn’t mean that our way is necessarily the ‘right way.’ It just means that electronic works well here, but the paper-charting system seems to work well there.”

He said the absence of computers wasn’t the only difference as hospitals held patients in large wards versus individual rooms. He said pharmacies also lacked security. “In the U.S., we have motion sensors and gates around the counters, but the Kumasi pharmacies had none of that. The pharmacies were secured with a padlock.”

Lasting connections

During Ladwig’s summer in Kumasi, he stayed in a hostel, which he said was one of the ritzier places to stay. “In general, the city was not as run down as I thought it would be,” Ladwig said. “I know some people in northern Ghana live in huts, but from what I saw, a lot of residents within larger cities live in communal buildings.”

High points of Ladwig’s trip included the personal relationships he established with exchange students from Ghana, France, Cameroon, Germany and the U.S. Although Ladwig’s exchange experience had a rocky beginning, he grew comfortable in Ghana. He said he started having a great time once he traveled to tourist destinations including a castle and slave camp, and had the chance to feed live chickens to a crocodile.

Toward the end of the trip, Ladwig met a German pharmacy student. “One night, we sat up on a hostel roof and just talked about life,” Ladwig said. “It was cool to realize that, even though we live in different countries, we have a lot of the same feelings and thoughts. It was a great way to end the trip.”

Ladwig is currently a pharmacy practice resident at the Veterans Affairs Black Hills Health Care System’s Fort Meade site, where he’s been since July 2015.

Karissa Kuhle
Gary Van Riper honored as Kappa Psi adviser

Longtime Kappa Psi adviser Gary Van Riper of Brookings has been honored as the National Adviser of the Year by a pharmacy fraternity.

This is the second time Assistant Professor Emeritus Van Riper has received the award, which is known as the Grand Council Deputy Outstanding Achievement Award. He received the inaugural award in 2005. He has been adviser of the Gamma Kappa chapter at South Dakota State University since 1973, an incredible 42 years.

In addition to twice winning the award, three times he has been selected as one of 10 certificate of excellence winners.

Each of the 110 Kappa Psi chapters in the country is eligible to nominate their adviser. This year 29 did so.

The selection committee looks at the level of the adviser’s participation and the success of the chapter, according to University of Iowa Associate Professor Deanna McDaniel, who co-chairs the Grand Council Deputy Development Committee. In addition, there is a statement from the nominator.

‘Goes above and beyond’

Luke Klugherz, the regent, or president, of the Gamma Kappa chapter in 2014-15, stated, “Gary Van Riper, also known as GVR, is a model GCD (grand council deputy) that goes above and beyond what he is called upon to do.

“He has been the GCD of Gamma Kappa chapter since before most of the brothers were born and demonstrates what it means to be a ‘brother for life.’

“As the former regent, GVR communicated with me more frequently than most of my officers and his impressive organizational skills kept everyone on the same page at all times. He frequently opened his home to our chapter for important meetings and often supplied food at those meetings.

“He goes out of his way to make our chapter’s brotherhood bonds stronger, and even volunteered his and his wife’s time to appear in our chapter’s video report to the Northern Plains conference.

“Hands down, GVR deserves to win the GCD Award because his devotion keeps our chapter functioning smoothly and efficiently.”

Chapter record reflects GVR’s effort

Those thoughts are echoed by McDaniel. “He truly emulates all the aspects of an adviser of Kappa Psi. He has a heart and passion for working with students to help them achieve their goals. And the chapter is outstanding, so that is a true testament to Gary’s dedication within the chapter.”

One shining example of that is the chapter has received the Frank Eby Scholarship Tray Award for having the best academic record of all chapters five times—1997-98 and 2009-11. The complicated formula considers grades of P2 and P3 students and adds bonus points if the top P4 graduate is a brother.

In addition, the chapter has numerous top 10 placings for overall excellence, fueled in part by the group’s extensive community service.

Has produced lifelong friends

The “irreplaceable” Van Riper says he continues to serve as adviser despite retiring in 2006 because “We enjoy the interaction with the students. Sharon and I say it keeps us young. It keeps us in touch with the university, and we’ve made a tremendous number of friends in the Northern Plains.”

For example, last summer the Van Ripers toured Ireland with brothers from the graduate chapters in the Northern Plains. The age range was 30 to 68 with the Van Ripers the oldest.

“Sometimes we think, ‘Why do they want two old people on these things?’ But age doesn’t enter into it. We’ve made lifelong friends whom we would miss if we weren’t involved,” he said.

In mid-September the Van Ripers were at the South Dakota Pharmacists Association convention in Deadwood.

“The leadership of that association, over the last 40 years, a good number of those are Kappa Psi brothers. I’m thinking I’ve had some influence on their willingness to take leadership in the profession. Those who were officers in the chapter level are now leaders in their professional association.

“To see them grow in that way, knowing they got their start in Kappa Psi and I was their mentor who hopefully led them in the right direction, is very satisfying,” Van Riper said.

No plans to step down

He adds that his commitment to Kappa Psi has been shared by his wife, a 1968 home economics major.

“Sharon has been referred to as the mother of pharmacy. She received the Distinguished Service Award from South Dakota Pharmacists Association in 2001. She’s stood behind me in the good and bad of being an adviser. It takes a special person to allow their spouse do this thing since 1973. It’s a family commitment,” he said.

Next year will mark Van Riper’s 50th year as a Kappa Psi brother and the Groton native said he has no plans in the short-term to step down as grand council deputy.

Van Riper, who turned 69 Nov. 19, plans to continue “as long as I’m able to do so.” When a replacement does emerge, “I would like the opportunity to work with the person for a year or two before yielding the position.”

He will definitely be a tough act to follow.

Gary Van Riper

Notes:

• The Grand Council Deputy Award was presented at the Kappa Psi Grand Council Convention Aug. 6 in Denver.
• Kappa Psi’s faculty adviser is Brad Liable, a member of the pharmacy practice department who works out of Avera McKennan in Sioux Falls.
• Kappa Psi is the oldest and largest professional pharmacy fraternity in the world. It was organized in 1879 and boasts more than 70,000 members. The local chapter, which was formed in 1958, has 109 members.
• Van Riper’s big picture effort now is to raise $500,000 to replace the aging Kappa Psi house at 629 11th Ave.
The College of Pharmacy recently received a $110,000 donation from Cardinal Health to establish the Cardinal Health Independent Pharmacy Scholarship as well as funding for a program to develop students’ entrepreneurial skills.

South Dakota State is one of 10 pharmacy schools selected to receive scholarship funds through the Cardinal Health Pharmacy Scholarship Program in 2015. In all, Cardinal Health’s program will provide $1 million in 2015.

South Dakota State College of Pharmacy Dean Dennis Hedge received the check from Cardinal Health’s Ree Hamlin, director of sales for Hudson, Kansas City, Roanoke and St. Louis Pharmaceutical Distribution; Wendy Sease, sales manager for Pharmaceutical Distribution; and Lance Mindt, pharmacy business consultant for Retail Independent/Alternative Care Pharmacy. Cardinal Health, a $103 billion health-care services company, cited the university’s commitment to independent pharmacies as a key factor in it receiving the donation.

“Cardinal Health recognized our support of independent pharmacy practice and our motivation to enhance the entrepreneurial skills of the students in our program,” Hedge said. “We look forward to working with Cardinal Health on initiatives to advance independent pharmacy in the region, and we are grateful for the investment they are making in SDSU students by establishing this scholarship.”

Courtney Donnelly, a P3 student from Lakefield, Minnesota, is the inaugural recipient of the Cardinal Health Independent Pharmacy Scholarship.

Cardinal Health has donated more than $5 million to 28 universities through this program since its launch in June 2011. All scholarship winners will also attend a pharmacy ownership workshop at the University of South Carolina.

The schools selected to participate in this year’s Cardinal Health Pharmacy Scholarship Program were chosen based on their commitment to advancing the independent pharmacy profession.

These schools offer curricula focused on operating an independent pharmacy; support student-run chapters of the National Community Pharmacists Association; endorse internship and co-op programs with local independent retail pharmacies; and demonstrate high postgraduate placement rates in community pharmacy settings.

Matt Schmidt
Accreditation. According to the U.S. Department of Education, the goal of accreditation is to ensure that institutions of higher education meet acceptable levels of quality.

As part of its reaccreditation process, the medical laboratory science program recently had a site visit. According to director Pat Tille, the visit and interviews went well. The MLS program was first accredited for five years, April 30, 2011. Tille, who submitted a self-study review to start the reaccreditation process, hopes the program will receive accreditation for 10 years.

“The students graduating from the SDSU program can compete with any in the country,” said Mike Black, who is on the program’s advisory board. The assistant vice president of the clinical laboratory at Avera McKennan Hospital and University Health Center, Black was interviewed as part of the site survey. “We have SDSU students rotate through Avera Laboratories and they have been very well prepared. However, while the technical aspects are always appreciated and expected, the impressive part to me is the students’ level of maturity as potential future employees.”

In addition to Black, Tille said alumni from Nebraska and Wyoming returned to campus to participate in the site visit. In addition, current students and faculty as well as individuals from the program’s clinical affiliates were interviewed.

“The site reviewers were pretty impressed that we would have someone who was so committed to the program that she drove from Wyoming for a 30-minute interview,” Tille said. “And that we are located in what they called rural South Dakota, the fact we draw the students we do.”

Colleen Smith ’10 is the alumna who made the nearly 500-mile one-way trip to Brookings to participate in the site visit. “My career has turned out to be more than I expected,” Smith said. “It is rewarding knowing you have a direct impact in the lives of others. The results I provide can and have saved lives, provide continued monitored health care, and improve the quality of life for so many. There are no words for how wonderful and amazing it is to be a medical technologist.”

Tille said the program should receive word about its status in 2016’s second quarter, following another committee’s review of the site visit and other submitted reports.

“I was pleased with the reaccreditation process due to the involvement of the board and the interaction with the site team,” Black said. “We were free to discuss questions concerning the challenges surrounding shortages of laboratory personnel, as well as challenges that inspectors are seeing across the nation. Some of the feedback from inspectors covered how involved the advisory board was with the process.

“My role with the advisory board is to give SDSU feedback on what we’re seeing ‘in the field’ with the students,” Black continued. “Dr. Tille is very receptive to listening to our concerns and stressing to students what we may see as deficiencies. Beginning this year, Dr. Tille has further emphasized communication with Avera by inviting guest speakers from the clinical lab to speak to her classes. This has been very successful because it reinforces communication from both sides.”

Tille admitted that interaction was noted by the reviewers and noted the program’s success on the licensure exam.
Teaching, Research and Service

The College of Pharmacy continues to make outstanding contributions in the areas of teaching, research and service. Specifically, graduates have exceeded the national performance level on licensure and certification exams and over a three-year time frame have obtained residencies in 27 separate programs in 19 states. In addition, graduates and alumni report that they would choose South Dakota State University if they were starting their pharmacy career over (96.6 percent). The college is committed to maintaining these high standards through the continuous development of faculty. The 2015 faculty survey results demonstrate the success of this strategy. Finally, faculty excellence has led to 13 international presentations by faculty in 6 countries over the past 4 years.

We are committed to our mission: which is to prepare pharmacy graduates capable of providing high-quality interprofessional, patient-centered and population-based pharmacist care to the people of South Dakota, the region, the nation and the world. The college further seeks to advance societal well-being and the profession of pharmacy through graduate education, research, scholarship and service.

The following highlights showcase several of our successes
Pharmacy graduates go across the nation to learn advanced practice skills in residency training

Each year, South Dakota State University graduates compete for residencies and the opportunity to expand their skills in high-quality practice sites. The College of Pharmacy at South Dakota State University prides itself in helping students actualize their residency goals. From 2012 through 2014:

- 25.8 percent (54 of 209) of SDSU College of Pharmacy graduating students went on to complete a residency
- 71.1 percent (54 of 76) of the SDSU students seeking a residency via the ASHP match succeeded in obtaining a residency compared to 62 percent nationally
- 54 residents completed a residency at 27 unique residency sites in 19 states
  - The map illustrates the distribution of residencies that SDSU graduates attended across the nation
  - 26 percent of the residency sites were in Veterans Administration facilities (n=7)
  - 22 percent of the residency sites were located in South Dakota (n=6)

“And the Survey Says …”

The college annually seeks input from various stakeholders to evaluate the adequacy of the college in achieving our mission. There is a rotation in the frequency of all surveys except the graduating student survey, which is completed every year. This year we surveyed the graduating students, alumni from 2013 and 2014, and faculty.

- **Graduating Students Survey**: Two important questions that are asked of all graduates are whether they are prepared for practice and would they choose the same college/school if they were to start over. In both cases, a higher percentage of our students agreed with these statements compared to the national response.

<table>
<thead>
<tr>
<th>AACP Graduating Student Survey</th>
<th>SDSU</th>
<th>National</th>
</tr>
</thead>
<tbody>
<tr>
<td>I am prepared to enter pharmacy practice.</td>
<td>98.3%</td>
<td>95.1%</td>
</tr>
<tr>
<td>If I were starting my pharmacy program over again I would choose the same college/school of pharmacy.</td>
<td>96.6%</td>
<td>84.0%</td>
</tr>
</tbody>
</table>

- **Alumni Survey**: A similarly high percentage (96.6 percent) of alumni would choose our program again and this exceeded the national percentage that agreed (86.8 percent).

<table>
<thead>
<tr>
<th>AACP Alumni Survey</th>
<th>SDSU</th>
<th>National</th>
</tr>
</thead>
<tbody>
<tr>
<td>If I were starting my education over today, I would choose the same college/school of pharmacy.</td>
<td>96.6%</td>
<td>86.8%</td>
</tr>
</tbody>
</table>

- **Faculty Survey**: A focus of the college is to develop and retain high-quality faculty. On all five items that addressed this aspect, we exceeded the national value.

<table>
<thead>
<tr>
<th>AACP Faculty Survey</th>
<th>SDSU</th>
<th>National</th>
</tr>
</thead>
<tbody>
<tr>
<td>I receive adequate guidance on career development.</td>
<td>100.0%</td>
<td>71.9%</td>
</tr>
<tr>
<td>Funds are available to support my faculty development.</td>
<td>96.7%</td>
<td>77.5%</td>
</tr>
<tr>
<td>Programs are available for nonpractice faculty to orient them to the pharmacy profession and professional education.</td>
<td>50.0%</td>
<td>45.9%</td>
</tr>
<tr>
<td>Programs are available to me to improve my teaching and to facilitate student learning.</td>
<td>96.7%</td>
<td>90.4%</td>
</tr>
<tr>
<td>Programs are available to me that help me develop my competence in research and/or scholarship.</td>
<td>83.3%</td>
<td>74.5%</td>
</tr>
</tbody>
</table>

The college carefully examines data trends and compares our results to the national values to identify successes and opportunities for improvement.
College of Pharmacy Faculty Present Research Around the World

- Since 2012, seven faculty have provided 13 presentations outside of the United States.
- Presentations were made in Scotland, China, Greece, England, France and Canada.
- Eight presentations were made by the pharmaceutical sciences faculty and five by the pharmacy practice faculty.

International Presentations by SDSU College of Pharmacy Faculty since 2012

<table>
<thead>
<tr>
<th>TITLE</th>
<th>Meeting</th>
<th>Location</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Absorption Kinetics of Dendrimers across the Pulmonary Epithelium: Comparing Degree of PEGylation</td>
<td>Annual Meeting of the Controlled Release Society</td>
<td>Edinburgh, Scotland</td>
<td>2015</td>
</tr>
<tr>
<td>Co-Delivery of Curcumin Analog and Paclitaxel with Reduction Sensitive Micelles to Treat Drug Resistant Cancer</td>
<td>Annual Meeting of the Controlled Release Society</td>
<td>Edinburgh, Scotland</td>
<td>2015</td>
</tr>
<tr>
<td>Molecular Targets of Aspirin and Cancer Prevention</td>
<td>20th World Congress on Advances in Oncology and 18th International Symposium on Molecular Medicine</td>
<td>Athens, Greece</td>
<td>2015</td>
</tr>
</tbody>
</table>

Pharmacoeconomics (PE) Guidelines in Asia

Using Weighted Criteria for Making Decisions on Off-patent Medicines: Case Studies from China, Thailand and Vietnam

Patient Understanding, Preferences and Value of Community Pharmacy Indicators

Novel PEG-ztein Nanomicelles for Topical Delivery of Retinol

Topical Delivery of Curcumin Using Ethosomes

Oral podium presentation—Transmammary Drug Delivery

Micro/Nano Particulate Formulation of a Novel Polymer-based Vaccine Adjuvant to Stimulate Cellular and Humoral Immune System

Critical Care Pharmacy Services in a Medical/Surgical ICU

Number of Pharmacy Students in Honors College Grows Dramatically

Students who graduate with the Honors College distinction from the Van D. and Barbara B. Fishback Honors College demonstrate academic excellence; attain multidisciplinary, global perspectives; develop critical thinking, creativity and problem-solving skills; and achieve outstanding oral and written communication abilities. All of these skills are fundamental to an outstanding pharmacist, and students in the Fishback Honors College achieve these goals through such requirements as an independent study project, honors colloquium and contracted credit courses.

The number of pharmacy students taking Fishback Honors College courses has increased dramatically over the last four years. Many factors may account for the increased participation, including a requirement within the pre-admission program for the Pharm.D. program.

Fishback Honors College participation offers students another opportunity to maximize their education experience and distinguish themselves. Growth in numbers is an exciting trend for pharmacy students and the college.
Pharm.D. and MLS Students Distinguish Themselves on National Exams

The 2015 Pharm.D. students again achieved a 100 percent pass rate on the North American Pharmacist Licensure Examination (NAPLEX). Since the first entry level Pharm.D. class graduated in 1998, 1,040 SDSU students have sat for the NAPLEX exam and (1,034) have passed on the first attempt (99.4 percent).

The medical laboratory science students may choose to take the ASCP Certification exam. Over the last three years, the graduates have achieved a first-time pass rate of 96.1 percent on this exam, which exceeds the national average (84.0 percent).
Instructor’s story mirrors that of her students

T eaching six classes in the medical laboratory science program during fall semester challenged Stephanie Jacobson’s ability to keep every plate spinning.

In 2014-15, she was an adjunct instructor while also working at Rapid City Regional Hospital. The growing program needed to expand its staff and Jacobson was ready to grow in her relationship with the College of Pharmacy, which is in its second year of hosting the long-established medical laboratory science program.

Fortunately for Jacobson, she doesn’t need to spend time getting dressed for work or finding a good parking space.

Jacobson teaches an Upward Mobility program, which has been around about four years. It is for medical laboratory technicians who have a two-year associate degree and are seeking a four-year bachelor’s degree.

She works from her Rapid City home, which she shares with her husband, Dan, who also is a medical laboratory technologist, and their 4-year-old daughter, Katelyn.

In fact, it was family reasons that helped draw Jacobson to the job. Her husband is evening shift supervisor in the medical lab at Rapid City Regional. She was working days as a microbiology specialist at the hospital. The Jacobsons, both raised in Bemidji, Minnesota, were like ships passing in the night.

“Now I’m able to see family more. It makes for a better personal life and allows me to teach, which is something I really enjoy,” Jacobson said.

Bringing life to online

Although she can’t pat any of her 16 students on the back, she does enjoy interacting with them through conference calls arranged through the South Dakota Board of Regents switchboard. She also varies her office hours to make herself available to students “who work all sorts of hours and in all sorts of time zones.”

Most are from South Dakota, but they dot the map from Florida to Montana. In the future, she hopes to be able to do a videoconference call.

From associate degree to master’s

She said she can relate to her students’ aspirations because she too started with an associate degree.

“When getting done with high school, I was working as a CNA (certified nurse assistant) and thought about nursing, but I chose to pursue medical laboratory science because I liked science,” she said. Dan Jacobson’s high school guidance counselor suggested the MLS program at a Bemidji tech school and she joined him.

Both graduated from Northland Tech in 2004 and then headed to Grand Forks, North Dakota, for further education.

Jacobson received a bachelor’s degree in medical laboratory science in 2007 and a master’s degree in 2010, both from the University of North Dakota. She got her first taste of teaching by working as a grad assistant at UND from September 2008 to May 2010. However, she said there were no teaching openings when she graduated.

The Jacobsons then headed to Jackson Hole, Wyoming, where they worked at a hospital. In 2012, they moved to Rapid City.

Among her duties at Rapid City Regional from 2012 to August 2015 were education coordinator and preceptor, serving as the clinical liaison to SDSU med lab students.

“Teaching allows me to keep up on my education because the field is changing so fast. Being able to share that with people and seeing them succeed is what I really enjoy,” said Jacobson, who adds she also enjoys spending time with her family and dogs as well as hiking, crafts, cooking and reading.

Dave Graves
April Nelsen has returned to teach in the program from which she earned her degree.

Nelsen began Aug. 23, 2015, as an instructor in the medical laboratory science program within the College of Pharmacy. She received her bachelor’s degree in 2009 in microbiology and clinical lab science, which was then the program’s name. In May 2015, she received her master’s in microbiology from State.

After earning her bachelor’s degree, Nelsen spent three years as a medical laboratory scientist at Sanford Health in Sioux Falls.

However, the schedule didn’t work well for a woman with a family, so she returned to school in August 2012. In graduate school, she was a teacher’s assistant in Biology 151 and Mammalian Physiology. She said she found it very rewarding to help others learn and decided to look for a career in academia.

The SDSU position provided an excellent opportunity to work in a growing department, she said.

Working out of the Avera Health and Science Center on the Brookings campus, Nelsen teaches Clinical Chemistry, Diagnostic Immunology and Management, and the freshman introductory course, as well as advising the MLS Club. She also coordinates the students’ off-campus clinical rotations.

“We have 10 affiliates where we can send students and we are accredited so we can send them most anywhere that will take them,” Nelsen said.

It is that hands-on portion of the curriculum she likes best.

“We prepare students for real life. Not every program does that. We prepare them for real life so they don’t have a big slap in the face when they’re done. We’re not so concerned about GPA as we are that they learn the material and be able to apply it,” said Nelsen, who went through a 3 + 1 program.

That was three years of classroom work and a year in the hospital. Today’s program is two years of general education classes and two years in the MLS program with the final two semesters at a clinical site.

Nelsen is a Dell Rapids native who continues to live in Dell Rapids, where she coaches the Dell Rapids High School cheer team. She also is active with yoga and kettlebell exercises, as well as running after daughters Kaeley, 10, and Julia, 1. She and her husband, Aaron, are expecting another child in March.

The medical laboratory science program moved into the College of Pharmacy in 2014. It has been at State since 1948.

Joshua Reineke arrived from Wayne State in Detroit. He had been involved in teaching and research there since 2008. At SDSU, he will be teaching the P2 pharmacokinetics class, providing topical lectures in multiple graduate courses, working with students in research-based independent study courses and conducting his own research.

During his first semester, Reineke’s focus was on teaching pharmacokinetics and the “really interesting interaction” with students.

In the spring semester, Reineke will develop more in-depth research with graduate students and postdocs on nanotechnology and the use of nanoparticles for cancer diagnosis and treatment. One outgrowth of this continuing research is the development of mouse models to research barriers to pancreatic cancer treatment.

Reineke holds a doctorate in medical sciences (2008) from Brown University, an Ivy League school in Providence, Rhode Island.

It was while pursuing this degree that Reineke realized his career would be based in research. He worked with drug delivery and biomedics while he was at Brown, which doesn’t have a pharmacy program. But the training prepared him to teach pharmaceutical sciences here and at Wayne State.

He enrolled at Brown in 1998 after graduating from Rye (Colorado) High School, a small town in the state’s southern foothills.

Reineke and a friend were the first students at Brown to graduate with a degree in biophysics, a major they crafted. The following year, 2004, it became a recognized program at Brown.

Reineke said athletics was the carrot that attracted him to the East Coast school.

In high school, he was recruited in football and track, ultimately choosing to high jump and run the 400-meter dash at Brown.

When he was in graduate school, Reineke was a professional triathlete and competed for Team USA at the 2006 Olympic Games in Athens.
Kazuhiko Kido (Kaa—zu Key—do) joined the Department of Pharmacy Practice in August 2015 after completing residencies in Kentucky. Kido, an assistant professor who originally is from Tokyo, specializes in cardiology and internal medicine. After receiving an undergraduate degree in pharmacy in Japan, he earned a doctor of pharmacy from the University of Iowa in May 2013. He then spent a year in pharmacy practice residency and a year in cardiology pharmacy residency, both at the University of Kentucky HealthCare.

Kido’s current post is a dual position split evenly between the college and Avera Health’s internal medicine team in Sioux Falls, which is a new arrangement for the college.

Kido goes on rounds with the Avera medical team and precepts P4 students at the practice site. He also teaches a class on therapeutics and pharmacy practice. Afternoons are dedicated to teaching and scholarship activities, and in the spring semester, Kido will be teaching pulmonary hypertension, evidence-based medicine and sepsis treatment. Next year, he will add a class on cardiology-related topics.

Kido said he enjoys the “multitasking” required by the position, “I appreciate getting the exposure to multiple duties at the same time. Teaching students a lecture that is applicable to the P4 students who I precept, and vice versa. It’s a very interesting aspect with this job.”

In fact, he describes his favorite experience as “giving the great learning experience,” such as interacting with students in the classroom in a lecture on anticoagulation and then being able to demonstrate it in patient care while precepting a student. “When that happens, I feel I really accomplished something. I love to teach students and I love to precept students on the practice side, but I also wanted to continue the research side. So academia was a good fit,” Kido said.

His research areas of interests include optimal anticoagulation management, heart failure pharmacotherapy evaluation and pedagogy.

As a youngster, he had an interest in science. By his last year of high school he had chosen the field of pharmacy because he also wanted to be involved in patient care by utilizing scientific knowledge and skills. As an undergraduate student, he had the opportunity to study abroad for two months at University of North Carolina Hospitals and Clinics. Kido found that the profession of pharmacy is more advanced in the United States than in Japan, where the emphasis is on medication dispensing. “I wanted to be involved in clinical pharmacy and gained an interest in clinical research at the beginning of my residency,” he said.

On a personal level, Kido has found success in a Sanford Sports Complex tennis league and is looking forward to a visit this summer from his parents and younger brother, who live in Japan.

Dave Graves

World Championships in Cornerbrook, New Foundland, Canada.

“I rarely compete in triathlons anymore, but I continue to train, though much less intensely. I find running and bike workouts to be a therapeutic release of stress and an excellent time to brainstorm new things to implement in my research or teaching,” said Reineke, who has competed in a couple races since moving to Brookings.

Small town, close-knit faculty

He said he enjoys living in a town where he can walk or bike to work, especially after making one-hour, one-way drives in Detroit.

Reineke said he also enjoys the department’s attitude. “The collegial environment amongst the faculty is really unique. A lot of people tout it, but I don’t think everybody has it the way they do here. Everybody is here to help,” he said, particularly noting Hemachand Tummala and Om Perumal.

Both have successfully translated their research in drug delivery to commercial applications and shown interest in collaborating, Reineke said.

Other benefits he has discovered at SDSU include the financial support to pay graduate students for working in faculty labs, the ease in which faculty members can conduct research at animal facilities, and newer facilities and buildings, including his office in the 5-year-old Avera Center.

Reineke replaces Hongwei Zhang, who arrived at SDSU in September 2010, and researched gene therapy and RNAi therapeutics.

Reineke’s wife, Dengnoi, emigrated from Laos with her parents when she was 5. They have a daughter, Jaixia, age 10.

Dave Graves
GRAD CLASS HAS 100 PERCENT PASS RATE

All 81 recent graduates of the College of Pharmacy who took the North American Pharmacist Licensure Examination (NAPLEX) passed in their first attempts as candidates.

According to Dean Dennis Hedge, 81 of the 82 Pharm.D. graduates from 2015 sat for the exam during the summer. The national pass rate was 93.86 percent.

The SDSU graduates compiled a mean scaled score of 110.2, well above the national mean of 101.53.

The NAPLEX is administered by The National Association of Boards of Pharmacy to ensure the competency of individuals who apply for licenses to practice pharmacy in their respective states.

MASTER OF PUBLIC HEALTH PROGRAM GETS HIGH RANKING

The online master of public health program offered by SDSU and the University of South Dakota has been ranked 13th in the 50 Most Affordable Online Master’s of Public Health Programs in 2015.

The ranking by Top Master’s in Healthcare Administration highlighted the collaboration between SDSU and USD.

“The idea behind this program is to take the collective strengths in the health sciences that both campuses have and build a program around them,” said Dennis Hedge, dean of SDSU’s College of Pharmacy. “A great thing about this program is that beyond a degree opportunity, it directly addresses public health issues right here in the state of South Dakota.”

The program started classes in January 2015. Students can pursue the degree on a full-time or part-time basis, which has interested undergraduates and employed health-care professionals looking for the next level of education. To receive the

CREATIVE COMPOUNDERS

P2 students Jade Kuetzke and Jacob Maland found a creative way to break from the demand of pharmaceutical studies.

They won a cake-decorating contest sponsored by the University Program Council Sept. 17. They took home a $150 prize for the entry, in which they put their cake inside a square, movie theater popcorn box and then topped it with icing and marshmallows to look like popcorn and added a bag of M&M’s. Next to the box were two small cakes decorated to look like movie tickets.

“In celebration we each ate one of the tickets then brought the cake back to our hall to eat. We ate some of it while watching a movie, but we had a lot leftover to eat throughout the week,” Kuetzke said.

Champion cake decorators Jade Kuetzke and Jacob Maland pose by their winning entry in the SDSU student union for the contest sponsored by the University Program Council Sept. 17, 2015.
degree, students must take 42 credit hours—36 coming from core courses.

In addition to the College of Pharmacy, other colleges across the campus, including the colleges of Nursing, Education and Human Sciences, and Agriculture and Biological Sciences, also will contribute faculty to teach classes and/or review projects.

USD and its School of Health Sciences contributes expertise from programs such as addiction studies, physician assistant, occupational therapy, nursing and others. Both USD and SDSU can grant the degree.

Top Master’s in Healthcare Administration only ranked graduate programs that are available 90 percent or more online.

It used College Navigator to collect each school’s tuition rates for graduate programs as well as to determine the associated fees. For the purposes of creating a ranking, the firm averaged each public school’s in-state and out-of-state rates to determine a single approximate cost.

OFFICERS OF SOUTH DAKOTA PHARMACISTS ASSOCIATION

Several SDSU pharmacy alumni were installed as officers at the annual meeting Sept. 19, 2015, in Deadwood were:

President—Rob Loe, B.S. 1996;
President Elect—Trisha Hadrick, Pharm.D. 2004;
Vice-President—Eric Grocott, Pharm.D. 2014;
Secretary-Treasurer—Erica Bukovich, Pharm.D. 2004;
Board Member—Bernie Hendricks, B.S. 1977; and
Board Member—Jan (Opperman) Lowe, B.S. 1986.

The following received awards:
Distinguished Young Pharmacist—Beth Joachim, Pharm.D. 2005; and
Hustead Award, Pharmacist of the Year Award—Steve Aamot, B.S. 1992.

TILLE HONORED FOR MED LAB EDUCATION

Pat Tille, director of the medical laboratory science program since 2009, was in the spotlight twice this past summer.

She was listed as one of the “20 Professors of Clinical Laboratory Science You Should Know” on MedicalTechnologySchools.com’s blog and was one of three finalists for the Cardinal Health urEssential Award.

The list of 20 were required to be active teachers who have been published in trade journals, have exercised leadership and have been active in professional groups.

She was the 2014-15 South Dakota president of American Society for Clinical Laboratory Science. Tille also has been very active at the national level with her most recent service as bylaws chair and consulting editor of the Clinical Laboratory Science Journal.

Her research has put both her and her program on the map. In 2005, she received the society’s Professional Achievement Award in microbiology and in 2011 its award in molecular diagnostics. She was the first laboratory professional to be recognized nationally by the society in molecular diagnostics.

“Due to writing a leading textbook on clinical laboratory microbiology, Pat has literally taught thousands of medical laboratory scientists throughout the world,” said Rodney E. Rohde, chair of clinical laboratory science at Texas State University. “I have used this text (“Diagnostic Microbiology”) for more than a decade in my clinical microbiology courses and its impact is truly global.”

Cardinal Health first issued the urEssential Award in 2014 to recognize clinical laboratory scientists and their contributions to health care and patients. While not necessarily at the patient’s bedside, clinical laboratory scientists play a prominent role in quality care.

Bridget Parsons, a senior MLS student from Zimmerman, Minnesota, said, “Dr. Tille’s passion for the profession of medical laboratory science, as well as teaching future laboratory scientists is shown through her consistent participation in campus events as well as starting the Rho Chapter of the Lambda Tau Honor Society at SDSU.

“Dr. Tille has traveled to native reservations in South Dakota, high schools and attended health science camps across the state to inform high school students and underrepresented populations about laboratory science and the career options available.”

Tille said, “It’s always nice to be recognized but this honor is more about the students in the medical laboratory science program and what they’ve been able to do in the classroom and in their careers after graduation.”

AN PUBLISHED IN GENOME RESEARCH

Wenfeng An, Markl Faculty Scholar, had an article published in the November issue of Genome Research, a leading international genome sciences journal.

The article, which has several co-authors, including his longtime graduate assistant Simon Newkirk, discusses An’s chief research topic—long interspersed elements in the human genome.

Using transgenic mouse models, An reveals that these jumping genes not only mutagenize the genomic DNA but also alter DNA methylation, an epigenetic modification that plays a critical role in tumorigenesis.
Scholarships

Steven M. Aamot and Robbie D. Aamot Scholarship in Pharmacy
Brittanie Venard

Aberdeen District SDPhA Scholarship
Connor Rumpca

Alcester Drug Store Scholarship in Support of the Jackrabbit Guarantee
Rick Heiman

Oliver G. and Nelle K. Anderson Scholarship
Connor Rumpca

James A. Armbruster and Nancy E. Armbruster Scholarship in Support of the Jackrabbit Guarantee
Chelsea Hofman

Dr. Harold S. Bailey and Barbara A. Bailey Scholarship in Support of the Jackrabbit Guarantee
Kelsie Wahl

Jack M. Bailey Scholarship
Darren Kuetter

Brad and Dawn Bargmann Scholarship in Support of the Jackrabbit Guarantee
Paige Haraldson

Benson/Glasscock Scholarship in Pharmacy
Nicholas Elgersma

Scott and Jessie Bergman Scholarship for Academic Leadership
Haylee Brodersen

Jean Bibby Memorial Pharmacy Scholarship
Morgan Mathieu

Joye Ann Billow Kappa Epsilon Leadership Award
Hannah Kueter

Joye Ann Billow Scholarship Endowment
Tamara Giese

Darrel and Peggy Bjornson Scholarship in Pharmacy
Kendra Haase

Black Hills District (SDPhA) Scholarship
Megan Dorsey

Joeseph J. and Coral (Coffey) Bonnemann Scholarship in Medical Technology
Katelyn Jennings

Marlin R. and Linda J. Brozik Scholarship in Support of the Jackrabbit Guarantee
Morgan Hemmingsson

Cardinal Health Independent Pharmacy Scholarship
Courtney Donnelli

Class of 1957 Scholarship in Pharmacy
Nicholas Buschette

James and Marilyn Clem Pharmacy Scholarship
Alyson Schwebach

Pharmacy Endowed Scholarships
Kaya Borg
Aimee Carlson
Teagan Gustadson
Jack Kerner
Maggie Orr
Megan Schlinz
Kristen Schroeder
Whitney Specht

Pharmacy Scholarship Fund
Avery Aldridge
Nicholas Buschette
Shelby Carlson
Catherine Creech
Kiley Hyland
Mackenzie Klinkhammer
Kaye Kurth
Hubert Lahr
Allison Mitchell
Keaton Moffitt
Joshua Ohrtman
Amber Olson
Meghan Perry
Jason Schneider
Mollie Skot
Jade Ternus
Crystal Wright

CVS Caremark Charitable Trust Pharmacy School Grants Scholarship
Alex Olson

Lloyd Daniels and Helen Daniels Bader Scholarship
Vanessa Hinkle
Elizabeth Murray

Bill R. Darrah Scholarship in Support of the Jackrabbit Guarantee
Morgan Plender

Bill R. Darrah Scholarship at the College of Pharmacy at South Dakota State University
Madisen Fanslau

Mary M. Pullman Dodge Scholarship in Support of the Jackrabbit Guarantee at South Dakota State University
Kate Jansen

Richard J. Duffner Memorial Scholarship
Morgan Mathieu

Pundit Abhaya Narayanan Dwivedi Scholarship in Pharmacology
Mackenzie Klinkhammer

E. Keith Edgerton Memorial Scholarship in Support of the Jackrabbit Guarantee
Brooke Schwasinger

Clark T. and Alice H. Eidsmeoe Scholarships
Kaya Borg
Jenna Lund

Debra Farver Pharmacy Scholarship
Jenna Donnelly

Fleeger/Lovely Scholarship in Pharmacy
Brittany Bailey

Marvin E. Foss Scholarship in Pharmacy
Zachariah Vernon

Lawrence and Winnibert Bradshaw France Memorial Scholarship
Tyler Chromostra

Milton and Elaine Freier Scholarship in the College of Pharmacy
Jenna Lund

Shirley and Lyle Glasscock Pharmacy Scholarship in Support of the Jackrabbit Guarantee
Clare Lloyd

Gross Scholarship in Pharmacy
Kaylie Gabur

Sandra Grover Memorial Scholarship
Kayla Kurtzweg

Dorothy Nelson Haas Memorial Scholarship in Support of the Jackrabbit Guarantee
April Lick

Daniel J. and Jessica L. Hansen Scholarship in Pharmacy
Shannon Miller

Gerrit Heida Memorial Scholarship
Joshua Ohrtman

Owen “Woody” and Connie Hillberg Scholarship at South Dakota State University
Nicole Heeren

Hoch Drug Scholarship in Pharmacy
Megan Czimsoni
Katie Ferguson
Adam Goetz
Brant Haase
Samuel Koob
Brittany Kortan
Kylea Larsen
Ty Moody
Shelby Olson
Abigale Walz
Khia Warzecha

Ronald Hohenberger Scholarship in Support of the Jackrabbit Guarantee
Elizabeth Murray

Ted and Bill Hustead Memorial Scholarship
Kiley Hyland

Kathleen Ingalls Scholarship in Support of the Jackrabbit Guarantee at South Dakota State University
Rebecca Matzek

Bruce R. Johnson Scholarship in Support of the Jackrabbit Guarantee at South Dakota State University
Riley Georgezon

Julie Hanlon-Johnson and Matthew Johnson Scholarship in Support of the Jackrabbit Guarantee
Christian Kroll

Ron Johnson Memorial Scholarship in Pharmacy
Calvin Limberg

Galen D. Jordre and Ann M. Jordre Scholarship in Support of the Jackrabbit Guarantee
Nathan Sutera

Dolly Mettler Jorgensen (Class of 1945) Legacy Scholarship Endowment
Natalie Beiter

Juhnke Pharmacy Scholarship
Gina Wolles

Kmart Scholarship for Excellence in Community Pharmacy
Kendra Emste

Duwayne and Joan Knauf Pharmacy Scholarship
Kayla Kurtzweg

Nancy and Seth Hildebrand Scholarship in Support of the Jackrabbit Guarantee
Danielle Jensen

Owen “Woody” and Connie Hillberg Scholarship at South Dakota State University
Nicole Heeren
Lea Telkamp

J. Howard Kramer Memorial Scholarship
Kaye Kurth

Jeffrey James Kuper Scholarship
Cassidy Latusek

Susan Lahr and Gordon Niva Scholarship in Pharmacy
Hadley Cropsey
Ayssa Larson

Robert and Donna Landes Memorial Scholarship in Pharmacy
Lea Telkamp

Terry Larvie Scholarship
Shelby Thompson

J. Bruce Laughrey Scholarship
Kassandra Freese
Patrick Watchorn

Floyd LeBlanc Scholarship
Shelby Thompson

Harry M. Lee Scholarship
Matthew VanDerWerff

Larry Leighton Memorial Scholarship
Levi Hattervig

Gary and Karen Lesch Scholarship in Pharmacy
Luke Klugherz

Donald M. Lien Scholarship
Blake Medvec

Edgar and Gladys Light Scholarship in Pharmacy
Meghan Perry

Lounsbery Professional Scholarship in the College of Pharmacy
Stephanie Demers

Robert J. Manning Pharmacy Scholarship in Pharmacy
Hannah Poppen

Barry and Sharon Markli Scholarship in Support of the Jackrabbit Guarantee
Kathryn Swanson

Marion John McCormack Scholarship
Matthew VanDerWerff

Don McRoberts Scholarship
Endowment in Chemistry, Medical Technology, and Nursing
Brianne Weber

Barry Duane Mellelgaard Memorial Scholarship in Pharmacy at South Dakota State University
Mackenzie Byron

Dr. Brittney Meyer Scholarship in Pharmacy
Lauren Wilde

Tom and Marie Mills Scholarship in the College of Pharmacy at South Dakota State University
Samantha Wagner

Glenn C. Miller Memorial Scholarship
Nathan Smith

Carney and Margaret (Maggie) Nelson Memorial Scholarship
Casey Hettinger

Robert W. and Ardith Olson Scholarship in Pharmacy
Darren Kueer

Alka and Raja Patel Endowed Scholarship in Pharmacy
Bailie Carlson

Kay Coffield Pearson Scholarship in Pharmacy
Courtney Neubert

Mark Eric Petersen Scholarship in the College of Pharmacy
McKayla Thieman

Alford O. and Dolores J. Peterson Scholarship in Pharmacy
Fang Chen

Allen A. Pfeifle Scholarship in Pharmacy
Elizabeth Palmer

Kenneth and Elizabeth Redman Scholarship
Nathan Smith

William J. Regan Scholarship
Katie Schelhas
Nicholas Young

Rho Lambda Tau Scholarship for Medical Laboratory Science
Adeline Wiertzema

Rochelle N. Roberts Family Scholarship in Support of the Jackrabbit Guarantee
Alexandra Anzai

Sanford Pharmacy Faculty Scholarship in Support of the Jackrabbit Guarantee
Lauren Metzger

Stanford D. Schmiedt Memorial Scholarship in Pharmacy
Shelby Carlson

Craig and Carolyn Schnell Scholarship in Support of the Jackrabbit Guarantee
Andrea Burr
Jacob Worner

Tim and Jennifer Schut Pharmacy Scholarship
Jacqueline Thomas

Sioux Falls VA Practice Site Scholarship sponsored by Katie E. Bremmon, Erin S. Christensen, Steffanie M. Danley, Stacy M. Heitsma, Annette M. Johnson, and Kelley J. Oehlke in Support of the Jackrabbit Guarantee at South Dakota State University
Jaron Schneider

Jane and Norbert Sebade Jackrabbit Guarantee
Trace Steckler

Chuck and Dorie Sendelbach Scholarship in Support of the Jackrabbit Guarantee
Kenton Weibig

Earl and Daphne Series Memorial Scholarship
Joshua Collett

Shopko Scholarship
Hilary Deragisch

Ephriam “Ep” and Hilda Sieler Scholarship
Brett R. and Justin Joachim Scholarship in Support of the Jackrabbit Guarantee
Casey Goodhart

Dwight and Keo Smith Scholarship
Allison Mitchell

Richard A. Smith Scholarship in Pharmacy in Support of the Jackrabbit Guarantee
Analisia Bayose

Merlin J. Snyder Scholarship in Support of the Jackrabbit Guarantee
Kayla Guy
Nicole Rasmussen

South Dakota Pharmacists Association (SDPhA) Legacy Scholarship
Traci Elkers
Shelby Young

South Dakota Society of Health-Systems Pharmacists Scholarship
Amanda Janisch

Dick Spielmann Scholarship in Medical Lab Science in Support of the Jackrabbit Guarantee
Brittany Kramer
Emily Young

Dr. Fred and Mary Stahmann Endowed Scholarship in Pharmacy and Nursing
Christopher Schneider

Statz Family Pharmacy Scholarship at South Dakota State University
Chelsea Berg

Julie C. Stevens, M.D., Scholarship in Pharmacy at South Dakota State University
Lauren Dartois
Brittany Williams

Dr. Julie Stevens and Dale Evenson Bon Homme High School Scholarship
Dylan Steeber

Ed and Louise Swanson Pharmacy Scholarship in Support of the Jackrabbit Guarantee
Sarah Calhoon

Meder A. and Florence M. Thibodeau Memorial Scholarship
Travis Van Ede

Van Hove Scholarship in Pharmacy at South Dakota State University
Mikaela Smesrud

Gene Van Pelt Memorial Scholarship in Pharmacy
Katherine Tierney

Visions for the Future Scholarship
Tai Nguyen

Walgreens Diversity and Inclusion Excellence Award
Jade Kutzke

Walgreens Diversity Scholarship
Yi Pin Liu

Walmart Pharmacy Scholarship Award
Leah Eckstein

Watertown District (SDPhA) Scholarship
Kaylie Gabur

Murray D. Widdis Jr. Pharmacy Scholarship
Nicole Carr

Women’s International Pharmacy Award
Ambera Felten

Yankton District (SDPhA) Award
Mindy Stewart
Assessment report
Alumni and preceptors weigh in on the most important abilities to measure in order to determine whether students are “APPE-Ready”

The Accreditation Council for Pharmacy Education’s Standards 2016 includes a requirement to assure students are ready for Advanced Pharmacy Practice Experiences (APPE-Ready) at the end of the classroom portion of the curriculum. Specifically, the standards outline 11 pre-APPE core domains in which students should be proficient. Over the summer, we distributed a survey focused on ascertaining what practitioners thought were the most important domains and assessment methods to assure students are APPE-Ready.

Sixty-four alumni and preceptors responded. Of those, most (90.6 percent) served as a preceptor in the last five years, half practiced 10 or more years (48.4 percent), half practiced in a hospital setting, one quarter in community practice (27.4 percent), and over half (53.1 percent) practiced in a city with a population of less than 100,000. Thus, the participants represented a good cross-section of the pharmacists in the state.

Participants ranked the 11 domains from most critical to least critical (Table 1). The domains that were listed most often among the top three critical domains were patient safety (55 of 64 participants), drug-related problem management (30 of 64), medication information (28 of 64), basic patient assessment (23 of 64) and ethical, professional and legal behavior (21 of 64). The most frequently recommended assessments for these critical domains are listed in Table 2.

This information will be used by the college to guide the design of our APPE-Ready assessments. Thanks to all who helped direct our vision for assessment.

Jane R. Mort

<table>
<thead>
<tr>
<th>Domain</th>
<th>Ability Statement</th>
<th>Participants Who Selected the Domain as Most Critical* N %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patient Safety</td>
<td>Demonstrate a commitment to and a valuing of patient safety by assuring accurate preparation, labeling, dispensing and distribution of prescriptions and medication orders.</td>
<td>55 85.9</td>
</tr>
<tr>
<td>Identification, Assessment and Resolution of Drug-related Problems</td>
<td>Correlate drug-related variables and patient-related variables to identify and assess drug-related problems. Evaluate how the unique characteristics of patients and patient populations impact on manifestations of drug-related problems.</td>
<td>30 46.9</td>
</tr>
<tr>
<td>Medication Information</td>
<td>Demonstrate knowledge—and accept responsibility for that knowledge—of commonly used medications, formulations and drug products.</td>
<td>28 43.8</td>
</tr>
<tr>
<td>Basic Patient Assessment</td>
<td>Collect, record and assess subjective and objective patient data to define health and medication-related problems. Patient information is collected in a manner demonstrating knowledge of patient educational level, the unique cultural and socioeconomic situations of patients, and compliance with requirements for patient privacy.</td>
<td>23 35.9</td>
</tr>
<tr>
<td>Ethical, Professional and Legal Behavior</td>
<td>In all health-care activities, demonstrate knowledge of and sensitivity toward the unique characteristics of each patient. Comply with all federal, state and local laws related to pharmacy practice. Demonstrate ethical and professional behavior in all practice activities.</td>
<td>21 32.8</td>
</tr>
<tr>
<td>General Communication Abilities</td>
<td>Demonstrate effective communication in interactions with patients, their families and caregivers and other health-care providers. Communication should be consistent with education level, cultural issues and be empathetic. Elicit feedback validating understanding of communication. These skills are essential in carrying out the Pharmacists’ Patient Care Process.</td>
<td>16 25.0</td>
</tr>
<tr>
<td>Patient Education</td>
<td>Provide effective health and medication information to patients and/or caregivers and confirm patient and/or caregiver understanding of the information being provided.</td>
<td>10 15.6</td>
</tr>
<tr>
<td>Mathematics</td>
<td>Utilize pharmaceutical and pharmacokinetics mathematics to perform accurate medication calculations. Value the importance of total accuracy in performing and applying these calculations.</td>
<td>6 9.4</td>
</tr>
<tr>
<td>Drug Information Analysis and Literature Research</td>
<td>Assess information needs of patients and health providers and apply knowledge of study design and literature analysis and retrieval to provide accurate, evidence-based drug information.</td>
<td>3 4.7</td>
</tr>
<tr>
<td>Health and Wellness, Public Health</td>
<td>Know and apply principles of health and wellness when providing individual and population-based health and wellness information. Integrate unique characteristics of individuals and populations in design of health and wellness information.</td>
<td>0 0.0</td>
</tr>
<tr>
<td>Insurance/Prescription Drug Coverage</td>
<td>Utilizing knowledge of a wide array of private and public health insurance options, assist patients and caregivers to obtain their medications and related para-pharmaceuticals in an affordable manner that meets their health-care needs.</td>
<td>0 0.0</td>
</tr>
</tbody>
</table>

* Defined as being ranked in the Top 3 Critical Domains

Table 1. Domains Ranked by Participants as Most Critical*
Table 2. Recommended Assessments for Most Critical Domains

<table>
<thead>
<tr>
<th>Patient Safety</th>
<th>N</th>
<th>% (of 53)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Identify inappropriate medication orders based on patient information.</td>
<td>36</td>
<td>67.9</td>
</tr>
<tr>
<td>Fill a prescription including: verify a prescription, dispense a solid dosage form and check a prescription prepared by a technician.</td>
<td>25</td>
<td>47.2</td>
</tr>
<tr>
<td>Prioritize tasks/medication orders.</td>
<td>21</td>
<td>39.6</td>
</tr>
</tbody>
</table>

Identification, Assessment and Resolution of Drug-related Problems (of 29)

<p>| | | |</p>
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<tr>
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<tbody>
<tr>
<td>Identify drug-related problems from medication orders for a hospital patient’s case.</td>
<td>12</td>
<td>41.4</td>
</tr>
<tr>
<td>Prioritize drug-related problems.</td>
<td>12</td>
<td>41.4</td>
</tr>
<tr>
<td>Identify a life-threatening drug interaction versus a negligible interaction.</td>
<td>10</td>
<td>34.5</td>
</tr>
</tbody>
</table>

Medication Information (of 27)

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<tr>
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<tbody>
<tr>
<td>Pass a comprehensive assessment of key elements within the top 200; pharmacology, dose, etc.</td>
<td>24</td>
<td>88.9</td>
</tr>
<tr>
<td>Create an effective plan for addressing a knowledge or skill deficiency.</td>
<td>15</td>
<td>55.6</td>
</tr>
</tbody>
</table>

Basic Patient Assessment (of 20)

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<tbody>
<tr>
<td>Carry out a medication reconciliation or medication therapy management.</td>
<td>12</td>
<td>60.0</td>
</tr>
<tr>
<td>Take a medication history.</td>
<td>7</td>
<td>35.0</td>
</tr>
<tr>
<td>Identify a drug-related problem.</td>
<td>7</td>
<td>35.0</td>
</tr>
</tbody>
</table>

Ethical, Professional and Legal Behavior (of 20)

<p>| | | |</p>
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</tr>
</thead>
<tbody>
<tr>
<td>Demonstrate professional behavior when dealing with rude customers/providers.</td>
<td>11</td>
<td>55.0</td>
</tr>
<tr>
<td>Propose a resolution to an ethical dilemma that is based on sound ethical principles.</td>
<td>10</td>
<td>50.0</td>
</tr>
</tbody>
</table>
The chance of meeting someone with cancer is more likely than not. According to the National Cancer Institute, approximately 40 percent of men and women will be diagnosed with cancer during their lifetimes. Cancer is the second-leading cause of death in the U.S., exceeded only by heart disease. One in every four deaths that occurs in the U.S. is from cancer. There are more than 100 different types of cancer and each is classified by the type of cell that is affected. Some of the major challenges in cancer include the complex molecular changes in the tumor, early diagnosis and prevention, cancer metastasis and serious side effects associated with chemotherapy.

Cancer research in the Department of Pharmaceutical Sciences has come a long way from a humble beginning in the late 1980s to a comprehensive research program covering all aspects of cancer drug development and delivery. Dr. Chandradhar Dwivedi started the program by focusing on cancer chemoprevention using natural compounds to prevent skin cancer and colon cancer.

Around 2009, the department’s cancer research got a big boost through the Governor’s 2010 funding program (2009-2015), when the department established a cancer research program in collaboration with the Sanford Cancer Biology Research Center in Sioux Falls. Currently, more than 50 percent of our faculty’s research is focused on cancer. The research spans from understanding the molecular basis of cancer, cancer drug development and development of new drug delivery systems. The major research focus includes understanding the genomic changes in cancer development, developing new drug therapies for metastatic cancers, repurposing existing drugs for cancer chemoprevention and reducing side effects of current anticancer agents using targeted drug delivery systems.

**Aspirin’s impact**

One of the research projects in the area of cancer chemoprevention focuses on understanding the anticancer effects of aspirin, a 100-year-old drug. Aspirin, ‘a wonder drug,’ is currently used as a pain reliever and to prevent the risk of blood clots in cardiovascular diseases. The ability of aspirin to reduce cancer, especially colon cancer, has been known for sometime, although, the mechanism of its anticancer effects is unknown.

Recently, the U.S. Preventive Services Task Force has published a draft recommendation for the use of aspirin as a chemopreventive agent in colon cancer. Dr. Jayarama Gunaje’s research focuses on understanding the molecular basis of aspirin’s anticancer effects. His group has recently found molecular targets for the anticancer effects of aspirin and the target was validated in multiple cancer cell lines. In addition, his group found that salicylic acid, a metabolite of aspirin, also possesses anticancer effects. It is important to note that salicylic acid is found in many plants and fruits. His work sheds new light in deciphering the anticancer mechanism of aspirin and the findings are expected to lead to new or better analogues of aspirin as anticancer agents.

**Limiting cancer metastasis**

Invasive cancers are characterized by metastasis of cancer to other organs. Cancer metastasis is attributed to 90 percent of deaths in cancer. Despite extensive research efforts, effective treatments for cancer metastasis are lacking. In this regard, Dr. Xiangming Guan’s recent research work suggests that glutathione disulfide, a natural antioxidant in the body, may have antimetastatic effects. Though the process of cancer metastasis is complex, it mainly involves cancer cell detachment from the original site and migration, invasion and adhesion to a site other than the original site.

Guan’s group found that once delivered inside cells, GSSG was able to completely block the processes of detachment and migration, significantly inhibiting the invasion process. The effects were confirmed in multiple human cancer cell lines and in a lung metastasis mouse model of melanoma. GSSG is a cell-impermeable molecule and its intracellular concentration is low under normal conditions. Guan’s group developed a liposome delivery system to effectively deliver exogenous GSSG into the cells. Further studies are underway to confirm these exciting findings and to understand the mechanism of the antimetastatic effects of GSSG.

**Addressing chemotherapy issues**

A major problem with chemotherapy is the serious side effects associated with the highly cytotoxic drugs. To this end, there is a need to target the anticancer drugs to the tumor and reduce the drug exposure to normal tissues in the body. Targeted drug delivery approaches can be designed by exploiting the differences in the tumor and normal tissues. The rapidly growing tumor tissues overexpress nutrient transporters to meet their energy demands and in addition, the tumor vasculature is ‘leaky’ compared to the normal blood vessels.

Dr. Hemachand Tummala’s group has tested the idea of using nutrients (glucose and amino acids) to target the anticancer drugs to the tumor. His group has used glucose-conjugated carriers and amino acid-conjugated anticancer drugs to target the overexpressed glucose and amino acid transporters respectively on the tumor cell surface for specifically delivering the anticancer drug to the tumor. The findings have implications in enhancing the efficacy and reducing the toxicity of chemotherapeutic agents.

On the other hand, my group has been focusing on localized drug delivery approaches in breast cancer, especially for the prevention and treatment of early stage breast cancer. We have used nipples as a potential route to retrotransport drugs directly into the breast tissue. Given that majority of breast cancers originate in the milk ducts in the breast, the localized delivery approach can maximize the drug at the target site and minimize systemic exposure. We have tested this new delivery concept in-vitro using pig and human breast tissue and in-vivo in rats. If further studies prove successful, this novel approach can lead to an effective and safe therapy for women at high risk of developing breast cancer.
Delivery barriers

Another aspect of drug delivery research focuses on understanding the delivery of nanomedicines to the tumor and their ability to overcome the delivery barriers in tumor. Although nanomedicine has generated great interest for targeting the small-scale length (nanoparticles are approximately 50 times smaller than the diameter of a human hair) is not well understood. Dr. Joshua Reineke, a recent addition to the department, focuses his research on understanding the delivery barriers in the difficult-to-treat cancers, such as pancreatic cancer. Further, given that lymph nodes serve as major sites for metastasis of cancer cells, Reineke’s research also focuses on targeted delivery of particles to the lymphatic system via the pulmonary route.

And those efforts do not include Wenfeng An’s work in cancer, which you’ve already read about.

In addition to generating knowledge in developing better therapies for cancer, our faculty are also actively involved in translating their research from bench to market through intellectual property development and licensing the technology to university spinoffs for commercialization. Through the efforts of our dedicated faculty, graduate students and postdoctoral researchers, and with the support of our stakeholders, the department continues to break ground in cancer research.

Om Perumal, Ph.D.
Department head and associate professor
Department of Pharmaceutical Sciences

Department of Pharmacy Practice

On behalf of the Department of Pharmacy Practice, I am excited to provide you with an update since the academic year started. The fall semester went by very quickly and a lot was accomplished. I will start with faculty and staff news. We had two faculty resignations. Dr. Billie Bartel relocated with her family to Aberdeen, which opened the critical care faculty position at Avera McKennan Hospital in Sioux Falls. Dr. Shawn Dalton relocated with his family to Sheridan, Wyoming, opening an ambulatory care faculty position. And Linda Kraft, who was the senior secretary the last four years, retired at the end of August.

We have already successfully recruited and filled the critical care position. Dr. Kari Taggart accepted the position as an assistant professor and started at the end of November. She brings several years of outstanding critical care experience and expertise to our faculty. I look forward to all of her strong contributions. We continue to work recruiting for the currently vacant ambulatory care faculty position.

We continue to make enhancements to the pharmacy practice curriculum. In that light, five faculty members made a site visit to the University of Iowa to observe its pharmacy practice lab in action. It was a very productive two-day visit and the group came back with some excellent ideas to incorporate into our practice lab. We are very appreciative of their willingness to host us and let us observe them.

Through a university strategic reinvestment proposal, the college was able to secure partial funding for a new position. The position has the official title of health technology instructional design coordinator. Its major focus and responsibilities will be to assist faculty with incorporating health-related technology into the classroom and laboratory instruction settings as well as incorporating more simulation. In addition, this position will maintain software programs and our health technology equipment, including our high-fidelity simulation mannequins. Michelle Parker, who has a lot of experience with instructional design at South Dakota State, has taken on this role.

Another area of focus for the department and college has been to advance our instructional expertise and efforts in the area of pharmacogenomics. This area of health practice continues to evolve and is on pace to become an integral piece of contemporary health care, including the practice of pharmacy. In order for the college to continue to educate and graduate pharmacy students who are competitive in the health-care workforce, we need to continue to put an emphasis on this evolving area. The professional pharmacy program curriculum already contains fundamental pieces of pharmacogenomics. We have been able to enhance this as the curriculum now has a pharmacogenomics elective that is offered as an elective option during the P3 year and we are continuing to look at ways and taking steps to continue to advance our efforts in this critically important area of pharmacy practice today and into the future. We continue to look at additional ways to advance our emphasis in this area as we move forward with advancing pharmacy practice.

I would like to close with a simple thank you to everyone that contributes to the outstanding education our students receive. We are very appreciative of those contributions and do not take them for granted. Thank you.

James Clem, Pharm.D.
Department head and professor
Department of Pharmacy Practice
For Daniel Remund ’75, the “R” in ROTC stood for reluctant. The pharmacy major from Wilmot signed up for ROTC simply because he viewed it as his best option.

Mandatory ROTC participation for freshmen and sophomores in South Dakota colleges ended the year before Remund arrived at State. However, the military draft and the Vietnam War were still realities. If he was going to be drafted, Remund wanted to go in as a second lieutenant commissioned by the U.S. Army ROTC rather than a noncommissioned soldier.

“I didn’t think I would enjoy the military at all. My objective was to spend as little time as possible in the military,” Remund recalls.

He had a low draft number so he stayed in ROTC, spending four years in the program and gaining his commission. He rejected an ROTC scholarship so his commitment would only be two years instead of four.

Today, Remund is a retired colonel who served more than 28 years on active duty. He earned accolades in pharmacy benefit management and, after retiring from the Army in 2005, now works as a consultant for businesses dealing with the Military Health System.

For contributions in those fields, he was honored as the College of Pharmacy’s Distinguished Alumnus at its Sept. 26, 2015, scholarship luncheon.

**Career shifts to benefit management**

“Obviously, my opinions (about the military) proved to be incorrect. I did not make a very good decision about that ROTC scholarship,” said Remund, who is now self-employed and living in Larkspur, Colorado, in the foothills of the Rocky Mountains between Denver and Colorado Springs.

He was stationed at Fitzsimons Army Medical Center in Aurora, Colo., as chief of inpatient pharmacy service when he made a career-shaping move.

In 1992, he was part of a team of pharmacy leaders from the Army, Navy and Air Force that developed 30-some business improvement ideas for military pharmacies. At the same time, the Army had created a pharmacoeconomic center to do a better job of controlling pharmacy costs.

The work interested him and in 1996 Remund was appointed deputy director of what had then become the Department of Defense Pharmacoeconomic Center at Fort Sam Houston in San Antonio.

**National contracts net big savings**

After three years as deputy director, he served as director from 1999 to 2005, leading a team of professionals performing pharmacy benefit management activities for the $5 billion Tricare (military) pharmacy benefit program. He developed initiatives that resulted in $168 million in cost savings at military treatment facilities in fiscal year 2004.

The action producing the biggest savings was negotiating national contracts for various drugs.

“If you don’t pool your buying power, you aren’t in position to get a competitive price. In my second year there, we started the process to develop the first-ever national contract,” Remund recalled. “We
went out for a bid and got some great prices.”

Major cost savings resulted when purchasing statins for cholesterol levels, nonprescribing antihistamines and proton pump inhibitors (stomach acid drugs), he said.

Group purchase model expands

Initially, the contracts were just for Department of Defense purchases. Later, Department of Veterans Affairs purchases were included in the contracts and “those also resulted in tremendous savings,” Remund said.

He is credited with establishing the first joint agency national pharmaceutical contracts by collaborating with the Pharmacoeconomic Center, the Defense Supply Center, the VA Pharmacy Benefits Management Strategic Health Group and the VA National Acquisition Center.

During his final year on active duty, Remund and other Pharmacoeconomic Center staff members worked with the Iraq Coalition Provisional Authority Ministry of Health to develop an Iraq National Drug Formulary and train Iraqi pharmacists on formulary management and pharmaceutical procurement strategies.

Brian Kaatz, a 1974 College of Pharmacy graduate and former dean, nominated Remund.

He noted Remund’s work in policy and drug utilization in Army systems resulted in “positive change that still exists, creating efficient and cost-effective drug therapy for millions of current and former military personnel. He has left behind a successful footprint for others to follow.”

Success in civilian work

As a private consultant, he spent a year with Lockheed Martin and five years as director of DoD Business Operations with the WSI Pharmaceutical Business Group. Since July 2011, he has been president of Remund Group, which has provided services to more than 50 client companies to increase access to and use of their products by the Military Health System and the Veterans Health Administration.

He said 2015 was his busiest year to date, the only drawback needing to spend 50 percent of his time on the road.

His experience in negotiating the complex Military Health System makes Remund a valuable commodity. “Complexity helps my business. If it wasn’t complex, businesses wouldn’t need my help.” On the other hand, “If they have the perception that it’s too complex and not worth it, they’ll give up on doing business with the government.”

His first job as a consultant was helping the person who filled Remund’s shoes as director of the Pharmacoeconomic Center.

While there, “a colleague suggested I find a company to work with to help others understand how the Military Health System works. ‘It will take a burden off us,’” the colleague said, because military officials spend “a fair amount of time” helping civilian firms understand how the system works.

When the private sector is better informed about how the military operates, the Military Health System should get better bids, he said.

Remund is concerned that federal “budgetary pressures could make it more difficult for Military Health System leaders to make sure Tricare beneficiaries have access to the best products and services.”

Hopes to have influence at college

Part of the reason Remund serves on the College of Pharmacy Development Council, which seeks to increase the financial resources of the college, is “to make sure there are high-quality personnel working with military pharmacy operations.

“I’m so absolutely devoted to the idea that military personnel have earned their pharmacy benefits.”

He said the greatest satisfaction of his military career was “Working with highly skilled, dedicated civilian, military and contracted personnel. I was frankly in awe of how hard these people worked to get this mission accomplished. I really feel we had a team that pulled together at all times.”

That also reflects how he feels about his oldest son, who served in the infantry in the National Guard and spent a year in Iraq.

Dan and Robin (Wiese), also a 1975 SDSU graduate, have two sons, Derek, of San Antonio, and Christopher, of Austin, Texas.

Dave Graves
The Davis Pharmacy
Continuing a four-generation legacy

From the time Matt Lavin ’96 was playing in the attic of the family drugstore, he knew he wanted to be a pharmacist. “Pharmacy was all I knew growing up,” said Lavin, a Vermillion native.

Three generations of pharmacists—Lavin’s mother, father, grandfather and great-grandfather—shone a light on the personal gratification a small-town drugstore supplied.

The Davis Pharmacy entered Lavin’s mother’s family in the early 1900s when his great-grandfather, Roy Davis, took over the Vermillion drugstore from Alfred Halgerson. Lavin grew up watching his grandfather, Marshall, and father, Tom, operate the drugstore. Now, Lavin owns and operates the store.

Both of Lavin’s parents were pharmacists and graduated from State. While his mother’s family owned the pharmacy, Sandy worked at the Sanford Health hospital pharmacy in Vermillion.

“I spent everyday growing up at the pharmacy,” Lavin said. “I tried to stay out of trouble when I was really young. My dad would hand me a rag and ask me to dust the shelves or fill some bottles. But when I got into high school, my responsibilities grew and I helped behind the cash register or counter.”

Lavin said spending all that time at the family pharmacy was what drove him into it. “Watching my parents take care of people the way they did, and seeing the interactions they had with customers really made me want to go into pharmacy,” he said.

‘Great college routine’

After graduating from the pre-pharmacy program at University of South Dakota in 1992, Lavin was accepted into the pharmacy program at State.

Lavin loved his years at State because “it had that small-college feel.”

He knew all of his classmates, as well as many students in other programs. “The professors knew who I was and asked me about my personal life when they saw me walking around campus,” he said. “I had the ability to go in and talk to them whenever I wanted, and they remembered me.”

When Lavin wasn’t meeting his close friends for early breakfast at the University Student Union, or studying at the library, he was hunting and fishing. “If something was flying, or we had an hour to squeeze in some fishing—that is what we were doing,” Lavin said.

And when Lavin was late for class, he said professors knew it was because he was either hunting or fishing. “I loved that we could do that around Brookings. I was able to keep pursuing a lot of my personal passions during school, and it always seemed like the professors accepted each student as an individual.”

“I remember Matt as a student—as he is today—very outgoing,” said Dennis Hedge, dean of the College of Pharmacy. “As a junior faculty member then, I was assigned to teach Drug Literature Evaluation and recall visiting with him and a classmate, Patrick Jensen, before most every class. They were always doing something—often hunting and fishing. As a rookie instructor, they made class fun.”

Lavin knew his classmates had different reasons for pursuing pharmacy. “In school, I heard a lot of different reasons for people going into pharmacy,” he said. “Some went into it because of the income, some because family or friends were in the field, some enjoy the atmosphere, some love health care, but for me it was because of the people—the customers.

“It’s why I went into this—watching people come in to talk with my dad everyday, multiple times a day. If a patient had a question, my dad had an answer. I always saw my parents taking care of their customers. The customers could have gone to any pharmacy, but they chose our pharmacy because they knew they could trust us and they would be taken care of. That’s what pharmacy—at least in my mind—is all about.”

After graduation, Lavin worked as pharmacy manager at the Lewis Westgate Store in Sioux Falls for two years, then moved home to Vermillion to direct the Sanford Health hospital pharmacy. There, he worked with his mother. During the 15 years Lavin spent directing the hospital pharmacy, he worked nights and weekends at the family pharmacy.

Lavin now works full time at The Davis Pharmacy, alongside his father. He said working with his father is great. “It’s different than when I worked with him when I was younger,” Lavin said. “He has this innate amount of information about the field and that is just something that someone who has been working for 40 years has.”

Small town, best part

Lavin said, operating a pharmacy in Vermillion, he knows just about everyone who walks through the door.

“As a pharmacist, you really get to know your patients everywhere you work,” Lavin said. “You learn to take care of your regular customers. Students or new folks will come into the store, and it doesn’t take long before I know them well, too.

“I had a mom who was on call at the hospital and a father who everyone in town knew they could call anytime,” Lavin said. “I spent 15 years being on call at the hospital and nights and weekends at the pharmacy. I know a lot of people consider that you’re always obligated, but it was the fact that I grew up knowing nothing different. To me, it’s like having a huge extended family. My siblings, as pharmacists and dentists, are the
same way. They’ll go in at odd hours on odd days. Maybe it’s in our genetics.”
Growing up, Lavin said he never remembers being swayed to pursue pharmacy.
“My parents told my siblings and I that we needed to go to college after high school, but never pressed us to go into the pharmacy.”

All four of the Lavin siblings started in pharmacy after high school. His older brother Marshall, and younger brother, Mark, started in pharmacy and then switched to dental school once accepted, and Matt and Megan chose to stay with pharmacy. Marshall and Mark now work as dentists in Sioux Falls, and Megan works at Sanford Hospital in Sioux Falls. “Health care was a done deal in our family,” Lavin said. “It was just where we all wanted to be.”
Lavin said he thought about pursuing dental school. “It was one of those deals where you apply at the same time for dental and pharmacy school, and typically you get into pharmacy right away, and only begin the process of applying to dental school—taking the exam and setting up interviews.
Lavin completed his first year of pharmacy school before being accepted into a dental program and chose to stay with pharmacy.

Fifth generation at drugstore
Lavin and his wife, Carol, have two children, Madison, 15, and Hunter, 13, who help at the drugstore. “I think they enjoy it,” Lavin said. “Madison sure does because she’s older and is getting away from some of the grunt work that Hunter does. Hunter says if he doesn’t go on to be a professional athlete then he will come back to the pharmacy.”
Lavin said he has customers come into the drugstore now and say similar things to his children as he heard as a child.
“I remember my dad’s customers would say things like, ‘Oh, you can tell Matt is a Davis,’ and now people come and say the same sort of things to Madison and Hunter. Generations of families have chosen to keep coming back to the pharmacy because they know how much we care.”

—Matt Lavin ’96

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