

NDSU GLOBAL LINK

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NDSU's international studies major asset in today's world

Every year hundreds of students from countries around the world come to NDSU to study. During the 2004-2005 academic year, more than 600 international students representing 67 countries gathered on the NDSU campus. For many, it was the experience of a lifetime.

But it's not a one-way door. NDSU's Office of International Programs sent dozens of students to study and travel abroad last year. And 20 NDSU students are enrolled as international studies majors.



Krisanne Kvernen took in as many historic sights as possible during her semester of study in Spain, including remains of ancient Roman aqueducts in Segovia.

“The international studies major is truly valuable for anyone in this day and age,” says Lisa Hauck, associate director of international programs. “It makes you stand out.”

Of course, Hauck is biased. Not only does she recruit students for the program, she herself spent five years living in China before coming to work at NDSU almost two years ago. In fact, Hauck recently sent an NDSU student — who received a \$5,000 scholarship — to the Chinese University of Hong Kong, where she once studied Chinese language and literature.

When Hauck introduces the international studies program to NDSU freshmen, she tells them that with a little planning and a minimum of extra effort, they can earn a major in international studies. NDSU students from other countries may also enroll in international studies.

The key is in the timing.

Before students can declare an international studies major, they must have reached sophomore standing, have completed one year or the equivalent of college foreign language study and have started advanced course work in their academic majors. Any academic degree can be paired with international studies, from interior design to electrical engineering. It is not, however, a stand-alone degree.

Ultimately, international studies majors must show they are proficient in a foreign language (most take at least two years of language classes), participate in an experience abroad, complete an integrative senior project based on that experience, and take some core courses and electives with an international focus.

Lots of hoops? Not really, say Krisanne Kvernen and Melinda Marty.

Kvernen will graduate in winter 2005 with bachelor's degrees in Spanish, Spanish education and international studies, plus a music minor. Including the semester she spent at the University of Granada in Spain, Kvernen did it all in four and one-half years.

Like many international studies majors, Kvernen knew she wanted to spend time abroad in college because of travel she did in high school. She was inspired by a six-week mission trip to Europe. "That trip opened my eyes to the world," she says. "It developed my love for the world and love for traveling and made me want to go back and do it again."

What Kvernen didn't expect, perhaps, was how much studying abroad would shape her college career. "At the time I went to Spain, I was an elementary education major. When I came back, I knew I loved Spanish and loved the idea of teaching the language and culture." So she changed majors, and added one.

For her integrative senior project, Kvernen chose to examine Spain's education system. While writing her research paper was "a lot of work," Kvernen says it also was one of her most rewarding academic exercises. She also found that having to do research in Spain enriched her travel experience, taking her into an elementary classroom and to Granada's school of education, which she otherwise would not have explored.

This summer, in preparation for student teaching at Fargo North High School, Kvernen spent six weeks at Monterrey Tech in Mexico. After brushing up on her Spanish grammar and studying Mexican society, she spent time exploring the country on her own. By next summer, Kvernen hopes to be involved in some kind of international work/ministry.

Melinda Marty left July 8 for Saarbruecken, Germany. A sophomore zoology major, Marty has wanted to visit Germany as long as she can remember. She made her first trip in December 2003 to visit Fabian Schlegel, who had been an exchange student in her high school. Now she's going to live with Schlegel's family for 13 months and take classes at the University of Saarland.



Kvernen, right, sits with friends on one of her favorite spots, Sacramonte (Sacred Mountain) overlooking the Arab neighborhood in Granada, Spain.



Melinda Marty

While studying abroad tends to be more expensive than at home, Marty said, thanks to the German education system and to her host family, it will cost her less to be a student in Germany than it would in North Dakota.

Marty will spend her first semester in German language classes specifically designed for international students; she doesn't know what she'll take her second semester. When school is out, Marty plans to travel to other parts of Germany, as well as Mallorca Island in Spain, and — most likely — Paris. A few weeks before her departure, Marty confessed, "I'm very excited and

very ready to go. I'm ready for a change."

Marty hopes to work for a zoo someday and sees the international studies degree as a vehicle for making vital connections. "Zoos collaborate with so many other zoos around the world," she said, so having international experience, and the ability to speak German, can only be an asset.

For more information on the international studies major, contact Hauck at Lisa.Hauck@ndsu.edu or call her at 1-701-231-7895 or read more about it on the Office of International Programs Web site, www.ndsu.edu/International/.

— Catherine Jelsing



Dear alumni and friends,
North Dakota State University has seen many milestones achieved this past year. For the first time in our history we reached a record enrollment of 600 international students out of an overall record student enrollment of 12,026. These students represent an amazing

67 countries. International students contribute a great deal to the campus not only in the classroom but also in regard to research that is conducted and increased diversity that is seen on campus. President Chapman would like to have more international students on campus and has given the Office of International Programs a lofty goal of bringing international student enrollment to 1,000 during the next few years. To help us reach this goal, the Academic and Cultural Sharing Scholarship was created reducing non-resident tuition by 50 percent for new undergraduate international students.

The university also has seen an increase in the number of agreements we have with overseas institutions. For the first time this year we hosted or sent out students on programs with the University of Burgos, Spain; Charles Sturt University, Australia; Aarhus School of Business, Denmark; and Leeds Metropolitan University, United Kingdom. This year we signed agreements with the Universita Cattolica del Sacro Cuore, Italy; Chonbuk National University, Korea; and our most recent signing with the University of Belize, Belize. We also had the pleasure of hosting 30 students from Konkuk University, Korea.

Needless to say it's been a busy year and it's not about to slow down anytime soon. NDSU remains committed to internationalization and sees increasing international student numbers, expanding international opportunities for students, and increased overseas research collaboration as priorities. NDSU has expanded its presence in the state, in the nation, and now has its eye set on the world. It truly is an exciting time to be part of NDSU. We hope you feel it too.

Kerri Spiering
Director
International Programs

News you can use

Send your kids to NDSU

Children and spouses of NDSU alumni are eligible for reduced tuition at NDSU. Qualifying alumni offspring and spouses may attend NDSU at a tuition rate of 150 percent of the North Dakota resident rate. Based on the 2005 non-resident rate, that's a savings of more than \$4,600 on tuition.

The reduced rate applies to new undergraduate students. Those already eligible for reduced rates due to residency in Minnesota or other states with reduced tuition structures are not eligible for the alumni discount.

For more information, visit www.ndsu.edu/prospective_students. International students should e-mail questions to ndsui@ndsu.edu or call (701) 231-7895. Students in the U.S. should e-mail ndsua@ndsu.edu or call (800) 488-6378.

Homecoming game is Oct. 22

The Bison will tackle the University of Northern Colorado, Greeley, during NDSU Homecoming 2005. The game will take place in the Fargodome Oct. 22. Special activities are planned throughout Homecoming Week, Oct. 17 through 22.

For complete homecoming information, visit www.ndsualumni.com/index.htm or call (800) 279-8971 in the U.S. or (701) 231-6800.

Send us an e-mail update

We want to share news of your life and accomplishments with other NDSU alumni. Please send us an e-mail at ndsui@ndsu.edu.

Here's the information we'd like you to include: Your full name (nickname if appropriate), the year you graduated, your degree(s), your current e-mail address, your hometown, the city/state/nation where you now reside, your current employer and position, promotions, important family news, honors, exciting travels, plus any news you'd like to share, etc.

We'll publish the updates in next year's Global Link.

Diplomatic assignment to Belize turns into new opportunity for NDSU students

The colors. That's one of the things Susie Freeman, BA '65, misses about Belize.

Freeman and her husband, Russ, a Fargo attorney, relocated to the Central American country in the fall of 2001, after President George W. Bush appointed Russ to be U.S. ambassador there. The couple returned to their home on Pelican Lake, near Detroit Lakes, Minn., April 8.

Nestled between Mexico and Guatemala, in an area smaller than Massachusetts, Belize offers jungles, mountains, waterfalls, mangroves, Mayan ruins and the longest uninterrupted barrier reef in the Western Hemisphere. "I trekked through jungles and snorkeled with sharks and manta rays," Freeman said. "It was incredible."

Freeman especially enjoys remembering the color and excitement of Belize City. "The activity, the smiling faces in the marketplace, the bright clothes, the happy yellows, the hot pinks and the sea-washed greens. The houses were the same colors as the clothes. I loved the color."



Susie Freeman fell in love with the colors of Belize — both natural and man-made — while stationed with the U.S. Embassy there. On the right is Banana Bank Lodge in Belmopan where members of the NDSU delegation stayed in June during their visit to Belize.

During her three-and-one-half years as wife of the ambassador, Freeman said the most important thing she did was make personal connections with people. As much as possible, she did her own shopping and ran her own errands in the city center. She joined women's clubs, tutored elementary and junior high students in reading, and "We went to every function we were invited to, unless we had a schedule conflict."

Not long after her arrival, Freeman began to think of ways to connect students at the University of Belize with NDSU. "Belize would be a wonderful place for students to come for a semester abroad," Freeman said. They could study traditional Pan music or marine biology, share expertise in agriculture or architecture, or explore rainforests "rich with all the plants that we turn into medicine."

Thanks to Freeman — whose diligence finally resulted in a meeting with Corinth Morter-Lewis, president of the University of Belize — an exchange agreement with NDSU is now in place.

In June, NDSU President Joseph A. Chapman; Kerri Spiering, director of international programs; and Tom Riley, dean of the College of Arts, Humanities and Social Sciences, traveled to the capital city of Belmopan to meet with University of Belize officials and sign a Memorandum of Understanding.

Potential areas of collaboration, identified by representatives of the two universities, include professional development for the Belizean faculty, agricultural research, expansion of degree offerings, development of a research/technology park, and creation of short-term, study-abroad programs for NDSU students led by NDSU faculty.

The Freemans are planning their first return visit to Belize about a year and half from now, to coincide with the completion of a new embassy building. Freeman said she will be most eager to reconnect with the people who worked in their home, as well as well as members of the diplomatic staff.

The one thing Freeman experienced in Belize, which she didn't plan on, is what it's like to be seriously ill when living abroad. Freeman was visiting Mexico City when she went to see a doctor about an infection. He decided to order a mammogram, which led to a diagnosis of breast cancer. "I figured I was in three hospitals in three countries in two weeks," Freeman

said. "It was an intense period, but that's part of diplomatic life, especially in developing countries."

Freeman's third stop was the Mayo Clinic in Rochester, Minn. She chose to have surgery and receive chemotherapy there because the couple's two children both live in the nearby Twin Cities. Freeman was absent from Belize for a year, but returned healthy and still is "doing fine."

One thing the Freemans won't miss is the extreme heat and humidity of Belizean summers, although that might change come winter. And, on occasion, the Freemans did feel homesick and had to find ways to reach out and touch home. "We'd sit in my office and look at the palm trees and listen to the (NDSU) football games," Freeman said. "It was sort of nostalgic."

— Catherine Jelsing and Tammy Swift

New York designer Michael Kors adds NDSU graduate from Peru to his staff

It's not all glamour. The glamour only comes around twice a year, during New York's fashion weeks in February and September.

The rest of the time, Juan "Miki" Tokashiki says, it's a lot of hard work being Michael Kors' new assistant designer of the men's collection. But it's work the 2004 business administration graduate has wanted to do ever since he was a kid growing up in Lima, Peru.

Even in elementary school, Tokashiki was in love with clothes and fashion, making sketches of his own designs. "But, I wasn't that passionate until I realized that I had to do something for a living," Tokashiki said. He decided he wanted to become either a fashion designer or a costume designer.

His parents, however, had other ideas. They wanted him to have a "sensible" career, like business.

Out of respect for his parents, Tokashiki studied economics at Universidad del Pacifico in Lima. Next he found a school in the United States that offered degree programs both in business administration and apparel textiles, with an option in apparel studies. "I didn't know how cold North Dakota was," he says of his choice, but once enrolled at NDSU, Tokashiki warmed to the people, the place and the programs.

He graduated with his dual degrees in December 2004 and then was off to New York to study at New York's Fashion Institute of Technology (FIT). (An agreement with FIT makes it possible for NDSU apparel and textile majors to earn an associate degree at FIT and bachelor's from NDSU.)

But something happened between the first and second semester of FIT's one-year program. Tokashiki got an internship with Michael Kors.

An award-winning designer and FIT alum, Michael Kors' mission is to produce "polished, sleek, sophisticated American

sportswear with a jet-set attitude." Since forming his label in 1981, Kors has received many honors, including the prestigious Council of Fashion Designers of America award for Womenswear Designer of the Year in 1999 and Menswear Designer of the Year in 2003.

For someone like Tokashiki, who's wanted to work in the fashion industry his whole life, it was a great place to get his foot in the door. And once his foot was there, Kors decided he wanted Tokashiki to stay and offered him a full-time position.



An NDSU apparel studies degree and three New York internships helped Juan "Miki" Tokashiki land a job with designer Michael Kors. The company's work appeared on the cover of DNR magazine in February.

Prior to his Michael Kors internship, Tokashiki had spent two previous summers in New York City doing internships at New York Magazine and for Spoon, a "raunchy, fashiony" British magazine. He did fashion styling, finding clothes and accessories editors picked as trends for upcoming seasons. "It was more like partying and shopping for clothes," Tokashiki says.

It was a bit of an awakening to see how much business plays into the world of fashion design. "The sketches take about a week," Tokashiki says, "the rest is doing a lot of meetings, talking to factories ... the fancy stuff only happens once or twice a year. The rest is not glamorous at all. It's very time consuming."

Tokashiki's business training means he understands the bottom line: At the end of the day a designer has to sell clothes. So, although everything in the creative process starts with Kors' inspiration, and even though it's the job of his staff to execute his vision, the ultimate power — especially over the new MICHAEL collection carried by 350 stores across the country — lies with the merchandising department.

"Merchandising will tell us this is what is going to sell and this is what will not," Tokashiki says, and that drives what customers will ultimately find in the stores.

Tokashiki, 25, sees himself happy in this position for some time to come, and eventually would like to reach a point where he has some creative input into what is being made. "To oversee some line or some collection, that would be cool."



Jung named Korean rural development administration honorary scientist

This spring, Jae Min Jung, assistant professor of marketing, gave two NDSU colleagues a first-hand introduction to rural tourism in South Korea.

Jung is serving a three-year term as honorary scientist of Korea's Rural Development Administration, which is responsible for Korea's agricultural research and extension.

Jung arranged for a meeting in Korea between RDA officials and Kathleen Tweeten, director of NDSU's Center for Community Vitality. "I explained to Kathy the current status of RDA's work on rural tourism, which stimulated her interest in learning more about Korea's strategy." So in March Tweeten, Jung and Kara Wolfe, NDSU assistant professor of tourism, met with RDA staff in Suwon.

The group also toured two rural tourism sites, Suwon's Agricultural Exhibition Hall and Braemi, a small farming community near Icheon.

"There are more than 300 different rural tourism villages in Korea," Jung said. "Each community has different activities to offer and different assets to showcase. Each capitalizes

on its strengths." Attractions vary from tours of beekeeping operations and ginseng fields, which take six years to mature, to building clay pots or learning to make salt. Often traditional farming practices, no longer employed in modern Korea, are demonstrated.

Honorary scientists are expected to engage in discussions and problem solving with RDA scientists and act as a resource for the organization. Jung began his RDA term in July 2004 and will complete his assignment in June 2007.



Pottery making is among the activities tourists can engage in when they visit the farming community of Braemi, South Korea.

One of Jung's RDA projects is to analyze data collected in a survey of 200 tourists who visited rural sites in South Korea. The information will help tourism advocates, as well as farmers, customize their products, services, pricing and promotions to generate more rural tourism. Jung will present and/or publish the results within the next year or two.

A native of Korea, Jung graduated in 1992 from Chonbuk National University in Chonju. He went on to earn his MBA in 1996 at the University of North Texas, Denton, and his doctorate from the University of Cincinnati in 2002.

Jung and Bret Simmons, NDSU assistant professor of management, also led students on a study trip of Korea.

High goals lead to a lifetime of achievement

Byung Hee Han, PhD '83, sets high goals for himself and — as his accomplishments show — he achieves them.

Chan arrived in Fargo with eight years' experience teaching high school and a master's degree from Sungkyunkwan University, Seoul, Korea. He earned a second master's in 1980, a doctorate in organic chemistry in 1983 and did postdoctoral work in 1986, all at NDSU.

"When I first got to NDSU, I did not know much English and it was very hard for me," says Han. "However, the professors were very kind and they helped me to understand the materials better. They encouraged me to study harder and gave me good advice about my future. The thing that I liked most about NDSU was that they did not discriminate against race or

culture, and also that they were eager to help foreign students in any way possible."

The same year he earned his doctorate, Han accepted an assistant professor position with Chungnam National University in Daejeon, South Korea. He is now a professor and director of housing, responsible for 1,700 students and 46 employees and is currently working to establish a faculty dormitory and an entertainment building for CNU students.

In 2003 Han was one of seven professors selected to receive CNU's first-ever Outstanding Teaching awards. Students rated 830 professors on their teaching methods, skills, kindness and passion. Han credits his award to his students, whose eagerness to learn inspires him to teach at his best at all times.



Byung Hee Han

“The statistics say that human beings only show 40 percent of what they are capable of throughout their lives,” Han says. “I would like to urge students to live each day giving their best, showing the world what they are capable of.”

Han combines his love of teaching with intensive research. He is well recognized in his field, with more than 80 publications and numerous research awards to his credit. Two of his current research projects involve anti-wrinkle compounds, which could be used in cosmetic fields, and the medical potential of deer antlers.

Han returned to NDSU in 1992 as a visiting research professor, a position he also filled at the University of Illinois at Urbana-Champaign in 2000. He plans to retire after another six years of teaching. Until then, he intends to continue to teach to the best of his ability and work hard at his research projects.

— *Mary Frances Casper*

Like father like son: Xiao Guan Jia second in family to earn NDSU degree

Eight-year-old Xiao Guang Jia picked up a stopwatch laying on a black lab table, studied it a few seconds and began to click it on and off, watching the hand alternately sweep past hash marks and freeze. Sweep and freeze. Sweep and freeze.

Around him, Xiao could hear the hum of equipment and quiet exchanges between his father and other graduate students. The NDSU soil science lab, with its earthy smells, beakers and microscopes, was still a new and exciting place. Only a few months ago, he and his mother had been in China trying to imagine what life would be like together again as a family in faraway Fargo.

A yelp stopped Xiao mid click. Jerking his head toward the source, he locked eyes with an obviously displeased grad student. Glancing back down at the watch, Xiao then looked sideways at what he now realized was an experiment. A timed experiment.

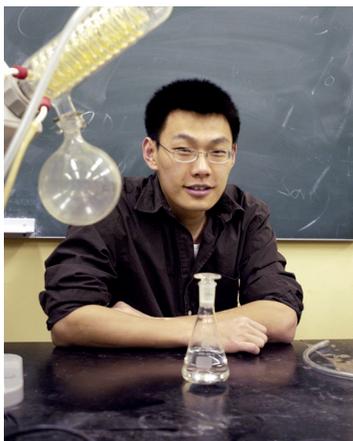
Today, 21-year-old Xiao has an 8-year-old brother, Eric, who sometimes tags along when Xiao goes to his lab. But Eric isn't allowed to wander among the beakers and test tubes; Xiao makes sure Eric safely entertains himself at a computer in Dunbar 261.

Xiao is a member of associate professor Sanku Mallik's research team. He graduated in May with four years of lab experience and his name on five of Mallik's publications. Not bad for an undergraduate.

There's no doubt Xiao's father sparked Xiao's early interest in chemistry. Quanzai Jia came to NDSU as a visiting scientist in 1989 and earned both his master's and his doctorate in soil science here. A few years ago Quanzai started his own crop consulting business, Northern Plains Ag Research, at Gardner, N.D. Xiao's mother, Jun, works winters in the NDSU barley department and spends her summers helping with Quanzai's test plots.

What clinched Xiao's future in chemistry was North Dakota's Experimental Program to Stimulate Competitive Research. Support through the EPSCoR program and some advice from his high school science teacher put Xiao in Mallik's chemistry lab a month before he started his freshman classes. Within a year, Xiao was thinking “this is so much fun, I could do this the rest of my life.”

Under Mallik's supervision, Xiao's research has focused on isozyme-selective inhibitors for the enzyme carbonic anhydrase.



Xiao Guang Jia

Carbonic anhydrase inhibitors are used to treat glaucoma by reducing the rate of aqueous humor formation. When this enzyme inhibitor is used, it allows the water to drain from the eye, but it also can cause many negative side effects. “The idea is to bind the inhibitor to the active site and a secondary part of the enzyme, so it's lots stronger,” Xiao said. “If it binds stronger, then you have to use less drug, so it won't be transported around your body as much and it will also be a lot more effective.” The group is applying the same principles to matrix metalloproteinase, which are over-expressed in tumors.

Mallik's work ethic, teaching style and research methods have profoundly impacted Xiao, who claims that if he became a professor, he'd do group meetings and teach grad students just like his mentor. And if he were to organize a lab, he would do it much like Mallik. “His method,” Xiao said, “it really works.”

Xiao plans to enter graduate school in the fall. He's not certain of where he'll enroll, but he plans to focus on organic chemistry and synthesis. He'll wait and see what his experiences are like in graduate school, but at the moment he's leaning toward a career in pharmaceutical research, because he believes the best part of conducting research is “developing something new that could be used in the future to help people.”

— *Catherine Jelsing*

Students go to China to view benefits, drawbacks of Three Gorges Dam

Imagine traveling the Yangtze River aboard a five-star cruise ship, floating between centuries-old limestone cliffs, adorned with ancient Chinese calligraphy. Scanning the precipices far above, one can see coffins suspended in caves. No one knows how the wooden boxes were placed so far up, out of reach of man and beast.

The river winds past ghost towns and evacuated villages, emptied to prepare for the day when the third-longest river in the world is dammed at the Three Gorges. The skeleton of one such village appears through the mountain mist, its darkened windows a testimony to the estimated 1.25 million people who will be forced to relocate. Across the river, on higher ground, stands a new village, the replacement for the one that will sink into the watery depths of the Yangtze forever.

A dozen NDSU engineering students made this three-day river pilgrimage to Three Gorges Dam construction site in March. They were inspired to make the trip when Wei Lin, professor of civil engineering, showed a video about the Three Gorges project in class. The video made the students want to see the site firsthand. Before the visit to China, Lin said the students were critical of the project because it will displace so many people, destroy so many known and undiscovered historic sites and disrupt so much wildlife.

“You hear about it on the news, but I don’t think you fully understand how big the project is until you actually see what it is doing,” said Isaac Odland, a construction-engineering student.

The world’s largest hydroelectric project, the completed Three Gorges Dam will supply approximately 11 percent of China’s power needs, provide flood management and improve navigation and trade on the upper Yangtze. Named for the scenic region in central China where it’s being constructed, the dam will be five times as wide as the Hoover Dam. Construction began in late 1994 — almost 75 years after the project was first proposed — and is scheduled for completion in 2014.

For the NDSU students, abandoned towns along the Yangtze came to symbolize the controversy surrounding the dam. “Our

guide said that 14 cities have been moved, which does not include the hundreds of small towns, villages and single-home areas,” Odland said. For instance, the tourist town of Fengdu, once known as the “Ghost City” for its lavish temples and shrines dedicated to the gods of the netherworld, has fallen victim to the very river that inspired its legends and lore.

“The thought that much of the area we visited is going to be under water in only a few short years was quite an eye-opener for all of us,” said Lindsey Roberts, a civil engineering student. “To know that we are some of the last people to see these villages, towns and archaeological sites is quite amazing.”



A water level marker runs up the bank of China’s Yangtze River. When Three Gorges Dam is completed, the river will rise from 138 meters above sea level to 175 meters.

The students also learned that many people have refused to leave their businesses and homes. “There were many abandoned buildings still being occupied by small restaurants and other businesses,” Roberts said. These businesses had no formal structure, no shelving, storage or seating, just a few chairs for those who remain.

Lin said the visit to the dam site made students less critical about the social and environmental impact of the project because they now know what measures are being taken to preserve native plants and animals. They understand the valuable energy it will produce and the lives it will save. “The Yangtze has taken so many lives over the course of history,” Roberts said, “and now — to have almost full control over flood waters — is literally a lifesaver.”

Before their three-day Yangtze cruise, the NDSU students participated in an academic exchange with students from Beijing Institute of Civil

Engineering and Architecture. Some BICEA students joined the group on a four-day tour of Beijing, visiting sites such as the Beijing Zoo, Summer Palace, the Forbidden City, Tiananmen Square, the Great Wall, Ming Tombs and the Peking Opera House. “It was nice to have students from China there to answer questions and tell us information that we may not have learned otherwise,” Odland said.

The group also visited the construction site for the 2008 Olympic Games and heard a presentation by the project’s chief engineer. Plans are under way for the BICEA and NDSU students to reunite during the Olympics in 2008.

'Friendship families' plus for Korean students

NDSU's new affiliation program with a university in South Korea is off to a terrific start. During the fall 2004 semester, NDSU welcomed 30 South Korean students from Konkuk University, Seoul — the first group to take part in the program.

"Overall, it has been a very positive experience. It was positive for both the university and the students," said Kerri Spiering, director of international programs. "Part of their goal in coming here was to improve their English, but it was a different experience for each student."

The students explored a variety of studies, including business administration, English, biochemistry, engineering, animal and range sciences, apparel and textiles, statistics, architecture and interior design.

For Bo Eun Chun, an economics major from Seoul, it was a great way to learn about the United States. "I was so lucky, because meeting awesome American friends came easily," she said. "They were my neighbors around my room in the dormitory, so we spent most of the time together and I had many opportunities to be close with them. I enjoyed hanging out with American friends and learning American culture."

Chun had fun learning how Americans do things. For example, the Office of International Programs arranged a "friendship family" for Chun, so she got a first-hand look at holiday celebrations for Halloween, Thanksgiving, Christmas and Easter.

"My first visit at an American home was Halloween," Chun explained. "We carved pumpkins and made caramel apples. Since we don't have Halloween in Korea, everything was interesting and looked funny."

She will also remember her first taste of turkey at Thanksgiving, loved the tradition of "open present" at Christmas and liked taking part in an egg hunt at Easter.

"Because I had great experiences with American friends, I would like to strongly recommend future Korean students to make intimate American friends," said Chun, who also participated in the Circle-K service organization and Habitat for Humanity while she was on campus. She said her plans now include further study in China, followed by attending graduate school in the United States. "Americans are willing to be our friends. They are very kind and generous, different from what we think. Through



A group of 30 students from Konkuk University in Seoul, South Korea, were the first to participate in a new exchange program between Konkuk and NDSU.

friends, I have learned American culture and had lots of fun — they help me a lot."

The program's long-range goals are to continue hosting students at NDSU and have NDSU students go to Korea. Konkuk University, with an enrollment of about 25,000 students, has created a summer program to make it easier for American students to study the Korean language and the country's history and culture. The university offers 120 undergraduate degrees, 70 graduate degrees and 55 doctorates, and has a second campus in Chungju in addition to its main campus in Seoul.

"Increasing our international student numbers is one of our goals, and having this affiliation program is one way of doing that," Spiering said. "It also gives our domestic students an opportunity to meet people from outside North Dakota, and we're definitely looking at continuing and expanding the programs with other schools outside the United States.

"The program has already had a direct impact," Spiering said. "We have a student who plans to study in Korea this fall."

And for the visiting students, like Chun, it was an academic year that will be a lasting memory. "I experienced a lot and had chances to look back upon my life. Living in the States is likely to bring me the biggest change in my life," she said. "Those times are so precious and influence my life. I can never forget the times and friends I met here."

— Steve Bergeson

Mergoum working with wheat breeders around world to eradicate scab

To grain farmers across the globe, “scab” is far worse than other four-letter words.

With the technical name of *Fusarium* head blight, scab wheat and barley disease caused more than \$7 billion in damage to American crops between 1993 and 2001, about two-thirds of the impact being felt in North Dakota and Minnesota. The frustrating disease shrivels kernels of wheat or barley, while producing deoxynivalenol (DON), a toxin that can make the grain unsuitable for use.

Now, through the help of researchers around the world, an answer may lie ahead.

“We have made tremendous progress in wheat resistance to scab,” said Mohamed Mergoum, associate professor of plant sciences and NDSU’s hard red spring wheat breeder. “We have stepped forward, but in no way is the war over.”



Mohamed Mergoum

Mergoum, the fourth wheat breeder in NDSU history, believes that by working with the international scientific community, a solution can be found to the complex disease. According to him, part of the answer may eventually come from plant genes or germplasm that originate in places from Asia like China and Japan; Brazil; or from local germplasm and related wheat species.

But, it can get tricky crossing plants from the around the world. “It takes years to get a variety,” Mergoum explained. “Especially when you make germ crosses that are so exotic.”

NDSU’s scab research began in 1993, almost a decade before Mergoum came to campus in 2002. Annually funded with a \$5 million grant from the USDA’s U.S. Barley and Wheat Scab Initiative, important steps have been made.

Through the efforts of Mergoum’s predecessor, Richard Frohberg, and other NDSU researchers, wheat plants were crossed with

germ plasma from a Chinese variety called Sumai-3 that showed natural resistance to scab. The result of that work was the “Alsen” hard red spring wheat variety, which was released in 2000.

Alsen quickly became popular with growers, and in 2003, North Dakota producers planted 2.4 million acres of it.

More progress came with a new variety called “Steele-ND,” which included genes from wheat wild relative *Triticum dicoccocoides*. Another variety, named “Glenn” in honor of NDSU’s second wheat breeder Glenn Smith, is being released by Mergoum’s program in 2005. Glenn is considered a milestone in fighting the wheat scab disease battle because it combines resistance genes from both Alsen and Steele-ND.

An important key to this work for Mergoum is to find appropriate germplasm, no matter where in the world he needs to turn. He worked previously in breeding programs in Turkey, Mexico and Morocco, so he has many friends and colleagues on the international scene. That certainly helps.

“We need several genes to achieve high levels of resistance. We need to find these other genes and pyramid them somehow,” he said. “Once we put those genes into a variety, that makes it available to the whole world.”

That international aspect to his work is appealing to Mergoum, who grew up on a farm on the Mediterranean coast in northeast Morocco, graduated from high school in the city of Fes and completed his bachelor’s degree in Rabat. He went on to earn his master’s at the University of Minnesota and his doctorate at Colorado State University.

Mergoum knows that by working together, important strides can be made. “It’s really a mutual benefit. It is not just one way coming to us — it benefits everybody,” he said. “But we have a long way to go.”

— Steve Bergeson

Share your NDSU experiences with potential students in Asia

Prospective students and their parents are always interested in meeting people who have first-hand knowledge of NDSU and the Fargo-Moorhead community. If you’d like to help Alicia Kauffman introduce NDSU to potential students in Asia, please consider joining her at one of nine recruitment fairs included on the Fall 2005 American Educational Opportunities Tour of Asia.

The tour will take Kauffman, international student adviser in the Office of International Programs, to: Manila, Philippines,

Sept. 13-15; Taipei, Taiwan, Sept. 15-17; Hong Kong, Sept. 17-20; Kuala Lumpur, Malaysia, Sept. 20-22; Singapore, Sept. 22-24; Jakarta, Indonesia, Sept. 24-26; Surabaya, Indonesia, Sept. 26-27; Bali, Indonesia, Sept. 27-29; and Bangkok, Thailand, Sept. 29-Oct. 2.

Any NDSU alumni who live in or near the tour site locations are welcome to join Kauffman at the recruitment fairs. There also will be opportunities to participate in area high school visits.

Those interested in participating should e-mail Kauffman at Alicia.Kauffman@ndsu.edu.

Globe-trotters represent NDSU around world

International agribusiness student promotes U.S. products in China

Paul Berglund, a graduate student in the NDSU international agribusiness program, completed a three-month internship with the U.S. Foreign Agricultural Service in Guangzhou, China.

Berglund's duties included helping U.S. exporters finalize sales to Chinese firms, participating in trade shows, highlighting American products to Chinese buyers and identifying new markets for American products.

He also documented the processes and steps used to acquire a legal Chinese label for qualified U.S. food or beverage products, allowing the legal import and sale of products in China.

NDSU, NCI animal experts present seminars in China

Three NDSU animal scientists were in China Feb. 26 through March 11 to provide technical assistance in dairy and beef production and to highlight the value of the region's crops as feed products.

Vern Anderson, animal scientist at the Carrington, N.D., Research Extension Center; Kim Koch, Northern Crops Institute feed production center manager; and Charles Stoltenow, associate professor of animal and range sciences, provided educational programming and on-site technical assistance at several university and extension locations, and met with the Chinese Ministry of Agriculture.

Program topics included beef and dairy cattle reproduction, nutrition, genetics, herd increase, herd health, feed management technology, forage and pasture management and animal management systems. Technical information provided during the visits is expected to assist the Chinese in improving livestock and poultry performance.

Jauhar presents wheat genetics lectures in Bangladesh

Prem P. Jauhar, USDA-ARS research geneticist and adjunct professor of plant sciences, presented a series of lectures in January in Bangladesh and India on alien gene transfer in wheat using tools of classical cytogenetics and modern biotechnology.

Jauhar was a keynote speaker at the National Symposium on Classical Cytogenetics and Modern Biotechnology, organized by the University of Calcutta's Centre for Advanced Study in Cell and Chromosome Research. He also chaired the symposium's final session.

Jauhar also gave the Panchanan Maheshwari Memorial Lecture at the centennial celebration of embryologist Maheshwari's birth held Feb. 15 at the University of Delhi.

Jauhar's research focus is on wheat germplasm enhancement using classical and molecular cytogenetics. In 1995, his laboratory produced the world's first transgenic durum wheat and standardized the procedure for genetic transformation of durum.

Ashworth studies glaciers on South American ice cap



Allan Ashworth, professor in geosciences, participated in a research team to examine glaciers on the remote South Patagonian ice cap in South America.

Funded by the National Oceanographic and Atmospheric Administration (NOAA) branch of the Department of Commerce, the group investigated the retreat of glaciers, which is believed to be caused by global warming. Ashworth was invited because he was the last geologist to study the glaciers on the west side of the ice cap 20 years ago. The group, as part of the current research, revisited sites for which Ashworth provided paleoclimatic interpretations.

The scientists expect to discover geological sections that will help them decipher the glacial history for the last several thousand years, seeking clues in the sediments uncovered by glacial retreat to help them resolve questions relating to the causes of the growth and shrinkage of Patagonian glaciers.

Faculty collaborate with Australian university, attend metals conference

Gordon Bierwagen, professor and chair of coatings and polymeric materials, recently visited Australia's University of Wollongong and BlueScope Steel Co., Port Kembla, Australia, to discuss the cooperative work program between the two facilities and NDSU's Corrosion and Coatings Research Center.

Initiated in 1995 by Dennis Tallman, professor of chemistry, the collaborative research involves the study of conjugated polymers for corrosion control of steel and aluminum alloys. Bierwagen and Tallman are the Corrosion and Coatings Research Center directors.

Katti gives keynote speech at world congress in China

Dinesh Katti, professor of civil engineering, was the keynote speaker at the World Congress on Computational Mechanics held recently in Beijing, China. More than 1,200 researchers from 58 countries attended the congress.

Katti's presentation included the nanomechanics of mineralorganic interfaces in biological nanocomposites, and the multi-scale modeling techniques that use computational mechanics and computational chemistry to evaluate mechanical properties that were developed by his NDSU research group.

Katti's paper "Exploring Mineral Biopolymer Interactions to Model Mechanical Response of Interfaces in Bio-Nanocomposite Nacre," co-written with Kalpana Katti, associate professor of civil engineering, was published in the congress proceedings.

French graduate students defend research via Internet

Three French students who are studying at NDSU for their master's degrees in international agribusiness, gave oral defenses of their research projects at NDSU, while one of the graduate committee's faculty members watched and asked questions from thousands of miles away in France.

Through the use of the Internet and video conferencing, economist Karine Daniel participated from the campus of l'École Supérieure d'Agriculture in Angers, a small city 200 kilometers southwest of Paris. Technical support was provided by NDSU's Information Technology Services.

The students participated in a joint master's degree program through an exchange program between the two schools. "In the exchange program, students spend two semesters here at NDSU and at least one semester back in Angers. Internships with European companies also are an important component of this joint program," said David Lambert, professor and chair of agribusiness and applied economics.

NDSU student and exchange program participant Paul Berglund, Fargo, plans to use the same international hook-up to defend his research simultaneously in France and in the United States.

Reynolds, Redmer team up with Scottish scientist

Lawrence Reynolds and Dale Redmer, professors of animal and range sciences, received a \$1.5 million grant from the National Institutes of Health's National Institute of Child Health and Human Development to study nutrition, fetal growth and placental angiogenesis.

Part of a collaborative effort between Reynolds, Redmer and Jacqueline Wallace of the Rowett Research Institute, Aberdeen, Scotland, the five-year program will focus on overfed and underfed animal models, and the role of altered sex steroid

levels on fetal and placental growth and placental vascular development using a model of adolescent pregnancy in sheep.

"NIH is interested in this work because low birth weight, resulting from poor fetal growth and development, is a major socioeconomic problem in human medicine," Reynolds said. "Low birth weight also is a problem for livestock producers. If we can determine how placental blood vessels grow and develop, we may be able to alleviate poor fetal growth, at least in some cases, in both humans and livestock. Because we are using adolescent sheep, this also is a good model for teenage pregnancy in humans."

Recent studies in humans and livestock have shown that low compromised fetal growth, leading to low birth weight, results in much higher incidence of serious metabolic diseases, such as heart disease, obesity and diabetes when offspring reach adulthood.

More world travelers



• **Bryan Christensen**, assistant professor of health, nutrition and exercise science, presented "Individual Biomechanical Profiles of Changes in Technique

Between Practice and Competition in Seven Collegiate Pole Vaulters" at the International Symposium on Biomechanics in Sports held in August 2004 in Ottawa.

• **Amy Hinderliter**, assistant professor of pharmaceutical sciences, was an invited speaker at a recent conference in Switzerland.

• **Betty Patterson**, assistant professor of pharmacy practice, was an invited speaker at the South African Academy of Pharmaceutical Sciences, and spent 10 weeks as a visiting educator consultant

at Rhodes University, Grahamstown, South Africa.

• **Tanya Dockter, BS '03**, and **Charles Semling, BS '03**, completed five-week clinical pharmacy rotations last fall at Rhodes University, South Africa.

• **Gerald Anderson**, associate professor of history, was co-director of the seminar "Expressionism: The Scream Heard 'Round the World," which took participants to Prague, Czech Republic; Berlin and Cologne, Germany; Amsterdam, Netherlands; Paris and London. Anderson also spent six weeks conducting research in England, Scotland and Wales.

• **Larry Peterson**, professor and chair of history, conducted a workshop in Germany focusing on ways in which historians and artists viewed the West following the Lewis and Clark expedition.

• **Thomas Isern**, professor of history, traveled to New Zealand to continue his research of comparative grasslands history.

• **Ineke Justitz**, associate professor of history, continued her research into the mysteries of 16th century Naumburg, Germany.

• **Khalil Khan**, professor of cereal and food sciences, serves as the department representative for the "Agreement of Scientific and Cultural Cooperation Between the Faculty of the Science Academy of the State Grain Administration of China and the Department of Cereal and Food Sciences at North Dakota State University." In that capacity, Khan made arrangements for seven Chinese academy scientists to visit NDSU in November 2004 to learn about research set-up and administration, and about various areas of ongoing research.

• **Gary Hareland**, part-time lecturer in cereal and food sciences, presented a series of lectures on hard red spring wheat milling and evaluation of its quality at the Science Academy of the State Grain Administration of China.