

# pharmacy

## ALUMNI NEWS

THE COLLEGE OF PHARMACY, NURSING, & ALLIED SCIENCES

SPRING '12



### New vaccinology minor

Pg. 4

Master of Public Health ③

'About The Patient' ⑤

'Battle of the Cents-es' ⑬

*Preparing students to become competent, caring, ethical health professionals and citizens.*



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## a message from the dean

Greetings from NDSU. How about those Bison? Our congratulations go out to the NDSU football team for their outstanding 2011 season and becoming the Division I FCS national football champions. I know many of you were at the game cheering on the yellow and green against Sam Houston State in Frisco, Texas, on Jan. 7. What a game, and a great way to end the season. Now we can focus on a repeat. Go Bison!

We have a lot of exciting things happening in our college. We are excited about our new Master of Public Health (MPH) degree program and the addition of Dr. Donald Warne as the new program director. This program is on track for implementation during fall semester 2012. The program will provide wonderful opportunities for our students and practicing pharmacists in the region; but most importantly, it will improve the health and wellness of North Dakota's citizens. This is a truly unique program – a first of its kind for North Dakota.

We also are excited about our new collaborative agreement with the North Dakota Pharmacists Association and the North Dakota Pharmacy Service Corp. including Wendy

Brown's new role as director of our statewide "About the Patient/Medication Therapy Management" (MTM) project. With this new partnership, it's the ABCs of pharmacy coming together again to deliver an amazing program that combines the strengths of North Dakota pharmacy in practice, student training and research. I am convinced this approach will bring North Dakota to the forefront nationally for innovations in practice and MTM delivery.

The State Board of Higher Education recently approved NDSU's request to offer a new vaccinology minor to complement the goals and objectives of our Center for Biopharmaceutical Research and Production's Center of Excellence in Vaccinology and Biopharmaceutical Research. The minor is the first of its kind in the country and is drawing much national attention. Enrollment in the program began in fall semester 2011.

I hope you enjoy our newsletter, and if you have comments, stories to share or suggestions for future issues, please let us know. If you are in the area, stop by and visit with us. For more information about our college, its people and programs, visit our website at [www.ndsu.edu/pharmacy](http://www.ndsu.edu/pharmacy).

# Master of Public Health program launches

The much anticipated Master of Public Health program is ready to begin. Applications are now being accepted for the program, which will hold its first classes during fall semester 2012.

The initiative, in collaboration with the University of North Dakota, is a 43-credit, two-year degree geared toward health professionals but is open to any applicants. There are 21 core course credits divided evenly between the two universities, and then students take 22 credits in specialty tracks of public health. NDSU's pharmacy practice program has taken the lead in developing the curriculum and coordinating the degree's administrative functions.



Donald Warne has joined the NDSU campus as the director of the Master of Public Health program.

## Donald Warne

"Because of rising healthcare costs and healthcare reform, the more we can do to prevent disease, the better."

"This program truly reflects the college's commitment to addressing real-world health needs in North Dakota and other rural areas," said Donald Warne, MD, MPH, who began his new position as program director in October.

Four specialization tracks will be available, including health promotion, emergency management preparedness and infectious diseases. "The other track that is very intriguing and probably of the greatest interest to our alumni is the pharmacy and public health track," Warne explained. "That track is very exciting because there is a new effort and focus on the role of pharmacists in public health. One of the issues we face in rural America, like North Dakota, is we don't have physicians in many communities, but we do have pharmacists. With the expansion of things like flu immunization clinics and the ability to provide public health messaging – all of those things can be done through a pharmacy."

According to Warne, several groups of people will find the degree valuable. He suggests students dedicated to the public health field and professionals in mid-career are likely to seek

more information about the degree. "Those already working in healthcare – pharmacists, nurses and physicians – recognize we need to deal with healthcare from a population health perspective and not just a one-on-one, provider/patient perspective," Warne said. "Because of rising healthcare costs and healthcare reform, the more we can do to prevent disease, the better. That's true for the healthcare system, our communities and individuals."

Originally from Kyle, S.D., Warne comes to NDSU from Sanford Health, where he was the director of the Office of Native American Health. Prior to that, he was the executive

director of the Great Plains Tribal Chairman's Health Board. "My focus during my career has been on rural and Native American public health. So, the MPH program is an ideal fit for me," he said, noting initial work also has begun on a certificate program for pharmacy and public health.

The new degree program clearly has the support and interest of students, including Laurel Aaberg, immediate past president of the student Public Health Association at NDSU.

"The MPH program will allow a variety of students to unite under a motivation for public health, creating a unique, multidisciplinary team aimed at promoting, educating and researching public health and disease prevention across a diverse population," said Aaberg, a third-year pharmacy student from Rochester, Minn. "One of the key ideas of public health is improving the health of communities. By utilizing education of healthy lifestyles, communities can utilize MPH graduates to initiate public health programs to improve the overall quality of life."

To meet the changing needs of pharmacies and the public, Warne is requesting input about the program. "I'd like to hear from NDSU pharmacy alumni about problems they are facing in dealing with public health issues in rural communities. One of the things we'll be doing with the curriculum is developing case studies, so if any NDSU alumni have such issues, I'd love to hear from them," he said.

For more information, visit [www.ndsu.edu/pharmpr/mph](http://www.ndsu.edu/pharmpr/mph) or contact Warne at [donald.warne@ndsu.edu](mailto:donald.warne@ndsu.edu).



# NDSU collaborates on new vaccinology minor

A program designed to match existing and future business needs with workforce development is quickly helping students prepare for career opportunities in the expanding biosciences industry.

NDSU, through its collaboration with Tri-College University, launched a first-in-the-nation undergraduate academic minor in vaccinology. The minor prepares students for a career in development and production of vaccines. Announced in July 2011, the program graduated its first students in spring 2012.

“It shows how nimble we can be in responding to industry needs,” said Tim Flakoll, Tri-College University provost.

Career opportunities in biochemistry, cell biology and immunology are increasing. Employment in the U.S. biosciences industry grew 15.8 percent from 2001 to 2008 and is expected to grow during the next decade, according to a 2010 Biotechnology Industry Organization report.

NDSU’s effort to meet workforce demand was coordinated by the College of Pharmacy, Nursing, and Allied Sciences; the Department of Pharmaceutical Sciences; and the Center for Biopharmaceutical Research and Production. NDSU President Dean L. Bresciani touted the minor in his 2011 State of the University address. “The recently created undergraduate program in vaccinology will be immediately starting to educate a workforce for jobs emerging from NDSU’s new Center for Biopharmaceutical Research and Production,” he said.

The 21-credit program allows undergraduate students to conduct research, interact with industry experts and secure relevant experience through industry partnerships. NDSU developed several courses for the program, ranging from an introduction to the vaccinology field to a high-level research experience course that incorporates hands-on training using scientific equipment. Students will design and develop a real-world peptide or DNA-based vaccine against hookworm, vaccinate mice, measure immune response and challenge the animals with the parasite.

“These students are working on a very real research project,” said Joseph Provost, adjunct professor in NDSU’s pharmaceutical sciences department and a member of the Center for Biopharmaceutical Research and Production. “In the process, students will be doing all of the hands-on and theoretical work learning important techniques and developing their critical



The new minor in vaccinology prepares students in the development and production of vaccines.

thinking skills. Because we are working with Dr. Jennifer Bath at Concordia College and her students on this project, we hope that this information will be used to further this type of research and hopefully develop a real vaccine that can help a large number of people.”

Demand for the vaccinology minor was driven in part by a study completed by the Greater Fargo-Moorhead Economic Development Corp. The study found a focus on vaccinology would translate into long-term sustainable economic growth for the region. “It showed this area could lead the nation within the vaccine industry,” Flakoll said. “It found a steady employment market that we want to meet and take advantage of.”

Sanford Health created a Vaccinology Professorship Endowment of \$150,000 to fund faculty investment. Flakoll said four student scholarships have been awarded to each of the Tri-College campuses. Pledges and guarantees are in place to continue the scholarships for the first three years of the program.

More than 2,500 students are enrolled in life sciences and health care fields at NDSU, Concordia College and Minnesota State University Moorhead. Flakoll said the program was near its intended capacity of 24 students in its first year.

Further development may be on the horizon. The minor will be reviewed to measure its success and determine if companies have an interest in expanding the program into an academic major.

# 'About The Patient' emphasizes better patient outcomes

It's an opportunity for North Dakota pharmacists to take an active, person-to-person role in patient care. The program, called "About The Patient," is a partnership between the NDSU College of Pharmacy, Nursing, and Allied Sciences and the North Dakota Pharmacists Association.

Wendy Brown, associate professor of pharmacy practice, is the new clinical coordinator for the Pharmacists Association's Disease Management Program and Medication Therapy Management Services. According to Brown, the association contracts with payer groups to provide disease or medication education services to eligible participants through the "About The Patient" program.

"Currently, we have two active programs. One is with the North Dakota Public Employees Retirement System, where community pharmacists provide diabetes education and management. The other is with Workforce Safety and Insurance of North Dakota, providing pain management," she said, noting hundreds of state residents are eligible for the two programs.

Brown's duties include overseeing the credentialing of participating pharmacists, contacting pharmacies where the education programs take place and acting as a liaison between the program and payers groups that include insurance companies.

"Pharmacists can significantly improve disease outcomes, as well as medication adherence when they can actually spend time with the patient. Through 'About The Patient,' we can highlight pharmacy cognitive services," Brown said. "As pharmacists, we are really trying to ensure we are providing holistic care for patients. This is one way we can step out from behind the counter and use our clinical skills to better meet patients' needs. When a person takes their medication, that translates into better outcomes and better disease control."



Wendy Brown is the clinical coordinator for the "About The Patient" program.

Michael Schwab, executive vice president for the North Dakota Pharmacists Association and North Dakota Pharmacy Service Corp., said his group is proud to partner with the college.

"We are excited about the opportunities this partnership presents," Schwab said. "Our 'About The Patient' program is truly about the patient, and we will continue to build off the success the program has already achieved. Our collaborative patient care program truly delivers value and focuses on improving medication efficacy, safety and adherence for patients. We look forward to writing the next chapter in partnership with the college."

In addition to being a licensed pharmacist, Brown is a certified asthma educator. She earned a Master of Physician Assistant Studies degree and is a certified physician assistant. For more information on "About The Patient," contact Brown at [wendy.brown@ndsu.edu](mailto:wendy.brown@ndsu.edu) or visit [www.aboutthepatient.net](http://www.aboutthepatient.net).

## Rafert named NDSU's provost

NDSU's new provost is J. Bruce Rafert, who joined the university in July. A nationally recognized astrophysicist, he is the former vice provost at Clemson University, Clemson, S.C.

"Dr. Rafert brings a career-long level of recognized experience and success in enhancing the caliber of academic offerings from instruction to research," President Dean L. Bresciani said. "He will be key to guiding NDSU, North Dakota's first research university to reach the Carnegie Commission's highest national classification, toward even more contributions to North Dakota's success."

Rafert's research portfolio totals more than \$9 million in multidisciplinary research activities, spanning industry, state and federal agencies such as the National Science Foundation, National Park Service and U.S. Air Force. Rafert also was chief

scientist at the U.S. Air Force Malabar Test Facility and was the founding director of the Southeastern Association for Research in Astronomy Observatory, located at the Kitt Peak National Observatory in Arizona.

"This is an exciting time to be working in higher education," Rafert said. "We truly live in a global knowledge economy, and higher education is on the front lines."



Rafert

Rafert earned his bachelor's degree at Case Institute of Technology, Cleveland, and doctorate in astronomy at the University of Florida, Gainesville.

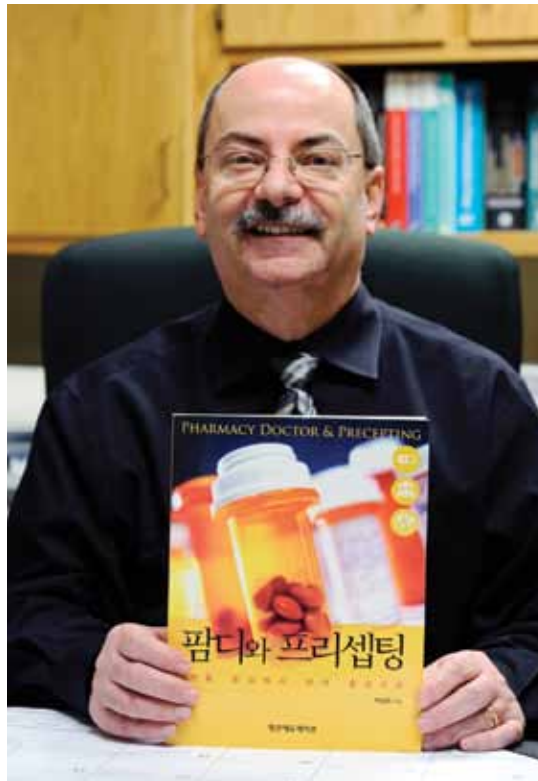
## Alumna's book brings US pharmacy practices to Korea

In 2001, South Korean Sunghee Park became the first international student accepted into what was then NDSU's post-graduate Pharm.D. program. The experience had a tremendous impact on her and now she is sharing her knowledge with other pharmacists in her homeland.

Park published a book last year titled "Pharmacy Doctor & Precepting," inspired by her NDSU education and her work as a pharmacist in the United States. The first-of-its-kind book, published in Korean, illuminates key differences between pharmacy practice in the U.S. and Korea.

Park, who is a clinical pharmacist at St. Luke's Hospital in Duluth, Minn., said South Korean pharmacists traditionally have been more like chemists rather than clinicians. The book focuses on the clinical pharmacist's roles, pharmacy practice experience programs in pharmacy schools, pharmacy residency programs and the pharmacist's collaborations. She hopes the book will help Korea's pharmacy programs foster clinical pharmacists.

"A lot of Korean pharmacy school professors and pharmacy leaders have visited other countries to see the advanced health care systems and the pharmacy practice experience programs. They have put lots of effort into making the new system succeed," Park said, noting she spent three years researching and writing the book. "I have practiced as a clinical pharmacist in U.S. hospitals and precepting pharmacy students and pharmacy residents for more than eight years. I thought that my experiences and knowledge that I have learned in practice could definitely be helpful in designing the frame for pharmacy practice experience programs."



Above: Don Miller displays the book, "Pharmacy Doctor & Precepting."  
Left: NDSU alumna Sunghee Park is the book's author.

Park's book has been used to design a pharmacy practice experience for first-year students at a university in Korea. Park hopes an exchange program between American and Korean pharmacists and students can be established, and she recently gave presentations to pharmacists at Seoul National University Medical Center and students at Seoul National University Pharmacy School.

When Park's book was published, she had a special person in mind to send one of the first copies – Don Miller, NDSU professor and chair of pharmacy practice. "Dr. Miller was my adviser while I was in school. I was an international student who was not familiar with the U.S. culture and had a language barrier," Park said. "Dr. Miller was a wonderful professor and adviser, and I wanted to thank him for everything he has done for me."

Miller was delighted to receive the gift. "I was surprised. She was not only a good academic student, but also just a good person, always very conscientious and polite," he said. "It says a lot about her as a person that she had the drive to do something important after she graduated."

### Sunghee Park

"NDSU has an excellent pharmacy faculty and pharmacy program. It has produced incomparable clinical pharmacists who contribute to direct patient's care and public health."

A proud alumna, Park has high praise for her NDSU education. "NDSU has an excellent pharmacy faculty and pharmacy program. It has produced incomparable clinical pharmacists who contribute to direct patient's care and public health," she said.

Park, herself, is an outstanding example of that.



# Distinguished Alumnus: 'Experiment in life'

When it comes to the pharmacy profession, Tony Welder has practically done it all. The 2011 Distinguished Alumnus for the College of Pharmacy, Nursing, and Allied Sciences, Welder has enjoyed a remarkable career of leadership, service and success.

"I'm so lucky in my life, and I appreciate every day," said the 1961 NDSU graduate. "My advice to students is to experiment in life. If you have a dream to do something – try it. That makes life interesting."

Welder certainly practices his own advice. After practicing in a clinic pharmacy for six years, Welder bought his first store in his hometown of Napoleon, N.D. During the ensuing years, he gained ownership of five more pharmacies with varied practices.

Welder also has been active in pharmacy groups on the local, state and national levels. He is past president of the North Dakota Pharmacists Association and National Community Pharmacists Association.

"I believe the more you get involved, the better your life is. And you meet a bunch of great people," Welder said. "I see the need to get involved in associations at all levels because politics determine so much of our future in this profession."

When Welder sees an issue, he tackles it head-on. In 1985, he helped create a buying group organization called the PACE Alliance, with the purpose of assisting independent pharmacists. He was on the organization's executive board for 25 years and served as treasurer. Under his leadership, 19 state pharmacy associations have reaped the benefits.

"I've always been kind of a fixer. I have an ability of seeing better ways of doing things," Welder explained. "When we started PACE, independent druggists were truly independent and couldn't get buying or negotiating power. PACE was a factor in how prices got lower to independent pharmacies."



He also has been an advisory board member for a pharmaceutical manufacturer, an adviser for a special compounding committee for the Food and Drug Administration and an adviser to a compounding company. He was treasurer of the National Home Infusion Association and president of the North Dakota Pharmacy Service Corporation for 14 years. He also recently joined the NDSU Pharmacy National Advisory Board.

His honors include the NDSU chapter of Kappa Psi Man of the Year, Alumnus of the Year from Napoleon High School, Al Doerr Service Award, Bowl of Hygeia, Bismarck State College Alumnus of the Year and North Dakota Small Business Person of the Year.

"I love what I do. I love seeing people every day," Welder said when asked what keeps him going. "I like to keep busy, and I'm enjoying every day."

Welder lives in Bismarck, N.D. His daughter, Sara, works with him in his business, while daughter, Renae, is an attorney in Los Angeles.

## Alumni receive Heritage Award

NDSU alumni Mike and Joanne Warner received the 2011 Heritage Award, presented by the NDSU Alumni Association. The Warners were recognized at the Alumni Awards Celebration held May 12 at the Fargo Hilton Garden Inn. The Heritage Award acknowledges outstanding volunteer service to NDSU.

Mike Warner, BS '72, pharmacy, is a former member of the NDSU Foundation board of trustees and NDSU Research Foundation. He also served on the 2010 NDSU presidential search committee.



Joanne Warner, BS '70, physical education, is a former member of the Alumni Association board of directors where she served as president and was a member of the NDSU athletic NCAA certification committee.

The Warners co-founded BisonArts, an organization that builds financial and promotional support for the benefit of NDSU Fine Arts. They launched the BisonArts Gala, a fundraising event that directly supports NDSU Fine Arts students. They also helped establish the BisonArts Singers.

# Alumnus named ASHP Fellow

Like many diehard fans, NDSU alumnus Michael Gulseth loves to talk about his beloved Bison football team. For him, the national championship quickly takes center stage, and his own personal accomplishments seem to take a back row seat.

But, his career certainly deserves accolades.

Gulseth, BS '97, pharmaceutical sciences, PharmD '99, is program director for the Anticoagulation Services Department of Pharmaceutical Services at the Sanford-University of South Dakota Medical Center in Sioux Falls, S.D.

His research focuses on evaluating antithrombotic therapies and exploring the benefits of pharmacist-managed inpatient anticoagulation services. "I run a comprehensive anticoagulation management program. We do management of blood-thinners, in both the acute hospital side and the outpatient arena," Gulseth explained during a recent telephone conversation. "We do a lot of work with warfarin or Coumadin, and also extensive work with low molecular weight heparins and the new oral anti-coagulants. We do research with all of those agents."

Gulseth's efforts were recognized this past summer, as he was named a 2011 Fellow of the American Society of Health-System Pharmacists. "I was honored to be recognized in that fashion," said Gulseth, who is a past member of the editorial advisory board for the American Journal of Health-System Pharmacy and past president of the Minnesota Society of Health-System Pharmacy. "It meant a lot to me that other people thought my contribution to the profession is worthy of being designated with that award."

The recognition was nice, apparently, but Gulseth seems more excited about being in Frisco, Texas, to watch the NDSU football team win the NCAA Football Championship Subdivision national title. He shared the experience with his children, Olivia, age 10, and Luke, 8.

"I've been a Bison since I can remember," Gulseth said, noting his father, Dan Gulseth, is a 1965 NDSU pharmacy graduate. "My mom and dad have a picture of me as a baby wearing a 'Future NDSU Alumni' bib. I just had to be there for that game."

So, the trip to the Jan. 7 championship game was not to be missed, even if it meant flights from Sioux Falls to Minneapolis



NDSU alumnus Michael Gulseth attends the NCAA Football Championship game with daughter Olivia and son Luke.

to Memphis to Dallas and arriving late the night before the game. "It was absolutely incredible," Gulseth said. "You wouldn't believe all the NDSU people everywhere you looked in our travel to Texas. Even on my middle flight from Minneapolis to Memphis, good grief, 25-to-50 percent of the full plane were Bison fans."

Gulseth and his children can proudly say they, like hundreds of other fans, were on the field when the team was presented with the championship trophy.

"I truly cherish my years at NDSU. I really appreciate the strong education I received, and I have to tip my hat to Dean Peterson and the impact he had on my career," Gulseth said. "On my first day of pharmacy school, he got up in front of our class and said we shouldn't accept the status quo. He told us to be innovative and help advance patient care. I really thought about that, and that is basically what my whole career has been – challenging those paradigms and delivering better patient care."

That, and, of course, cheering for the Bison.

Gulseth and his wife, Brenda, BS '98, industrial engineering, live in Sioux Falls with their children, Olivia, Luke and Dominic, 2.



# Pharmacy Reunion - Homecoming 2011

## Right: Tour Group

In front: Jim Bodell; back row, left to right: Janelle Farnsworth Crowley, Nancy Rydholm, Carolyn Eidsness Bodell, Carla Webster Aipperspach, Ellen Nelsen Feldmann, Judy Mareck Mattson



## Class of '81

Front row, left to right: Loni Brown Kohorst, Pam Kram Paskey, Janelle Farnsworth Crowley, Ellen Nelsen Feldmann; back row: Judy Mareck Mattson, Carolyn Eidsness Bodell, Greg Wettstein, Nancy Rydholm, Janet Handberg Schultz, Bob Roppel



## Class of '82

Front row, left to right: Peggy Kraus, Mary Thompson Stende-Miller, Candace Wenberg Haugtvedt; middle row: Paul Iverson, Laurie Gilles Straus, Susan Kennedy Pfeiffer, Dean Mattson, Lori Cheatley Kreklaug, Steve Mareck; back row: Nathan Seip, Mitch Krog, Jon Haugan, Mark Cherney, Jim Bodell

## class notes

**Gary Boehler, BS '70**, pharmacy, received the Bowl of Hygeia award from the American Pharmacists Association and National Alliance of State Pharmacy Associations. Boehler, who lives in Plymouth, Minn., was recognized for his active support of the NDSU College of Pharmacy, Nursing, and Allied Sciences and helping NDSU lead the nation in delivering telepharmacy services.

**Scott Donelenko, BS '86**, pharmacy, is program manager for the Pharmacy Pain Service and co-director for the PGY2 Pharmacy Pain and Palliative Care residency program at North Florida South Georgia Veterans Health System. It is one of only four accredited programs in the country. He was one of the first 50 healthcare professionals to earn the American Society of Pain Educators Certified Pain Educator credential. He is the clinical research pharmacist at the Lake City, Fla., VA Medical Center.

**Jef Bratberg, BS '98**, pharmaceutical sciences, PharmD '00, is president of the Rhode Island Pharmacists Association for 2011-12. He took office during the association's 137th annual President's Dinner and Award Ceremony in Narragansett, R.I. He is a clinical associate professor of pharmacy practice at the University of Rhode Island, Kingston. He lives in Attleboro, Mass.

**Valerie Corcoran Bahl, PharmD '11**, pharmacy, is a clinical pharmacist at Essentia Health St. Joseph's Medical Center in Brainerd, Minn.

# Pharmacy students serve Guatemalans during medical mission trip

No matter the remoteness of the location, time of day or soaring temperatures, when the medical mission team arrived at different villages in Guatemala, the scene always looked the same. Hundreds of adults and children were waiting – sometimes in a line so long it wrapped the length and width of a school or church.

“It never got old to see those lines,” said Amber Altstadt, a fourth-year professional pharmacy student from Perham, Minn.

She and classmate Jordan Wolf, a fourth-year professional pharmacy student from Fargo, were members of the mission team, including two doctors, a pharmacist, a nurse, three medical students and dental assistants, who traveled from village to village for six days last summer. Their mission was to provide basic health care and dental services. The line illustrated the magnitude of their visit.

During their time in Guatemala, the team treated 2,631 patients. They provided 38 referrals for more serious conditions, filled 1,625 prescriptions, extracted 219 teeth, restored 45 teeth and provided 1,139 fluoride treatments to children.

## Learning by doing

For the past two years, the College of Pharmacy, Nursing, and Allied Sciences has selected two students to be part of the annual medical mission team. The experience, along with preparation and post-trip evaluation and reflection, can serve as one of the eight experiential rotations required for students to earn their doctor of pharmacy degree.

Amy Werremeyer, assistant professor of pharmacy practice, who accompanied the students on the 2011 trip, said the college supports the mission trip for two reasons: as an outreach service project and as an immersive student learning experience unlike any other.

“On the trip, students practice pharmacy and learn about medication; but more than that, they learn about people in the world and about themselves,” she said. “They learn they can work harder than they thought they could, can use their knowledge in more ways than they ever dreamed and care about their patients so much that sometimes it hurts.”

The students encountered patients with malnutrition, anemia, headaches, musculoskeletal pain, gastrointestinal upset, heartburn, high blood pressure, high cholesterol, diabetes, infection and injury. “We read statistics on the poor health care system they have to deal with, but it really didn’t come alive until we saw the individual stories and pain,” Altstadt said.



L to R: Amber Altstadt (NDSU fourth-year professional pharmacy student), Caleb Skipper (UND second-year medical student), Tara Nelson (UND second-year medical student), Brittany Berg (UND second-year medical student), Jordan Wolf (NDSU fourth-year professional pharmacy student), outside a medical mission clinic.

## A hunger to serve

Each day, an early breakfast was followed by a two-hour drive to the clinic where the team unloaded supplies. A classroom was converted to a “clinic” by stacking desks against the wall. No signs of sterility or privacy existed. For example, a medical pad was used to create a barrier for a patient who was receiving a shot. Members of the medical team filled whatever roles were needed. In one case, Wolf’s only job was to hold a little boy still as a doctor gave him stitches.

Altstadt, Wolf and Werremeyer filled and evaluated prescriptions for accurate dosing and appropriate use, counseled patients and administered injections. Both Altstadt and Wolf have a minor in Spanish, so they were able to counsel patients in their native language.

The patients ended their visit by receiving educational materials on diet and lifestyle modifications, special instructions for their treatment and a supply of vitamins. In an area where malnutrition is common, vitamins are like gold, the students said. In all, they dispensed more than 1,800 month-supply vitamin packets.

Despite the large number of patients they saw, people had to be turned away at the end of the day because the lines were so long.

“It was hard to leave knowing we could have gone to 100 more villages and had a long line waiting for us,” Wolf said. “It has motivated us to become better clinicians. We understand that we aren’t ready to be the type of provider that the community needs ... leaving is hard but we have something to work toward, to become better for a purpose greater than ourselves.”

# Students learn about public health issues

Third-year NDSU pharmacy students are learning about public health and the important role a pharmacist can have in promoting and providing healthcare for patient populations as part of their introductory pharmacy practice experiences. The innovative experience provides opportunities for students to explore public health from both a patient and provider perspective. In the first component of the experience, students were paired with a resident at an assisted or independent living facility. Students met with their resident three times during fall semester to conduct health interviews that included assessments of health literacy and cardiovascular risk. In addition, students educated residents on the National Patient Safety Foundation “Ask Me 3” campaign and the influenza vaccine. Students also provided blood pressure screenings.

“Overall, these experiences provided opportunities for students to positively impact resident health in a geriatric population,” said Rebecca Focken, director of introductory pharmacy practice experiences and assistant professor of pharmacy practice.

During the second component, students learned about community resources available to patients through attendance and observation at open Alcoholics Anonymous meetings and



Jerad Binstock, P3, presents his poster.

chronic disease support group meetings or informational sessions. Students had the chance to empathize with patients and gain insight into challenges patients deal with in relation to addiction and chronic disease.

As the final component, students completed a public health poster designed to educate other health-care providers on public health topics. Students worked with faculty mentors to conduct a literature review, write a poster abstract and create a poster for presentation. All students had the opportunity to

present their posters at the 2012 Mid-Winter Pharmacy Seminar in Fargo and the 2012 North Dakota Pharmacists Association state convention in Jamestown, N.D. In addition, three poster groups were invited to present their posters at the 2012 National Association of Boards of Pharmacy annual meeting in Philadelphia. It is through the generous support of alumni in the Sudro Society and the North Dakota Board of Pharmacy that students have been able to travel to present their posters at both state and national pharmacy meetings.

“This introductory pharmacy practice experience has provided students with opportunities to explore the expanding role of a pharmacist in promoting public health, and ultimately, improving patient care,” Focken said.

# Students attend community pharmacists convention

Nine students from the NDSU chapter of National Community Pharmacists Association attended NCPA's 113th annual Convention and Trade Exposition in Nashville, Tenn., in October. The students attended several programs, including “Business Plan Basics,” “Junior Partnerships Demystified,” “Student Business Plan Competition” and the “Future Pharmacists Networking Reception.” Numerous noteworthy speakers included former Arkansas Gov. Mike Huckabee and the closing ceremony featured the entertainment of country star Sara Evans. The students also spent some time sightseeing, which included a trip to the Grand Ole Opry and the Country Music Hall of Fame.

Upcoming events for the association include a cell phone drive for the Rape and Abuse Crisis Center, blood pressure screenings for the public at a local Hornbacher's Foods and collecting orders from the graduating class for personalized mortars and pestles. During fall semester, the group held a bake sale and matched all donations for Hospice of the Red River Valley.



Among the NDSU students who attended the National Community Pharmacists Association convention include (front row left to right) Carly Smith, Rachele Kunde, Jared Giroux and (back row left to right) Michelle Pilgram, Jenna Midgarden and Kaitlyn Kraus.



# Pharmaceutical sciences student awarded fellowship

Erin Nyren-Erickson, a doctoral student in pharmaceutical sciences, received a pre-doctoral fellowship from the American Foundation for Pharmaceutical Education. The fellowship is awarded to approximately 60 outstanding pre-doctoral students in the U.S. The fellowship supports pharmaceutical and medicinal chemistry sciences research programs.

"I am honored to be selected for this award. It is very competitive and is awarded to students who the committee feels have promise in the field of pharmaceutical research," said Nyren-Erickson, who plans to conduct research in biological chemistry during her career. "Having professionals in your chosen field acknowledge your hard work, and being bestowed with their support and good opinion is always a great privilege."

Nyren-Erickson is a native of Streeter, N.D., and is the daughter of Paul and Anne Nyren. She earned her bachelor's degree in biotechnology at NDSU in 2003, and worked at Dakota Clinic (now Essentia) and the Center for Nanoscale Science and Engineering prior to pursuing her doctorate.



Left to right: Erin Nyren-Erickson, Jessica Totzauer

Nyren-Erickson has been studying with Sanku Mallik, professor of pharmaceutical sciences, since 2009. Mallik's research is concerned with the sensitive detection of various cancer-related enzymes and other disease-related biomarkers. Her recent projects involve the detection of elevated levels of glycosaminoglycans in human serum, a possible indicator of Alzheimer's disease.

"Erin is a very bright student. In fact, she is one of the brightest students I have interacted with at NDSU," Mallik said. "Her grade-point average is 4.0 and she is doing cutting edge research on the detection of biomolecules

involved in various diseases such as Alzheimer's disease and cancer. She has some promising results on the detection of these biomarkers employing lipid-based nanoparticles. Her excellent academic credentials and promise of the research are responsible for her getting the fellowship."

Additional ongoing studies in Mallik's lab include amplified detection of matrix metalloproteinases and other enzymes associated with metastatic cancer.

## Phi Lambda Sigma holds etiquette dinner

The NDSU chapter of the Phi Lambda Sigma pharmacy leadership society held its second annual PLS Etiquette Dinner in the Memorial Union on Jan. 17. More than 70 guests attended the event, including students, faculty and alumni. The evening included an etiquette presentation, fashion show of business dress, presentation of the Outstanding Leadership Award to second-year pharmacy student Kristyn Murphy and networking opportunities.

During fall semester, members volunteered at the Ronald McDonald House in north Fargo, and in December the group collected gifts for the Salvation Army. The chapter is working on new member recruitment and initiation will take place this spring.



Above: Attendees of the successful Etiquette Dinner included (from left to right) Kit Wong, Maddie Kelzenberg, Derek Gaffney, Dan Sandgren, Megan Born, Julie Boyer, associate dean Cynthia Naughton and Amanda Kerr.

Right: Phi Lambda Sigma president Tekla Anderson (on left) presents the Outstanding Leadership Award to Kristyn Murphy



# NDSU penny drive raises \$1,400 for charities

A little friendly competition can go a long way. Just ask the Pharmacy, Nursing, and Allied Sciences Ambassadors, who participated in a highly successful campus penny drive that raised more than \$1,400 for local charities.

For five days, Feb. 6-10, the ambassadors went head-to-head with College of Engineering and Architecture Ambassadors in the second annual “Battle of the Cents-es” to collect change for charity.

Both student groups selected charities that relate to their future careers. The Pharmacy, Nursing, and Allied Sciences Ambassadors collected money for Cullen Children’s Foundation, which provides financial resources to organizations that support children’s healthcare needs with an emphasis on cancer. The College of Engineering and Architecture Ambassadors raised funds for the Minot State University Flood Families Fund, which was established to help the university’s 116 faculty and staff displaced by flooding.

In the competition, coins were considered positive scores, while cash bills were counted against an organization’s numbers.

When the dust settled in the close contest, the Engineering and Architecture Ambassadors defeated the Pharmacy, Nursing, and Allied Sciences Ambassadors.

The Minot State University Flood Families Fund received \$755.11 and Cullen Children’s Foundation received \$695.95.

“It really is neat to see how quickly pocket change can add up and in turn make a great impact. Both of the charities benefited, but so did our students,” said Dana Davis, director of recruitment for the College of Pharmacy, Nursing, and Allied Sciences. “This competition was a great way for them to collaborate with those they might not ordinarily have an opportunity



NDSU President Dean L. Bresciani makes a contribution to the “Battle of the Cents-es” campaign. From left to right, Kevin Young, civil engineering; Sam Ewen, electrical engineering; President Bresciani; and Kristen Weiss, radiologic sciences.

to partner with. The students also learned more about our community by working with local charities. The “Battle of the Cents-es” has become a fun tradition and is something that I hope stands out when our students look back on their college experience at NDSU.”

This year’s total was roughly \$200 more than the inaugural penny drive last year, which raised more than \$1,250. The Pharmacy, Nursing, and Allied Sciences Ambassadors raised \$643.33 for the Dakota Medical Foundation while Engineering and Architecture Ambassadors raised \$615.50 for Habitat for Humanity.

# Rho Chi Society inducts new members

NDSU’s Kappa Chapter of the Rho Chi Society inducted 18 new members during ceremonies on Feb. 23. Membership is offered each spring to students in their second year of the professional program and who represent the top 20 percent of their class based on grade-point average. The new members from the P2 class include Ashley Andrew, Sarah Clark, Nidhi Dubey, Alyssa Emerson, Kathleen Grimes, Nicole Herman, Tenzin Jangchup, Shalynn Jeske, April Johnson, Micaela Koster, Kyle LaPorte, Corey Melroe, Lane Nelson, Heath Oetken, Michelle Pilgram, Rebecca Richards, Sarah Schaaf and Hannah Zimny. The chapter also inducted Stephen O’Rourke, professor of pharmaceutical sciences, as an honorary member.

According to Ashlee Randklev, chapter president, the mission of the Rho Chi Society is “to encourage and recognize excellence

in intellectual achievement and foster fellowship among its members.” She said the NDSU chapter is beginning a Student Mentor Program for incoming P1 students, where a P1 student will be matched with an older student mentor.

Randklev said the group also will conduct a spring book drive and participate in Expanding Your Horizons, a program that encourages girls to pursue science and mathematics education. “This past fall semester we offered tutoring to P1 students throughout the semester and plan to continue this as well,” Randklev said. “We are looking forward to all the opportunities that await us this upcoming year and are excited to have new members join our organization.”

# Students honored at pharmaceuticals research meeting

Anil Wagh and Faidat Sanusi, doctoral students in the pharmaceutical sciences department, received awards for their poster presentations at the 43rd Pharmaceuticals Graduate Student Research Meeting at the University of Wisconsin-Madison in June.

Wagh, a third-year doctoral student in assistant professor Shek Hang Law's laboratory, received the Best Poster Award in the Drug and Gene Delivery category for his work, "Synthesis and Characterization of FRET-based Nanoparticles for Near-infrared Imaging."

Sanusi, a second-year PharmD student in assistant professor Estelle Leclerc's laboratory, received the Best Poster Award in the joint categories of Pharmaceutical Analytical Methods and Pharmacokinetics, Pharmacodynamics and Biopharmaceutics for her work, "Development and Characterization of new

Monoclonal Antibodies against the Receptor for Advanced Glycation Endproducts."

Approximately 300 graduate students attended the meeting and 81 posters were presented. The posters were distributed in six sessions or categories. The poster awards were attributed according to the quality of the poster. A total of eight Best Poster Awards were presented.

The participating schools included the University of Wisconsin-Madison, University of Iowa, University of Kansas, University of Kentucky, University of Michigan, University of Minnesota, University of Missouri at Kansas City, University of Nebraska Medical Center, Ohio State University, Purdue University, Wayne State University, University of Illinois at Chicago, University of Toledo, University of Pittsburg, University of Buffalo and NDSU.

# Student's cardiovascular research recognized

Praveen Shukla, graduate student and research assistant in the Department of Pharmaceutical Sciences, received a 2010-11 Teaching and Research Award presented by the NDSU Graduate School in partnership with the colleges. Shukla is a student in the laboratory of Stephen O'Rourke, professor of pharmaceutical sciences.

Shukla was one of six graduate students campuswide who received an award in the research category. "The Teaching and Research Awards recognize outstanding graduate students for their accomplishments in the classroom and in research laboratories," said David Wittrock, dean of the College of Graduate and Interdisciplinary Studies.

Shukla and the other recipients each received a \$1,000 cash award in honor and recognition of their accomplishments.

"I am very happy and feel honored to receive this recognition and wish to continue the kind of research work which led to

this award," said Shukla, who is from Nagpur, Maharashtra, the largest city in central India.

Shukla's research focuses on the effect of melatonin on coronary circulation. "Melatonin is very commonly used to treat sleep disorders and one can find it in several retail stores. Surprisingly, given such widespread and often unsupervised use of melatonin, our knowledge regarding the way melatonin influences cardiovascular function is limited," Shukla said.

For the same research work, Shukla also was awarded the Society of Experimental Biology and Medicine's prestigious Young Investigator Award; the Cetereo, PRACS Institute/James D. Carlson Graduate student scholarship and the NDSU Graduate School Doctoral Dissertation Fellowship in 2010.



Shukla

# Christian fellowship adds outreach activities

Christian Pharmacists Fellowship International added many new group outreach opportunities during the past year. The events included a Thanksgiving prayer breakfast for students, providing blood pressure screenings at local churches for the "Healthy Hearts for Valentine's Day" program and preparing an "Over the Counter Drug Formulary" booklet for pregnant women and children. The group also helped prepare for the yearly mission trip that NDSU pharmacy students take to Guatemala.

The fellowship is a worldwide ministry of individuals working in all areas of pharmaceutical service and practice. The group's mission is to provide fellowship among like-minded professionals, challenge and promote spiritual growth, encourage the advancement of knowledge and ethics in the practice of pharmacy, encourage evangelism and the integration of faith into practice and provide support and opportunity for service in both home and foreign missions.



# Generation Rx program under way

A new community program called “Generation Rx” is reaching out to provide important information about the abuse of prescription medications. Launched during fall 2010, the program is a partnership of the American Pharmacists Association Academy of Student Pharmacists with the Cardinal Health Foundation.

“‘Generation Rx’ is a term used to describe all of us in American society, because we use medications at unprecedented rates at every age,” explained student Victoria Okoye, who is the committee chair. “We expect ‘quick fixes’ to our health problems. Prescription drugs and the use of pharmaceuticals have become the norm in our everyday lives.”

“Generation Rx” is an educational program to increase public awareness of the abuse of medications, while it encourages health care providers, community leaders, parents, teens and college students to actively work to prevent prescription drug abuse.

In January, the Fargo/Moorhead Law Enforcement Task Force met with the committee to collaborate in the prevention of a noticeable shift in momentum from prescription drug abuse to the distribution and use of heroin in the local community. Student pharmacists involved in the program were asked to help educate parents, teachers and other groups with access to young people, ages 18 to 24. Okoye said the hope is to prevent misuse and abuse of prescription medications, thwarting the linkage



Victoria Okoye, Kayla Porter and Jessica Swanson are chairing the Generation Rx projects.

to other drugs. She said involvement in the Law Enforcement Task Force project gives pharmacy students the opportunity to network and get involved in important issues facing their future profession.

For more information on “Generation Rx,” contact Okoye at [Victoria.K.Okoye@my.ndsu.edu](mailto:Victoria.K.Okoye@my.ndsu.edu).

# AAPS chapter has active year

The NDSU student chapter of the American Association of Pharmaceutical Scientists reports a highly productive year. Chapter members presented 11 posters at the association’s Annual Meeting and Exposition held in Washington, D.C. In addition, there were seven poster and two podia presentations by student members at the annual Pharmaceutics Graduate Student Research Meeting 2011 held in Madison, Wis. The chapter also hosted a talk on “Novel vaccine formulations and delivery systems: opportunities and challenges,” by NDSU alumnus Babu Medi in April 2011.

In collaboration with the Department of Pharmaceutical Sciences, the chapter also invited Dr. Ferid Murad from George Washington University, who was a co-winner of the 1998 Nobel Prize for physiology or medicine. The group plans to bring in more renowned speakers in the field of research to keep the members acquainted with the latest innovations and developments. The chapter also organizes social gatherings to promote networking and interaction.

The NDSU chapter, which was established in 2005, represents various disciplines of pharmaceutical sciences, including drug delivery, epigenetics, imaging diagnostics, development of new monoclonal antibodies and enzyme inhibitors, among others. With 36 members involved in diverse research areas, the chapter provides opportunities both for academic growth and career development in the field of pharmaceutical sciences. All graduate students or postdocs become members of the chapter.

The American Association of Pharmaceutical Scientists is a professional and scientific organization established in 1986 and now has more than 12,000 international members. The organization provides a platform for the exchange of knowledge and ideas among scientists across the globe to enhance their contributions to health.

## Kappa Psi sees year of growth and activity

Kappa Psi pharmaceutical fraternity reports another busy year of growth and increased activity. During fall 2011, the fraternity added 21 new members, bringing the organization's total membership to 80. An additional 15 members were welcomed spring semester.

With the growth in membership, Kappa Psi created new volunteer opportunities to reach out to the community. The fraternity continued its monthly service at a low-income high-rise to provide a meal and blood pressure screenings. Members have begun volunteering with Bethany Homes by playing bingo with residents every other week. The weeks the volunteers are not at Bethany, they volunteer at the New Life Center by preparing and serving a meal. Members also volunteered for the Ronald McDonald house, Kiwanis Pancake Carnival, Family HealthCare Center, American Diabetes Association and Gluten Intolerance Group. Several members also participated in the Service Plunge in January along with other NDSU students. Altogether, Kappa Psi members donated more than 500 volunteer hours and more than \$1,100 in philanthropy during the fall 2011 semester.



Left to right: Kristyn Murphy, Laryssa Erickson, Sara Asmus and Kyrsten Karsky

Kappa Psi received several awards at the 2011 Greek Life Awards in areas such as service and scholarship. Most notably, Jerad Binstock, the immediate past regent, was named the 2011 Fraternity President of the Year.

## Students provide health screenings at Big Iron

North Dakota LIVING partnered with the Big Iron Farm Show to promote public health through the sponsorship of health screenings. Fourth year professional pharmacy students performed cholesterol, glucose and blood pressure screenings for Big Iron Farm Show attendees. More than 70 screenings were provided.

Students participating in the event included Michael Miller, Caitlin Hoff, Erika Haglund, Anthony Wieland, Logan Hollenkamp, Matthew Helbling, Sammie Nguyen, Andrew Zwack, Scott Rudnicki and Jared Giroux. Faculty preceptors were pharmacy practice faculty members Jeanne Frenzel, Alicia Fitz, Elizabeth Skoy and Wanda Roden. Many of the people requesting services return for updated screenings and often comment the students provide their only source of health care each year.



Left to right: Caitlin Hoff, P4; Matthew Helbling, P4; Logan Hollenkamp, P4; Anthony Wieland, P4; and Jeanne Frenzel, PharmD, RPh

## Pharmacy students receive national scholarships

The National Association of Chain Drug Stores Foundation has awarded NACDS Foundation Pharmacy Student Scholarships to Abby Haugrud, P3, and Nicole Towne, P4. They each received \$3,000 to offset costs of tuition and other course-related expenses. In addition, Natasha Petry, P4, was awarded the Edmond Fougera Scholarship in the amount of \$5,000.

"A total of 58 pharmacy students nationwide were selected to receive scholarships ranging from \$3,000 to \$5,000," said Brian

Kellman, the association's coordinator of Education and Foundation Programs. "Out of over 950 scholarship applicants, the Scholarship Committee found their achievements exceptional, and we applaud their efforts in and outside of school."

The NACDS Foundation Pharmacy Student Scholarship Program supports the development of future leaders in the chain community pharmacy industry. For more information on the program or the association, visit [www.nacds.org](http://www.nacds.org).

## Erxi Wu continues commitment to cancer research

Erxi Wu's interest in cancer research began when he witnessed his friend battle the relentless disease. It was reinforced a few years later when he was in postdoctoral training and a professor in his research area died from lymphoma.

Wu wanted to help. Now, as an assistant professor of pharmaceutical sciences at NDSU, Wu conducts important research and dutifully shares his work with others.

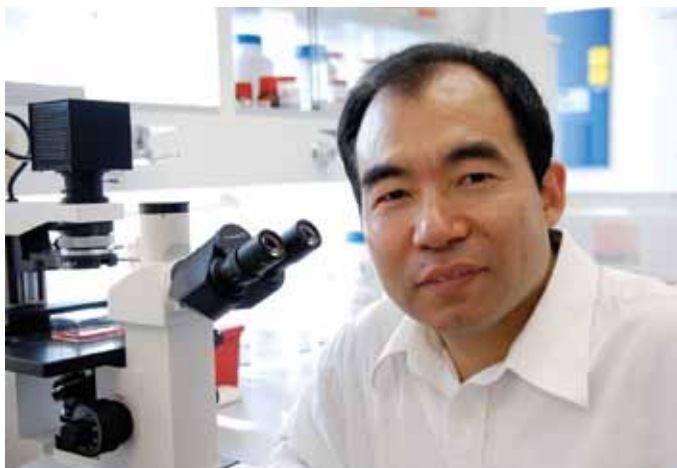
In 2011, Wu's lab published 20 papers on various cancer research projects in numerous publications, including *Current Molecular Medicine*, *Journal of Immunology*, *Journal of Biomedical Informatics*, *Cancer Letters*, *PLoS ONE*, *Journal of Neuro-Oncology*, *European Journal of Pharmacology* and *Molecular Cancer*.

His work focuses on tumor therapeutic targets, drug target proteins, biomarkers, drug discovery, natural products, traditional Chinese medicine/complementary and alternative medicine, and pharmacogenomics.

His latest efforts involve understanding the biological mechanisms linked to the spreading of medulloblastoma, a highly malignant brain tumor that originates in the cerebellum. He is working to target the molecules responsible for it metastasizing and will then study effective treatment strategies.

Wu's lab also studies pancreatic cancer, which has a nearly 100 percent mortality rate. Patients with higher levels of fasting serum glucose have higher death rates from pancreatic cancer compared to patients with lower levels of fasting serum glucose. However, the reasons have not been understood.

Collaborating with Ma lab at Xi'an Jiaotong University, China, Wu and his lab have examined the neural alterations in pancreatic cancer patients with hyperglycemia (high blood sugar) and identified the relationship between the neural alterations and perineural invasion (cancer spreading around a nerve). They have demonstrated that high glucose promotes pancreatic cancer cell proliferation. They now are testing if



The research of Erxi Wu, assistant professor of pharmaceutical sciences, focuses on the battle against cancer.

chronic stress in a negative social and psychological state plays a critical role in pancreatic cancer development and progression. Wu hopes the results will have a therapeutic or preventive potential for patients with pancreatic cancer who are especially subject to psychosocial stress.

Wu's lab also is exploring the use of natural products in treating cancer. For example, they have detected anti-cancer activities of a component of tea, called tea epigallocatechin-3-gallate. Results show the tea component, present in abundance in widely consumed

tea, inhibits cell proliferation, invasion and angiogenesis (the physiological process involving the growth of new blood vessels from pre-existing vessels) in breast cancer patients who also are undergoing radiotherapy. They also are investigating the tea epigallocatechin-3-gallate efficacies in patients with lung cancer.

Wu's motivation is fueled by cancer's increasing impact. He said new statistics show cancer is the leading killer of people younger than 85. One out of two men and one out of three women will be diagnosed with cancer in their lifetimes.

The challenge is great, but Wu remains optimistic. "Our research efforts, with other people's research, surely will help to improve the lives of millions of people now, and millions to come, who suffer from cancer," Wu said. "The answer to find the cure for cancer is research. We will continue to do innovative cancer research and collaborate with physicians to conquer cancer."

Wu finished his doctorate in biochemistry from Sheffield University Medical School, Sheffield, England, in 1998. He then conducted postdoctoral research in cancer biology at the Dana-Farber Cancer Institute at Harvard University. From 2004 to 2008, he led a research group as a faculty member at Children's Hospital Informatics Program of the Division of Health Sciences and Technology at Harvard-MIT.

He joined NDSU in 2008 as a tenure-track assistant professor in the Department of Pharmaceutical Sciences.



## Brown receives asthma education award

Wendy Brown is, unquestionably, an expert on asthma. And her efforts have gained national recognition.

The NDSU associate professor of pharmacy practice is a Certified Asthma Educator, but as a person who has lived with the disorder her entire life, she brings a true passion to her work.

For 10 years, Brown has raised public awareness about asthma by educating and encouraging patients who have the condition that causes airways in the lungs to swell or narrow. Asthma often leads to shortness of breath, coughing and tightness in the chest.

“Asthma is one of the disease states where if you get proper management, you can pretty much do any activities you’d like to do. It’s not a self-limiting disease,” she explained, noting that’s why asthma education programs are so important.

Some of Brown’s many projects include being a regional consultant for the Pharmaxis product Aridol, which is an inhaled mannitol powder used to determine the presence of asthma. This year, she gave presentations on how a health professional can become a Certified Asthma Educator at the Association of Asthma Educators meeting in Denver and the American College of Allergy, Asthma and Immunology in Boston. She also is a member of an expert panel committee as part of a Merck Childhood Asthma Network Grant in conjunction with the Center for Minority Health and Health Disparities Research at Xavier University.

In addition, she is involved in a pilot project to provide a distance education program on asthma management for the Oakes, N.D., area.

“We’re seeing a trend of increased asthma cases across the country. We’re not sure why, but it’s especially true in the pediatric population. That has prompted an effort to get more people certified as asthma educators – they are needed to meet the increasing demand,” Brown said.

Her hard work and dedication have earned a special distinction among her peers. At the Association of Asthma Educators meeting during July, Brown was honored with the “Outstanding Member Award.” The group has more than 500 members, including doctors, health providers, nurse practitioners, physician assistants, pharmacists, school nurses, coaches and health educators.

“I was very surprised,” said Brown, who is a member of the association’s board of directors. “Typically, this national asthma education award goes to a person who has shown sustained service to the organization and made a substantial contribution to asthma education. So, to be recognized like this is kind of cool.”

Brown earned her bachelor’s degree in pharmaceutical sciences and PharmD at NDSU and her Master of Physician Assistant Studies from the University of North Dakota School of Medicine and Health Sciences.

## Sylvester’s article included on biology and medicine website

Robert Sylvester, professor of pharmacy practice, was lead author of the article, “Evaluation of methadone absorption after topical administration to hospice patients,” which was selected for recognition by members of the Faculty of 1,000. The Faculty of 1,000 is an open-access repository of published scientific research articles, conference posters and presentations. Sylvester’s article was published in the May 2011 issue of the Journal of Pain and Symptom Management.

According to Faculty of 1,000 editor-in-chief Sarah Greene, this places Sylvester’s work in the top 2 percent of published articles in biology and medicine. “The service is widely used to find significant new research articles, and the inclusion of your article should significantly increase its visibility,” Greene wrote in an email to Sylvester.

Sylvester said he has received inquiries from researchers or clinicians in Israel and Costa Rica since the research appeared on Faculty 1,000. “I received this comment from an Ohio State University colleague: ‘Your study made an impact on the recommendations of the pharmacists at my practice site.’ For me, receiving this feedback was more gratifying than the Faculty of 1,000 recognition,” Sylvester said.



Sylvester

According to its website, Faculty of 1,000 is a peer-nominated, global panel of more than 10,000 expert scientists and clinical researchers. It provides access to top published articles in biology and medicine.

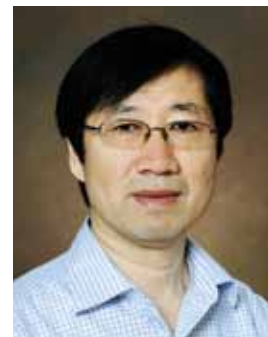
# Chengwen Sun receives Dean's Award for Excellence in Research

Chengwen Sun, assistant professor of pharmaceutical sciences, received the Dean's Award for Excellence in Research at the College of Pharmacy, Nursing, and Allied Sciences' second annual college awards ceremony and reception on May 2.

The award recognizes a faculty member who has demonstrated outstanding achievements in research and who demonstrates excellence and innovation in scholarly work.

Sun joined the Department of Pharmaceutical Sciences in 2007. His research focuses on central blood pressure regulation and pathogenesis of hypertension to identify novel targets for the treatment of hypertension and other cardiovascular diseases.

He has published more than 50 peer-reviewed papers, 20 abstracts and been invited to present five lectures. His research has received more than \$1 million in funding from federal agencies, such as the National Institutes of Health and American Heart Association. He oversees three postdoctoral fellows, three graduate students and three visiting scholars.



Sun

"This award is not only for me, but also for my hard-working research team, including postdoctoral fellows, graduate students and visiting scholars," Sun said. "They are hard working every day in the lab while doing research."

# Pharmacy practice faculty present at national meeting in San Antonio

Several faculty members in the pharmacy practice department attended and held prominent roles at the 2011 annual meeting of the American Association of Colleges of Pharmacy in San Antonio, July 10-13.

Jeanne Frenzel, associate professor, was installed as chair of the special interest group on laboratory instruction, and Christian Albano, assistant professor, was installed as chair of the Public Health Special Interest Group. Frenzel and Albano, along with several other faculty, presented at the meeting.

Albano organized and chaired an educational session on "Curriculum and Educational Resources for Teaching Public Health." Frenzel was first author and presenter of the poster, "Team Based Learning to Assess Practical Pharmacy Competencies." Heidi Eukel, assistant professor, was first author and presenter of the poster, "Amazing Self-Care Race." Elizabeth Skoy, assistant professor, was first author

and presenter of the poster, "Medication Error Reporting Form to Document Adverse Events in a Practical Pharmacy Skills Laboratory."

In addition, Frenzel presented "Innovations in the Pharmacy Skills Laboratory" with Eukel and Skoy at a special session sponsored by the Lab Special Interest Group. Eukel also presented and led a roundtable discussion on "The Use of Video to Teach Important Self-Care Topics" during a special session sponsored by the Self-Care Special Interest Group, and Skoy led a roundtable discussion on "Student Remediation" during the business meeting of the Lab Special Interest Group.

Amy Werremeyer, assistant professor, and Skoy also presented the poster, "Photovoice to Characterize Learning During an International Medical Mission-based Advanced Pharmacy Practice Experience."



Frenzel



Albano



Eukel



Skoy



Werremeyer

## Faculty/staff

*New to the college August 2009 to March 2012*

### Kristina Anderson

**Title:** Research Assistant, Center of Biopharmaceutical Research and Production

**Responsibilities:** Laboratory work is focused around cell culture, aseptic media manufacturing, biochemical cell assays and molecular biology techniques.

**Work history:** During her undergraduate studies, she conducted cancer research and was a general chemistry laboratory assistant.

**Degree:** Bachelor's degree in biochemistry and biotechnology from Minnesota State University Moorhead



### Melissa Eslinger

**Title:** Academic Assistant

**Responsibilities:** Assistant to the associate dean of academic affairs and assessment. Maintain websites within the college; assist in the accreditation process, class scheduling, approval of curriculum, some marketing materials, pharmacy orientation, and event planning for faculty retreats.

**Work history:** Worked for Comstock Construction in Wahpeton and Fargo as an administrative assistant and accountant.

**Degrees:** Associate Degrees from Aaker's Business College and Rasmussen Business College, and is working on a bachelor's degree at NDSU



### Janis Bork

**Title:** Office Manager, Center for Biopharmaceutical Research and Production

**Responsibilities:** Manage center's day-to-day activities.

**Work history:** Grant administration, coordinating volunteers, teaching English Language Learners and orchard management

**Degrees:** Bachelor's degree in sociology and master's degree in English linguistics from the University of Wisconsin-Madison



### Dan Friesner

**Title:** Associate Dean for Student Affairs and Faculty Development, Professor of Pharmacy Practice

**Responsibilities:** Support and oversee recruiting, outreach and diversity initiatives within the college; teach courses in health outcomes assessment for Pharm.D. and D.N.P. students.

**Work history:** Faculty member at Gonzaga University in Spokane, Wash.; Weber State University, Ogden, Utah; and the University of Southern Indiana, Evansville, Ind.

**Degrees:** Bachelor's degree from Gustavus Adolphus College, St. Peter, Minn.; doctorate in economics from Washington State University, Pullman.



### Satish Chandrasekhar

**Title:** Director, Center for Biopharmaceutical Research and Production

**Responsibilities:** Develop a strategy to bring a vibrant biotech sector to the region; develop business partnerships and research collaborations for the region and center.

**Work history:** Most recently served as chief technology officer of the Nucleic Acid-Based Therapeutics Division at Pfizer, Cambridge, Mass.; professor at the Institute for Hepatitis and Virus Research, Doylestown, Penn.; COO and CSO at Nucleonics in Pennsylvania.

**Degrees:** Bachelor's degree from the University of Bombay, India; master's degree in microbiology/microbial genetics/microbial biochemistry from the University of Baroda, India; doctorate in molecular biology/biochemistry/microbial genetics from Memorial University – St. John's, Canada.



### Estelle Leclerc

**Title:** Assistant Professor of Pharmaceutical Sciences

**Focus:** Teaching pharmacodynamics and infectious diseases and performing research, concentrating on developing new antibody based therapeutic agents.

**Work history:** Research assistant professor at Florida Atlantic University, Boca Raton, Fla.

**Degrees:** Doctorate from University Paris XI, France, and was then a postdoctoral fellow at the Swiss Polytechnic Federal Institute, Zurich, Switzerland, and The Scripps Research Institute, La Jolla, Calif.





## Mark Lofgren

**Title:** Experiential Program Assistant

**Responsibilities:** One of the initial contacts for students, preceptors and pharmacy educators for Advanced Pharmacy Practice Experiences; assists with site and preceptor communication and coordination of fourth-year Pharm.D. student rotations; initiates and tracks nationwide experiential site affiliation agreements; manages the E\*Value data collection.

**Work history:** Associate research fellow at NDSU and Fargo VA Hospital, Patient Files Radiology-Nuclear Medicine

**Degrees:** Bachelor's degree from Minnesota State University Moorhead, MBA from NDSU



## Satish Menon

**Title:** Associate Director, Center for Biopharmaceutical Research and Production

**Responsibilities:** Assist in developing business partnerships and research collaborations for the region and center; oversee operations of the center, including research development and production.

**Work history:** Extensive experience in establishing technical infrastructure for process development and developing commercial, early stage basic research and target drug validation; management experience in cell line development, cell culture, protein purification, analytical methods and process sciences.

**Degrees:** Bachelor's degree from Pune University, India; master's degree in microbiology and biochemistry from G.B. Pant University, India; doctorate in biochemistry from the Indian Institute of Science; postdoc at Harvard Medical School.

## Nancy Nessa

**Title:** Experiential Program Assistant

**Responsibilities:** Assists Introductory Pharmacy Practice Experience students by keeping track of required paperwork, immunization records and progress through the program; helps coordinate the poster project for third-year students and assists with annual college functions.

**Work history:** An accounting office in Tucson, Ariz., investment and public housing offices in Minneapolis, Lake Region Healthcare in Fergus Falls, Minn., and Moorhead Public Schools

**Degree:** Bachelor's degree from Bemidji State University and Certified Professional Secretary certification



## Kevin Soiseth

**Title:** Member, Center for Biopharmaceutical Research and Production

**Work history:** Supervisory roles at PRACS, Bone Care International, G.D. Searle, Solvay and Schering-Plough Pharmaceuticals

**Degrees:** Master's degree in business and biotechnology from NDSU, MBA from NDSU and executive leadership program certificate at Harvard University Kennedy School of Government



## Stefan Vetter

**Title:** Research Assistant Professor

**Responsibilities:** Teaching selected pharmacodynamics classes and pharmaceutical biotechnology to professional and graduate students; directs graduate students in the pharmaceutical science doctoral program.

**Research:** Focuses on structure-function and pharmacology of the RAGE receptor. The cell surface protein RAGE is involved in pathophysiological complications of diabetes and neurodegenerative diseases.

**Work history:** Postdoctoral fellow at the Scripps Research Institute, La Jolla, Calif., and assistant professor of biochemistry at Florida Atlantic University.

**Degree:** Doctorate in biochemistry from the Swiss Federal Institute of Technology



## Donald Warne

**Title:** Associate Professor and Director of the Master of Public Health Program

**Responsibilities:** Direction of NDSU's new MPH program, teaching and research focusing on health disparities in diabetes, cancer and rural and American Indian public health.

**Work history:** Director of the Office of Native American Health for Sanford Health, Sioux Falls, S.D.; executive director of the Great Plains Tribal Chairmen's Health Board, Rapid City, S.D.; health policy research director for the Inter-Tribal Council of Arizona; clinical professor at Sandra Day O'Connor College of Law, Arizona State University; and staff clinician at the National Institute of Diabetes and Digestive and Kidney Disorders, National Institutes of Health, Phoenix

**Degrees:** MD from Stanford University; Master of Public Health from Harvard University



# Students, alumni cheer Bison at NCAA Football Championship

For more pictures of pharmacy fans at Frisco, visit the college facebook page.



Left: Joshua Wolf (left), a sophomore in nursing, and his brother Jordan, P4, on the field after the NDSU Bison won the NCAA national championship game in Frisco, Texas, Jan. 6.



Middle: Front row, left to right: Chad Keller, P3, and Kristin Rowe, P3; Back row: Matt Dohman, P2, Jerad Binstock, P3, and Ashlee Randklev, P3



Right: Trisha Scheid, PharmD '04, pharmacy director at Prairie St. John's Hospital in Fargo, and her husband Mark Scheid, '02 electrical engineering, at the NCAA national championship game in Frisco Texas, Jan. 6.

## obituaries

**Gail Marie (Nystuen) Arnold, 64, BS '70**, pharmacy, was a pharmacist for Kaiser Permanente. She lived in Great Falls, Va.

**Kathryn (Odney) Benshoof, 91, BS '41**, pharmacy, worked as a registered pharmacist in North Dakota and also taught at NDSU. She later worked at several pharmacies in the Seattle area and was a Girl Scout leader. She lived in Redmond, Wash.

**Steve Burnside, 64, BS '71**, pharmacy, was director of pharmacy at St. Joseph's/UniMed Hospital, Minot, N.D. After retirement, he established the Natural Health Shoppe in Minot, where he counseled clients on natural alternatives. He lived in Minot.

**Delton R. Jesser, 78, BS '55**, pharmacy, was a staff pharmacist at Trom Drug in Lisbon, N.D., and Kwako Drug in Detroit Lakes, Minn., before moving to Moorhead in 1962, where he worked at Dakota Clinic Pharmacy. He retired in 1994. He lived in Moorhead.

**Neil M. Knatterud, 73, BS '60**, pharmacy, was a medical supply officer for the Medical Service Corps. He later worked for the North Dakota Department of Health, beginning in the Division of Chemistry and later in the Division of Waste Management. He retired in 2000 as the director of the Division of Waste Management. He lived in Bismarck, N.D.

**Daniel S. Lee, 50, BS '90**, pharmacy, worked as a registered pharmacist in the Twin Cities area. He also was a member of the Screen Actors Guild, and he performed in many commercials and in a movie that premiered at Cannes Film Festival and the Sundance Film Festival. He lived in Roseville, Minn.

**Robert Rekedal, 94, BS '47**, pharmacy, owned a drug store in Howard Lake, Minn., for more than 30 years. He also earned a private pilot license and was a charter member of the International 170 Cessna Association. He lived in Peoria, Ariz.

**Deborah Sudro Schranz, 97, BS '35**, human development and education, was the daughter of former NDSU dean of pharmacy William Sudro. A high school teacher, she was active in several community, social and church organizations. She lived in Merrimac, Wis.

**Anthony Walter, 98, BS '39**, pharmacy, owned Bismarck Pharmacy in Bismarck, N.D. He was president of the N.D. Pharmaceutical Association, president and member of the N.D. Board of Pharmacy, charter member and president of the Sixth District Pharmaceutical Association, and later in retirement, senior compliance officer for the N.D. Board of Pharmacy. He received many awards, including the Bowl of Hygeia as N.D. Pharmacist of the Year in 1971. In 1980, the NDSU Kappa Psi fraternity selected him as Man of the Year. He lived in Fargo.

**Rodney Zimmerman, 79, BS '53**, pharmacy, was a pharmacist in Jamestown, N.D., a colonel in the Air Force, a hospital administrator for Brookhaven Medical in Dallas and hospital building consultant in St. Louis. He was a member of the Masons of Arizona and the Retired Officers Association. He lived in Plano, Texas.

**Correction** – In our last newsletter, Marcus K. Lunde was incorrectly listed as deceased. We apologize for the error.

## a message from the advancement office



Wald

The Advancement Office has been working on an exciting project this past year. We are installing an interactive donor board in Sudro Hall outside of the Dean's Office. This board will allow us to show our students how alumni and friends have helped in their education. We would like to thank the North Dakota Rexall Club for their support of the recognition wall.

The North Dakota Rexall Club and Bill Grosz have been essential in helping raise funds for the Pharmacy Program. Part of the interactive board is to distinguish the past, present and future students who have received a North Dakota Rexall Scholarship. We need help filling in gaps in our records. If you or someone you know received a Rexall Scholarship and is not on the list below, please email or call me. We would like to have our records complete. Thank you.

*Sara Wald*  
 Director of Advancement  
 (701) 231-6461 or sara.wald@ndsu.edu

### North Dakota Rexall Scholarship Recipients (by class year)

**1987**

Cori Evanson

**1988**

John Olejnik

**1990**

Darren Seay

**1991**

Gary Haverlock  
 Sara Roux

**1992**

Bradley Roesler

**1994**

Kami Anez  
 Think Ha  
 Mary Wire  
 Jennifer Zenker

**1995**

Lana Kirschenmann  
 Randell Peterson  
 Henry Wieland

**1996**

Amy Drummond  
 Amy Noeske

**1997**

Lisa Wanner  
 Kimberly Wilson

**1998**

Amy Baumann  
 Ryan Holzwarth  
 Kara Johnson

**1999**

Megan Krueger

**2000**

Lida Etemad  
 Angela Orn

**2001**

Lisa Borreson  
 Amy Splonskowski  
 Crystal Winter

**2002**

John Sherven  
 Jayme Steig  
 Lisa Vandrovec

**2003**

Lindy Flatau  
 Jolena Hagen  
 Janel Silvernagel

**2004**

Kathryn Boyer  
 Holly Erickson

**2005**

Gwendolyn Bisek  
 Jennifer Melgaard  
 Shawn Pritchard  
 Amy Werremeyer

**2006**

Lisa Richter  
 Christy Steiner  
 Jacquelyn Wienbar  
 Kaila Wilner

**2007**

Wendy Burgess  
 Christopher Wessling

**2008**

Amanda Eastman  
 Heidi Eukel

**2009**

Hannah Dyk  
 Dana Opsahl  
 Jill Wohl

**2010**

Elliot Klapperich  
 Maari Loy  
 Faith Wentzel  
 Lindsay Werre

**2011**

Megan Adelman  
 Jill Anstadt  
 Brooke Melicher  
 Suzette Reisenauer

Our annual donors help us maintain our tradition of excellence in the pharmacy program. Visit [www.ndsu.edu/pharmacy/donor\\_list](http://www.ndsu.edu/pharmacy/donor_list) for a list of donors from July 1, 2010, to Dec. 31, 2011.



# pharmacy alumni news

SPRING 2012 • VOL. 16 • ISSUE 1

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## NDSU

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*NDSU has changed campus mailing procedures.  
Please note the college's new address.*

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Editor/writer: Steve Bergeson

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Designer: Janelle Kistner

Photographer: Dan Koeck

Copy editor: Kathy Laid

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This publication is available in other formats on request.

## continuing education opportunity

### PAIN MANAGEMENT CERTIFICATE PROGRAM

- Complete 12-module home study..... 12 credits
- View Webinar ..... 4 credits
- Complete both.....16 credits, and Pain Management Certificate

#### Target Audience

The program is intended for community, hospital and consultant pharmacists. It is appropriate for pharmacy technicians, physicians, mid-level practitioners and nurses with an interest in the subject area.

*Note: Program designation of "P" signifies this program has been specifically developed for pharmacists. ACPE Continuing Education credit is applicable for pharmacy technician and nursing.*

#### Program Goals

The pain management certificate program will provide pharmacists with necessary tools to help patients manage pain associated with injuries and illnesses. The program offers valuable information of benefit to any healthcare practice setting.

[www.ndsu.edu/pharmpr/continuing\\_education](http://www.ndsu.edu/pharmpr/continuing_education)



The College of Pharmacy, Nursing, and Allied Sciences, North Dakota State University, is accredited by the Accreditation Council for Pharmacy Education as a provider of continuing pharmacy education.