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# NORTH DAKOTA MEDICINE

UNIVERSITY OF NORTH DAKOTA SCHOOL OF MEDICINE & HEALTH SCIENCES

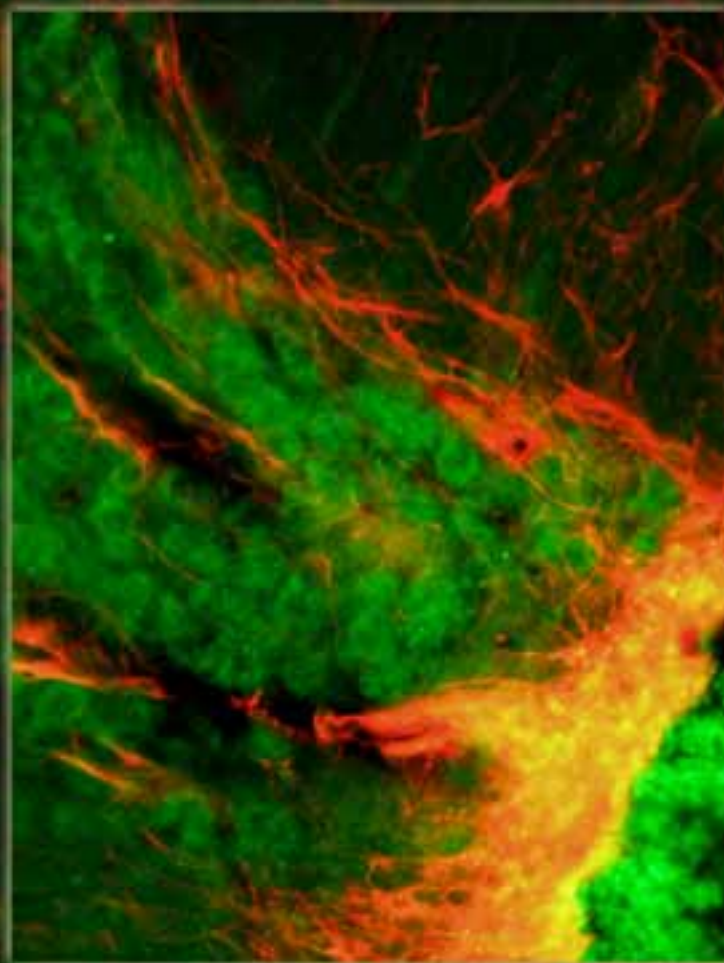
## Research: Source of Hope

**A New Well**

**Mentor  
Extraordinaire**

**Healing the  
Abused Child**

**Dr. Almost**



AS MENTIONED IN PAST WRITINGS, one of my greatest joys in my role as dean is being involved in the personification of medicine at so many levels. It's a rewarding experience to place the white coat on the shoulders of each eager first-year student, to share the pride at commencement exercises, and to meet with working alumni and enjoy their accomplishments at the very peak of their professional careers. I find different enrichment when I have the pleasure of visiting with our *retired* alumni; however, because it is this important group that continues to remind me that what they gave throughout their career in medicine did not stop with their retirement. Seldom do I meet a retired physician that does not volunteer at a healthcare clinic or with a reading program or garden club or some other civic or community organization.



One of the physicians I speak of is **William Schwartz, M.D. (B.S.Med. '55)**, Hillsborough, CA. Dr. Schwartz gave his life to medicine and during his "extra" time founded and operated a free clinic recognized today as one of

the best in California. He also writes his thoughts in prose and poetry. Last month he sent me the following words. It reminded me again, about the *kind* of doctor this school has always educated. I would like to share it with you.

*H. David Wilson*

H. David Wilson, M.D.  
Vice President for Health Affairs and  
Dean

### Covering the ER

By **William Schwartz, M.D.**

On a warm balmy night many years ago I was covering the emergency room. All was quiet.

Suddenly the doors exploded open and two men rushed in holding a thin elderly man. "He collapsed in the street and we picked him up and brought him here!"

I bent over him, my face close to his.

"What's the fuss about?" he whispered.

I introduced myself and told him what had happened. Around us, everyone was jumping into action: O2, IV, ECG, blood, fluids, meds...

Somehow in the turmoil, he and I created a serene conversation. He told me was 90 years old and had been out for his evening walk...The pain... His ECG revealed a complete heart block ...insert a pacemaker.

He grabbed my arm and pulled me closer and said, "Don't worry about me; I will be fine."

I explained to him his condition was very delicate.

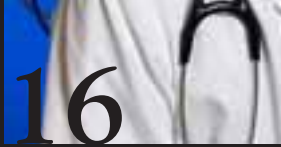
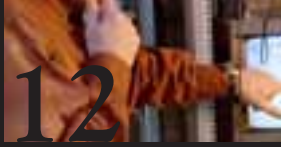
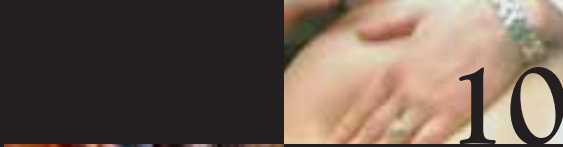
He asked, "Will I die?"

"You may", I responded, "but we are doing everything we can for you to live."

"Either way is fine. I have lived a very full, happy life and I am prepared to die. Don't worry", he said. "You look so serious".

I felt a heaviness that always attends this kind of situation lighten. For a moment there was a calm over the battlefield. He smiled gently and died.

Who treated who?



# NORTH DAKOTA MEDICINE

UNIVERSITY OF NORTH DAKOTA SCHOOL OF MEDICINE & HEALTH SCIENCES

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**On the cover:** This region of the brain, referred to as the supraoptic nucleus (SON), is located in the hypothalamus. These are the neurons that project to the posterior pituitary. The red color corresponds to astrocytes. The green color is linked to a receptor called the ciliary neurotrophic factor receptor alpha. The yellow corresponds to the region of the astrocyte where the receptor is located.

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### NORTH DAKOTA MEDICINE

UNIVERSITY OF NORTH DAKOTA  
SCHOOL OF MEDICINE AND HEALTH SCIENCES

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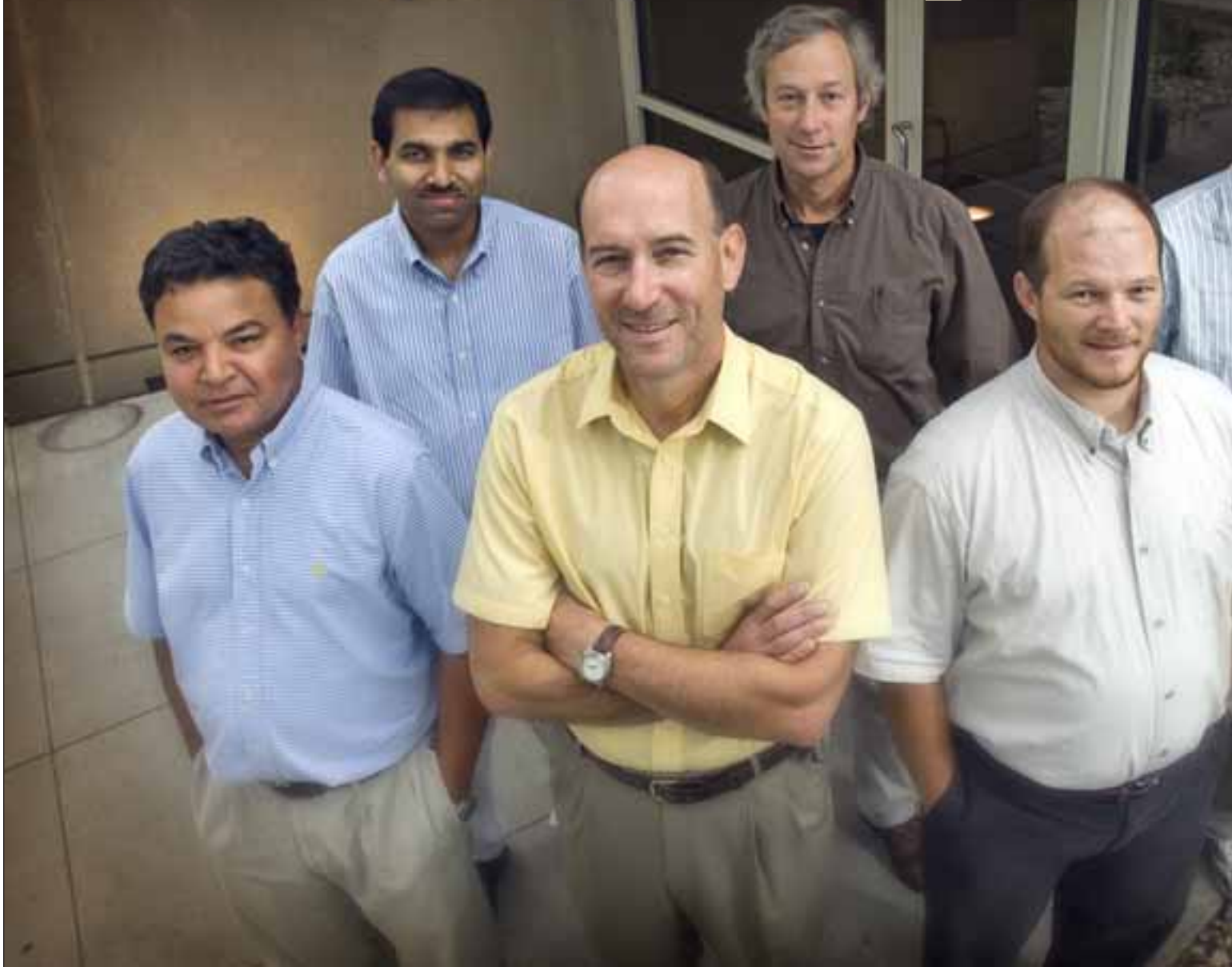
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# Research: Source of Hope



Conducting research on neurodegenerative diseases through the Center of Biomedical Research Excellence (COBRE) are (from left): Othman Ghribi, Ph.D.; Brij Singh, Ph.D.; Jonathan Geiger, Ph.D., principal investigator; John Watt, Ph.D.; Thad Rosenberger, Ph.D., and Saobo Lei, Ph.D.

**D**ISEASES THAT AFFECT THE BRAIN ARE some of the most destructive and debilitating. Most of us have seen the effects that illnesses such as Alzheimer's disease, Parkinson's disease and ALS (Lou Gehrig's disease) have had on friends and loved ones. It's heartbreaking to witness the diminishing capacity, or the

loss of life itself, that these diseases exact.

Improved treatments are emerging and great strides have been made in recent years, but truly effective means of preventing, eliminating or successfully treating them remain elusive. Hope resides in research laboratories where dedicated biomedical scientists are searching to more deeply understand the incredibly complex workings of the



## Building a Premiere Neuroscience Group

Biomedical Research Excellence (COBRE) on the Pathophysiological Signaling in Neurodegenerative Diseases,” says principal investigator **Jonathan Geiger, Ph.D.**, chair and professor of pharmacology, physiology and therapeutics. It’s the latest step in the school’s “focused commitment to establish a premiere neuroscience group here at UND and builds on progress made in the past five years through NIH funding for our COBRE-supported neuroscience research program.”

brain and central nervous system.

At the University of North Dakota (UND) School of Medicine and Health Sciences, researchers are working diligently to uncover the underlying causes of these neurodegenerative diseases. We have developed a “center of excellence” where a cluster of researchers concentrate, with laser-sharp focus, on investigations aimed at finding the answers to *why* and *how* healthy brain function is disrupted.

Their efforts were rewarded in 2002 when the UND medical school received \$10.3 million in funding for five years for our Center of Biomedical Research Excellence (COBRE). We recently received a renewal of this grant, for \$10.1 million over five years, from the National Institutes of Health (NIH), based in Bethesda, MD.

The project is titled “Center of

“We have achieved a lot in the past five years and have built quite a strong group of researchers in the area of neurodegenerative diseases,” Geiger said. “But we can’t stop here. We’re at a point where we need to continue to grow and strive for excellence in everything we do.”

The goal of this project “is to enhance and expand our ability to better understand causes of and identify treatments for such devastating neurological disorders as Alzheimer’s and Parkinson’s diseases and epilepsy by focusing the efforts of our researchers on the mechanisms within the brain that lead to these diseases,” he said.

This is a very exciting opportunity for our researchers who dedicate their professional lives to advancing the scientific knowledge necessary to develop better treatments for these devastating diseases which cause so much human misery. Just as worthwhile, in this creative environment of inquiry and discovery, students are inspired by faculty members to continue the quest to reach higher levels of achievement in the biomedical sciences.

### Impact of Neurodegenerative Disease

	Number of new citizens diagnosed	Number of U.S. cases diagnosed annually in U.S.
Alzheimer’s	5.1 million**	411,000
Epilepsy	2.7 million	200,000
Parkinson’s	1 million	40,000
Multiple Sclerosis	400,000	10,400**
ALS*	30,000**	5,600+

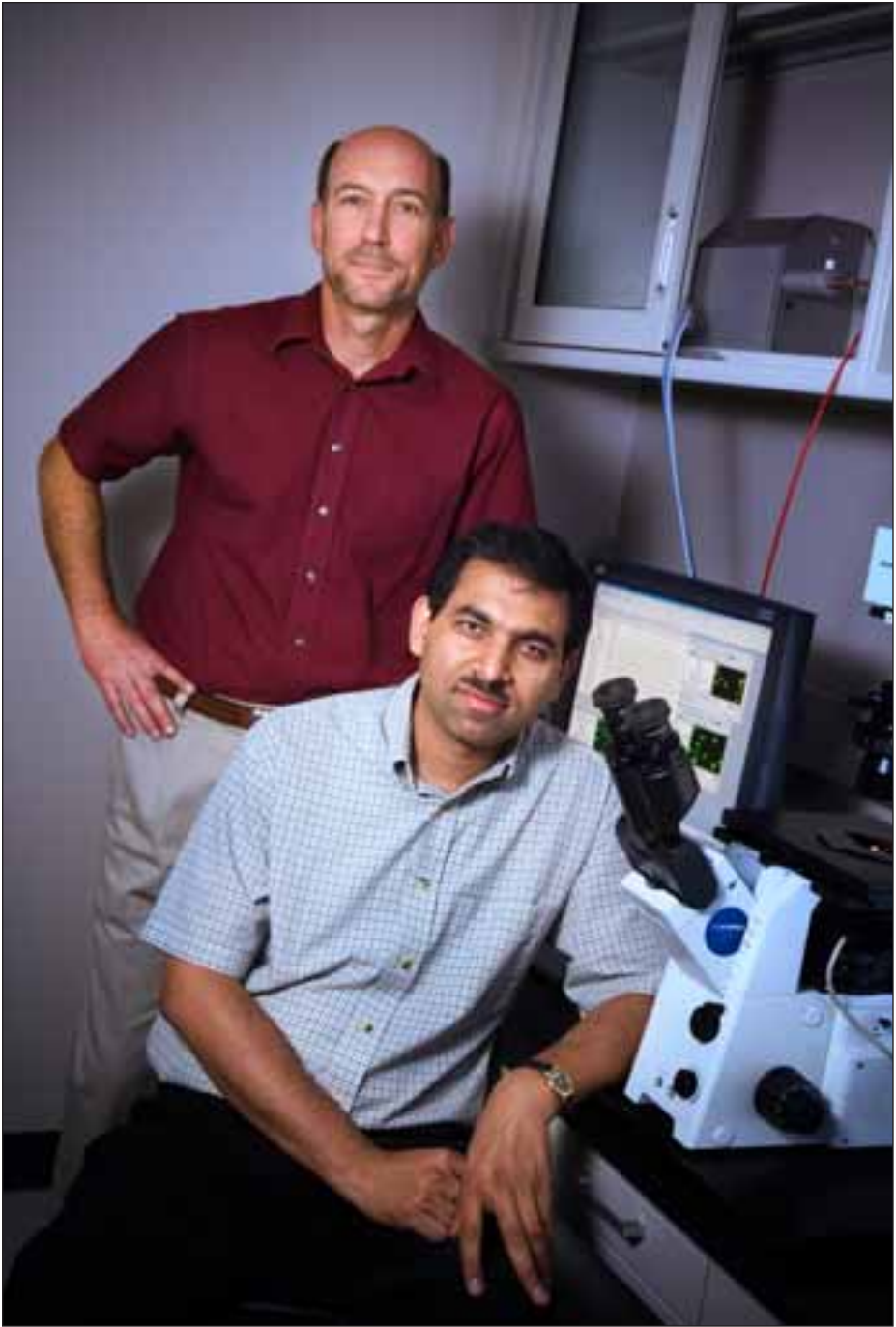
\* Amyotrophic lateral sclerosis (also known as Lou Gehrig’s disease)

\*\* estimate

“COBRE represents an extraordinary effort by our investigators to build a nucleus of outstanding scientists whose research is focused on discovering new, critically important knowledge about diseases of the brain,” said **UND President Charles Kupchella**. “We are especially pleased that their success brings us closer to achieving our goal of becoming one of the top 100 doctoral/research universities in the nation, as outlined in our strategic plan.”

“We are extremely proud of the leadership and extraordinary effort by Dr. Geiger that has resulted in the renewal of the COBRE grant,” said **H. David Wilson, M.D.**, dean of the UND medical school. “It is most unusual for renewal to be awarded on the first attempt, and we congratulate him on this remarkable accomplishment.

“Under his guidance, our researchers will continue to advance knowledge and understanding of diseases in the brain that greatly diminish quality of life,” he added. “In the highly competitive research arena, the excellence of their work has been recognized and rewarded by the NIH, which affirms that our studies hold promise for improving treatment for millions who suffer from neurodegenerative diseases.”



Along with their research colleagues, Jonathan Geiger, Ph.D. (left), COBRE principal investigator, and Brij Singh, Ph.D., collaborate on investigations designed to broaden scientists' understanding of how the brain functions.

The purpose of the COBRE grant is to increase the competitiveness of UND's biomedical researchers for extramural grants through extensive mentorship and funding of five research projects and smaller pilot grants, Geiger said. By supporting and guiding these researchers, it is hoped that their work will advance to a level of quality that will attract future substantial funding from federal and other agencies.

Projects to be carried out through the COBRE grant are aimed at uncovering new information that will lead to better treatments for:

- epilepsy
- Parkinson's disease
- Alzheimer's disease
- neuroinflammation (a condition that is involved in virtually all neurodegenerative diseases, such as Alzheimer's, Parkinson's, HIV-related dementia and multiple sclerosis)
- traumatic brain injury (analyzing potential to regenerate nerve tissue to restore function)

In addition to Geiger, researchers involved in this COBRE grant are: **Saobo Lei, Ph.D., Othman Ghribi, Ph.D.,** and **Thad Rosenberger, Ph.D.,** assistant professors of pharmacology, physiology and therapeutics; **Brij Singh, Ph.D.,** assistant professor of biochemistry and molecular biology, and **John Watt, Ph.D.,** assistant professor of anatomy and cell biology.

Geiger also expects to hire at least two neuroscience faculty members with expertise in molecular/genetics and/or proteomics, which are promising and powerful new approaches to scientific investigation.

Biomedical researchers at the UND medical school also are very active in educating and training the next generation of scientists, physicians and physician-scientists, he emphasized, and many have received awards and recognition for their teaching excellence.

"In the big picture, the school's research enterprise is very important to the vitality of UND's academic mission," he said. "It is also a powerful economic driver for the state of North Dakota."

**Diet and Alzheimer's - is there a link?**

Othman Ghribi, Ph.D., studies Alzheimer's disease on two fronts: one related to the role that cholesterol may play in the development of the disease and another concerning how caffeine may affect the progression of the disease.

Unfortunately, people who suffer from Alzheimer's have limited options for treatment because the disease is extremely

complex and what causes it is not clear, says Ghribi who has been studying the disease for more than 10 years.

Although genetic factors are thought to play a role in a small minority of cases, perhaps up to five percent, the overwhelming majority is thought to be caused by environmental influences including exposure to environmental toxins; diet; having diabetes, and other factors that predispose one to develop the disease.

Ghribi is most interested in the risk factors that may induce Alzheimer's disease, or make it worse. His long-term objective is to identify risk factors and mechanisms by which these factors trigger the disease. He is especially interested in cholesterol as it relates to Alzheimer's disease, he says, particularly "how high cholesterol levels in the blood can lead to the hallmarks of Alzheimer's disease (AD) that we see in patients."

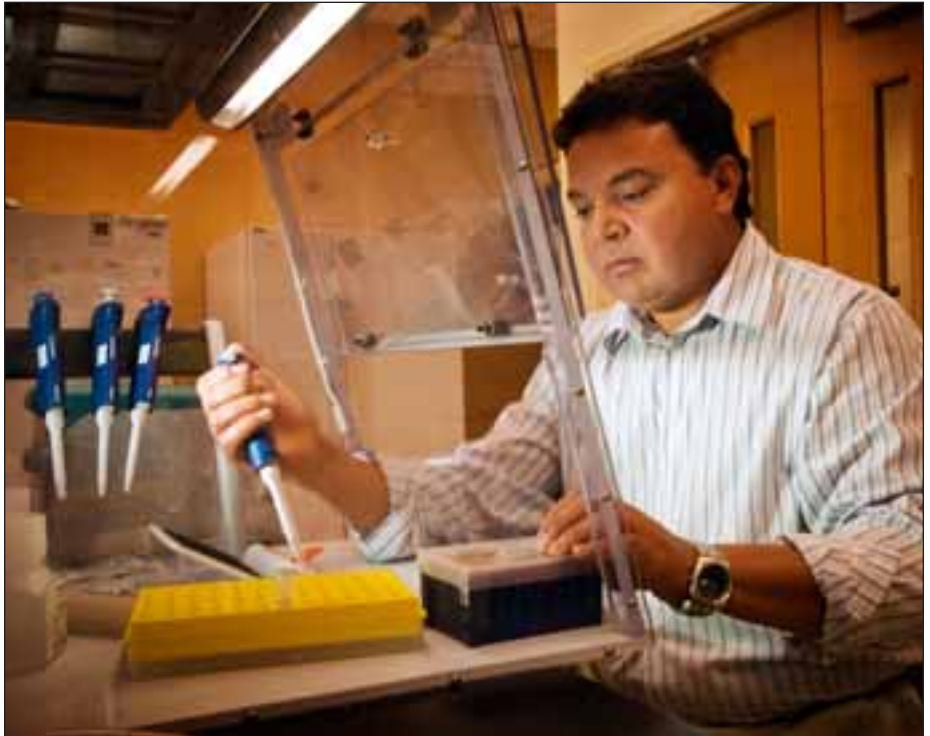
"Epidemiological studies have shown that people who, at middle age, have high levels of cholesterol in the blood are more prone to have Alzheimer's disease later in life," he says. Also, people who take statins, a class of drugs that regulate cholesterol levels in the blood, seem to be protected from getting Alzheimer's because of these drugs.

"The incidence of Alzheimer's disease is less in these people," he says. "However, we have to keep in mind that statins have more than one effect, and it is not clear whether their protective role in Alzheimer's is due to reduction of cholesterol levels or through other mechanisms."

Caffeine, the most commonly ingested psychoactive drug in the world, has been implicated in AD as well, Ghribi says. Caffeine has been found to have either a damaging or protective effect on one's potential to get AD, depending on the amount of consumption.

In collaboration with Geiger, his studies are aimed at increasing scientists' knowledge of the role that caffeine plays in either increasing or decreasing the type of damage which may lead to AD.

Ghribi, a native of Tunisia, a North African country, came to UND in 2004 after five years as a research assistant professor at the University of Virginia. He completed his Ph.D. degree in Paris at the University Rene' Descartes and took three years' post-doctoral training at the University of Quebec.



### Hope for epilepsy patients

Saobo Lei, Ph.D., is involved in research related to epilepsy, one of the most prevalent diseases in the United States. Drugs that treat epilepsy, while somewhat effective, produce side effects and target a limited number of mechanisms.

Exploring new strategies to treat epilepsy is an arduous task, Lei says. But "we have strong preliminary data" demonstrating that a group of endogenous biological substances, tachykinins, "significantly increases seizure activities" in rat brain models.

By exploring the involved mechanisms, "we aim our research at finding adequate drugs that interfere with the functions of tachykinins for treating epilepsy," he says.

Lei completed the doctoral degree at the University of Alberta in Edmonton, Alberta, Canada, in 1997. He joined UND in 2003.

Othman Ghribi, Ph.D., analyzes the role that diet plays in Alzheimer's disease.



“Our researchers have hopes and plans for identifying strategies to protect, prevent and repair effects of neurodegenerative disease for improved human health.”

### Identifying disease before symptoms

The research that fascinates Thad Rosenberger, Ph.D., is founded on the premise that in many neurodegenerative diseases, such as Alzheimer’s and multiple sclerosis, biochemical changes occur long before the patients exhibit clinical symptoms. He feels that if these biochemical changes can be identified early, then treatment strategies can be developed to prevent the disease and ultimately reduce human suffering.

“Many neurodegenerative disorders have an inflammatory component,” he says. These disorders result in the release of molecules that propagate the disease and disrupt normal brain function.

Rosenberger and his colleagues are determined to shed light on particular inflammatory processes, or “inflammatory signaling cascades,” that occur early in the disease process. They are analyzing different models of neuroinflammation (an abnormal condition in the brain), using rats, which duplicate many of those aspects found in Alzheimer’s disease, multiple sclerosis, stroke and head injury.

“If we can identify the ‘metabolic hot spots’ before a person shows symptoms of a disease, we may be able to develop therapeutic strategies to reverse the signaling” in order to prevent the disease, he says. “These

studies will allow us to identify those molecules that are involved in the breakdown of the cell and help to develop therapeutic strategies to slow or stop their production.”

Rosenberger, a native of Ohio, earned his doctorate in medical biochemistry, focusing on brain lipid metabolism, at The Ohio State University. Prior to joining the UND medical school in 2004, he conducted research for five years at the National Institute on Aging, a division of the National Institutes of Health, in Bethesda, MD. He is senior associate editor of the journal, *Lipids*.

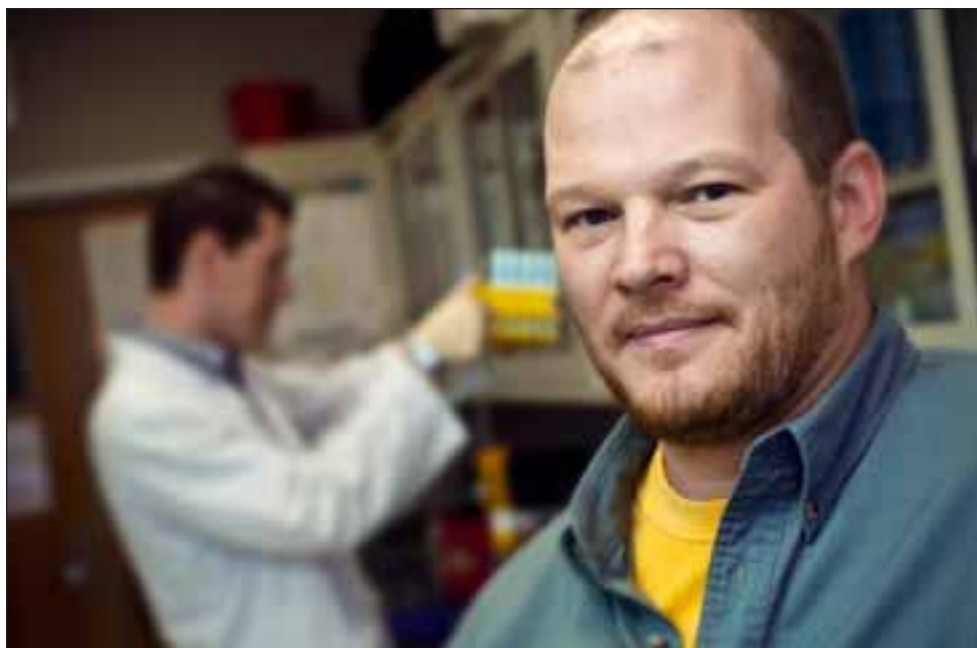
### Calcium’s role in disease progression

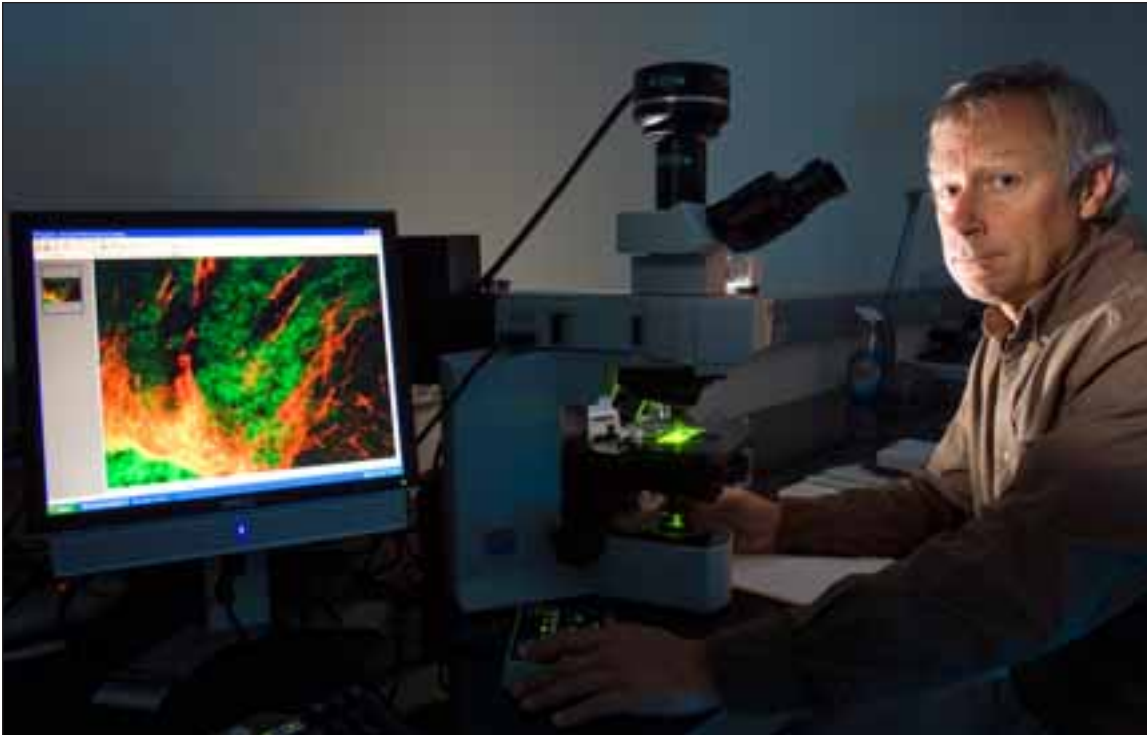
Brij Singh, Ph.D., studies the vital mechanism of calcium in the body which, when it doesn’t work properly, leads to diseases such as Parkinson’s disease and Sjorgens syndrome (a salivary gland dysfunction), as well as cancer.

If that calcium mechanism – governed by a particular protein Singh is studying – gets out of whack, things can go seriously wrong in the body, he notes. He is pursuing this research because the mechanism is still incompletely understood even though it is key to many vital body processes.

“When the calcium influx channel gets out of balance – and we’re not

Thad Rosenberger, Ph.D., is studying biochemical changes in the brain that, if identified early, could lead to development of improved treatment strategies for neurodegenerative diseases.





Neuroanatomist John Watt, Ph.D., focuses on the question of how neurons in the brain can re-grow after injury.

sure why that happens – then the body goes into a disease state,” he explains. “That can be Alzheimer’s, Parkinson’s, heart disease – they’re all related to calcium.”

Singh, who earned his doctoral degree from Bhopal University in India, came to UND in 2003 from the National Institute of Health in Bethesda, MD

### **Studying neuronal re-growth**

In an area of the brain, the hypothalamus, is a type of cell with an unusually high propensity for re-growth in response to injury. Why this area has such a capability when other central brain regions do not is the compelling question that absorbs the interest of John Watt, Ph.D.

He and his colleagues are analyzing how neurons recover from injury (neurons are similar to electrical conductors that send signals which control bodily functions). He wants to know if they can re-grow after injury and, if so, how. His team is focused on elucidating the mechanisms that either promote or prevent survival of injured neurons.

Using rats, his experiments involve damaging the brain, applying a brain chemical called CNTF and then studying

the resulting response. With insights gained from this study, he may be able to develop intervention strategies to promote survival of injured neurons in *other* parts of the brain as well.

“The long-term goal is to gain a greater understanding of the mechanisms by which CNTF promotes neuronal survival in the damaged central nervous system,” he says.

His research has important implications for developing improved treatments for diseases such as epilepsy, Huntington’s, Parkinson’s, and ALS (Lou Gehrig’s). It will also be particularly valuable for the treatment of people who’ve suffered traumatic brain injury or who experience “phantom limb” pain.

“If we can discover what promotes survival of neurons,” he says, “our findings will allow us to develop intervention strategies that will promote neuro-restorative functions in a variety of neurodegenerative disorders.”

Watt, who joined UND in 2003, earned the doctoral degree in neurobiology from Montana State University in 1993.



-Pamela D. Knudson

# A New Well



Dacia Engberg, PA class of 2008, practices an obstetric assessment with Annette Larson, FNP/PA '79, assistant professor. Engberg, a respiratory therapist from Fargo, is among the first non-nurse students to be admitted to UND's PA program.

AFTER 30 YEARS OF TRAINING physician assistants (PA) in primary care for rural and underserved areas, the UND PA program began noticing fewer and fewer North Dakotans in the program. New national standards have allowed the program to refocus slightly to educate more North Dakotans and produce PAs that are used to working as a member of a health care team.

### **Strong tradition**

Since its inception in 1970, the PA program at UND has served as a way for nurses to play a larger roll in rural and underserved health care areas.

Admitting only registered nurses with strong clinical experience (10 years or more) allowed the program to avoid re-teaching basic medical courses and incoming students already knew the basics of clinical care. This made the program very efficient by needing fewer faculty and taking less time to complete

However, in the early 2000s, a national trend began to move PA studies from the certificate level of education to a graduate program and the accrediting body revised its standards, requiring the program to teach some of the basic sciences that previously were only prerequisites, changing the UND program from 12 months to 20 months.

Meanwhile, due to the shortage of nurses in North Dakota as well as throughout the United States, and because there were continuing requests from health care professionals other than nurses to seek entrance into the program, the faculty took a long, hard look at the feasibility of accepting other health care professionals.

### Filling a need

"We realized that with our program as it is now, very few changes were needed to be able to expand the program to include other experienced health care professionals," explained **Mary Ann Laxen, FNP/PA '91**, director of the PA program at UND.

Last August, the first class of students in a pilot program began their education. A little more than half of the class members are registered nurses, the rest come from a variety of other health care fields, all have extensive clinical experience and the majority of these students come from North Dakota or Minnesota.

"I never thought I could go to UND, because they only took nurses," said **Dacia Engberg**, a respiratory therapist from Fargo. "But I was always checking back and just when I was applying elsewhere, which would mean I would have to move, they opened up the program."

Although all students must have at least a bachelor's degree, some of the pilot students needed additional training in certain technical skills. The program has added extra classes and labs and collaborated with the UND College of Nursing to ensure all students can adequately perform certain basic clinical procedures.

"Our preparation and planning has really paid off," said Laxen. "We looked at every course to see what adjustments might need to be made and we are doing a study as we go, comparing the two groups and identifying areas of the curriculum that might still need to be strengthened."

### Teamwork

The students in this class who are not nurses are a variety of health care professionals including physical therapists, respiratory therapists, pharmacists, paramedics, corpsmen, foreign medical graduates, lab and radiology technologists, cardiovascular technicians and clinical lab scientists. Other eligible professionals include psychologists, exercise physiologists, athletic trainers and occupational therapists.

Having students from a variety of backgrounds has already increased the richness of the program, said Laxen.

"Classmates are able to help each other depending on their backgrounds," she said. "Pharmacists can help study pharmacology, ER nurses help study trauma protocol, while radiology techs can explain those diagnostic procedures."

Engberg agrees.

"Everybody's got a different background," she said. "We all have our strong points and our weak points, but we all help each other out."


"This team approach in education mirrors what is needed in all facets of health care in the 'real world,'" said Laxen. "They are coming to realize the strengths of each of these health care professions. They are a living example of the strengths of health care professionals working as a team and hopefully that will carry over into their professional life."

### More changes ahead

Though things are going well with a new student body, the PA program is not resting on its laurels. With the next class, it is going to expand to a 24-month program, with the first two semesters completely on-line, allowing these professionals to continue working part-time during the first two semesters. This also allows sufficient time to bring everyone "up to speed" before beginning the clinical portion of the program.

In addition, rather than have one class of 35 students a year, they are going to start taking a class of 70 once every two years, allowing students to work with even more and diverse classmates and allowing faculty to focus on just one class at a time.

In these changes, the program only sees advantage.

"It adds breadth to the program," said Laxen. "It opens the possibility of studying to become a PA at UND to more people in North Dakota and surrounding states, but still maintains our unique niche in the field of PA education." 

- Amanda Scurry

"Everybody's got a different background. We all have our strong points and our weak points, but **we** all **help each other** out."

# Mentor Extraordinaire



A recent high school graduate, Ke Xu, who emigrated from China at the age of 12 with his parents, conducts research in the lab of Van Doze, Ph.D. The experience strengthened his application to Harvard where he'll begin his studies this fall.

**VAN DOZE, PH.D.,** LIKES TO GIVE students – all types of students – *opportunity* to learn about biomedical research, maybe because he grew up in rural Kansas where such opportunity was limited.

"I had a mentor at Wichita State who took me under his wing and encouraged me to go out-of-state, get experience in research, and bring it back to the Plains," he recalls.

He did just that, selecting Stanford University in Palo Alto, CA, to pursue his doctoral degree. He joined UND in 2000 as assistant professor of pharmacology, physiology and therapeutics.

For the past six years, he has mentored more than 30 students who range from high school- to middle-age – the latter, science teachers who take summer stints with Doze in order to bring new knowledge and techniques

back to their classrooms.

Doze recruits students from colleges, throughout the nation, that don't offer research opportunities, using funds from the National Science Foundation (NSF), the National Institutes of Health, the medical school and his own grants.

For example, under the NSF "Research Experience in Neuroscience for Undergraduates from Rural and Tribal Colleges" program, he is teaching students from across the state, including several Native Americans.

When recruiting, he looks for students with rural and tribal backgrounds or "kids who need money and have lacked opportunity," he says. While he receives applications from very bright students, "grades don't always correlate with how well they'll do. Desire is more important. I'd rather have them motivated."

In very busy labs, running two "shifts" that keep students conducting experiments sometimes into the wee hours of the morning, students range from those starting out with very little experience to those in the final stages of completing their Ph.D. degrees, working on very challenging projects.

Many are interested in medical school, while others are heading for careers in research, teaching or careers in the pharmaceutical industry. He counsels and advises students (and even keeps a well-stocked pantry for those with limited resources).

One of his students, **Floyd Laverdure**, 47, a teacher-in-training from Belcourt, ND, is working with Doze this summer to build science-teaching skills so needed on the Turtle Mountain Indian Reservation.

Another student, a recent Grand Forks Central High School graduate, **Ke Xu** has been conducting epilepsy research with Doze for the past few years, testing the effect of certain drugs on lab rats. He's preparing a paper to submit to a scientific journal and will attend Harvard this fall to continue his interest in neuroscience. Eventually, he plans to pursue graduate studies in neuroscience and to work as a university researcher or professor.

Nurturing and encouraging students' interest in science is a deep-seated force in Doze.

"This is an *academic* institution; part of our mission is outreach," he asserts. "Students are important. Isn't that why we're here?"



- Pamela D. Knudson



Van Doze, Ph.D., instructs Brianna Goldenstein, a UND senior from Granite Falls, MN, about her research.

# Healing the Abused Child

Special training gives professionals tools to more effectively treat abused and neglected children



MENTAL HEALTH PROFESSIONALS with the University of North Dakota (UND) medical school and the Neuropsychiatric Research Institute (NRI) are training their colleagues statewide to provide more effective treatment for children who are victims of trauma, particularly abuse and neglect.

Through a program funded primarily by the Otto Bremer Foundation and Dakota Medical Foundation, these professionals offer training for mental health clinicians in new treatments called: Trauma Focused Cognitive Behavior Therapy (TFCBT) and Structured Psychotherapy for Adolescents Responding to Chronic Stress (SPARCS).

They are providing training through a series of conferences and ongoing consultation (other support is from the Bush Foundation, State Department of Human Services, Alex Stern Family Foundation and MDU Resources).

**Stephen Wonderlich, Ph.D.,**

Chester Fritz Distinguished Professor and associate chair of clinical neuroscience, says the goal of the project is to provide better treatment for "children who've been exposed to an overwhelming traumatic experience," and to "reach these children *before* they develop complicated psychiatric problems."

The project, aimed at helping children who range in age from four to

adolescence, brings evidence-based, trauma-specific, mental health treatments for abused, neglected and traumatized children to North Dakota for the first time, Wonderlich says. "These treatments include specific psychological and family-based techniques."

### Snapshot of the problem

Recent statewide surveys indicate that incidences of child abuse and neglect are increasing in frequency and warrant statewide intervention. The North Dakota Department of Child Protection estimates there are about 2,000 well-documented cases of child abuse and neglect each year and that the majority of these children would benefit from mental health interventions. The average age of the typical abuse or neglect victim in North Dakota is nine years.

Wonderlich's colleagues on the project, **Heather Simonich, M.A.**; **Tricia Myers, Ph.D.**, and **Myla Korbelt, M.S.**, traveled to New York and Pennsylvania to receive the training they are now offering to professionals in-state. As of July, they've provided training for about 50 professionals from throughout North Dakota, with plans to train more.

Recently, they've received additional funding from the Bush Foundation to continue the program, with an emphasis on reaching Native American youth.

### Nature of the abuse

The abuse is generally long-term and usually takes several forms including emotional, verbal, psychological and sexual, says **Stacy Fuller, Psy.D.**, psychology resident at North Central Human Service Center, Minot, who took part in a recent training session.

"Even going into foster care can be traumatic," she says. "That's on top of what they've experienced in what probably is a dysfunctional home."

Many of the children are referred to mental health and social service professionals by the protective service system, foster care system, juvenile court, the Department of Juvenile Services, school systems and parents who require help with problems they are having with their children.

### Excellent, relevant training

The training was "a very positive experience," says **Jim Knudsen, Ph.D.**, program administrator at North Central Human Service Center, Minot. It "is focused on aiding children, who've been traumatized, to give them the skills they need to navigate life. It was perfect for the kinds of kids we see.

"And to have them learn those skills through a group process, we find very intriguing."

### Continuing collaboration

Unlike many training programs which present an expert and a manual (the latter usually ending up on a shelf), this program is designed to provide continuing follow-up and regular consultation with the trainers.

Knudsen says he appreciates "that there's a follow-up system of support and guidance that's already in place."

And Fuller is pleased that the relationship "will go on for another year of on-going contact with the experts who gave us the training."

### Benefits children statewide

**Carla Kessel, M.S.W.**, administrator of children's mental health services programs, North Dakota Department of Human Services, Bismarck, says the greatest benefit of the training is that it "increases the clinicians' repertoire of evidence-based practices and treatment modalities that we know work with a certain group of children and adolescents." Throughout the state, several groups have started or are planning to start in the fall.

"Anytime we have an opportunity to receive such a high level of training and trainers, it's a benefit for the whole state."



Stephen Wonderlich, Ph.D., with colleagues (from left) Heather Simonich, M.A.; Myla Korbelt, M.S., and Tricia Myers, Ph.D., who provide training for those who treat child abuse victims

- Pamela D. Knudson



# Dr. Almost

Third-year  
medical students  
learn medicine  
hands-on through  
clerkship rotations



Brad Kohoutek (right) a third-year medical student at the UND medical school did an eight-week clerkship in his hometown of Wahpeton learning about rural family medicine from Robert Ostmo, M.D. (B.S. Med. '80).

MeritCare photo by Mike Smith

"If I am doing all of this in my second week, I can't imagine what I will be doing in week eight."

**Brad Kohoutek**, a third-year medical student at UND spent eight weeks in Wahpeton, his hometown, learning the basics of family medicine.

These clerkships in the third and fourth years at sites throughout the state provide students clinical experience ranging from physician practices in a rural health care system to urban medical centers.

The third year focuses on the basics, providing eight weeks each of family medicine, general surgery, internal medicine, obstetrics and gynecology, pediatrics and psychiatry.

During these clerkships, the students are almost doctors with the same commitments of hospital rounds, seeing patients in the clinic and being on call.

To teach these clerkships, the medical school relies on a cadre of more than 900 volunteer physician-faculty members throughout the state.

Kohoutek's preceptor, **Robert Ostmo, M.D. (B.S. Med. '80)**, clinical assistant professor of family and community medicine, has been teaching students one way or the other for about 25 years.

"I consider it almost an obligation," he said. "The state spends a lot of money on educating medical students, so I believe we owe it to the state to give back in some way."

### **A day in the life**

Kohoutek starts his day early in the morning doing rounds with Ostmo at the hospital. If Ostmo is on call at the emergency room, Kohoutek stands guard, being the first to see the patients as they arrive to gather medical histories and do a basic assessment of the situation. He then calls Ostmo and briefs him on the patient before he arrives.

"They trust us to do a lot," said Kohoutek. "Dr. Ostmo gives me freedom and other opportunities as well. He tries to let me see a lot of things. It is obvious he enjoys having students."

But, they aren't doctors yet, so as Kohoutek joins Ostmo in clinic, Ostmo

and the rest of the staff quiz him all day long. During clerkships, students are also expected to present cases to the physicians and attend lectures on a regular basis.

Kohoutek's day doesn't end when he goes home.

"I can't sleep at night," he said. "I lay awake thinking about the day and what the next day is going to be like."

There are also benefits for the faculty-physicians who oversee the students during their clerkships.

"It keeps me reading and challenged," said Ostmo. "There is also a selfish aspect to it. You want to train these people the way you would like them to practice, how you would like them to be as your physician because these are the doctors who are going to have to take care of us."

### **Be prepared**

Through the school's patient-centered learning curriculum and by working with actor-patients, third-year medical students arrive at their first rotation in July of each year well prepared. However, no matter how well prepared, there are differences between the classroom and the real exam room.

"It isn't near the same," said Kohoutek. "I knew I was capable, but I was still unsure. It quickly turned into excited energy."

This trepidation doesn't seem to affect student's performance.

"I've had exceptional students," said Ostmo, who takes three students a year for their family medicine clerkships. "They all arrive with great enthusiasm, ready to get out of the textbook and practice what they have learned. They are all incredibly bright and never hesitate to look something up and learn more, often times without even being told to."

The third-year clerkships all lead up to the national shelf exam and the clinical skills exam, both are required to graduate from medical school and be admitted into a residency program. The individualized attention students get during clerkships help medical school faculty ensure students pass these exams.

"If I am **doing** all of **this** in my **second week**, I can't imagine what I will be doing in week eight."

MeritCare photo by Mike Smith



Dr. Robert Ostmo (right) watches carefully as third-year medical student Brad Kohoutek checks for signs of arthritis in a patient at MeritCare Clinic in Wahpeton.

"If a particular student seems to be struggling on a particular clinical skill, we can work with their clerkship preceptors to ensure they get plenty of instruction and experience in that area," said **Jon Allen, M.D., '84** assistant dean, Northeast Campus in Grand Forks.

"You need that book-based learning," explains Ostmo. "But you need to learn to recognize what you learned from those books in real patients and the only way to do that is to see a lot of patients. The more you see, the more you learn."

#### **Planting the seed**

For many students, the basic clerkships they do in their third year is the first time they are experiencing what their future careers might be like and they start considering specialties. This is especially true when it comes to acquainting students to rural family

medicine practice.

"In family medicine you get to see all kinds of stuff," said Ostmo. "In the other disciplines, you tend to be focused on the one situation—you miss out on seeing the patient as a whole in a broader picture."

At least four weeks of the family medicine clerkship must be done in a rural community, but Kohoutek spent his entire eight-week rotation in Wahpeton.

"I love rural medicine," he said. "I love seeing familiar faces here."

The positive experiences students have during clerkships affect their later choices of fourth-year elective rotations and residencies, but in the meantime, they work hard at a job of an almost-physician and learning all they can about caring for patients. 🌿

-Amanda Scurry

# An Exercise of Responsibility

by UND President Charles Kupchella, Ph.D.

UNIVERSITIES LIKE UND HAVE specific objectives for their programs such as writing effectively, thinking critically and behaving professionally. However well we equip graduates, they clearly will be able to function most effectively in states of good health and fitness.

The responsibility universities have to educate about health and wellness goes beyond students. The universities' own employees will do better work if they are healthy and well. There is also a responsibility to educate the general public about health and wellness. A university's responsibility for research extends to the behavioral sciences to help find even more effective ways of educating.

The University of North Dakota is, in fact, exercising its responsibility to address health and wellness to a very high degree.

Last fall, UND opened a world-class wellness center. While this facility appears to be devoted to physical fitness, it, in fact, is derived from a broad-based consideration of the need for a wellness climate across many dimensions. In addition, the "Healthy UND" program was developed to encompass faculty and staff as well as students. A comprehensive worksite wellness program now assists all UND community members in avoiding unhealthy behaviors and fostering habits that *promote* good health and wellness.

One way to promote health is by having clean air to breathe. With the support of the key governing bodies for students, staff and faculty, a "tobacco-free campus" policy will take effect in October 2007. Why go tobacco-free,

even outside? Smoking is the leading cause of preventable disease and death. We are making a statement. According to the American Cancer Society, employees who smoke have more hospital admissions per 1,000 (124 versus 76), have longer average lengths of stay (6.7 versus 5.03 days) and make six more visits to health care facilities per year than non-smoking employees. Smokers are absent from work 6.5 days per year more than non-smokers.

Approximately six years ago, Governor Hoeven asked the University to join with the State Health Department to develop a "Healthy North Dakota" program, which has already led to the publication of a "Comprehensive Cancer Control (CCC) plan" for North Dakota. This plan focuses sharply on the need to give greater attention to disease prevention as it relates to cancer. It addresses ways in which prevention and early detection might be applied to reducing both early death and chronic illness. The plan is supported by a large coalition of health care organizations throughout North Dakota, including UND, particularly the School of Medicine and Health Sciences – a nationally recognized leader in rural health.

UND research is yet another dimension to the University's work being brought to bear on healthful living and wellness. Behavioral science has long been an area of strength at UND. A team of researchers in nursing, medicine, and psychology recently received a grant to build a major behavioral research facility, now under construction.

## UND Promotes Healthful Living, Wellness, and Disease Prevention



### WEB EXCLUSIVE:

For more information on President Kupchella, the Comprehensive Cancer Control plan for North Dakota or the tobacco-free campus policy, visit: [www.ndmedicine.org](http://www.ndmedicine.org)



# Volunteering for a Special Cause

Patrick Moore, M.D. '76 (front left), pictured here with Team USA's medical team, will serve as medical director at the 2007 Special Olympics World Summer Games in Shanghai



IT ALL BEGAN MORE THAN 20 YEARS ago. **Patrick Moore, M.D. '76**, a family physician with Altru Health System in Grand Forks, began working with the Special Olympics.

"I got involved partly because of my nephew," states Moore whose nephew was a Special Olympics athlete who played basketball in the 1991 World Summer Games. "I started out as a volunteer at different events and was later elected to the Special Olympics North Dakota Board of Directors."

In addition to serving on North Dakota's board for nine years, Moore has also been involved with Special Olympics International World and looked at medical-related issues from a worldwide prospective. In 2005,

Moore was appointed to be part of Team USA's medical team. The U.S. team that went to the Special Olympics World Winter Olympics Games in Nagano, Japan.

"I was one of three physicians who provided medical coverage for approximately 150 athletes and 100 staff," he explained.

The physicians split coverage for certain groups. Moore oversaw the downhill skiers and snowshoers. As part of the medical team, Moore also reviewed and identified any concerns or relevant issues that might require special precautions.

"Although we had a few cases of pneumonia and bronchitis, every athlete was able to compete," he said.

Moore admits that the hours were grueling and although his responsibilities allowed him no spare time, Moore confesses he loved watching the athletes participate. "We started at 6 a.m. and typically ended our day after midnight," he said, "but watching them compete makes you appreciate what you've got."

### Headed for Shanghai

The 2007 Special Olympics World Summer Games will be held in Shanghai, People's Republic of China, in October. Moore will serve as Team USA's medical director. The event will mark the first time the World Summer Games will be held in Asia, and only the second time they will be held outside the United States. The team will once again travel as a group, and athletes of all ability levels will compete in 21 different Special Olympics and Olympic-type sports. Special Olympics athletes not competing in the World Games will play crucial leadership roles off the sports field as officials, assistant coaches, reporters and spokespeople.

In July, Moore attended the athlete's training camp in Nashville, TN.

"At the camp we got to know an athlete's health issues," he said

Moore speculates that the increased number of events will present more of a challenge to the medical team.


"It is expected to draw 7,000 athletes from 169 countries, 40,000 volunteers and 3,500 event officials." Under his direction, USA's health care team will provide medical coverage for minor issues at the games; any major health concerns are handled by the host country's health care facility.

"We'll assist in the process if anyone needs to go to the hospital. However, we are not certified to practice medicine in another country."

Over the past two decades, Moore has witnessed a change in people's perceptions because of the Special Olympics program.

"There is greater acceptance of individuals with intellectual disabilities and more of an interest in integrating these individuals into the community," he said.

Looking forward Moore says he'll continue to offer his services to Special Olympics for as long as they want him. "I've been asked to look at the 2009 World Winter Games in Boise, Idaho," he said.

He states that he could not pursue this passion without the support of his family and partners at Altru Clinic - Family Medicine Center. "Next year I'll be gone for close to four weeks." And he highly encourages people to get involved with Special Olympics. "It's a lot of fun, and you get far more out of it than you put into it." 

**"It's a lot of fun,  
and you get far  
more out of it  
than you put into it."**

WEB EXCLUSIVE:  
Learn more about the  
2007 Special Olympics  
World Summer Games at  
[www.ndmedicine.org](http://www.ndmedicine.org)



Story courtesy of Altru Health System, photos courtesy of Patrick Moore

# What is Special Olympics?

CURRENTLY, SPECIAL OLYMPICS serves over 2.25 million people with intellectual disabilities in more than 150 countries. It is an international organization dedicated to empowering children and adults with intellectual disabilities to become physically fit, productive and respected members of society through sports training and competition. Special Olympics offers

children and adults year-round training and competition in 26 Olympic-type summer and winter sports. Participants grow mentally, socially and spiritually and, through their activities, exhibit boundless courage and enthusiasm, enjoy the rewards of friendship and ultimately discover not only new abilities and talents but "their voices" as well.





Freshman medical students, clockwise from top left: Matthew Gerde, Rachele Miles, Tyson Bolinske, Fallon Hoverson, Eric Ericson, Kristin Streifel

THE CADAVER BONE AND FIVE screws in **Tyson Bolinske's** right shoulder are very likely the reasons he's beginning medical school this fall. They were put there six years ago by a UND M.D. graduate who so impressed him that he began to consider medicine as a career choice.

Back in high school at Dickinson, ND, Bolinske had sustained a few injuries playing football and, as a patient of **Troy Pierce, M.D. '91**, Bismarck, remembers well the young surgeon and his impact.

"His whole presentation, his confidence and skill level, his straightforwardness – everything

combined, the total package" was impressive, he recalls. "He said he hadn't done this particular surgery before, that I could go to (elsewhere), but that he believed he could do it."

Bolinske told him to go ahead.

"He cut a divot in my shoulder; made a wedge of a cadaver bone" and secured it all with screws. Today, "the shoulder is stronger than ever."

All the physicians Bolinske met as a patient were UND grads and, he thought, "these are all doctors from North Dakota, they attended UND; look how good they are!"

Bolinske is the son of **Shelly Bolinske** of Dickinson and **Larry**

**Bolinske** of Egan, MN. He earned a bachelor's degree in chemistry from UND in May 2007.

In the two years after college that **Eric Ericson** worked as a research technician at Mayo Clinic's Department of Anesthesiology in Rochester, MN, he determined that medicine was the career for him.

The son of **Gerald and Cherylyn Ericson** of Hatton, ND, had just earned a bachelor's degree in biology at UND in 2005 when he started working at Mayo in the Blood Transfusion, Coagulation and Cardiopulmonary Bypass Research Group where **Mark Ereth, M.D. '85**, is one of a team of three who heads up the unit.

That experience, combined with Ereth's mentorship, convinced Ericson to pursue medicine. Although he applied to a half-dozen schools in the Midwest, "UND was my first choice," he said. And "the curriculum is the main reason."

He is excited to study medicine through the patient-centered learning which "integrates clinical sciences with the basic sciences, along with problem-solving."

"To be a good physician, you have to know more than just the basic science. You need to know how to apply it to real-life situations," he says, which students start doing from the first day and continue throughout medical school.

"The more practice you have at something, the better off you're going to be."

Growing up in Beulah, ND, **Matthew Gerde** recalls being fascinated by medical dramas on TV, replete with all-too-realistic surgeries and sometimes gruesome emergency room scenes.

"I am the only one in my family who can watch that stuff without getting grossed out," says the son of **Mark and Arlette Gerde**, Beulah.

The idea of becoming a physician "has always been in the back of my mind," he says, but his experience as an EMT (emergency medical technician) for the Mercer County Ambulance Service about two years ago was "a deciding factor."

He also was influenced by long-time Bismarck pediatrician, **William Riecke, M.D. (B.S. Med. '57)**, who was his doctor for years. "He's a great guy. He perked my interest in medicine in the first place." (Riecke has since relocated to North Carolina.)

UND "was always my first choice," he says, largely due to its "very good reputation – it's as good or better than anywhere else."

He expects to be able to incorporate knowledge, gained through earning the Bachelor of Science in computer science this spring at Minot State University, into his future medical practice.

"It's still hard to believe I'm going to medical school," he says. "I'm really looking forward to it. I really feel very honored to be selected."

"Medicine is my passion in life," says **Fallon Hoverson**. "Passion produces purpose, and I feel it's my purpose to pursue a career in medicine." (Her sister **Alyssa Hoverson, M.D. '05**, shares the same passion.)

The daughter of **Deborah Hoverson**, Manvel, ND, and **Carl Hoverson**, Larimore, ND, earned a bachelor's degree in psychology at UND this past spring. She applied to other medical schools "but UND was definitely my top pick.

"UND's focus on patient-centered learning allows students to interact with patients early on and to build skills that will help them become talented and personable physicians," she notes. The curriculum "makes for compassionate physicians; patients know they can trust you and relate to you."

Faculty members "seem genuinely concerned about helping students do their best," she says. "Their friendliness and willingness to help others makes for a great place to learn."

The Rural Opportunities in Medical Education (ROME) program also "appeals to me," she says. Studying medicine "in a rural area is an opportunity to see a broad range of cases and experiences.

"Being from a rural area, I can see myself working in that setting," says Hoverson, who job-shadowed her sister

**"UND was always my first choice. It has a very good reputation – as good or better than anywhere else."**



when she was a ROME student under the supervision of **Heidi Bittner, M.D. '91 (Family Medicine Residency '94)**, clinical assistant professor of family and community medicine, Devils Lake. Bittner “has great patient-contact skills.”

One of the most moving, and pivotal, experiences she’s had involved a woman who suffered a second stroke affecting the previously unaffected side of her brain.

“The doctor placed his hand on hers,” she recalls, “and although she could not physically speak, she spoke to him through her tear-filled eyes. It was obvious that she trusted him to do the best he could to help her recover.”

Growing up on the Navajo reservation in New Mexico, **Rachelle Miles** did not see a lot of Native American physicians, but when she was about 10, her father showed her a book with a picture of **Taylor McKenzie, M.D.**, the first Navajo doctor, surrounded by students.

The daughter of **Eugene and Laverne Miles** of Crystal, NM, thought, “Wow, a Navajo could be a doctor!” she recalls. “That’s my earliest recollection” about medicine as a possible career.

“I thought, ‘I want to do that.’”

Her father always talked to her about education, she says, although he hadn’t been encouraged to value and pursue an education when he was younger. In time, she began to believe that she could “go way up there” in her career and didn’t have to become “another statistic” on the reservation, where the incidence of alcoholism is high.

Miles, who earned a bachelor’s degree in chemistry from Arizona State University in 2003, gained valuable experience working two years at a branch of the National Institutes of Health in Phoenix where she conducted research on diabetes in Pima Indians. The Pimas have the highest prevalence of diabetes of any type of people in the nation, she explains. That experience “triggered” her decision to attend medical school.

“I can identify with that (Native American) population,” says Miles, who hopes someday to work to improve the

health of her people, the Navajo, the largest Native American tribe in the United States.

She chose UND over other schools with strong Native American programs (New Mexico, Dartmouth, Oklahoma) because she sensed that UND’s INMED program is very family-oriented and supportive, she says.

Looking back, she says “it’s been a difficult road,” but her family continually told her to “keep going, keep pushing for my dreams.”

Medicine “is my dream — so I’ll go wherever it takes me.”

When she was in the eighth-grade, **Kristin Streifel’s** father suffered a heart attack. He was only 45.


“I saw how the doctors and nurses worked to save his life,” she recalls. The event was pivotal, pointing her towards medicine.

Even so, the daughter of **Randy and Jane Streifel** of Powers Lake, ND, began her undergraduate studies in business at Concordia College in Moorhead, MN. In her sophomore year, she “realized that business is not what I loved” and changed her course towards medicine, which is “really where my heart is.” She completed a bachelor’s degree in biology with a minor in chemistry last May.

Streifel applied to eight medical schools, mostly in the Midwest, but says “UND was my top choice” because of the patient-centered curriculum in which students learn in small groups of seven or eight.

“I really like the small groups and learning with people you know... and the patient contact – that’s really enticing for me,” she says. “I just thought that was so cool.”

She’s also intrigued by the ROME program which places third-year medical students in rural communities such as Dickinson, Hettinger, Jamestown, Devils Lake and Williston.

“I like the option of going to different hospitals, to explore other places and see how they do things,” she says. 

- Pamela D. Knudson

## Physical Therapy Program Reaccredited for Ten Years, Earns Four Commendations

The Physical Therapy (PT) Program has been reaccredited for ten years by the national agency which accredits more than 200 such programs across the United States. The reaccreditation report from the Commission on Accreditation in Physical Therapy Education (CAPTE) included four commendations for the program and cited no areas of non-compliance, a rare phenomenon. The program offers a Doctor of Physical Therapy (DPT) degree through the Department of Physical Therapy.

"It is unusual" for a program not to be required to file a progress report to address certain issues as part of the reaccreditation process, said **Tom Mohr, Ph.D. (B.S.P.T. '75, Ph.D. in Physiology '86)**, professor and chair of physical therapy. UND's program is one of only two, of those reviewed this year, which had no deficiencies and no progress report.

The CAPTE report gave particular emphasis to the high quality of the faculty, both academic, those teaching at the university, and clinical, those who are affiliated with the program and teach at more than 300 sites in 24 states. It also noted that the program "has made concerted efforts to train clinical faculty in the use of library search and resource opportunities," adding that these efforts are "likely to result in more evidence-based practice in the clinical community..."

The CAPTE report commended the program "for providing continuing education opportunities for clinical educators which has enabled more than 200 physical therapists to become certified clinical instructors, thus improving the quality of clinical education for PT students in the region."

Reviewers commended UND on its "strong clinical program," Mohr said, noting that students spend 36 weeks learning from clinical preceptors, nine weeks each in the areas of acute care, orthopedics, neuro-rehabilitation and a specialty of their choice such as pediatrics or sports medicine.

"The outcome assessment program was highly rated," Mohr said. This is an effort by the department to obtain valuable feedback from students, graduates, employers and patients, and clinical instructors that can be used to make improvements in the program.

It also cited the high quality of the students and how well they do, the program and the curriculum, he said. It also recognized that the UND program "is a major resource for the PT workforce in North Dakota and the mid-western region."

This was the first accreditation visit for the PT program since the Doctor of Physical Therapy (DPT) degree program was initiated in 2002. The DPT degree takes three-and-one-half years to complete following a pre-physical therapy program of at least three years. The program admits 48 students in each class for a total enrollment of 144 at UND's Grand Forks campus.

The department also offers an on-line DPT degree, which does not require students to come to the UND campus, that has been completed by 50 students and is

expected to be completed in December this year by another 35 students — all of whom are physical therapists who have been employed for several years and wish to earn an advanced degree in their field.

## Lichter Receives Prestigious Epilepsy Foundation Award

**Jessica Lichter**, second-year medical student, has received a \$3000 grant from the Epilepsy Foundation to conduct epilepsy research in the lab of **Van Doze, Ph.D.**, assistant professor of pharmacology, physiology and therapeutics, Grand Forks.

The daughter of **Gerald Lichter and Sandra Selland-Lichter** of Grand Forks won the Epilepsy

Foundation Health Science Student Fellowship, a nationally competitive award. She is one of only three health science students in the nation to receive this prestigious award.

Epilepsy is a neurological disease characterized by recurrent seizures, she says. Her project aims to uncover the mechanisms by which norepinephrine, a naturally-occurring compound in the brain, inhibits epileptic seizures.

"The debilitating and sometimes fatal nature of epilepsy makes the search for treatment of great priority and urgency," says Lichter who is interested in becoming a neurologist and "is fascinated by the possibility of combining my interests in epilepsy research and neuroscience with medical practice."



## Faculty Members Receive Awards for Outstanding Teaching

Medical students presented awards to outstanding teachers earlier this spring. Second-year medical students presented the Golden Apple Award for outstanding teaching to **Steve Hill, M.D. '90**, associate professor of clinical neuroscience and coordinator of Year 1 Clinical Science in the Office of Medical Education.

First-year medical students selected **Patrick Carr, Ph.D.**, associate professor of anatomy and cell biology, to receive a Golden Apple Award for outstanding teaching.

**Tom Hill, Ph.D.**, professor of microbiology and immunology, received the Portrait Award, given in recognition of outstanding support provided to the students during their first two years of medical education.

## CLS Announces Scholarship Recipients

The Clinical Laboratory Science (CLS) Program has presented awards to the following outstanding students:

Jean Holland Saumur Hematology Award: **Rochelle Cariveau**, Grand Forks.

Ralph and Hazel Rohde Medical Technology Scholarship Award: **Rochelle Cariveau**, Grand Forks; **Hidayo Elmi**, Burnsville, MN; **Solayman Jama**, Minneapolis; **Andrew Kerstiens**, Larimore; **Zac Lunak**, Grand Forks, and **Sara Palmer**, Williston. All are seniors.

Eleanor Ratcliffe Award: **Cindy Morstad**, Drayton, senior.

Dillenburg Memorial Award: **Tara Lease**, Roseau, MN, senior.

Eileen Simonson Nelson Pathology Award: **Zac Lunak**, Grand Forks, senior.

## Upper Midwest Rural Health Summit Attendees Discuss Rural Health Policy

Concern for the future of rural health care prompted the Center for Rural Health at the UND medical school to join forces with counterparts in Montana and Minnesota at a rural health summit in August.

The summit focused on the future of rural health care policy and featured keynote presentations by **Frank Cerra, M.D.**, senior vice president for health sciences of the University of Minnesota; **Kristin Juliar**, director of the Montana Office of Rural Health and **Brad Gibbens**, associate director of the UND Center for Rural Health.

"The Summit is an opportunity to gain fresh insights into health policy perspectives, to learn what is happening around the area, to develop new contacts with people dealing with issues similar to your own," said Gibbens. "There is continuing discussion and interest in forming a similar association in North Dakota, so with the summit being co-sponsored by the Minnesota Rural Health Association, there is an opportunity for North Dakotans to ask questions and learn about this opportunity."

WEB EXCLUSIVE:

For the class of 2007 match results, visit:  
[www.ndmedicine.org](http://www.ndmedicine.org)



## Correction

In the article "It's All About the Kids" (Summer '07, page 22), the child in the photo with Myra Quanrud, M.D. '90, was misidentified. The child is Arianna, the youngest and one of the most medically fragile residents at the Anne Carlsen Center for Children in Jamestown, ND.

## Commonwealth Fund Visits North Dakota



Sam Fleming, a member of the Commonwealth Fund board of directors and director of Decision Resources Inc.; Steve Schoenbaum, M.D., Commonwealth Fund executive director and executive vice president for programs, and Karen Davis, Ph.D., Commonwealth Fund president, during the site visit to Bismarck.

Members of the Commonwealth Fund's Commission on High Performance Health System visited Bismarck, ND in July to learn about innovative approaches to delivering high quality, efficient care in a rural setting.

The Center for Rural Health at the UND School of Medicine and Health Sciences hosted the group of about 15 Commission members and senior staff of the Commonwealth Fund, including its president, **Karen Davis, Ph.D.**

While in Bismarck, Commission members learned about high-performance health care in North Dakota, focusing specifically on innovative applications of telemedicine and networks that provide economical, efficient, and high-quality health care. The group heard from providers from across the state and witnessed demonstrations of mental health and pharmacy services delivered via telemedicine technology.

## Espejo Honored with Two Awards

**Napoleon Espejo, M.D.**, clinical assistant professor of family and community medicine and medical director at Family Healthcare Center, Fargo, has been honored as the Transitional Year Outstanding Teacher of the Year by the Internal Medicine Program at UND. He also was honored with the Leonard Tow 2007 Humanism in Medicine Award from the school.

## Record Number of Students Participate in This Year's ROME Program

Ten medical students will study and train with practicing physicians in communities throughout North Dakota through the Rural Opportunities in Medical Education (ROME) program during the 2007-08 academic year.

"This is the largest number of medical students to participate in the ROME program since its inception in 1998," said **Roger Schauer, M.D. (B.S. Med. '69)**, program director and associate professor of family and community medicine. He attributes the popularity of the program to "former ROME students who recruit other students by sharing their excitement and positive experiences, as well as how much they learned and enjoyed the program. The program really sells itself."

The ROME program is an interdisciplinary experience in a rural primary care setting which allows students to live and train under the supervision of physician-instructors in communities throughout North Dakota. Generally, the ROME program places two students in each community. Later in the academic year, other students will begin in Dickinson and Devils Lake.

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Homecoming 2007



learn it. love it. live it.

### Homecoming Events

#### Thursday, Sept. 27

- Reception for James Mehus
- Sioux Award Banquet

#### Friday, Sept. 28

- Class of 1957 Reunion
- Golden Grad Social

#### Saturday, Sept. 29

- Pre Game Party
- Football Game  
UND vs. Augustana
- M.D. Class of 1997 Reunion
- Flood Stage concert featuring  
The Johnny Holm Band

[www.undalumni.org](http://www.undalumni.org)

'00s

**Abrar Mohammed, M.D. (res. '07)** joined St. Alexius Medical Clinic in Minot, ND, as a specialist in internal medicine. He completed his medical degree at Christian Medical College in Vellore, India and a residency in internal medicine through UND.

**Michael Kruger, M.D. '03 (res. '07)** joined Valley Bone and Joint Clinic in Grand Forks, specializing in sports medicine. He completed his residency at Grand Forks Family Medicine and a sports medicine fellowship at Hennepin County Primary Care in Minneapolis.

**Ryan Stromme, D.P.T. '03**, recently joined Altru Health System's Outreach Therapy department. He will provide outpatient and inpatient physical therapy services to the Devils Lake, ND, region. Previously, he worked at the Orthopedic and Spine Therapy Outpatient Clinic in Ashland, WI, and Mercy Hospital in Devils Lake.

**Jennifer Raum, M.D. '01**, internal medicine, joined MeritCare Southpointe in Fargo, ND. She completed her residency in internal medicine at Georgetown University Hospital, Washington, D.C., where she then served as chief resident of ambulatory medicine. Prior to joining MeritCare, she was a clinical assistant professor of medicine at Georgetown University Hospital.

**Jason Baxter, B.S.O.T. '00**, graduated with his doctorate of health sciences from the University of Indianapolis. He is also a visiting professor at the University of Indianapolis and a guest lecturer at Governor's State University. He is a regional manager and on the board of directors at Apex Physical Therapy in Effingham, IL.

**Mary Jo Crissler Belanger, M.D. '00**, joined MeritCare Broadway in Fargo, ND, practicing in the fields of internal medicine and palliative medicine. She completed her residency in internal medicine at Hennepin County Medical Center, Minneapolis, MN. Prior to joining MeritCare, she practiced at White Earth Health Center in Ogema, MN.

**Brett Vibeto, M.D. '00**, joined Mercy Medical Center in Williston, ND, as a general surgeon. He completed his residency at Wright State University and Texas Tech University.

'90s

**Kim Krohn, M.D. '96**, program director at the UND Center for Family Medicine in Minot, has recently been recognized by the Association of Family Medicine Residency Directors for completion of the national Institute for Program Director Development fellowship.

## ALUMNI NOTES

### '90s

**Alonna (Knorr) Norberg, M.D. '96**, was named a YWCA Cass Clay Woman of the Year for developing advocacy programs for child abuse victims. She completed her pediatric residency and pediatric emergency fellowship at the Children's Hospital Medical Center of Akron, Ohio. She belongs to several children's alliances and the MeritCare Children's Hospital Child Protection Team. She also is medical director of the Red River Children's Advocacy Center, a community partnership developed to improve response to child abuse. Norberg is trained in forensic pediatrics, an area of medicine that focuses on assessing abused or neglected children.

**Joel Johnson, M.D. '93**, a physician at First Care Health Center in Park River, ND, was awarded the 2007 North Dakota Diabetes Care Provider Achievement Silver Award by Blue Cross Blue Shield of North Dakota and the North Dakota Department of Health, Diabetes Prevention and Control Program.

**Heidi Bittner, M.D. '91**, of Altru Clinic – Lake Region in Devils Lake, ND, received the North Dakota Physician of the Year award at the North Dakota Academy of Family Physician conference in Medora. The award is given once a year to a North Dakotan physician who shows great pride in practicing family medicine.

She has been practicing at Altru Clinic – Lake Region since 1995. Areas of interest include pediatrics, obstetrics and women's health. She is also a clinical assistant professor of family and community medicine for the UND medical school and precepts residents at the Minot Center for Family Medicine.

### '80s

**Lori Klabunde, PA-C, FNP '89**, is a visiting specialist in her hometown of Williston, ND, as part of the Bone & Joint Center spine team.

**Bonnie Knutson, B.S.O.T. '88**, joined Axis Clinic, Aurora Medical Park, in Grand Forks. She will help develop the Aurora occupational medicine program, serving as a faculty trainer for WorkWell Systems, training physical and occupational therapists to perform different evaluations and rehabilitation programs.

**Jane Sepiol, RNC, FNP '83**, joined PrimeCare Washburn Family Clinic in Washburn, ND. She previously worked in the Phoenix, AZ area in diabetes care and education.

**Mark Gregerson, M.D. '81**, Moose Lake, MN, practices orthopedic surgery at Gateway Family Health Clinic in Moose Lake and Gateway Clinic in Sandstone, MN.

### '70s

**John Baird, M.D. (B.S.Med '76)**, health officer for Fargo Cass Public Health, is now a member of the board of directors of the National Association of county and City Health Officials. NACCHO develops resources and programs and promotes national policies that support effective local public health practice.

**Robin Bernhoft, M.D., FACS (B.S. Med. '74)**, has opened a new practice in environmental and functional medicine in Ojai, CA. He had been practicing liver and pancreatic surgery in the Seattle area until "becoming disabled by allergy to soaps and sensitivity to various chemicals," he said, "thereby proving that old dogs can learn new tricks, when they regain enough health."

### '60s

**Myron Wentz, Ph.D. (M.S. '66)**, founder, chairman, and CEO of USANA Health Sciences, Inc., was honored in Jerusalem with the Albert Einstein Award for Outstanding Achievement in the Life Sciences.

The award salutes leaders whose vision and commitment have contributed to the critical advancement of vital life-saving and life-enhancing technology to benefit mankind. Wentz received the award in recognition of his many scientific and charitable endeavors.

Wentz is an internationally recognized microbiologist, immunologist and pioneer in the development of human cell culture technology and infectious disease diagnoses. In 1974 he launched Gull Laboratories, which developed groundbreaking viral diagnostic assays, including the first commercially available test for diagnosing infection with the Epstein-Barr virus. Wentz sold his controlling interests in Gull Laboratories in 1992 and founded USANA Health Sciences, a state-of-the-art manufacturer of science-based nutritional supplements and personal-care products. Most recently, he founded Sanoviv Medical Institute, a holistic medical facility with full hospital accreditation located in Baja California. He holds a Ph.D. in microbiology and immunology from the University of Utah.

Today Wentz is increasingly focused on his humanitarian and charitable endeavors, recently founding the Wentz Medical Centre and Laboratory in Uganda and the Wentz Medical Centre in Cambodia to serve children in those countries orphaned by diseases such as malaria and HIV. Wentz was a recipient of the Children's Champion Award by Children's Hunger Fund, for which he travels worldwide as a medical missionary.



**Alan Allery, Ph.D. '04**, 59, of Grand Forks, died July 14, 2007 in Bemidji, MN.

The son of Louis and Ermaline (Krebsbach) Allery and a member of the Turtle Mountain Band of Chippewa Indians, he graduated from St. John High School in 1965. He went on to attend college, earning a B.S. degree from Mayville State

University; a M.Ed. from Northern State University in Aberdeen, SD; a M.H.A. from the University of Minnesota; and a doctorate degree from UND.

On August 2, 1969, he married Margaret DeMers. From 1970 to 1972, he taught business and history and coached basketball in Lansford, ND. In 1972 and 1973 Alan worked for the Bureau of Indian Affairs in Belcourt, ND. Alan became assistant area director of the Aberdeen Area Office of the Indian Health Service in Aberdeen, SD from 1973 to 1984. He transferred to Bemidji, MN and served as area director of the Bemidji Area Office of the Indian Health Service until 1989. He worked for Red Lake Band of Chippewa Indians as director of the Self-Governance Program from 1990 to 1991.

He moved to Grand Forks in 1991 and worked for Native American Programs and Student Health at UND. He married Kathryn Broden on September 22, 1995. He served as the director for the National Resource Center on Native American Aging (located in the Center for Rural Health at UND) and the director for Student Health at UND until his death.

He is survived by his wife, Kathryn; sons, Chris (Chrissy) Allery, Bemidji, MN, and Aaron (Amber) Allery, Phoenix, AZ; daughter Gina Allery, Washington D.C.; sisters Paula (Mike) Parisien, St. John, ND, Marla Boyer, St. John, ND, and Barb (Wayne) Sande, St. John, ND; his mother, Ermaline Allery, St. John, ND; grandchildren, Alice and Adam Allery, Phoenix, AZ; and many nieces and nephews.

**James Berlin, M.D. (res. '81)** 60, formerly of International Falls, MN, died Monday, May 14, 2007, in Britt, MN.

Dr. Berlin grew up in Buhl, MN, and graduated from Martin Hughes High School. He attended Virginia Junior College and graduated in 1966. He graduated from the University of Minnesota in 1968. He enlisted in the U.S. Army, graduated from Officer Candidate School and served three years. He was a Vietnam veteran. He received his medical degree from the University of Minnesota-Minneapolis in 1978. He completed his three-year family practice residency in Grand Forks, ND, before joining the Falls Medical Center in 1981. He also served as the Koochiching County coroner, Falls Ambulance medical director, Kabetogama Lake First Responder director, and on various hospital boards and committees. As an emergency room physician he worked in International Falls, Virginia,

Roseau, Ely, and Bigfork. He also had worked at the Bois Forte Medical Clinic at Nett Lake.

Dr. Berlin is survived by his wife, Marilyn of Britt; sons, Doug and wife Elizabeth Keeney Berlin of St. Cloud, MN, and Nathan Berlin of Buhl, MN; daughter Kelly Berlin of International Falls, MN; sister, Laurel (Harmon) Badger of Grand Forks, ND; and nieces and nephews.

**Deborah Banker, M.D. '78**, died at her Malibu home on May 18, 2007 at age 55. She graduated from Mohall (ND) High School, received pre-medical training at the University of Colorado, and completed her medical degree at UND. Dr. Banker practiced medicine in both Colorado and California. She had her own practice in Malibu for the past 10 years.

Dr. Banker specialized in ophthalmology. She explored traditional Chinese medicine in her search for cures to blindness. As a result, she was successful in reversing blindness in patients who had exhausted all other options. She wrote a book on self-help eye care.

Dr. Banker is survived by her son, Troy Dailey; parents John and Betty Banker; and former husband, Will Dailey. She was preceded in death by her four grandparents; brother, Mark Hubbard Banker, and sister, Susan Banker Cross.

**Thomas Akers, Ph.D.**, former professor of physiology, died May 21, 2007 at Port Angeles, WA. He was 76.

A native of Brooklyn, NY, he served as a Navy hospital corpsman assigned to a Marine combat unit during the Korean War.

He earned bachelor's and master's degrees and the doctorate in physiology from Loyola University and taught physiology and pharmacology at Stritch School of Medicine in Chicago from 1961 to 1965. He was a member of the UND medical school faculty from 1965 to 1992, when he retired as professor emeritus.

At UND, he was project director and chief scientist for the Navy research project, "Man-in-the-Sea," which focused on long-term effects of high pressure, and on the reproduction, nutritional and general health needs of test animals. He received the UND Foundation/B.C. Gamble Award for Individual Excellence in Teaching and Service in 1987 and the Sigma Xi Faculty Award for Outstanding Scientific Research in 1990.

A lifelong artist, Dr. Akers was active in the local arts communities where he lived. He was a founding board member of the Listen Drop-in Center for adults with special needs in Grand Forks, serving on that board from 1971 to 1975.

Survivors include his wife, Virginia; sons, Tom (Pam) Akers, Eugene, OR, and Robert Akers of Bainbridge Island, WA; daughter, Betsy Akers (David Orsatti), Mount Vernon, WA; a brother and sister, and three grandchildren.

# Meet CHAD



Chad Hanson is beginning his second year of medical school. He's a "typical" student in that he is from North Dakota (Hatton, in his case), and he has excellent undergraduate GPA and MCAT scores. Chad is also typical because he, like the majority of his classmates, depends on scholarship assistance to attend medical school.

More than 90 percent of medical students at UND qualify for financial aid, and the average debt for a medical school graduate is nearing \$130,000.

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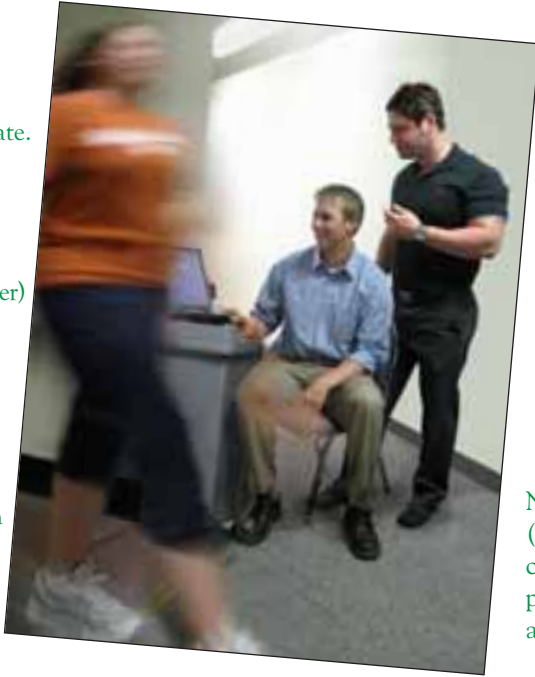
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## PARTING SHOTS

PT students are required to do research projects before they graduate. Here, volunteer Becky Thurn demonstrates her walking gait for Mark Wilson (center) and Scott Jackson (right), who are gathering normative age-related data for functional screenings used in physical therapy.



New OT grads Gerri Smith (left), Kristen Eastwood and Olivia Donald celebrate the completion of their scholarly project poster presentations with Kathy Dolan, UND/CC pediatric OT instructor, at the UND OT campus at Casper College in Casper, WY.



Turtle Mountain Band of Chippewa, Belcourt, ND



Standing Rock Sioux Tribe, North and South Dakota



In July, 73 Native American students from across the Midwest and western United States completed the Indians Into Medicine (INMED) Summer Institute, a six-week program designed to increase their knowledge and understanding especially in the sciences and math. Seventh- through 12th-grade students may apply to enter the program which has been offered annually for more than 25 years.





Surrounded by hundreds of family members and friends, the school officially welcomed the M.D. Class of 2011 into the medical profession during the annual White Coat Ceremony in August.



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