Preparing students to become competent, caring, ethical health professionals and citizens.
When it became clear that the H1N1 flu virus would be a factor in this academic year, the College of Pharmacy, Nursing, and Allied Sciences took notice. This fall, they stepped up efforts in providing information on the virus and enacting preventive measures to hold the flu at bay.

Pharmacy, Nursing, and Allied Sciences ambassadors joined the fight against flu by ordering 500 bottles of hand sanitizer personalized with a college label. They handed out 400 of the bottles between classes along with pamphlets containing the Centers for Disease Control and Prevention’s information about the H1N1 virus. Ambassador president Mary Raven, a third-year pharmacy student, said the event was a success.

“People definitely appreciate it,” she said. “Now there’s sanitizer gel all over campus, but I think people appreciate being able to put it in their backpacks. Protecting each other is just helpful.”

Dean Charles D. Peterson said the college took their cues from the World Health Organization and the Center for Disease Control, who were concerned about the disease. The quick spread may have big impacts on the college if a large number of students and faculty are ill at the same time. Two pharmacy students have already been hospitalized due to H1N1. Part of the college’s role is to promote public health and disease prevention, and they took it seriously. The college put together plans and action steps to address issues related to H1N1 outbreaks.

“We basically had a simple philosophy,” Peterson said. “Get everyone involved.”

Information on the virus was distributed to faculty and staff in every department. Faculty members were asked to prepare alternative learning methods in case of an outbreak and students are unable to come to class. Faculty members also were asked to be more flexible than usual with absentee students and allow them to stay at home. The college also worked to get information out to the campus at large through the following ways:

- A sponsored, campus-wide audio conference with an emergency management expert in pandemic flu planning to discuss measures,
- A page on the college’s Web site with links to the Center for Disease Control information and other public health service providers, and
- Informational posters on prevention set up around the building on such things as hand washing, keeping hands away from the face and standing away from people who might be sick.

“We essentially empowered our people with information and allowed them to take action on their ideas. They appreciated it and responded accordingly. They were saying, ‘Yeah, we’re all working on this, and it’s not so scary because we have access to information and are doing something about it,’” Peterson said.

Other measures implemented in the college include more frequent cleaning and disinfecting of contaminated areas, elimination of reusable hand towels and posting signs on the drinking fountains to stop people from using them. The public drinking fountains were a measure the college led the campus in by requesting they be turned off. When the request was denied, the college administration took matters into their own hands by physically taping over all drinking fountains in Sudro Hall. There was some criticism of this practice across campus, but Peterson felt the level of intervention was appropriate considering the students who had already been hospitalized due to the flu.

The college also offered its services to the university. When the university received a large shipment (2,200 doses) of H1N1 vaccine on Dec. 1, trained pharmacy and nursing students and faculty helped to administer flu shots to students at a campus-wide H1N1 flu clinic on Dec. 3. The college also provided refrigerator space to store the large quantities of vaccine before administration. The Thrifty White Concept Pharmacy also has been made available to the university as a site for students to receive H1N1 flu vaccinations.

“We’ve learned a lot by this experience,” Peterson said. “And by working together, we’ve come up with some terrific plans and action steps that have gone beyond what a lot of others have done. I feel good about the fact that our college has taken a leadership role in addressing a major public health concern for the campus.”
Greetings to all of you! I hope your holidays were filled with lots of fun, food, and family.

NDSU has experienced a number of unprecedented events. Most notably is: President Joseph A. Chapman submitted his letter of resignation to Chancellor William Goetz on Oct. 14. In an e-mail to the entire campus, President Chapman gave the following reasons for resigning: “Controversies in recent days have created distractions that have made it impossible for me to provide the leadership this institution deserves. Students have always been paramount, and I fear these distractions have impaired my ability to serve their interests.”

President Chapman joined NDSU as its 13th president in June 1999 and brought bold leadership to the university, focusing on five themes: It’s About People, Students are Paramount, Programs, Leveraging Support, and Stature. His unprecedented achievements during his tenure including the Research and Technology Park, Renaissance Hall, Richard H. Barry Hall, Klai Hall, Benton/Bunker Fieldhouse, Memorial Union, Soduto Hall, Equine Science Center and Bison Sports Arena, to name a few. The effective date of President Chapman’s resignation was Jan. 2. However, his last day at NDSU was Nov. 30.

The North Dakota State Board of Higher Education named Richard A. Hanson interim president of NDSU on Oct. 23. President Hanson’s previous experiences include: president of Waldorf College in Forest City, Iowa, from June 2005 through November 2009; vice president for academic affairs and dean at Augustana College from 1995 to 2005; interim vice president for academic affairs at NDSU in 1995; associate vice president for academic affairs at NDSU from 1993 to 1995; and department chair of home economics at California State University in Chico.

President Hanson is a native of Hillsboro, N.D., and earned his bachelor’s degree in sociology and master’s degree in child development and family relations from NDSU. He earned a doctorate in applied behavioral science from the University of California, Davis. He played football for NDSU, then for the New York Giants from 1971 to 1972. President Hanson began his duties as interim president on Dec. 1.

This is a big change for us and for NDSU. We need to remember that President Chapman was a great leader who also happened to lead a great university. This same momentum that has brought us all to this point. It is business as usual for us, including striving for even greater heights not previously seen before. We will continue to march on and march forward, something we all would expect from a thundering herd.

I want to personally thank President Chapman and Gale for all they have done for us and for NDSU. We have been forever impacted and changed by their great leadership, and our college has reached new levels of excellence in all areas because of their efforts. I also want to welcome President Hanson as interim president of NDSU. We look forward to working with him through this important transition. Go Bison!

Charles D. Peterson, dean Phone: (701) 231-7609 Fax: (701) 231-7606 E-mail: Charles.Peterson@ndsu.edu

College develops creative programs to foster diversity

On Dec. 17, several little bodies in white lab coats and blue hospital scrubs scurried around Madison Elementary School in Fargo. For 18 of the school’s second and third graders it was graduation day from an afterschool program called “The Great Healthcare Adventure,” and their reward was selecting a coat or scrubs as their “graduation gown.”

The program, which took place every Thursday for six weeks during the 2009 fall semester, was led by students, faculty and staff from NDSU’s College of Pharmacy, Nursing, and Allied Sciences. It was one of the initiatives funded by a $10,000 grant from Walgreens Co. to support and expand the college’s diversity efforts.

The program’s purpose is two-fold: introduce the elementary students to career opportunities that may not otherwise have access to and create an opportunity for the college students to work with individuals from different economic and cultural backgrounds, similar to what they will experience in the real world.

To engage the children on topics like pharmacy, nursing, radiologic sciences and more, students did fun, interactive activities like color cartoon viruses, press on temporary tattoos resembling bacteria, examine glow-in-the-dark germs, use plastic beads and aluminum tubing to fill prescription bottles, play online games and watch videos.

Kimberly Halbur, associate dean for student affairs in the College of Pharmacy, Nursing, and Allied Sciences, and Dana Davis, director of recruitment for the college, created and implemented the program.

According to Halbur, the favorite activity was puppet shows. Eight puppets representing different healthcare professionals and ethnic backgrounds, told the story of a little boy who fell out of a tree and recovered by working with various healthcare specialists. “They loved it, they were huge fans of the puppets,” Halbur said.

Seeing the children enjoy the program was a huge reward, but the most gratifying reward will be several years delayed. “I can’t imagine how cool it would be to have a student come to NDSU and say I’m here because you looked at glow germs with me, or helped me understand how an X-ray is made when I was in second grade,” Halbur said. “I feel really good about this program. We need to diversify the healthcare workforce … and the grant funds from Walgreens allowed us to do that with this partnership with Madison Elementary.”

The college’s other diversity efforts include collaborating with Moorhead High School to introduce healthcare fields to the students; participating in Expanding Your Horizons, a program for sixth-through-eighth-grade girls to learn about careers in science and math; and offering the Native American Professional Program and Multicultural Affairs in Pharmacy Program.

To represent the current diversity among the college’s students, faculty and staff, the college also has hung flags representing different countries and tribes in the atrium of Suden Hall, and has displayed a calendar that lists and explains different holidays observed around the world. “These things show us as a college we are really proud of the diversity we have,” Davis said. “It’s a way to celebrate the people in our college.”
New experience requirements going well

This past year, the Department of Pharmacy Practice implemented Introductory Pharmacy Practice Experiences, a requirement from the Accreditation Council for Pharmacy Education for students to gain 300 hours of pharmacy experience in a variety of pharmacy settings before their fourth year of school. With one year of the new program finished, Rebecca Focken, director of Introductory Pharmacy Practice Experiences said the program is being received positively.

“It’s been going very well,” she said. “We had our first-year students complete shadowing last spring, and they also did 80 hours in an institutional setting last summer.”

The new emphasis on introductory experiences is an effort of the Accreditation Council to standardize the wide variety of introductory experiences found in the curriculums of colleges of pharmacy across the country. These new requirements are in addition to the existing pharmacy course work and a fourth-year practice experience. Fourth-year students will continue to participate in eight five-week Introductory Pharmacy Practice Experiences rotations as they have in the past.

The Introductory Pharmacy Practice Experience activities for NDSU students have changed slightly after the first year of implementation. The new format provides students an opportunity to work in and explore pharmacy careers in a variety of pharmacy practice settings prior to their fourth year rotations.

“Giving students a broader range of practice experiences earlier in the curriculum provides students with opportunities to make more informed choices regarding the types of elective rotations they take during their fourth year of pharmacy school, and ultimately, can assist students with the decision making process as they decide which career path within the pharmacy profession they will pursue following graduation,” Focken said.

Alumnus receives Clinical Pharmacy award

A few years ago, Jeffrey Bratberg was sitting in Sudro Hall, working on class work toward a pharmacy degree at NDSU. A classmate told him that he should be a teacher. He didn’t think much of it then, but the prophecy came true, and he was recently awarded for his outstanding contributions to the discipline of teaching and to the education of health care practitioners.

Bratberg, PharmD ’00, received the American College of Clinical Pharmacy New Educator Award and was recognized for innovative teaching techniques and the variety of disciplines that he teaches. The American College of Clinical Pharmacy is a professional and scientific society that provides leadership, education, advocacy and resources enabling clinical pharmacists to achieve excellence in practice and research. American College of Clinical Pharmacy’s membership is composed of practitioners, scientists, educators, administrators, students, residents, fellows and others committed to excellence in clinical pharmacy and patient pharmacotherapy.

Bratberg is clinical associate professor of pharmacy practice at the University of Rhode Island. He also serves as clinical assistant professor of medicine at Brown University Medical School and clinical pharmacy specialist in infectious diseases at Roger Williams Medical Center in Providence, R.I.

At the University of Rhode Island, he coordinates and teaches infectious diseases courses, including large lectures and small group classes in the fall semester, and in the spring he teaches a pharmacy course and collaborates with the film studies group to create public service announcements about public health. He also oversees students on advanced practice rotations at the hospital, discussing patient cases and optimizing antimicrobial therapy for them. In addition, he teaches two lecture courses at the Brown University Medical School.

“It was a true honor and rather surprising,” Bratberg said about receiving the award. “It’s nice to be recognized for doing innovative things.” He said that his goal is to consistently improve his teaching and to have an impact on his students and their patients.

A mainstay of his teaching methods is exposing his students to up-and-coming technology. He also falls back on some of the techniques that were used when he was a student at NDSU in the basic theory of group projects.

Bratberg’s advice to future pharmacists is to look for opportunities and make your own luck. “Sometimes opportunities come along and people think it’s luck, but my belief is that you can do anything, you just have to seize the opportunities that are out there. The best time in life to take a risk is when you graduate. Look for something new and see where it takes you.”

Johnson recognized by national pharmacy society

Thomas Johnson, South Dakota State University pharmacy practice professor and Avera McKennan Hospital’s clinical specialist in critical care, was named a fellow of the American Society of Health-System Pharmacists at the society’s summer meeting. Johnson earned his bachelor’s degree in pharmaceutical sciences in 1995 and his PharmD in 1997 at NDSU.

The society evaluated Johnson against a strict set of credentials that included contributions to scientific literature, research, education and active participation and leadership in professional activities. A minimum of 10 years in health-system pharmacy was required as well.

Since the society’s fellow program began in 1988, they have honored 619 fellows, and Johnson is the only fellow named from South Dakota to date.

“Many of my patients come to the hospital because of the critical care pharmacy. I think it’s a very important role,” Johnson said about his work.

Johnson grew up in Brainerd, Minn. He was drawn to NDSU by the opportunity to play in marching band and study pharmacy. He also liked the small town atmosphere.

“I got a really good education,” he said. “There was a lot of one-on-one attention.”

Johnson teaches critical care medicine in both experiential and didactic roles at SDSU, and he directs a critical care residency program for the hospital’s postgraduate year-two pharmacists. He also teaches the postgraduate year-one pharmacy practice residents.

Johnson served as president of the South Dakota Society of Health-System Pharmacists and was that society’s 2005 Pharmacist of the Year.
NDSU pharmacy graduates excel during national exam

New test results tell a resounding story of success for the College of Pharmacy, Nursing, and Allied Sciences.

This past spring, every NDSU pharmacy graduate who took the national licensing examination passed on his or her first attempt. The test is the North American Pharmacist Licensure Exam (commonly called NAPLEX), which is designed to gauge a person’s competency in pharmacy practice.

“It was exciting to open up the scores, and it’s fun to see that we’re doing well,” said Don Miller, professor and chair of pharmacy practice. “The scores reflect the readiness of our class to go into practice.”

For the second year in a row NDSU had a 100 percent pass rate, compared to the national average of about 97.5 percent. The average score for NDSU graduates during the most recent exam was 121.2, a distinctive total when contrasted to the 114.7 average score across the country.

According to Miller, NDSU has usually been at or above the national statistics during the past 20 to 30 years. He credits recent changes to the curriculum and the quality of students for maintaining NDSU’s position in the forefront.

“We are keeping our curriculum up-to-date with current standards, and NAPLEX is one of the few ways that we can compare ourselves against other colleges,” Miller explained. “We’ve raised the bar again, and it’s helping us keep ahead of other schools.”

With the success comes satisfaction and pride for the recent graduates. Anne Gorder, who is a pharmacy resident at MerritCare Health System in Fargo, is among those who passed her exam this spring. “This reaffirms that NDSU is a very competitive school of pharmacy – we rank highly in the nation,” Gorder said.

Another of the graduates, Brandon Haas, said he had lofty expectations when he came to NDSU, so he was not surprised by the results. “NDSU always has had a high pass rate,” said Haas, who is a pharmacy resident at St. Alexius Medical Center in Bismarck, N.D., which is part of the PrimeCare Health Group. “It just goes to show our pharmacy program prepares us well to go into practice.”

In another important test, NDSU graduates showed excellence in the Multistate Pharmacy Jurisprudence Exam, which measures knowledge of pharmacy law. From January through April 2009, NDSU’s pass rate was 130 percent, while the national level was 88.5 percent. For May through August 2009, NDSU’s pass rate was 99.2 percent, compared to 94.3 percent nationally.

“We are fortunate to have a good pool of students who are well prepared to begin our program, and they reflect very well on us in practice,” Miller said. “Many preceptors who work with students from other schools consistently say they really enjoy NDSU students because they are smart, well prepared and a pleasure to work with.”

NDSU Alumni Association honors

Darryle D. Schoepp, BS ’78, pharmacy

Honor: Alumni Achievement Award, which honors NDSU alumni who have excelled in their profession.

Career: Senior vice president and franchise head for neuroscience at Merck and Company. Previously was vice president of neuroscience discovery research at Eli Lilly and Company.

Research: Focuses on glutamate receptor pharmacology, led pioneering efforts to investigate novel agents for psychiatric and neurological disorders.

Career highlight: Receiving the 2002 Pharmacia/American Society for Pharmacology and Experimental Therapeutics Award for career research on the experimental therapeutics of metabotropic glutamate receptors.

NDSU impact: “My first laboratory experience that created a lifelong passion for a scientific career was at NDSU. With my professor’s support, I was able to set up and run the pharmacology labs for pharmacy students. My research project at NDSU led to my first publication and presentation to the North Dakota Academy of Science. My professors were always there for me and helped me get into graduate school.”

Favorite NDSU experience: “Walking up to the pharmacy building after a blizzard and realizing I could not get in because the door was buried in snow. I have the picture to prove it.”

Future goals: “Our goal is to have Merck research labs discover and launch novel drugs for areas with very high medical need, in particular Alzheimer’s disease and Schizophrenia.

Advice for success: “There is no substitute for hard work and passion for what you do in life. Learn to work in teams and always lead by example.”

William Grosz, BS ’51, pharmacy, Doctor of Science (Honoris Causa) ’90

Honor: Heritage Award for outstanding volunteer service to NDSU.

Career: Retired as executive director of the North Dakota State Board of Pharmacy in 1997 and continued as the board’s treasurer and senior compliance officer through 2007. Also was executive director of the North Dakota Pharmacists Association for five years.

Activities: Member of the Pharmacy National Advisory Board since 2007, NDSU Research Foundation advisory board, College of Pharmacy Building Excellence steering committee, Team Makers, NDSU Arizona Week planning committee.

Career highlights: Receiving the Hugo H. Schaefer Medal from the American Pharmacists Association in 1993 – the first North Dakotan to be honored for outstanding volunteer contributions. He said another achievement was helping to maintain the Pharmacy Ownership Statute during four legislative sessions, which he said kept pharmacists in the state’s smaller communities and provided health care access for the public.

NDSU impact: “My faith, family and NDSU are the most important things in my life. I first walked on the NDSU campus in the 1930s and I fell in love with it.”

Favorite NDSU experience: Among his memories are the historic day during the 1949-50 academic year when the university reached 2,000 students for the first time and when NDSU’s PharmD program received accreditation in 1996.

Future goals: “Time, talent and money cannot repay what NDSU has given me. I will help NDSU in any way that I possibly can.”

Advice for success: “Students should have a dream and vision, and dedicate themselves to be a caring and concerned pharmacist. They should be amenable to confront patient care and technology with fortitude. That will lay the foundation for a successful career.”

Bradley J. Undem, BS ’79, pharmacy

Honor: Henry L. Bolton Academic Achievement Award, recognizing outstanding alumni achievement in education.

Career: Professor of medicine at Johns Hopkins University School of Medicine, with more than 200 papers published relating to the neuropharmacology of the respiratory system.

Expertise: Internationally renowned authority on the neural control of the respiratory tract in health and in airway diseases. Consultant for more than 20 pharmaceutical companies involved in the development of new drugs for airway diseases.

Career highlight: Mentoring more than 20 doctoral candidates and postdoctoral research fellows, who have gone on to productive careers in biomedical science; secondly, in making a substantive contribution to the overall understanding of the pathophysiology of diseases such as asthma, Chronic Obstructive Pulmonary Disease (COPD) and chronic bronchitis.

NDSU impact: “I was very fortunate to be taught by the exemplary faculty in Sudro hall during the years 1977-79. Collectively, they provided me with a sound foundation of basic pharmaceutical and biomedical knowledge that I leaned on heavily as I continued my studies in Madison and Baltimore.”

Favorite NDSU experience: “Playing pinochle with roommates and friends for a penny a point, and falling in love with Nancy Fercho – my wife of 28 years (not necessarily in that order).”

Future goals: “My future goal, along with the goal of virtually every academic scientist, is to continue to successfully compete in the arena of ideas for the funding required to keep my research laboratory at Johns Hopkins afloat.”

Advice for success: “If I were to be honest, my advice to others based on introspection and reflection of my own career, would be to figure out a way to get lucky. Luck has been the key to my success; beginning with the good fortune I had in starting my career in Sudro Hall.”

Among his memories are the
Pharmacy Today features NDSU pharmacy graduate

Today, Gulseth is program director for anticoagulation services at Sanford USD Medical Center in Sioux Falls, S.D. His duties include providing patient care, teaching and mentoring other pharmacists in caring for patients on anticoagulation.

“I love sharing my knowledge base with others and improving the lives of patients. It is rewarding to see other people be successful and see other people care for patients more effectively,” Gulseth said.

Gulseth said that 10 years ago he wouldn’t have anticipated being featured on the cover of Pharmacy Today, but he feels very fortunate. “I have been very blessed to work with tremendous people … I would have certainly not had these opportunities if it weren’t for those people. Those mentors have helped me learn how to optimally care for my patients and share that knowledge with others.”

Pharmacy students help administer flu shots

During the early rounds of fighting the flu this season, Student Health Services got a helping hand from the College of Pharmacy, Nursing, and Allied Sciences. Eight pharmacy students and eight nursing students helped to administer seasonal flu shots on Oct. 28 at NDSU. For pharmacy students in particular, the event was a chance to practice newly learned immunization skills.

Student Paul Heim helped during the morning of the event. “It was very steady,” he said. “For the most part, after I was done with each shot, I had to immediately prepare to administer the next vaccine. There was very little downtime.”

The students administered about 60 to 75 doses each during the morning shift. Faculty members monitored the students and made sure they completed the proper documentation. Although the plan was to hold the flu clinic until 1:30 p.m., vaccine doses ran out by 1:30 p.m.

The pharmacy department is in its fourth year of certifying pharmacy students, and this is the first year NDSU’s students become certified in the spring of their third year, but sometimes don’t have the opportunity to practice during their rotations.

“Not all local pharmacies do immunizations,” said Alicia Fitz, assistant professor of pharmacy practice and pharmacy manager at Student Health Services. “This was a great opportunity.”

LaNell Staroba, who helped during the busy morning shift, said it was her first time giving shots outside of the lab. “I am far more confident in my abilities to vaccinate,” she said.

Pharmacy and nursing students again helped administer vaccine in December for the H1N1 virus.

where are they now?

Agnes Harrington, professor emeritus, was worried she wasn’t going to be busy enough after retiring from the College of Pharmacy, Nursing, and Allied Sciences, so she said yes to a lot of offers. Now she keeps several schedule books full.

She was on the recent search committee for the associate dean of nursing and allied sciences when they picked Loretta Heuer, who was a student while Harrington was chair of the Department of Nursing. As a Pharm-assist person for the Fargo area, Harrington works with students, pharmacists and pharmacy technicians who are in need of support for substance abuse issues and other stresses. She is on the board of ShareHouse, an outpatient and residential addiction treatment center in Fargo. Harrington serves on the Catholic Charities Board of North Dakota and the Patient Family Advocacy Committee at MeritCare.

Harrington keeps schedule full after retiring from NDSU

Amber Altstadt is all-around student leader standout

It’s no secret. Pharmacy is a demanding degree that requires discipline and skillful time management. Budgeting time for extracurricular activities can be challenging. But somehow Amber Altstadt, a second-year student in the professional pharmacy program, has managed to remain a top student while committing to arguably the most time consuming student leadership position on campus.

In April, Altstadt and running mate, Andy Schlickup, were elected student body president and vice president, making Altstadt the second female in NDSU history to hold the title. Altstadt gained experience in student government while serving as a senator for the College of Pharmacy, Nursing, and Allied Sciences and later as the commissioner for Congress of Student Organizations. In fall 2008, she began deliberating whether or not to run for president. “After talking to peers and getting their commitment to help me get projects done, it just clicked one day. I have to do this, I will regret it if I don’t,” Altstadt said.

Since then Altstadt and her team have acted on a variety of campus initiatives. Some of the bigger ones include passing a campuswide smoking ban, proposing an early semester review of instruction, starting a freshman leadership organization, launching Red Rover (an online tool which helps students choose student organizations), researching the allocation of the student technology fee, starting an academic recognition banquet, and building more connections between students and alumni.

As for the balancing act of pharmacy student and student body president, Altstadt says the level of difficulty fluctuates. While the amount of time she devotes to student government averages about 30 hours a week, some weeks it is more and others less. “Sometimes, it makes for some late nights and early mornings, but when you love what you’re doing, it’s not that hard.”

Harrington earned her bachelor’s degree in nursing from the University of Kansas, Lawrence, a master’s degree in counseling from NDSU and did graduate work in nursing at the University of Minnesota.

Harrington began her NDSU career as a counselor at the Counseling Center in 1969. She transitioned to counselor education where she taught until 1979, when she was selected as the chair of the associate degree program in nursing. In 1989, she became the assistant dean of the college. In addition to administrative work, which included student services and chairing the admission and academic affairs committees of the college, she focused her teaching in areas of health care ethics, health care systems and genecology. She had a special interest, which continues today, in working with students from culturally diverse groups.

She retired in 2005 after 36 years and continues her involvement with the college.

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Amber Altstadt addresses the audience at the dedication ceremony of Richard H. Barry Hall.

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Student group receives national recognition

NDSU’s chapter of the Student Societies of Health-System Pharmacy has received recognition from the American Society of Health-System Pharmacists. This is the first time the group has received official recognition.

“It means a great deal, because it shows a commitment to the profession and also a commitment from the students in their own professional development,” said Mike Kelsch, adviser to the group and assistant professor of pharmacy practice. “It is an important accomplishment because not all pharmacy schools have student groups that have received recognition from ASHP.”

To be recognized, NDSU’s 55-member student group needed to meet criteria such as promoting membership in local, state and national health-system organizations; stimulating interest in pharmacy careers; and encouraging career development and professionalism among pharmacy students. Some of the requirements were Clinical Skills Competition participation, coordinating at least two events featuring health-system and professionalism among pharmacy students. Some of the in pharmacy careers; and encouraging career development awareness from ASHP. “It is an important accomplishment because not all practice. “It is an important accomplishment because not all pharmacy schools have student groups that have received recognition from ASHP.”

Robert Biberdorf, assistant professor of pharmacy practice and executive partner for MeritCare Pharmacy Services, joined more than 80 other professors and graduate students from universities throughout the U.S. and around the world in the National Institutes of Health Office of Dietary Supplements course. Titled “Dietary Supplement Research Practicum 2009,” the course was held on the National Institutes of Health campus in Bethesda, Md., June 1-5.

The Office of Dietary Supplements offers this annual intensive course to provide essential knowledge of dietary supplements to academic faculty and their doctoral or postdoctoral students with a serious interest in the subject. Experts from the National Institutes of Health, academic institutions and federal regulatory agencies such as the U.S. Food and Drug Administration served as speakers.

Wu active in pharmaceutical research

Enzi Wu, assistant professor of pharmaceutical sciences, has published several research papers and given one presentation in recent months.

“Marine Suppresses Breast Cancer Cell Proliferation and Invasion via VEGF-Akt-PI3-Kappa B Signaling” was published in Cytotechnology. Written with Guoying Zhang, a colleague from Yantai University in China, the study looked at the anticancer mechanisms in a natural compound known as matrine.

Wu, Zhang and Fengfei Wang, a research associate in the Department of Pharmaceutical Sciences at NDSU, published “Suppression of Growth, Migration and Invasion of Highly Metastatic Human Breast Cancer Cells by Berbamine and its Mechanisms of Action,” in Molecular Cancer. The researchers discovered that berbamine suppresses the growth, migration and invasion in highly metastatic human breast cancer cells and it has synergistic effects with anticancer agents.

“Recent Advances in Natural Bioactive Cycloartane Triterpenoids” will appear in the book series titled “Recent Progress in Medicinal Plants.” The manuscript was written with Ze Tian (first author), Kungfeng Liu and Pinjin Xiao and it summarizes the diverse bioactivities of cycloartanes.

“A Practical Platform for Blood Biomarker Study Using Global Gene Expression Profiling of Peripheral Whole Blood” was published in PLoS One. The study suggests that poor data obtained from pre-globin reduction samples is the result of the high concentration of hemoglobin derived from red blood cells either interfering with target mRNA binding or giving the pseudo binding background signal.

Wu also will publish “Mammalian Target of Rapamycin Regulates Cell Differentiation through STAT3-P63-Jagged-Notch Cascade” in the Journal of Clinical Investigation. The study revealed that inhibition of cell differentiation by the augmented Notch signaling could be responsible for the under-differentiated phenotype displayed by tumors with an activated RTK-PI3K-AKT-mTOR pathway.

Wu presented a poster titled “PDGFR alpha and PDGFR beta Differentially Regulate Cell Proliferation and Migration/Invasion in Medulloblastoma Cells” at the 2009 International Association for Biological and Medical Research annual meeting in Boston on Nov 19. Wang is first author for the poster. The data suggest that platelet derived growth factor receptor (PDGFR) alpha and PDGFR beta play different roles in cell proliferation and migration/invasion in medulloblastoma brain tumor cells.

Researchers in Wu’s laboratory study tumor therapeutic targets, anticancer natural products, traditional Chinese medicine, drug discovery, biomarkers, signaling pathways and pharmacogenomics.
New to College of Pharmacy, Nursing, and Allied Sciences

Heidi Eukel
assistant professor of pharmacy practice

Focus: Concept Pharmacy

Responsibilities: Teaching students to provide quality pharmaceutical care and patient-centered care through practical application of clinical skills. Eukel also is responsible for providing patients in the region comprehensive care through provision of North Dakota’s statewide diabetes management program.

Research: Teach pharmacy student medication therapy management skills and evaluate students providing health screenings to participants from rural areas.

Previous experience: Community pharmacy practice in Fargo and serving patients in the region through North Dakota’s statewide diabetes management program

Certifications: Eukel is a certified pharmacy-based immunization delivery provider and a certified diabetes care certificate program provider.

Degrees: Bachelor's degree in pharmaceutical sciences and PharmD from NDSU

Elizabeth Skoy
assistant professor of pharmacy practice

Focus: Instructing first, second and third year professional pharmacy students in a unique hands-on environment, on non-sterile compounding and medication therapy management.

Research: Developing and incorporating medication therapy management into the concept laboratory setting. Skoy has obtained the use of nationally recognized software to assist in instruction and provide a realistic medication therapy management experience for students.

Previous experience: Pharmacy manager for Walgreens in Amos, Iowa, and traveling to various sites to administer influenza and pneumococcal vaccines. While in Ames, she performed medication therapy management services through Outcomes Pharmaceutical Health Care.

Degrees: Bachelor’s degree in pharmaceutical sciences and PharmD from NDSU

Certifications: Skoy has her Immunization Certification and is working on her Diabetes Disease State Management Certification. She is a licensed pharmacist in Iowa, Minnesota and North Dakota.

Erxi Wu
assistant professor of pharmaceutical sciences

Responsibilities: Teaching pharmacodynamics and pharmacogenomics and performing research.

Research: Tumor therapeutic targets, anticancer natural products, traditional Chinese medicine, drug discovery, biomarkers and pharmacogenomics

Previous experience: Faculty member at Children's Hospital Informatics Program, Health Sciences and Technology Division, Harvard-Massachusetts Institute of Technology

Degrees: Wu attended graduate school at Massachusetts Institute of Technology and earned a bachelor’s degree from Hunan Normal University. He held a postdoctoral research position at Dana-Farber Cancer Institute, Harvard Medical School, and earned his doctorate at Sheffield Medical School, University of Sheffield, United Kingdom.

Kristi Weston
advancement assistant

Responsibilities: Assisting the college in advancement by helping plan the career fair and scholarship program, organizing alumni reunions and programs and assisting with the advisory board.

Previous experience: Weston worked for the NDSU Alumni Association for 12 years.

Degrees: Bachelor’s degree in mass communications from Minnesota State University Moorhead

Chengwen Sun, assistant professor of pharmaceutical sciences, has published two articles in Circulation Research, the journal of the American Heart Association.

“Actions of Angiotensin II on Nucleus Tractus Solitarii Neurons Shift to an Involvement of Phosphatidylinositol 3-Kinase in the Spontaneously Hypertensive Rats” was published on Oct. 22. Other authors include Jasenka Zubovic, Jaime W. Polson, Jeffrey T. Potts, Carlos Diez-Freire, Qi Zhang, Julian F.R. Paton and Mohan K. Raizada.

According to the authors, central angiotensin (Ang) II inhibits baroreflex and plays an important role in the pathogenesis of hypertension. “However, the underlying molecular mechanisms are still not fully understood,” Sun said. “Our objective of the present study was to characterize the signal transduction mechanism of phosphatidylinositol 3-kinase involvement in Ang II-induced stimulation of central neuronal activity in cultured neurons and Ang II-induced inhibition of baroreflex in spontaneously hypertensive rats versus normotensive Wistar Kyoto rats.”

The researchers’ observations demonstrated that phosphatidylinositol 3-kinase in the cardiovascular brainstem regions of the spontaneously hypertensive rats may be selectively involved in Ang II-mediated signaling that includes a reduction in baroreceptor reflex function, presumably via a nicotinamide adenine dinucleotide phosphate oxidase — reactive oxygen species mediated pathway.

“Chronic Blood Pressure Elevation in Normotensive Rats Induced by Apelin Gene Transfer into the Rostral Ventrolateral Medulla” was published on May 14. Other authors include Qi Zhang, Fannvong Yao, Mohan K. Raizada and Stephen T. O’Rourke.

“The peripheral apelin system plays a significant role in cardiovascular homeostasis and in the pathophysiology of cardiovascular diseases,” Sun said. “However, the central effect of this neurohormonal system in neural control of cardiovascular function remains poorly understood.”

The study is the first to show that apelin expression is enhanced in the rostral ventrolateral medulla of spontaneously hypertensive rats versus normotensive Wistar Kyoto rats and that overexpression of this gene in the rostral ventrolateral medulla results in chronic blood pressure elevation and cardiac hypertrophy in normotensive rats. The researchers discovered the apelin system in the rostral ventrolateral medulla may play a very important role in central blood pressure regulation and in the pathogenesis of hypertension.

Sun publishes two articles in Circulation Research

Two sites of the North Dakota Telepharmacy Project were featured in the fall issue of Rural Monitor, a publication of the U.S. Department of Health and Human Services’ Rural Assistance Center. In an article titled “Rural Pharmacies Struggle to Survive,” a central retail site in Casselton, N.D., and a remote pharmacy at a Casselton Drug, supervises Jennifer Joyce, a registered telepharmacy technician, who works at a site located at Arthur Grocery through the use of video conferencing. Joyce prepares the prescription drug for dispensing by Nelson, who then communicates face-to-face with Joyce and the patient through audio and video computer links.

The article also revealed that since North Dakota first passed administrative rules allowing retail pharmacies to operate in remote areas without requiring a pharmacist to be present, 16 additional states have approved telepharmacy legislation.

According to Rathke, North Dakota provides other states a convenient, safe, affordable model for rural retail and hospital pharmacies to maintain quality pharmacy services while adhering to relevant regulatory requirements. “We frequently provide information and other technical assistance to pharmacists and administrators around the country seeking to establish telepharmacy operations,” she said.

Telepharmacy sites featured in Rural Monitor

Rathke

Kristi Weston

Erxi Wu

Heidi Eukel

Elizabeth Skoy

Sun

Chengwen Sun
Miller attended his first meeting of the committee at the 75th annual meeting of the American College of Rheumatology in Philadelphia in October. During that meeting, Miller also moderated a live session on “Calculating and Using Effect Sizes in Evidence Based Medicine.”

Richard “Dick” L. Allen, 79, BS ’59, served in the Air Force and the Army. He worked with the Osco pharmacy chain in Fort Dodge and Boone, Iowa, until moving to Wickenburg, Ariz., where he worked as a pharmacist and manager for Ryan Bruin drug store chain and then for Revco drug stores. He continued serving in both the Army and Air Force Reserves, attaining the rank of Lieutenant Colonel in the Army Reserve, and retiring in 1989.

Thomas P. Bruner, 61, BS ’70, worked as a pharmacist early in his career and did relief pharmacy work. He also worked for the Sea Line Railroad, where he achieved the rank of engineer. He was an avid hunter, traveling to hunt in places like Africa, Russia, British Columbia, China, Mexico, the North Pole, the Yukon, and the United States. He lived in Towson, N.D.

Clarence T. George, 82, BS ’51, began his pharmacy career at Miller Drug Store in Wahpeton, N.D., and worked there until buying Farmount Drug in Farmount, N.D. He later returned to Wahpeton where he owned and operated George Pharmacy in the Red River Valley Clinic until 1981. He then purchased Wahpeton Drug where he worked until retirement in 1992. He was active in both the district and state pharmaceutical associations, serving as state president in 1979. Before attending college, he was served in the Army. At NDSU, he was a member of Kappa Psi. After retiring, he lived in Fargo.

Theodore “Ted” Habecker, 78, BS ’54, began working at Pick Reexall Drug Store in Park Rapids, Minn., as a high school student. After graduating from NDSU, he returned to Pick Reexall Drug as a pharmacist. He also worked at the Pharmacy Shoppe.

Byron M. Isler, 72, BS ’63, died May 1.

Richard H. Lapp, 79, BS ’52, served in the Army until his honorable discharge in March of 1954. He moved to Grafton, N.D., to work as a pharmacist at Grafton Drug. He purchased the store in 1980 and worked until retirement when he sold the store to his son and daughter-in-law Daniel and Mary Jo Lapp, who are both pharmacists. He was a life member of the North Dakota Pharmaceutical Association.

George Medich, 79, BS ’52, worked at Medich Pharmacy in Croquet, Minn. While at NDSU, he was a member of Kappa Psi.

Robert L. Meister, BS ’51, was owner and operator of Andrews and Meister Drug Inc. He died March 21.

Michael A. Nelson, 59, BS ’72, was a pharmacist for 27 years at Milwaukee County Hospital. He also was a pharmacist with Walgreens for 25 years.

Emerson “Speed” K. Neumann, 90, BS ’41, worked at Rolla Drug in Rolla, N.D. until he was drafted. He was assigned to the medical unit attached to the 49th Fighter Group in the Philippines until the war ended in 1945. He continued to work at Rolla Drug, while obtaining his pilot’s license. In 1955, he purchased a drug store in Canido, N.D., and named it Neumann Reexall Drug. He retired after 35 and a half years at Neumann Drug. He enjoyed Canadian fishing trips, family trips, golf, bowling, skiing, hunting and was a Detroit Tigers baseball fan.

Shellon L. Pomush, 68, BS ’61, died Feb. 20.

Nolan J. Samb, 54, BS ’77, owned a retail pharmacy in Walhoped, N.D. In 1996 he returned to Wisconsin and worked at Miller Pharmacy in Cadott and at O-W Pharmacy in Wither.

Cyril Zwetzer, 96, BS ’33, owned and operated a hospital pharmacy in Farmington, Minn. While at NDSU, he was a member of the Rho Chi Pharmacy Honor Society. During World War II, he served three years in the Navy as a chemical warfare specialist. He was later assigned to the U.S. Public Health Service in San Juan, Puerto Rico. After World War II, he operated and operated Walgreens in Rice Lake, Wis. In 1960, he and his family moved to White Bear Lake, Minn., where he worked for Walgreens as a registered pharmacist until his retirement in 1977.

Lambert’s gift to college set in trust

George Roy Lambert graduated from NDSU pharmacy in 1940 and lived in Detroit Lakes at the time of his death in 1991. He practiced community pharmacy his entire career and spent his winters in Mesa, Ariz. When he died, a living trust was started. Marv Tokach, BS ’51, pharmacy, administered the trust for 35 years. All income was to go to Lambert’s niece, Galie Bush. When she died in 2009, the trust was divided five ways with one part going to the Pharmacy Program. This amounted to nearly $75,000, which will go toward remodeling in Sudro Hall.

Focus on research: Estelle Leclerc

Arrival at NDSU: 2009
Position: Assistant professor of pharmaceutical sciences
Research interest: The development of therapeutic antibodies against the Receptor for Advanced Glycation End products (RAGE) receptor that triggers harmful effects in cancer, diabetes and Alzheimer’s disease.
How do you conduct this research? We generate the antibodies in mice, copy the antibody repertoire in bacteria and then search for the best antibodies using immunological based techniques.
Most recent research discovery: In collaboration with other researchers, we recently contributed to the understanding of how the cellular receptor RAGE interacts and is activated by its various ligands.
Best research experience: Every time an experiment gives the expected results.
Greatest influence: My mentors. I have been lucky to have the opportunity to work with experts in their fields.
Goals: To better understand the molecular mechanisms of human diseases.
Favorite medicine or prescription drug and why: Rituximab, the first therapeutic antibody licensed in the U.S. It led the way to a new family of therapeutic molecules.
Previous experience: Junior group leader at the Children’s Hospital in Zurich, Switzerland, and a research assistant professor at Florida Atlantic University in Boca Raton, Fla.
Hobbies away from NDSU: Swimming, spending time with my children.
Awards: Institutional Seed Grant from the American Cancer Society
Education: Doctorate at the University of Paris XI, France; postdoctoral training at the Scripps Research Institute in La Jolla, Calif.

The American Association of Colleges of Pharmacy released the 2009 national rankings for National Institutes of Health funding for pharmacy schools. Out of 112 schools of pharmacy, NDSU’s pharmacy program was ranked 13th in the United States for the percent of doctoral faculty with National Institutes of Health funding. Estelle Leclerc, assistant professor of pharmaceutical sciences, is one of the department’s newest faculty who is receiving start-up funding from various sources, including the National Science Foundation through the North Dakota Experimental Program to Stimulate Competitive Research (ND EPSCoR).
As we go through the process of leadership change at NDSU with the departure of President Chapman, it is a great time to reflect on how our college has addressed “taking it to the next level” — a theme that has seen an entire university thrive. Each college at NDSU has stepped up and helped lead the success we see and the far-reaching impact. Dean Peterson is a mainstay with solid vision and strong leadership needed to keep our college at the forefront.

One of the early changes that occurred during this time frame was the expansion of Sudro Hall. This was done during a time when fundraising nationwide was at a low. Thanks to the many alumni, faculty, friends and corporate support, the college succeeded in adding needed classrooms, a concept lab, faculty offices and state-of-the-art research space.

Inclusion of the nursing and allied sciences programs followed resulting in changing the name of our college to the College of Pharmacy, Nursing, and Allied Sciences. These programs were an important addition and have helped strengthen the pharmacy program as it addresses the accreditation standard from the American Council on Pharmaceutical Education for interprofessional training.

Dean Peterson foresaw the need for increased communication and input from alumni and others who have achieved a high level in pharmacy when he created a National Advisory Board. Great boards are planned for nursing and allied sciences.

The college has a rich history of producing graduates who are extremely successful. At homecoming this year, it was particularly evident when three of the five Alumni Association award winners were pharmacists: Heritage Award for Alumni Service; Bill Gross; Alumni Achievement Award, Darryl Schoeppe; and Henry L. Bobly Academic Achievement Award, Brad Undem. Congratulations to these well-deserving graduates who join a long list of other pharmacy honorees who have achieved a high level of success and truly represent this great university. That success also is evident in our students with the current student body president Amber Altstadt, a pharmacy student.

Through the dean’s commitment to better prepare our students for future practices and address the needs of the communities we serve, the college continues to improve and expand its programs. At the forefront is a Master of Public Health that is being developed in conjunction with the UND School of Medicine. The Telepharmacy Project is nationally recognized as the gold standard. The college is moving forward with a Center of Excellence in vaccinology. Health Resources and Services Administration also recognized the Family Healthcare Center Pharmacy with four prestigious awards for clinical pharmacy services.

The success is endless thanks to the current leadership and support of all faculty, staff, students and especially alumni and friends. If you have not visited campus for some time, make a trip back and see all the wonderful changes. Visit the college’s Web site. We encourage all of you to expand your involvement. You will be pleased with the quality and enthusiasm of these students. Please consider opening your practice for a pharmacy student rotation or serving on the Pharmacy National Advisory Board.

Fred Paavola, ’71, chair

A message from the advisory board chair

PHARMACY NATIONAL ADVISORY BOARD NOMINATION FORM

Nominate yourself or a classmate

Name of nominee_________________________ Address__________________________________________

Daytime phone number (_________) E-mail address__________________________

Class year_______________________ Area of pharmacy interest _______________________________________________

Why I’m interested in joining the Advisory Board _____________________________________________________________

PLEASE SUBMIT TO SARA WALD
BY FRIDAY, MARCH 19, 2010.
Thank you to the following alumni and friends for their gifts to Sudro Society from July 1, 2008, to June 30, 2009.

Please note that the names of alumni and friends whose gifts were designated for specific purposes, or to the following alumni and friends within the 1970s, are not included in the list above.

For more information about gifts that directly benefit the college, contact Sara Wald, director of advancement, at 314-210-3988.

Thank you!
Every year, we use this issue of the newsletter to recognize our donors, the people who have so graciously given their treasure to the NDSU Pharmacy Program. We like to share where your Sudro Society donations have gone and how they have helped our students, faculty and staff continue the tradition of excellence. The table displays where the money was spent for the fiscal year July 1, 2008, through June 30, 2009.

### Purpose of funds

<table>
<thead>
<tr>
<th>Purpose of funds</th>
<th>Percent of expenditures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advancement operating</td>
<td>38.3</td>
</tr>
<tr>
<td>Students</td>
<td>20.8</td>
</tr>
<tr>
<td>Operating</td>
<td>13.1</td>
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<tr>
<td>Faculty awards</td>
<td>10.8</td>
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<tr>
<td>Advisory board</td>
<td>8.2</td>
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<tr>
<td>Faculty recruitment</td>
<td>3.9</td>
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<tr>
<td>Faculty and staff development</td>
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<tr>
<td>Advertising</td>
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</tr>
<tr>
<td>Guest speaker</td>
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</tbody>
</table>

Following is a brief description of some of these expenses by purpose:

- **Advancement operating**: The Pharmacy Alumni Newsletter, reception at American Society of Healthy-System Pharmacists mid-year meeting, Sudro Society expenses and other alumni relations expenses

- **Students**: Pharmacy Hooding Ceremony, student assistance with professional development conferences, college ambassadors, research awards, registration fees for science fairs and equipment in the Concept Pharmacy Lab

- **Operating**: Assist North Dakota Pharmacists Association with journal printing and postage and other pharmacy operating expenses

- **Faculty award**: Awards for pharmacy faculty presented at the Pharmacy Hooding Ceremony

- **Advisory board**: Expenses associated with operations of the Pharmacy National Advisory Board, which meets twice a year to assist with pharmacy program business

- **Faculty recruitment**: Travel and interview expenses associated with recruiting new pharmacy faculty

- **Faculty and staff development**: Retreat expenses for staff and faculty

- **Advertising**: Assists with costs of community public service announcements about prescription safety, addiction and other health-related subjects

- **Guest speaker**: Pharmaceutical sciences guest speaker expenses

Please contact me if you have questions about any of these items. Thank you again for your generosity. With your help, we are providing opportunities for our students, faculty and staff to excel in their education and in their careers. We hope you consider continuing to enrich the life of this college.

Sara Wald
Director of Advancement
701-231-6461 or sara.wald@ndsu.edu
GET CONNECTED!

Link to the college Facebook page from www.ndsu.edu/pharmacy