

# NORTH DAKOTA MEDICINE

UNIVERSITY OF NORTH DAKOTA SCHOOL OF MEDICINE & HEALTH SCIENCES

## Stork Substitute

**Tar Wars**

**Peer Teaching**

**A Different Frontier**

**This is a Cell**

**Beating Bulimia from a Distance**

*AN OUNCE OF PREVENTION IS worth a pound of cure.* We've probably all heard this quote at one time or another; it's one my mother referred to her entire life. My mother lived a robust and healthy 94 years! The UND School of Medicine and Health Sciences considers prevention the backdrop in our training of physicians and allied



health professionals, our core research projects and as a key component of our state outreach programs that serve North Dakota's needs. Why?

The medical school is a **supplier** of health care professionals for North Dakota. We serve the majority of communities in the state ~ and we know that preventing adverse health conditions is the solution to many of tomorrow's health care needs. Imagine the impact on disease if we, as a society, would make broad changes in our lifestyles. Imagine how proper diet

and exercise would affect the rate of heart disease, stroke, obesity and arthritis, or how stopping the abuse of illegal drugs, alcohol and tobacco would positively affect our population. Our school has programs in place and research underway that are designed to positively influence school age children to recognize good choices in health and nutrition.

By combining and coordinating health education in the classroom, new physical activity and education programs, and healthier food choices in the cafeteria, the **Coordinated Approach to Child Health (CATCH)**

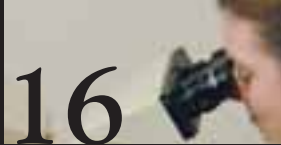
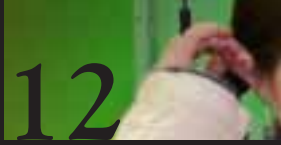
**program** shows elementary school children in eight schools across the state how to be healthy for the rest of their lives. Nancy Vogeltanz-Holm, Ph.D. and the Center for Health Promotion and Prevention Research report marked improvements in children's health and we hope to expand this program to all elementary schools in the state.

Nearly 90 of our medical students belong to **Docs Ought to Care (DOC)**, working with young people to promote healthy lifestyles. One of their signature projects is **Tar Wars**, (page 10) a tobacco-free education program for kids across the state to explain the health hazards and economic cost of smoking.

These programs are just a few that benefit the next generation of North Dakotans. As both a pediatrician and a proud grandpa to the two beautiful girls pictured here (**Katherine** (left) and **Madeline**), I am an advocate for children. It has always been my personal passion to expand the programs and make them available to every child in every school in the state. Children are often the spokespeople to the family ~ it is often they who take home the message "Mom, I learned at school today that we should drink skim milk, it's better for us."

Making the investment now will lead to longer lives and lower health care costs for the future of North Dakota ~ our children. Now that's something I can stand behind.

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



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SCHOOL OF MEDICINE AND HEALTH SCIENCES

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ON THE COVER: Jordan Lee, 11, daughter of **Warren and Sharon Lee**, Ada, MN, is the first child born to parents who went through the process of in vitro fertilization under the care of **Steffen Christensen, M.D. (B.S. Med. '71, Fargo** (see story, page 4).

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# Stork Substitute



Drs. Stephanie Dahl and Steffen Christensen give their patients hope and help in their quest to become parents.



**T**O RECEIVE THE NEWS FROM YOUR physician that you may not be able to conceive and bear a child is just as devastating as the diagnosis of cancer, studies show. Those who face such a challenge endure the heartache of so desperately wanting children yet, for some reason, this natural and very basic human experience has been denied to them. If they choose to pursue treatment for infertility, theirs is an emotional rollercoaster journey that may or may not take them where they hope to go.

Fifteen years ago, **Steffen Christensen, M.D. (B.S. Med. 71)**, left his busy obstetrics-gynecology practice in Fargo to pursue fellowship training in reproductive endocrinology at the University of Illinois/Michael Reese Hospital in Chicago to acquire the expertise necessary to help people with reproductive problems.

I felt that, if I didn't do this, I would always have wished I would have, he says. We were seeing a lot of infertile patients and not doing a very good job of treating them.

With support from his employer, MeritCare Health System, he invested two years of his professional life to complete the training that later, on his return to Fargo in 1994, distinguished him as the first obstetrician-gynecologist subspecialist in North Dakota. **Stephanie Dahl, M.D. 99**, whom he mentored as a student, joined him last June at the MeritCare Reproductive Medicine Institute (RMI). The RMI opened in January 2006.

#### **Stephanie's story**

I was always planning to do general obstetrics-gynecology, says Dahl, who is originally from Bismarck and, as a medical student, received the Humanism in Medicine Award. During her years in medical school at UND, Dr. Christensen talked to me about it (reproductive endocrinology, RE).

During residency, she took a rotation in RE and fell in love with it. It's a very specialized field, with a very select group of patients, she says. Only 25 to 30 physicians complete training in this field annually, and I know all of them.

Being able to help a couple achieve a family or build a family is most rewarding, she says. I have two little boys who mean the world to me. She and her husband, **Joel Honeyman**, who works at the Bobcat Co., are parents to **Grant**, 4, and **Jackson**, 16 months.

After four years of residency training at St. Joseph Memorial Hospital, affiliated with the University of Michigan, in Ann Arbor and three years of fellowship

# The Best in the Business



Brianne Kling, M.D. Class of 2007

**Dr. Christensen** has been an integral part of helping me pursue my career, says **Brianne Kling**, fourth-year medical student who will graduate next month and go on for residency training this summer.

He has been there every step of the way from first year through fourth year.

I actually heard of Dr. Christensen long before I met him because an aunt and uncle underwent treatment by him, and I now have a nine-year-old cousin who would not have been here if it wasn't for Dr. C. That is when I first started getting interested in reproductive endocrinology, says Kling who is strongly considering pursuing a fellowship in that field.

In her third year of medical school, Kling was lucky enough to scrub into surgery with Dr. Christensen which was a great experience for any new third-year medical student. He really discusses all the anatomy with you and lets the students first-assist on his cases to make you feel like a part of the team, instead of just an observer, she says.

training at the University of Cincinnati, the family is finally settled back in North Dakota.

I am thrilled to be home and back in Fargo, she says. It's great to work for Dr. Christensen; he's truly a mentor.

She's our new star, says Christensen, associate professor and vice-chair of obstetrics-gynecology and assistant dean for student affairs, Fargo. And it only took nine years to get her here!

Giving up obstetrics was probably the toughest decision for her, he comments. She rotated with me as a student. She's the first one we've convinced to come back here.

We're pretty lucky at MeritCare; most of our OBGYNs are grads of UND or are from North Dakota.

During the entire residency matching process he has been there to help me with everything. He brings reality into perspective for the students. Often we lose sight of the bigger picture, that is our career, and are so excited to be done that we want to go to programs that would not fit what we were trying to do.

Dr. Christensen has a way to bring life down to earth in these cases. He has so much experience in the field that he is able to counsel and advise us on many aspects of not only obstetrics and gynecology but our lives and careers as physicians, she says.

I strongly believe that the high percentage of UND students pursuing careers in obstetrics and gynecology is due in large part to all of the help and guidance that we get from the OB/GYN (department). Dr. Christensen, **Dr. James Kolars**, **Tracey Steffes** and the... faculty... are the best in the business!

## Their practice delivers personal care

The reproductive endocrinologists have what Christensen calls not a very big practice; we remember most of the patients who've come to the institute for help. They handle about 125 in vitro fertilization (IVF) cases each year, and have about 500 on-going patients.

Most of the patients are on medications, he explains. Only about 12 to 15 percent will require in vitro fertilization.

Physicians turn first to oral medications to treat infertility because they are cheaper, easier to administer, cause fewer side effects, and are not as invasive as the IVF process. Certain types of surgery also may be used to solve infertility problems such as fibroids that must be removed or endometriosis.

IVF is considered a last resort.

Christensen estimates that, annually, at his clinic about 50 couples go through IVF one time and do not see us again. Another 100 couples go through IVF two times, and about 50 go through it three times.

The best part of his practice is seeing the successful result of all the careful work he and his associates have gone through with the patients, he says.

I like seeing the babies when they bring them back.

The toughest part of his practice is having to tell the patient that she's not pregnant or that the process didn't work.

There's tremendous emotion and stress that surrounds the practice of reproductive endocrinology. Patients are often sensitive about needing this kind of treatment and very protective of their privacy, thus the RMI is situated in a residential area in south Fargo, apart from other medical facilities, and does not readily convey the image of a clinic.

To help patients cope with the emotional aspects of their condition, the RMI staff includes the availability of

psychologists who provide counseling. Also employed at the clinic are a nurse practitioner, **Jennifer Kringlie (BSN '95, MSN '02)**; registered nurses; an embryologist, and laboratory personnel.

Because nurses develop very close relationships with the patients, and spend a great deal of time communicating with them, the nurse burnout rate is high, Christensen notes.

#### Variety of patients

Most often, patients with infertility have been referred to the RMI after undergoing treatment from their obstetrician-gynecologist that has not resulted in pregnancy. However, patients do not need a referral, unless their insurance requires it.

The majority of insurance companies in our area do cover almost everything we do, Dahl says.

Staff at the RMI also sees patients who have had recurring miscarriages, want to preserve their future fertility, or are cancer survivors.

Cancer treatments are so much better now, Dahl says. For example,

### Practicing obstetrician-gynecologists in North Dakota

1977  
14

2007  
50

(52% are UND alumni)

# Obstetrician-gynecologists in North Dakota:

## State Benefits as Graduates Return to Practice

Delivering that next level of service as a reproductive endocrinologist, **Steffen Christensen, M.D.**, not only adds an extra dimension to health care services for women in North Dakota, he also is an excellent role model for medical students.

They can take an elective with him to see if that's a subspecialty they want to pursue, says **Dennis Lutz, M.D.**, chair and professor of obstetrics-gynecology, Minot. UND M.D. graduates choose OBGYN at a rate of 12 to 14 percent, two to three times the national average. Graduates must leave the state for training, but the good news, he says, is

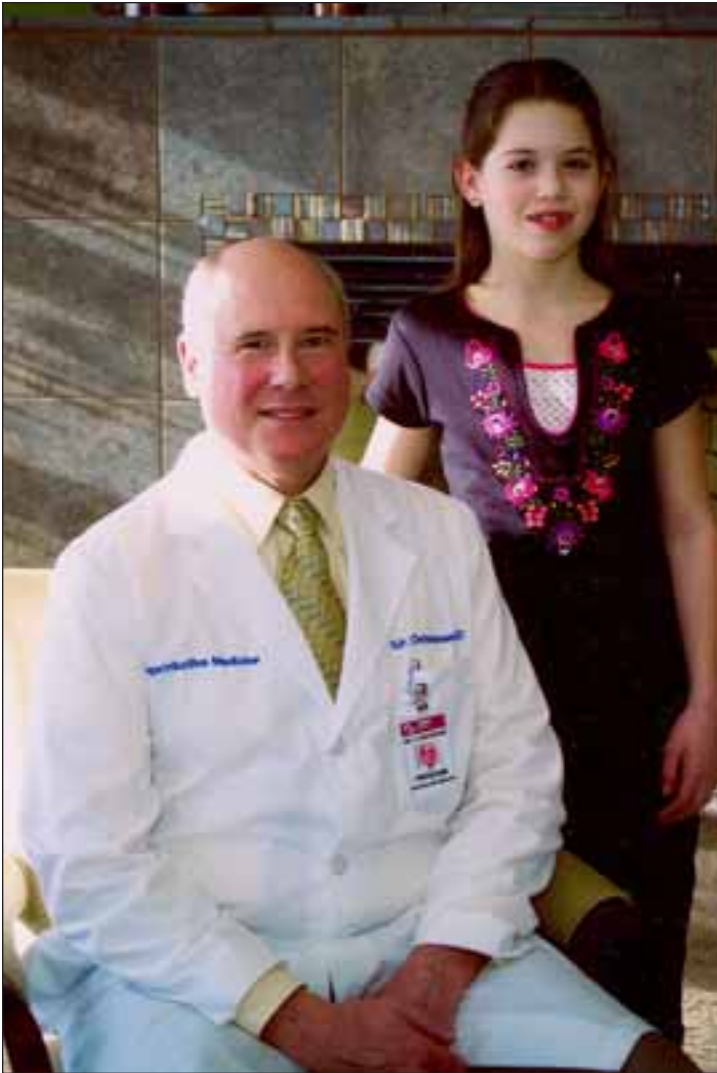
we get about 40 percent coming back to the state to practice.

Almost all of the 50 OBGYNs practicing in North Dakota are members of the medical school faculty, Lutz says. The group is split pretty evenly between the genders, with no great variations statewide. About 60 percent of the faculty are under the age of 50.

Our specialty was male-dominated for a long time, but the tide is turning as more women choose to enter the field, he notes. Seventy-five to 80 percent of residents (in training) are female.



Dennis Lutz, M.D., Chair and Professor, Department of Obstetrics and Gynecology



When Jordan Lee was born in 1995, Steffen Christensen, M.D., called her “the realization of a dream.” She’s the first child he helped to bring into the world through the process of in vitro fertilization after he completed fellowship training out-of-state and resumed his practice in Fargo.

we have male patients with testicular cancer who can become parents in spite of the disease.

To receive care at the RMI, patients travel from all parts of North Dakota and points in Montana, South Dakota, and central and northern Minnesota. After initial consultation in-person in Fargo, Christensen and Dahl go to outlying clinics to see patients in Bismarck and East Grand Forks, MN, as well as northern South Dakota. They are considering Bemidji, MN, as a regional site. Some care also can be provided via telemedicine.

IVF patients, the minority of those seen at RMI, must travel to Fargo because the exacting nature of the process, timing and other factors, is so critical, Dahl says. Both she and Christensen work closely with the patient’s local physician as needed for continuing care.

**How IVF works (basically)**

In the IVF process, egg production is stimulated by hormone therapy. Eggs are harvested from the female, combined with sperm in the laboratory to allow fertilization, and returned to the uterus in hopes that nature will take its course.

We stimulate as many eggs as possible, says Christensen, noting that determining the quality of the embryo is a critical step in the process. We try to choose the best embryos.

His team usually transfers two embryos into the uterus with the hope that at least one will attach to the uterine wall and continue to develop. (Patients also have the option of freezing their embryos for later use, an important and valuable option for women who have cancer.)

Patients have a 30 to 40 percent chance of becoming pregnant, he says. Ninety percent of his patients are pregnant within 12 months.

During his years of practice, what amazes him most are the advances and refinement in medications, the promotion of optimal conditions for fertilization to occur, and the laboratory advances changes in the culture media.

We’re understanding more about what the embryo needs in those first three days to improve the chances for a successful pregnancy, he says. Half the job is quality control in the lab.

Does he ever feel he’s tampering in territory reserved for God or nature?

No, he says without hesitation.

I’m providing a better environment for life to begin.

**My, how times have changed**

Before the development of effective treatments for infertility, a patient’s only option was adoption which, for domestic adoption, can run from \$15,000 to \$20,000. Today, several other viable options are available.

For example, Dahl says, a patient who had cancer as a child can receive a donor egg, fertilized by her spouse or partner, and carry that baby to term.

So often, genetics gets to be a minute issue, she says. When you carry that baby for nine months, the idea that it’s not my baby soon disappears.

On occasion, but not frequently, the RMI does have to turn away patients, for medical or psychological reasons. The physicians adhere to a professional code of ethics and national guidelines



# Stevens Family

**Brad and Dawn Stevens** were lucky; she became pregnant in their first attempt at in vitro fertilization, under the care of **Steffen Christensen, M.D. (B.S. Med. '71)**, reproductive endocrinologist, Fargo. But it was a long and difficult road to get there.

For at least six years, the rural Manvel, ND, couple tried to conceive, using standard drug therapies prescribed by a physician in Grand Forks. Dawn would see teenagers and others facing unwanted pregnancy, hear news stories about child abuse and neglect, and feel frustrated, considering how much she and Brad wanted children and knowing they would make great parents.

As a patient, you can't diagnose what's wrong. You're just led to the next thing, Dawn says, remembering just the let-down of not getting pregnant on your own; I personally was becoming bitter towards people who were pregnant.

She thought, Why can't we? I want that answer.

At the Reproductive Medicine Institute in Fargo, the care they received was exceptional, Dawn says. They are very compassionate and thoughtful of your feelings.

The staff does a good job of blending the two aspects of care, said Brad, the human side of it - what you're going through, the empathy you need, and the scientific side of it, what patients need to do, exactly when, how and why.



Brad and Dawn Stevens and their son, Lane  
(photo credit: Grand Forks Target)

Since the birth of their son, Lane, now 3, the Stevens went through a second round of IVF, which was not successful, but plan to try again.

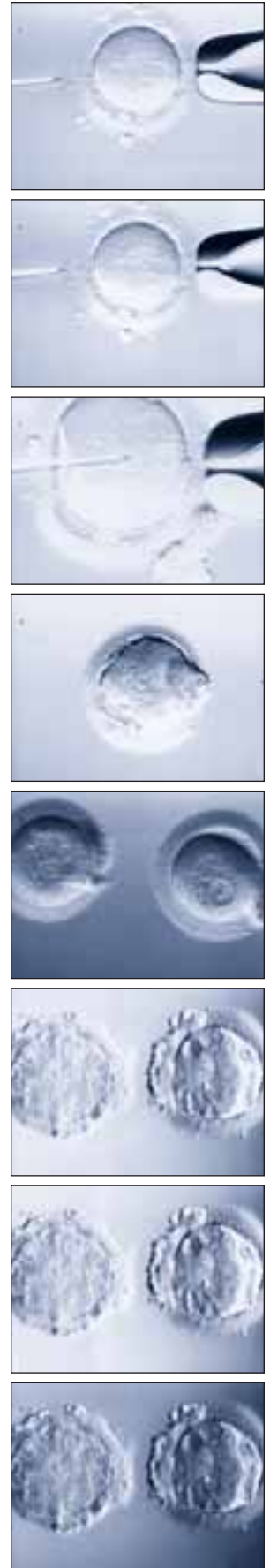
It's quite amazing, Brad notes, when you see how complicated it is - even naturally - to conceive a child. All the things that have to be in place... For all the intervening, there's still a lot that has to just happen.

set forth by the American Society of Reproductive Medicine, as well as their own personal ethics to guide them in conducting their practices.

When everything comes together for the patient, it's fun to be able to help families, Dahl said. We help as

many women as possible to achieve pregnancy... and it's a joy to see them go through it and have a happy outcome.

Pamela D. Knudson



# TAR WARS



## *North Dakota Kids Learn the Dangers of Tobacco Use from UND Medical Students*

Fourth- and fifth-graders at Viking Elementary School in Grand Forks simulate breathing difficulties caused by smoking by doing jumping jacks while breathing only through a straw.

THE IDENTIFIABLE THEME FROM THE Star Wars movies fills the room and text begins to scroll up the screen:

We are fighting a war against an unrelenting power. A power of strong soldiers we cannot see or hear. A power that can be defeated with a special army...of knowledgeable and informed students like you!

Medical students from the UND School of Medicine and Health Sciences taught the benefits of a tobacco-free life to fourth- and fifth-graders throughout the state this winter.

Through Tar Wars, a tobacco-free education program for kids from the American Academy of Family Physicians,

nearly 90 members of the UND chapter of Doctors Ought to Care (DOC) split into teams and headed to schools across the state to explain the health hazards and economic cost of smoking.

### **Battle against a health crisis**

Every day more than 4,000 children will try a cigarette for the first time, According to the American Academy of Family Physicians. More than 4.5 million children younger than 18 are currently regular smokers in the U.S.

It was because of this health crisis that Tar Wars was started nearly 20 years ago. Now presented annually to about 500,000 fourth- and fifth-grade

students in all 50 states, the program focuses on the short-term, image-based consequences of tobacco use and how to think critically about tobacco advertising.

What percent of fourth- and fifth-graders do you think are tobacco-free? **Dane Breker**, a second-year medical student asks the group gathered in the cafeteria of Viking Elementary School in Grand Forks.

Hopefully all, one voice says.

Ninety-eight percent, reveals Breker. How many ninth graders do you think are tobacco free?

After a flurry of responses, Breker tells the group that 78 percent of ninth-graders and 77 percent of adults choose to be tobacco free.

Why do you think kids start to smoke? he asks.

To be cool, comes one response.

They were dared to, says another.

Another voice from the back of the room is heard. They are a follower.

Good, replies Breker. What can happen to you if you smoke?

You will die, says one.

You can lose a lung or get a hole in your neck, cracks a wise guy in the far right corner.

You could lose your singing voice, a quiet girl on the left peeps.

You could lose your friends, chimes in another.

During the presentation, students participate in a live demonstration of the long-term effects of cigarette use. Each one is given a straw and the entire group does jumping jacks while breathing only through the straw.

The difficulty the children have breathing through the straw is what it is like to breathe when you have been smoking for a long time, Breker explains to them.

Each student also has the chance to participate in a poster contest aimed at portraying a positive message for remaining smoke-free. A state winner will be selected to win a trip to Washington, DC, paid for by the North Dakota Academy of Family Physicians and other contributors, where they will present their poster at a national competition. The winner of the national

event receives a free trip to Disneyland.

We are happy to support this wonderful effort to get out the word about a leading cause of distress on our national health, said **Chuck Breen, M.D. ( 90, family practice residency 93)** president of the North Dakota Academy of Family Physicians and clinical assistant professor of family and community medicine at the UND medical school. Tar Wars is a great way to teach our children and subsequently our adults the reasons to quit or to never start smoking.

### **Tar warriors on the western front**

For the first time this year, third-year medical students spread the Tar Wars message to the western part of North Dakota.

Previously, the first- and second-year medical students presented the Tar Wars program to schools in the Grand Forks area. Demanding schedules and distance from the main campus prevented third-year DOC members from doing the program in their clinical communities, said third-year student **Justin Reisenauer**.

I am a strong advocate of the anti-tobacco message, said Reisenauer, who arranged for Tar Wars to expand this year. I was the president of DOC last year, and truly wanted to spread the anti-tobacco message to the children of western North Dakota.

Several volunteers from his third-year class stepped forward and gave the anti-tobacco presentation to students in the communities of Hettinger, Jamestown, Williston and Bismarck.

Tar Wars is a wonderful program, said Reisenauer. Ultimately, DOC goes one step further by discussing tobacco use in families, describing peer pressure, brainstorming with the children on ways to deal with peer pressure, and advocating a smoke free lifestyle. 🌿

Amanda Scurry



At the end of the UND medical students' presentation, each kid received a "UND Smoke Free" armband to help them remember what they learned.

### **WEB EXCLUSIVE:**

Read more about AAFP's Tar Wars program, including success measurements nationwide, visit: [www.ndmedicine.org](http://www.ndmedicine.org)



# Peer Teaching

*Students Try on Role of Teacher*



Undergraduate student and “peer teacher” for the Department of Microbiology and Immunology, Margaret Flanagan (center), a junior from Sebeka, MN, gains valuable experience helping students grasp important concepts in the microbiology laboratory course.

PEER TEACHING IS A WIN-WIN-WIN situation, says **Francis Sailer, Ph.D. (MSCLS 92, Ph.D. Microbiology and Immunology 01)**, assistant professor of microbiology and immunology, Grand Forks. It’s a win for the graduate teaching assistants, a win for the peer teachers, and a win for the students they’re helping to teach.

Peer teachers are undergraduate students who have completed the laboratory portion of the advanced microbiology course and excelled in it. Through an application process, they

are selected to help teach that course alongside graduate teaching assistants (GTAs) and faculty members.

The peer teachers earn academic credit and gain experience in teaching, Sailer says. They also receive valuable, behind-the-scenes training in how the labs are set up in preparation for classes, and how supplies and media (what bacteria are grown on) are prepared and the use of modern classroom technologies.

Since the program was initiated in 2003 with funding from the UND

Office of Instructional Development, 23 students have participated in the peer teaching program.

We choose the ones who are best-suited to the role, she notes. Most are pre-professional students, majoring in biology, nursing, pre-med, pre-dentistry or other medical fields.

The study of microbiology is very labor intensive, Sailer notes. It involves a lot of demonstration, explaining, mentoring... It can require one-on-one teaching, if the student needs help.

Students in microbiology learn to become adept in the use of the microscope, sterile techniques, how to culture for an experiment, safety rules, the principles behind the experiment and how to interpret test results.

Generally, in the fall, about 120 students are accommodated in five labs and, in the spring, about 75 in three labs, she says. A GTA in each lab only goes so far.

Because peer teachers may be interacting with their roommates or friends, safeguards are built into the program to prevent them from being put into a conflicted position, Sailer says. They do not write or grade tests. They distribute their help among all students as needed.

It's really been a good program; and we've had really good feedback. Almost all (the peer teachers) strongly agree it's been beneficial for them. In their exit evaluation they're invited to discuss what they liked about the program and offer suggestions.

We've implemented a lot of their ideas, she says.

Three peer teachers have gone on to teach labs for us when we were short of lab teachers, she adds, and two others have opted to continue doing laboratory research with faculty in microbiology and immunology.

We've been extremely happy with their performance, Sailer says. The program has been a real success, I hope to continue it. As long as we have these big, full labs, the peer teaching program is very worthwhile for us.

### Students gain valuable experience

**Kelsey Naze** wants to be a pathology assistant—someone who works with autopsy cases, like the sort of character you'd see on the popular CSI TV series.

When I was about seven I asked for a microscope, says the sophomore from Adrian, ND. That gift launched her interest in the world of human biology only visible through a high-powered lens.

At UND, she's majoring in cytotechnology, working toward a Bachelor of Science degree. If all goes as planned, that diploma will be placed in her hand in the spring of 2009. Her long-range plan is to work five years in the field of cytotechnology, a requirement to enter an advanced program for pathology assistants offered by a university out-of-state.

Experience as a peer teacher is part of reaching that goal, she says. It allows her to build up references that will strengthen her application to graduate school.

As peer teachers, we're seeing it from a different side; it's been interesting to see what our TAs went through, Naze says. It's been lots of fun.

Peer teacher **Margaret Oestreich**, a nursing major and junior from Bemidji, MN, also wanted the experience for the sake of references. She is hoping, after graduation, to work in an AIDS clinic or with burn patients.

**Margaret Flanagan**, who is majoring in cytotechnology, says, I really like microbiology and I wanted to see what it was like to teach. I want to be a college professor and a researcher one day.

Peer teaching changed my mind, says the junior from Sebeka, MN. I debated about (going on to) medical school... Now she's sure about her decision not to pursue a medical career because I found something I like better.

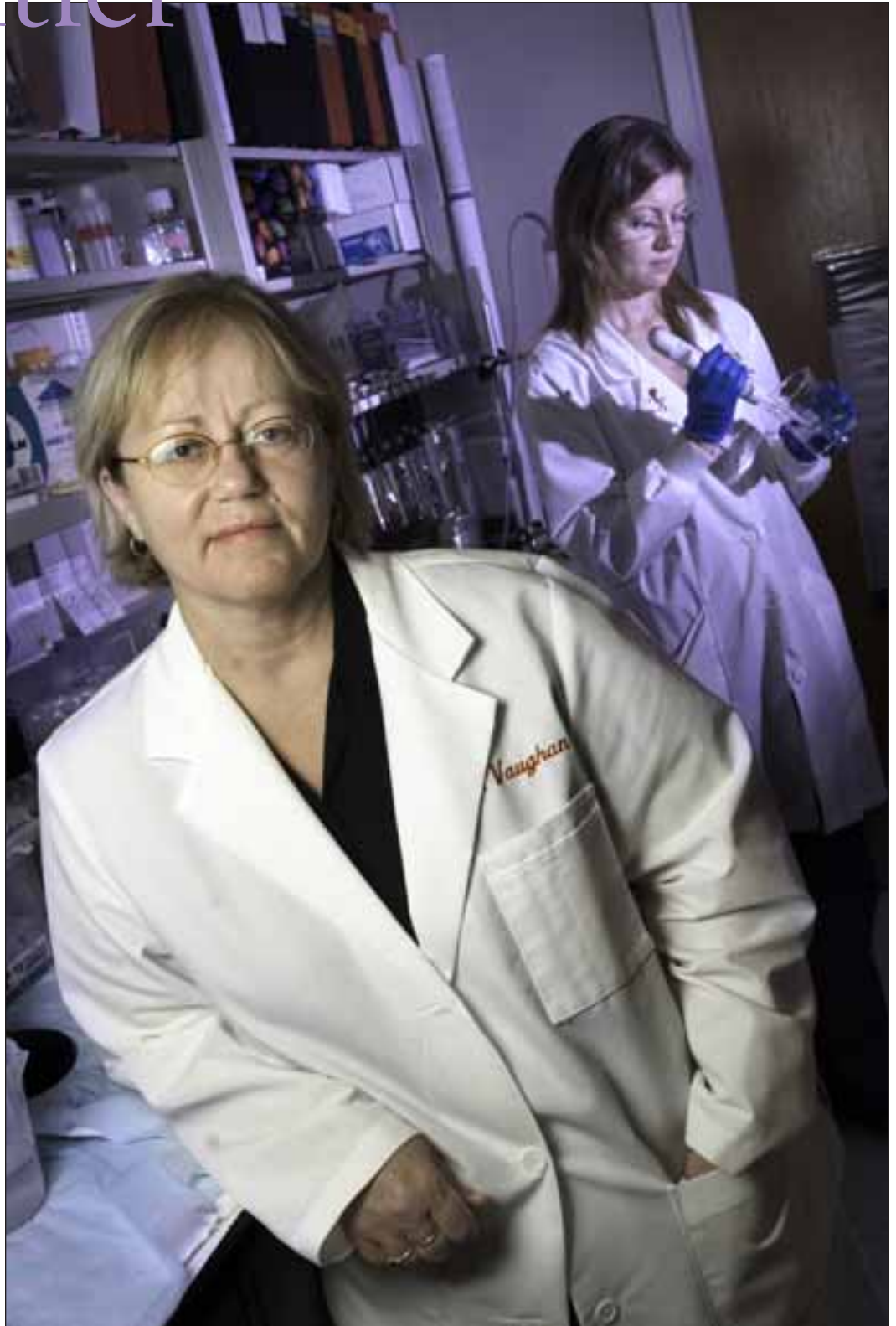
She has applied to enter the graduate program in UND's Department of Microbiology and Immunology.

Pamela D. Knudson

**“Peer teaching enhances students’ resumé and strengthens their application graduate school.”**

# A Different Frontier

Roxanne Vaughan (left) and doctoral student Laura Parnas (right) have worked together for five years investigating the dopamine transporter in the brain.



THE WORKINGS OF THE HUMAN brain are so complex that it is still a frontier in the scientific world. That is exactly why **Roxanne Vaughan, Ph.D.**, associate professor of biochemistry and molecular biology at the UND School of Medicine and Health Sciences chose to study it 16 years ago.

I love working with neurotransmitter transporters, explains Vaughan. They are parts of the brain that are not well understood, so there is an opportunity to make a lot of discoveries.

Vaughan came to UND eight years ago from the National Institute on Drug Abuse (NIDA), a division of the National Institutes of Health based in Baltimore, MD.

With two grants totaling nearly \$3 million from the NIDA, Vaughan and her team of researchers at UND are investigating how the brain enjoys itself.

#### **Too Much of a Good Thing**

Dopamine is chemical produced by the brain that allows you to feel good whether it is from the occasional chocolate indulgence or from abused drugs like cocaine.

The dopamine transporter, or DAT for short, is a protein in the brain that regulates the flow of dopamine. The DATs work as dimmer switches for dopamine, regulating its flow based on the need of the brain. This process is essential to life.

However, cocaine and related drugs bind to the DAT, stopping it from doing its job. This causes too much dopamine to be present in the brain. Although dopamine is a natural compound that allows us to enjoy the pleasures of a piece of chocolate, too much dopamine in the brain can result in mental illness and psychotic behavior.

**Laura Parnas**, a doctoral student originally from Santiago Del Estero, Argentina has been spending the past five years working with Vaughan to discover how these drugs bind with DATs in the first place.

Parnas came to UND through a foreign exchange program to work on a master's degree in the Department of Biochemistry and Molecular Biology.

She soon realized she had the knack for it and decided to stay on to pursue her doctorate degree.

Dr. Vaughan is very generous to us, said Parnas. She provides us with so many opportunities to help us learn as scientists.

If Vaughan and Parnas can discover how elements of cocaine bind to DATs, that would allow development of pharmaceuticals that prevent that binding and hence, the effects of cocaine on the brain.

#### **Beyond Cocaine**

Vaughan's lab is also looking at how the rate of DAT activity is controlled to regulate the levels of dopamine in the brain. The team is looking at the physiological processes that increase or decrease DAT function, and how these biochemical pathways are affected by drugs like cocaine.


However, this research has farther reaching implications than drug abuse. Naturally-occurring low levels of dopamine have been linked to depression and Parkinson's disease while high levels of dopamine are associated with schizophrenia and other mental illnesses.

Once Vaughan's team discovers how dopamine transport is controlled, treatments may be developed to artificially adjust those processes. This would benefit people suffering from drug abuse, because it would cause the drugs to lose their ability to create a high, and could also treat mental illness and other diseases, allowing doctors to put dopamine within normal levels for their patients.

#### **On the Forefront**

Through their groundbreaking research, Vaughan's team has brought UND to the forefront of the field.

When we present at meetings we can really see the impact we are making on a national and international level, said Parnas, right here in North Dakota.

It is very gratifying that in a small way what we are doing here might help people, said Vaughan. 

**I** "It is very **gratifying** that in a small way what we are doing here might **help people.**"

Amanda Scurry

# School named Center of Excellence for Drug Abuse Education

THE UND SCHOOL OF MEDICINE AND HEALTH Sciences has been named a Center of Excellence for Drug Abuse Education by the National Institute on Drug Abuse (NIDA).

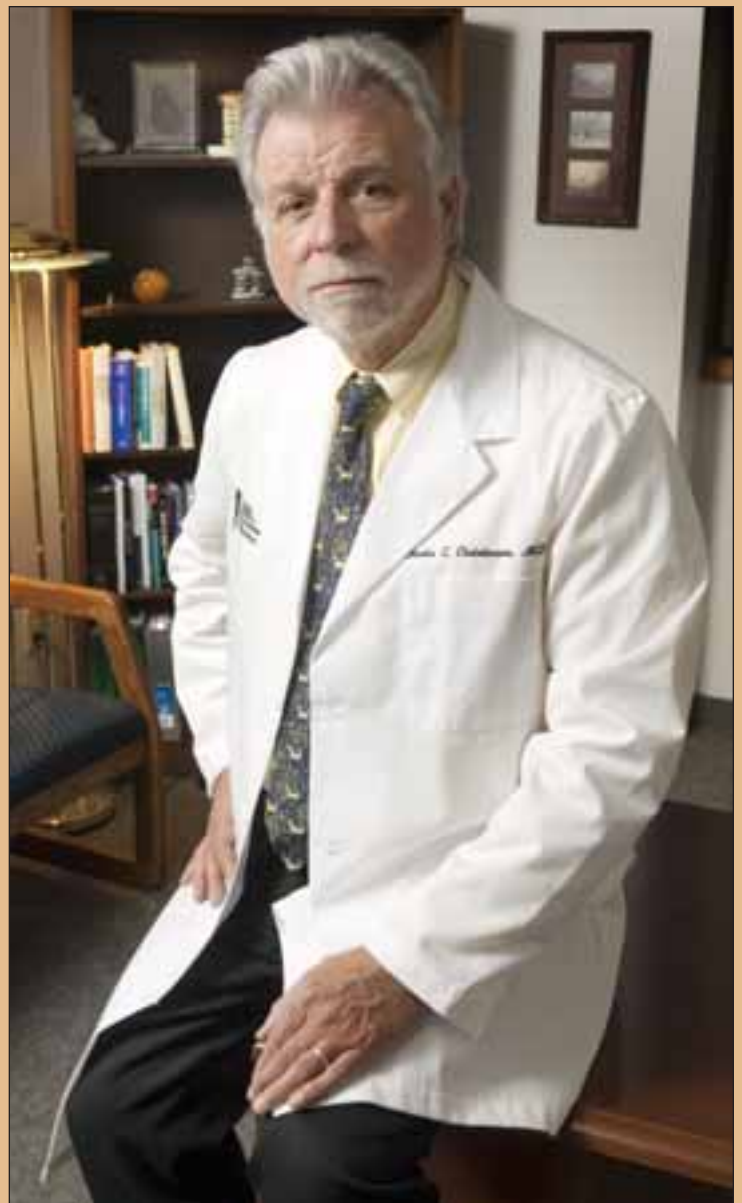
UND is one of the first four such centers established by NIDA to serve as national models to support the advancement of addiction awareness, prevention and treatment in primary care practices targeting medical students and resident physicians in primary care specialties such as internal medicine, family practice and pediatrics.

Through the center, the UND medical school's Office of Medical Education will identify what medical students and residents should learn about substance abuse and develop curriculum that will help them identify, assess and refer patients with drug addictions.

Our patient-centered learning curriculum allows us to integrate substance abuse into what the students learn, said **Charles Christianson, M.D.**, associate professor of family and community medicine, who heads the project for the UND medical school. We can add drug addiction to cases the students study each week and bring in standardized patients who play the part of someone with a substance abuse problem.

UND's Center of Excellence will focus on substance abuse that is prevalent in rural and tribal areas such as methamphetamine, inhalants and misuse of prescription drugs, said Christianson.

NIDA, a division of the National Institutes of Health, also funded centers of excellence at Creighton University School of Medicine, Omaha, Nebraska; the University of Pennsylvania School of Medicine in collaboration with Drexel University College of Medicine; and the Massachusetts Consortium of Medical Schools, including the University of Massachusetts Medical School, Tufts University School of Medicine, Boston University School of Medicine and Harvard Medical School/Cambridge Health Alliance.





# This is a Cell

*Training the Eyes that First Spot the Disease*



Cytotechnology students receive very focused, individual instruction from **Katherine Hoffman, M.M.** (left), program director, who emphasizes the crucial importance of their attention to minute detail. Students are (from second-to-left): **Hussein Roble**, Mogadishu, Somalia; **Andrea Martin**, Crookston, MN, and **Sarah Wehmhoefer**, Bismarck.

FROM THE VERY FIRST DAY OF CLASS when students hear, This is a cell, they progress very rapidly.

Before too long, we're starting to compare the various features of cells, analyzing and discerning what is normal and abnormal, says **Katherine**

**Hoffman, M.M. (B.S. Cytotechnology 85)**, cytotechnology program director, Grand Forks. There's a constant back and forth with the students. I really enjoy that.

They blossom.

*Continued on page 19*

# Cancer Causes Cytotechnology Career

IN 1999, AT AGE 26, **MELISSA PAHL (B.S. Cytotechnology '06)** was diagnosed with Hodgkin's disease, a cancer of the lymphatic system. The disease and the battle she fought took years, involved six months of chemotherapy and 26 rounds of radiation, and turned her life in an entirely new direction.



It totally changed my life," says the young woman from Jamestown who, at the time of her diagnosis, was operating a dog-grooming business which she had to close due to the illness. Doctors advised her that the chemo treatments were going to be very intense and my immune system compromised.

She became fascinated with the study of cancer — what occurs, and what goes wrong, at the cellular level. She enrolled at Jamestown College, majoring in microbiology with a special interest in hematology, the study of blood.

I came across a book from UND and was flipping through it," she says, when she noticed a section on cytotechnology. Her reaction, "Oh my word! I got chills.

I hadn't even heard of cytotechnology," she says, but this was exactly what she wanted to pursue and in that defining moment she decided to go into this field. Side effects of her cancer treatment, including a toxicity to one of the drugs, lasted quite a while. She could only attend school part time.

On a visit to UND, she met with the faculty, talked with students in the program, and "felt right at home here," she said. **Kathy Hoffman** and **Kim Droog** are excellent teachers.

Now having completed her degree in cytotechnology, she says, the quality of the education "was excellent; there are no words to express it. It's one-on-one... I learn a lot better that way.

If you have any questions they're always there to help, especially because we're such a small class.

Today, when I see a slide, and see that it's cancer, it's not only the patient. I see the mother, the father, the family, the children — everyone who will be affected by it.

She knows; she's been there.

*This is a Cell (Continued from page 17)*

Cytotechnology is one of the smallest and most unusual programs at UND. In the one-year curriculum leading to a Bachelor of Science degree, Hoffman and **Kimberly Droog**, education coordinator, provide one-on-one teaching for students.

It's different from a lot of programs at the university, Hoffman says. What you learn that first day you use forever.

Accredited for eight students, the program accepts qualified students in their fourth and final year as well as those who've completed a baccalaureate degree in another field, such as biology, and wish to take an additional year to become cytotechnologists. Students take two semesters at the UND medical school in Grand Forks, followed by clinical experience in the summer at sites in Grand Forks; Fargo; the Twin Cities; Marquette, MI, and Kalispell, MT.

It's highly specialized. You gotta love the microscope, Hoffman tells prospective students. It's the tool of our trade. Cytotechnologists spend more than six hours a day at the microscope, usually in a hospital or clinic setting. They may also be drawn toward research and teaching.

Students must also be prepared to move to metropolitan areas or a larger city in North Dakota when they complete their studies, she advises. If you have to stay in Grand Forks, it's probably not the profession for you. There are only about 25 cytotechnologists in the entire state; almost all (88 percent) are UND alumni.


Under the careful tutelage of their teachers, the students' work is very detailed, Hoffman says. They learn to recognize minute differences in cells, especially the nucleus—its size and shape, how does it stain, where it is located, are the edges smooth or irregular.

The majority of the cytologist's work (90 percent) involves reading Pap smears to detect cancer in the female genital tract. It also includes analysis of benign entities, inflammatory or infectious cells, and dysplasia (abnormal tissue growth, pre-malignant) cells.

The Pap smear is the most successful screening test out there for cervical cancer, Hoffman says, a disease that, fortunately, is going down in prevalence. Slides used for teaching are donated by area clinics and hospitals.

Cytology is more than the Pap smear; cell samples can come from all other body systems, she notes, gastrointestinal, genitourinary, respiratory and fine needle aspirations from anywhere in the body. Cytotechnologists sign out normal Pap smears; all specimens designated as abnormal (Pap smear and all specimens from the other body systems) are sent to the pathologist for final diagnosis.

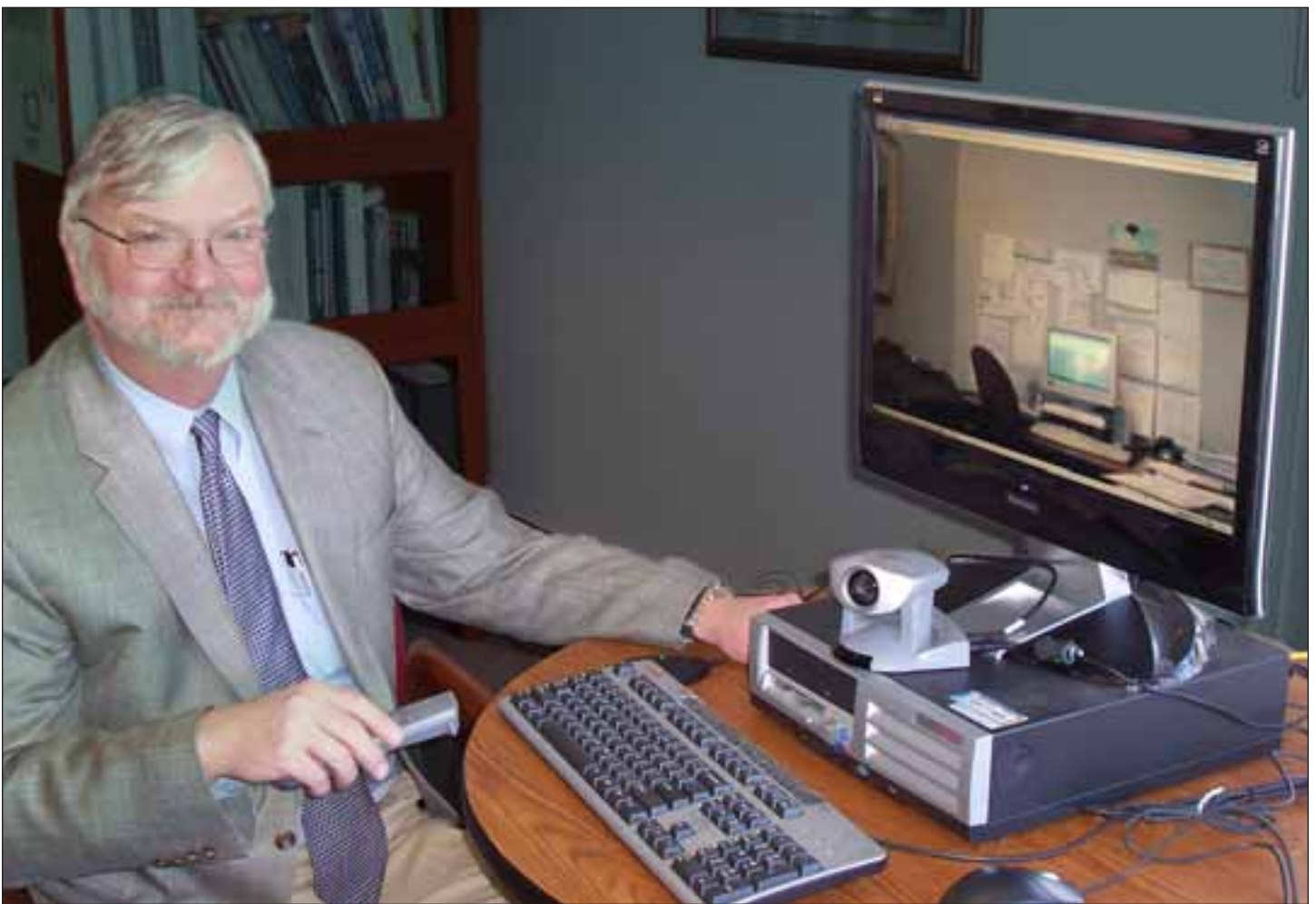
Sometimes it's easy to recognize abnormalities; sometimes it's not, she says.

The cytotechnology program's continuing commitment to excellence has yielded exceptional results, students routinely score very high on the national certification examination. Last year, the national pass rate was 96 percent; UND's pass rate was 100 percent. 

Pamela D. Knudson

# Beating Bulimia, from a Distance

*Researcher Studies Effectiveness of Therapy via Telemedicine for Rural Patients with Eating Disorders; Major NIH Grant Funds Project*



**James Mitchell, M.D.**, chair and professor of clinical neuroscience, Fargo, is breaking new ground through a televised cognitive behavior therapy program which has been shown to be effective in treating bulimia patients in rural areas.

HOW DO YOU REACH PATIENTS who suffer from eating disorders, and who live in rural areas, with the kind of psychotherapeutic care they need, care that is generally not available in most smaller towns in the Upper Midwest?

A new form of therapy, using telemedicine, has been tested by a team of UND medical school researchers and shown to be a very viable, productive means of treating these patients, especially those with bulimia nervosa, a serious eating disorder characterized by binge-eating followed by self-induced purging (vomiting).

Headed by **James Mitchell, M.D.**, professor and chair of clinical neuroscience, Fargo, the researchers have demonstrated that televised cognitive behavior therapy is just as effective, and acceptable to patients, as the traditional care provided by a therapist who is physically in the same room with the patient.

Mitchell, who also serves as president of the Neuropsychiatric Research Institute (NRI), has received a major grant from the National Institutes of Health (NIH) to continue a project aimed at helping patients in rural areas who suffer from eating disorders.

In the first phase of the study, also funded by NIH, the researchers compared cognitive behavior therapy (CBT) delivered via telemedicine and CBT delivered in person, involving patients in rural and smaller urban areas in North Dakota and northwestern Minnesota, Mitchell said. The two methods were equally effective and acceptable to patients, with good maintenance of treatment effects at one-year follow-up.

CBT is a highly structured form of counseling, with the patient given specific readings and assignments, he noted. It's like a class as much as it is like a therapy session.

The new five-year, \$2.5 million grant from NIH's National Institute of Mental Health funds the next phase of the study which involves comparing variations in telemedicine-delivered CBT to unsupervised self-help.

This additional study allows us to pursue our goal of developing delivery systems for effective and cost-effective intervention for patients in rural areas, where specialized treatments are usually not available, Mitchell said.


The therapy takes four months, with follow-up visits at six and 12 months, he said. Because the project is federally sponsored, he and his colleagues are able to provide care at no charge to participating patients.

Bulimia nervosa (BN) is a prevalent form of eating disorder that affects two to three percent of girls and women in late adolescent and young adulthood, he said. The age of onset is usually 18... Most people who need this therapy don't get it.

Studies reveal that five to six percent of girls and young women have symptoms but not full-blown bulimia nervosa, he said. Most practicing psychotherapists who treat patients with BN have not been adequately trained to deliver the care that has emerged as a recommended standard.

Therefore there appears to be a growing discrepancy between what is being used experimentally in academic centers and recommended by researchers in the field and what is available in the community, he said.

Internationally recognized for his work in eating disorders, such as anorexia nervosa, bulimia nervosa and obesity, Mitchell is the author of numerous books in his field of study and has written extensively for publication in scientific journals.

The recipient of numerous awards and honors, he was named in 2003 as a McCann Scholar, a prestigious honor given to a select few outstanding mentors in medicine in the United States. At UND, he holds the NRI/Lee Christoferson, M.D., Chair in Neuroscience and the Chester Fritz Distinguished Professorship, the latter is the highest faculty honor bestowed by UND. 

Pamela D. Knudson

**“We need to think of creative ways to help women and girls become more happy with their bodies regardless of their size.”**

WEB EXCLUSIVE:  
For more information on this study, visit:  
[www.ndmedicine.org](http://www.ndmedicine.org)



# Hometown Care

## Jacqui Nelson

Master of  
Physician Assistant Studies  
Class of 2007  
Hometown: Carrington, ND

FOR JACQUI NELSON, THERE IS NO reason to be anywhere but the Carrington area.

Originally from McHenry, ND, the high school basketball star left the region only briefly to play her way through a nursing degree first at Lake Region State College and then at the University of Mary in Bismarck. She promptly returned to the Carrington where she worked as a registered nurse for more than ten years before she decided she wanted more.

I loved patient care and I felt my position was getting too administrative,

explained Nelson, who is a senior Physician Assistant student at the UND School of Medicine and Health Sciences. I wanted to challenge myself and be more independent. I worked firsthand with the mid-levels in Carrington and thought it would be a very interesting career path to travel.

The UND physician assistant program, the only one in North Dakota, is the only one in the U.S. specifically geared to clinically practicing health care professionals, who have at least two years of professional experience.

They reside in their home

communities during the training experience, coming to UND only for four, four-week periods and a week prior to graduation. Most of their 22-month program of study occurs in the hometown clinical setting under the supervision of their physician-faculty member. Most of these students come from rural communities, where, in many cases, they plan to continue working.

Students who are planning to practice in their home communities come into the program with a high degree of determination, said **Mary Ann Laxen (FNP/PA 91)**, director of the PA program at the UND medical school. They have grown up in the community; they have seen the need, realize the challenges and are eager to become part of the answer. They know if they further their education, they can help fill that need.

I did a lot of research on what was out there, Nelson said. I chose UND because it was clinical-based, which meant I would spend less time away from my family. A PA here, **Mary Hoff (PA 95)**, had been through the program so I had a good idea of what to expect.

#### Timeout

Jackie embodies the type of student that we look for, said Laxen. She was already a longtime member of the health care community, she plans on working in her home community upon graduation, she is committed to life-long learning and she has the support of her family.

As a wife and mother of three young children, going back to school was no small decision. Her family would lose her full-time nurse's salary and they would be taking on the cost of her education. She would have to put on hold many of her community activities like being captain of the Midkota Ambulance Service, high school basketball coach and participating in her kids' school boosters and religious education groups.

My husband really had to step up, said Nelson, who was usually responsible for the kids' comings and goings. But he tells me all the time

how proud he is of me.

When asked about what her kids think about all this, Nelson replies, they are kind of inspired. I think this taught my kids that education is important. It doesn't have to end after high school.

#### The next level

The PA program at UND has been great, said Nelson, who will graduate in May. I felt challenged and got to meet people from other states. Even though I learned in the field, the faculty members were always good about communicating.

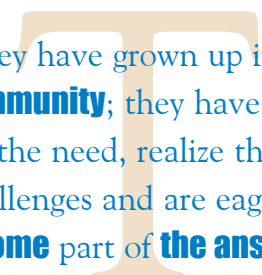
The program has done what she wanted. Nelson gets even more patient time at Carrington Health Center where she practices. Part of Catholic Health Initiatives, Carrington Health Center is a 25-bed acute care facility that includes laboratory, radiology, surgery, trauma, and emergency room, and other support services.

I have even closer contact with the patients, said Nelson. I get to know them a lot better now.

PAs that return to their own communities do really well, said Laxen. They are already known in the community and their patients know and trust them.

Upon graduation, Nelson will become one of the 70 percent of physician assistants practicing in North Dakota who are graduates of the UND program.

Amanda Scurry



“They have grown up in the **community**; they have seen the need, realize the challenges and are eager to **become part of the answer.**”

# Healing, in Harm's Way



Caring for young burn victims provided a “change of cadence” from regular duties in Iraq, said **Col. Craig Lamrecht**, pictured with a nine-year-old patient at the U.S. military’s Smith Gate clinic southeast of Baghdad. “It makes you feel good about what you’re doing.”

A NORTH DAKOTA NATIONAL Guard soldier committed to the United States military mission in Iraq, **Col. Craig Lambrecht, M.D. 87**, has brought peace and healing to children who are burn victims in that war-torn country.

A 23-year veteran of the National Guard, he completed his second tour of duty in Iraq in January, coming home to Bismarck after about four months. Two years ago, he was also deployed there for four months, serving near the Iranian border as part of the First Infantry Division.

Lambrecht, an emergency medicine physician at Medcenter One and

clinical assistant professor of family and community medicine at the UND medical school, is state surgeon for the National Guard, responsible for overseeing medical training for all members of the North Dakota National Guard.

Most recently in Iraq he served as senior medical officer and field surgeon at the Troop Medical Clinic, located at Convoy Support Center, Scania, southeast of Baghdad, and was responsible for the medical care of Multinational Coalition Forces and contract workers, as well as detainee care.

In addition to his regular duties, he treated Iraqi children at the Smith Gate



Burn Clinic (SGBC), part of the military's Effect's Mission or civilian assistance mission, he says. The outpatient clinic, housed in a small shipping container located outside the walls of the operation base, is open usually three days a week.

We can see one or two patients at a time. We see anywhere from 20 to 60 patients a day, primarily pediatric burn patients. They come from all over Iraq, and some even come from Iran.

We do a lot of debriding and dressing changes, which can be very painful, he says. In Iraq, there is no burn care expertise at the level provided at Smith Gate, so we see a range of patients with conditions spanning simple to complex.

Some patients require simple dressing changes, while others must undergo amputation which cannot be done at the clinic, Lambrecht says.

Patients will arrive by car, taxi, ambulance, from hospitals. (They) will be sick, not sick, dying or well - the full spectrum of health.

Because they live in an environment with little or no electricity, children especially are at high risk for injury due to exposure to flammable substances and fire. Iraqis cook using open hearth ovens and store fuel in open containers next to flames.

Children also suffer burn injuries as a consequence of war, from explosive devices, as well as their work in brick factories, he says. They are not victims of Coalition fire or related action.

### Help from home

The clinic has received assistance and donations from organizations and individuals throughout North Dakota, including basic medical and personal hygiene supplies.

Lambrecht is very grateful to the **Edward ( Ted ) Fogarty, M.D.**, chair and clinical assistant professor of radiology, Bismarck, for researching a burn ointment, Medihoney, which is the perfect product for the outpatient management of burns in Iraq, he says. Medihoney is produced in Australia.

He even donated thousands of

dollars of the product to convince us to use it! Lambrecht comments. It has changed the way outpatient burn care is being delivered at Smith Gate.

### North Dakota's contribution

The most important work I am achieving as a state surgeon, and in 23 years in the National Guard, is being able to take care of our state's troops and the country's soldiers, he says, and helping the North Dakota Guard achieve one of the country's highest overall medical troop readiness state ratings.

Lambrecht wants people to understand the profound impact the doctors of the North Dakota National Guard have on how health care has been delivered in Iraq. North Dakota has given some of its best providers and expertise to a health care mission which has never been without resolve or commitment.

Doctors **Joe Smothers** (Minot), **Mike Brown (M.D./Ph.D. 92**, Bismarck), **Don Kosiak (M.D. 79**, Wishek, ND), **Gordy Leingang** (Bismarck), **R.J. Moen (M.D. 00**, Williston), **Stacey Smith (M.D. 98**, Detroit Lakes, MN), **Rachel Hawker (M.D. 02**, LaCrosse, WI), and **Todd Schaffer (M.D. 02**, Carrington, ND) are a team personifying what North Dakota physicians do best, serving their patients with quality care, no matter what, where or when the circumstances, he says.

Just as importantly, true battle buddies have covered for them at home, allowing them to fulfill their missions and stay focused.

### What this service means

For Lambrecht, his long-term dedication and service in the North Dakota National Guard is more than military duty, it's about the troops and service to the country, he says.

There can be no doubt that support for this country should be manifested by shared responsibility, shared sacrifice and shared service. You can't ask someone to do what you are not willing to do yourself.

**“The most important work I am achieving as a state surgeon, and in 23 years in the National Guard, is being able to take care of our state's troops and the country's soldiers.”**

Pamela D. Knudson

## Associate Dean Ebadi Announces Retirement



**Manuchair (Mike) Ebadi, Ph.D.**, associate dean for research and program development at the UND School of Medicine and Health Sciences, Grand Forks, has announced his plans to retire, effective June 30, culminating a 40-year career in academic medicine.

He is director of the Center of Excellence in Neuroscience and

Chester Fritz Distinguished Professor of Pharmacology and of Clinical Neuroscience and also holds the titles, senior advisor to the president and associate vice president for medical research.

We wish to thank Dr. Ebadi for his many contributions to the UND School of Medicine and Health Sciences, said **Dean H. David Wilson, M.D.** They have been magnificent and magnanimous.

Ebadi also has established awards to recognize outstanding contributions to the field of neuroscience research (Dean H. David Wilson, M.D., Academic Award in Neurosciences), teaching (Hippocratic Dignity Award), and health promotion (Charles E. Kupchella Preventive Medicine and Wellness Award).

Under Ebadi's leadership, the research enterprise at the UND medical school has increased sixfold and is due, in large part, to recruitment and support of talented researchers, Wilson said. This year, awards for grants and contracts totaled nearly \$20 million, primarily from federal sources, placing the school among the top entities in terms of research activity in the state.

Since 1999, Ebadi has served the UND medical school as administrator, faculty member and researcher. An authority in the field of Parkinson's disease, he has written ten books on subjects related to his field of study, one of which has been translated into Japanese and one into Chinese. He also wrote a reference book on pharmacology, the study of drugs.

He and his colleagues investigate the nature and underlying causes of Parkinson's and other neurodegenerative diseases, as well as drug addiction. A fellow of the American College of Clinical Pharmacology, he conducts research funded by the National Institute of Neurological Diseases and Stroke (NINDS), the National Institute on Aging (NIA) and the Office of National Drug Control Policy which support health-related studies.

## Carlson Named Kaess Professor of Anatomy and Cell Biology



**Edward Carlson, Ph.D. (Anatomy 70)**, chairman and Chester Fritz Distinguished Professor at the UND School of Medicine and Health Sciences, Grand Forks, has been named as the first Dr. Karl and Carolyn Kaess Professor of Anatomy and Cell Biology.

The professorship was created with a significant gift from **Carolyn Kaess** of San Diego and her husband,

the late **Karl Kaess, M.D.**, a 1938 graduate of the UND medical school. It is the second professorship established with a major endowment to support the school.

Dr. and Mrs. Kaess chose to endow the professorship in anatomy because of their esteem for Dr. Harley French, an exceptionally gifted professor who served as anatomy department chairman as well as dean of the medical school for 37 years, ending in 1948.

We are sincerely grateful to Dr. and Mrs. Karl Kaess for their remarkable generosity, said Carlson. Their gift will directly impact my teaching and research career and benefit our department for years to come.

Professor Carlson, who has served as chairman of the anatomy and cell biology department since 1981, is respected as an award-winning educator, a highly effective administrator and a creative investigator. His work has centered on the morphometric analysis of cellular and extracellular ultra-structure, especially as applied to models of diabetic retinal and kidney ailments. Results of his research, represented by more than 180 papers and abstracts, have been widely published. In May 2006, he received the highest faculty honor bestowed by UND, the title Chester Fritz Distinguished Professor.

## Jeno Serves on NCAA Committee

**Sue Jeno, Ph.D. (Anatomy 99), PT**, assistant professor of physical therapy, Grand Forks, is serving as UND's Faculty Athletic Representative (FAR) to the National Collegiate Athletics Association (NCAA).

Established in 1989, the NCAA's FARs serve as one of the links between the NCAA and its member campuses. FARs monitor the academic integrity of athletic programs, the athletic performance of student-athletes, and the student-athlete experience. They also serve on a variety of campus committees to provide insight to NCAA regulations and recommendations.

One of the things the group works to do is to better integrate athletics and academics, said Jeno. Many times students feel they lead two lives: their athletic life and the academic life. We are trying to do a better job of integrating both aspects of the student-athlete's campus life.

## New Web Site a Gateway to Rural Health Research

The UND Center for Rural Health launched a new Rural Health Research Gateway Web site.

The Web site, funded by the U.S. Department of Health and Human Services, features rural health research conducted by the federal Office of Rural Health Policy (ORHP) s Rural Health Research Centers on topics such as access to care, health care quality management and improvement, Medicare and Medicaid, health information technology, health workforce, patient safety, and public and mental health.

At the Web site, <http://www.ruralhealthresearch.org>, users can:

- Search for summaries of research projects, both underway and completed.
- Find fact sheets, policy briefs, and other publications resulting from the work of the research centers.
- Access information about the eight ORHP-funded Rural Health Research Centers, including contacts and areas of expertise.

Rural health care can face significant challenges and it is hard to find solutions when you are operating in a data-free zone, said **Mary Wakefield, Ph.D., R.N., F.A.A.N.** director of the Center for Rural Health. The Rural Health Research Gateway will help to move information more rapidly so it can be used to address those challenges.

The Rural Health Research Gateway is a project of the UND Center for Rural Health, in conjunction with the RUPRI Health Panel and the University of Southern Maine.

## Federal Health Panel Praises UND

In a letter to U.S. Department of Health and Human Services Secretary **Michael Leavitt** discussing his visit to North Dakota last fall, the chair of the National Advisory Committee on Rural Health and Human Services praised UND for its mission of service.

The committee was impressed by the work of one of one of its hosts, the University of North Dakota, which is a great example for a research university taking to heart its mission of service, said Committee Chair **David Beasley**, former governor of South Carolina. The university s programs and outreach efforts play a key role in supporting health and human service delivery in North Dakota. It is home to the only medical school in North Dakota, whose graduates supply much of the health care workforce in rural North Dakota.

In September, the Center for Rural Health at the UND medical school hosted members of this committee that advises the Secretary on rural issues. During the meetings in Grand Forks, Devils Lake and Cando, the committee gathered information on rural issues involving substance abuse, Medicare Advantage and Headstart programs to include in their annual report to the Secretary.

## UND Physician Assistant Class of 2008 Receive White Coats

The sixth White Coat Ceremony for new students in the Physician Assistant (PA) Program took place on February 16 at the UND School of Medicine and Health Sciences.

The class consists of 33 students, 19 women and 14 men, from 16 states. These students, members of the program s 36th class, received their white coats and UND School of Medicine and Health Sciences pins. They also received Guidelines for Ethical Conduct for the Physician Assistant Profession.

The presentation of the white coat is symbolic of the new profession the students are entering, said **Mary Ann Laxen**, PA program director. The students will wear these coats throughout the clinical phase of their training.

Guest speaker for the event was **Robert Beattie, M.D. '89**, associate professor and chair of family and community medicine at the UND medical school.

Physician assistants are health care professionals who practice medicine with physician guidance and supervision. The UND physician assistant program, the only one in North Dakota, is the only one in the U.S. specifically geared to clinically practicing health care professionals, who have at least two years of professional experience.

They reside in their home communities during the training experience, coming to UND only for four, four-week periods and a week prior to graduation. Most of their 22-month program of study occurs in the hometown clinical setting under the supervision of their physician-faculty member. Most of these students come from rural communities, where, in many cases, they plan to continue working.

More than 70 percent of physician assistants practicing in North Dakota are graduates of the UND program.

## Lindquist Receives Award



**Kurt Lindquist, M.D.**, surgeon at the Veterans Affairs Medical Center (VAMC) in Fargo and UND clinical professor of surgery, has been awarded the 2006 Annual Secretary s Hands and Heart Award. This award recognizes his excellence in providing sustained and compassionate direct patient care. Only one such award is granted

annually at each facility.

Lindquist initiated a vascular surgery program at the Fargo VAMC, elevating it to the highest standards in vascular surgery. Additionally, he initiated an endovascular surgery program where a recent review of carotid endarterectomy results documented quality of care which exceeded expected national outcomes.

## Hill Receives Saiki Prize for Teaching Excellence



**Thomas Hill, Ph.D.**, professor of microbiology and immunology, Grand Forks, received the UND Foundation/Lydia and Arthur Saiki Prize for Graduate or Professional Teaching Excellence during the Founders Day banquet Feb. 22 at UND.

Since joining the medical school in 1995, he has made major contributions to UND and the

medical school in teaching, research and service. He came to UND well prepared, having taught and established an active research program at Drexel (University) and having become an internationally recognized expert in the area of termination of bacterial DNA replication, said **Kevin Young, Ph.D.**, professor of microbiology and immunology, Grand Forks. In addition, his teaching prowess was well-developed and acclaimed.

Many students, both current and former, wrote letters in support of Hill's nomination. A common theme among them was Hill's devotion to teaching, to his students, and to the patients they will serve.

Tom's performance as a lecturer is superb, says **Roger Melvold, Ph.D.**, professor and chair of microbiology and immunology, Grand Forks. His command of the information, the preparation of his visual materials, and his delivery style sometimes make me, frankly, green with envy. The high regard in which he is held by the students is obvious in the way they interact with him through asking questions or seeking clarifications, and in their evaluations.

He excels in teaching graduate students many of whom have gone on to post-doctoral positions in prestigious institutions, including Harvard and the National Institutes of Health. His commitment to research is evident in his work on AIDS, West Nile virus and prions, bringing funding to the University, providing research experience to students, and publishing on a wide variety of crucially important subjects.

## Nominations Invited for 'Humanism in Medicine' Award

The UND School of Medicine and Health Sciences is seeking nominations for the 2007 Leonard Tow Humanism in Medicine awards presented by the Arnold P. Gold Foundation. The awards will be presented during the M.D. Class of '07 Commencement Awards Luncheon May 13 at UND.

One graduating medical student and one physician faculty member will be recognized for excellence in both compassionate patient care and scientific achievement. Each recipient will be awarded a \$1000 prize.

To nominate a graduating medical student and/or a physician faculty member, submit a letter to the Student

## National Advisory Council Meeting Held on Campus

The Office of the Dean and the Office of Advancement and Alumni Relations hosted the UND School of Medicine and Health Sciences National Advisory Council meeting February 16-17, 2007 on campus.

Twenty alumni and friends of national prominence attended meetings with development consultant, Dr. Ralph Silverio of Grenzbach Glier & Associates, Inc., as well as Dean Wilson and the Office of Advancement and Alumni Relations staff. The group also toured the SMHS and visited with medical students, faculty members and researchers.

Members of the committee include: **Jon Tingelstad, M.D. (B.S.Med. 58)** Chocowinity, NC, national chair; **John Berger, M.D. (B.S.Med. 63)**, San Diego, CA; **Tom Berquist, M.D. (B.S.Med. 69)**, Ponte Vedre Beach, FL; **Cecil Chally, M.D. (B.S. 61, B.S.Med. 63)**, Minneapolis, MN; **Lloyd Everson, M.D. (B.S. 65, B.S.Med. 67)**, The Woodlands, TX; **Kevin Fickenscher, M.D. (B.S.Med. 78)**, Tiburon, CA; **Jay Giedd, M.D. 86**, Potomac, MD; **Julie Gilbertson, M.D. 91**, Rochester, MN; **Roger Gilbertson, M.D.**, Fargo, ND; **Ernest Godfread, M.D. 77 (B.S.Med. 75)**, Bismarck, ND; **Wesley Herman, M.D. 76 (B.S.Med. 74)**, Dallas, TX; **Richard Horne, M.D. (B.S.Med. 72)** and **Donna Horne, M.D. (B.S.Med. 72)**, Paradise Valley, AZ; **John Jarrett, M.D. (B.S.Med. 63)**, Eugene, OR; **George Johnson, M.D. (B.S.Med. 58)**, Fargo, ND; **Kent Johnson, M.D. (B.S.Med. 75)**, Ann Arbor, MI; **Mark Lundeen, M.D. (B.S.Med. 73)**, Fargo, ND; **David Monson, M.D. (B.S.Med. 61)**, River Forest, IL; **Richard Olafson, M.D. (B.S.Med. 57)**, Fargo, ND; **Bruce Porter, M.D. (B.S.Med. 72)**, Seattle, WA; **Rod Rohrich, M.D. (B.S.Med. 77)**, Dallas, TX; **Michael Unhjem, J.D. 78**, Fargo, ND, and **Myron Wentz, Ph.D. (M.S. 66)**, Indian Wells, CA.

The focus of this committee is to provide leadership for the national fundraising campaign which will greatly benefit the School of Medicine and Health Sciences.

Performance and Recognition Committee (SPRC) in care of the Office of Student Affairs and Admissions, 501 N. Columbia Road Stop 9037, Grand Forks, ND 58202-9037, which outlines why the individual should receive the award. Please explain how the nominee meets the criteria for the award which can be found on the medical school web site: [www.med.und.edu](http://www.med.und.edu) (click on Administration on left menu, then Student Affairs).

Deadline for nominations is April 6. For more information, contact the Office of Student Affairs at (701)777-4221.

'00s

07



**Richa Priyadarshini, Ph.D. (Microbiology and Immunology 07)**, began working as a postdoctoral student with **Christine Jacobs-Wagner, Ph.D.**, at Yale University's Department of Molecular, Cellular and Developmental Biology in New Haven, CT.

Priyadarshini recently completed her doctoral studies under the mentorship of **Kevin Young, Ph.D.**,

professor of microbiology and immunology, Grand Forks.

Jacobs-Wagner is an internationally known researcher who is working on cell division in the bacterium *Caulobacter crescentus*. She is known for her work on cell walls and on the recent discovery of a bacterial cytoskeleton protein that was thought to be present only in the cells of higher animals (eukaryotes).

She studies the mechanisms that govern cell cycle control and the acquisition and propagation of asymmetry using a simple prokaryotic model system. She also studies the bacterial cytoskeleton that supports cell shape.

This is extremely important, very basic work, Young said. The cell cycle is extremely important to understand if we want to eventually know how to manipulate (kill or inhibit) bacterial growth. Thus the long-term rewards of her research would be to identify new ways to interfere with or control bacterial growth for therapeutic purposes.

03

**Andrea Swenson, M.D. 03**, plans to begin a fellowship in neuromuscular medicine at the University of Illinois-Chicago in July 2007. She is completing residency training in neurology at the University of Iowa in Iowa City.

02

**Ryan Holzwarth, M.D. 02**, has joined MeritCare in his hometown of Jamestown as a dermatologist. He completed his residency at the University of Michigan, Ann Arbor.

'50s

57

**Kenneth Kihle, M.D. (B.S. Med. 57)**, of Bottineau, ND, has been named The Outstanding Rural Health Provider by UND's Center for Rural Health. This award is granted to a health provider that practices in rural North Dakota and who has made important contributions to their community and area in an unselfish mannerism. Kihle practiced for 47 years in Bottineau and the surrounding area.

**Malcolm Murdoch, M.D. (B.S. Med. 61)** of Merced, CA, died Dec. 27, 2006 at the age of 68. Originally from Valley City, he graduated from medical school as a pathologist and was inducted into the U.S. Navy. After serving in Vietnam, he was a commander at Bethesda Naval Hospital in Washington, D.C., for many years. He started in private practice in Madison, WI, and then moved to Merced, CA, in 1975. He had been with the Merced Medical Pathology Group since then.

He is survived by his wife Vicki; his daughter, Mara, and son-in-law, Mark Dal Poggetto; and sister, Nancy Englerth.

**Audrey Traub, M.D. ( 71, B.S. Med. 73)**, White Bear Lake, MN, died Jan. 28, 2007 at the age of 57.

Raised on a farm near Garrison, ND, she received bachelor's degrees in both medical technology and medicine at UND. She completed her medical degree at Washington University, St. Louis, MO, an internship in St. Paul, MN, and residency training at St. Paul-Ramsey Medical Center (now Regions) in general surgery.

She joined the medical staff of Unity Hospital in St. Paul in 1981. In addition to serving on dozens of hospital committees, Dr. Traub was selected chief of staff at Unity Hospital's Board of Governors from 1991 to 1992.

Additional appointments included serving as medical director of Mercy and Unity's High Risk Breast Diagnostic Treatment Program and chair of the hospital's breast cancer board.

In 2002, in recognition of her dedication and service to Unity Hospital, organized medicine and the community, Unity was proud to present her with the hospital's highest physician honor, The William J. Carr Award.

She is survived by her brother, Jerry; her daughter-in-law, Vickie; her cousins, and many close and loving friends and co-workers.

**Robert Lee, Jr. (PA 03)**, of Groves, TX, died Feb. 6, 2007 at the Medical Center of Southeast Texas. He was 41.

A native of Lexington, KY, he lived in Groves for 23 years and practiced as a physician assistant at Winnie Community Hospital for four years. He also served as a former Port Arthur fireman and paramedic.

Survivors include his wife, Shelley Lee of Groves; two daughters; four sons, and three grandchildren.

## ND OPPORTUNITIES

This feature offers information for physicians and other health care professionals interested in practice opportunities in North Dakota. For more information about these listings or loan repayment programs, please contact Mary Amundson, M.A., at 701-777-4018 or [mamundsn@medicine.nodak.edu](mailto:mamundsn@medicine.nodak.edu).

For the complete list, go to: [www.ndmedicine.org](http://www.ndmedicine.org).



# Everyone has the **Responsibility** to Ensure a **Healthy Future!**



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**As alumni and friends of UND, you can help ensure the health of the school too. How?**

- By securing additional scholarship funds to students.
- By endowing professorships and chairs to reward faculty for excellence in education.
- By providing renovation costs for facilities, to include naming opportunities for laboratory space, buildings and the school itself.

Contact me for more information!

Blanche E. Abdallah  
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Visit us online at [www.med.nodak.edu/alumni](http://www.med.nodak.edu/alumni) today to see how **YOU** can help!





Second year medical students (from left) **Janalee Holmes**, **Collette Lessard**, **Stephanie Dvorak** and **Emily Ament** enjoy the annual winter formal with **Patty Vari, Ph.D.**, associate professor of nursing, and **Richard Vari, Ph.D.**, associate dean for medical education.



**Robert Beattie, M.D. '89**, associate professor and chair of family and community medicine, congratulates **Wendy Brown** during the Physician Assistant Class of 2008 White Coat Ceremony.

## Check **IT** Out!

The UND Alumni Association and Foundation debuted a new and improved website last month.



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

- Get news.
- Support UND.
- Register for events.
- Read online publications.
- Find friends and classmates.
- Download fun stuff.
- Check out the calendar.
- Peruse the alumni directory.
- Visit the career center.
- Make a donation.
- Become a mentor to a student.
- Get in touch with nearby alumni.
- Design your own UND apparel.
- Enjoy!



## Mark Your Calendar

### April

- 16-22 **38th Annual UNDIA Time-Out Week**, [www.und.nodak.edu/org/undia](http://www.und.nodak.edu/org/undia)
- 19 **American Indian Research Forum**, UND Memorial Union, 8 a.m.-3 p.m., <http://www.med.und.nodak.edu/depts/rural/airf/>
- 19 **Frank Low Research Day**, Vennes Atrium, 9 a.m. - 5 p.m.
- 20 **Dean s Hour: Darryl Tonemah, Ph.D.**, National Institutes of Health, Keller Auditorium, noon - 1 p.m., **701-777-2312**
- 23 **North Dakota Women s Health Research Conference**, UND Wellness Center, 8 a.m. - 3 p.m., <http://www.und.nodak.edu/dept/womenshealth/researchconference.html>
- 23-24 **Conference: Hearing Hoofbeats and Thinking ZEBRAS:** Screening, testing and management of children with genetic disorders. Ramada Plaza, Fargo, ND. Contact Jayne at **701-777-4276** or [jbrown@medicine.nodak.edu](mailto:jbrown@medicine.nodak.edu).

### May

- 9 **Dean s Hour: Jeffrey Ryan, Ph.D.**, Instructor, Institute for Emergency Preparedness, Jacksonville State University, Jacksonville, AL, Keller Auditorium, noon - 1 p.m., **701-777-2312**
- 12 **UND Spring Commencement**, Alerus Center, 1:30 p.m., <http://sos.und.edu/commencement/>
- 13 **M.D. Class of 2007 Awards Luncheon**, Memorial Union, 11:30 a.m., **701-777-2514**
- 13 **M.D. Class of 2007 Commencement Ceremony**, Chester Fritz Auditorium, 3 p.m., **701-777-2514**
- 21-22 **IDeA regional meeting**, Radisson Inn, Fargo, ND, [www.ndinbre.org](http://www.ndinbre.org)

### September

- 16-18 **3rd Annual Rural Surgery Symposium**, Alerus Center. Contact Geralyn at **701-777-2589** or [glunski@medicine.nodak.edu](mailto:glunski@medicine.nodak.edu)
- 20 **Occupational Therapy Casper campus all-class reunion**, Lander, WY
- 24-29 **UND Homecoming**, [www.undalumni.org](http://www.undalumni.org)

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**Candelaria Martin, M.D. '04**, third-year resident in the UND Family Medicine Residency Program at Minot, is featured along with other young physicians in the "Aspiring Docs" campaign, a nationwide initiative of the Association of American Medical Colleges (AAMC) to encourage minority students to pursue careers in the health professions. Members of minority groups are under-represented in the medical field - a disparity the AAMC is hoping to alleviate through this and related efforts. Originally from Arizona, Martin attended the UND medical school through the INMED (Indians Into Medicine) Program. She plans to complete residency training in June and pursue additional obstetrics training through a family medicine residency.

**Eric Swensen, M.D. '02** (Psychiatry Residency '06), who practices in Belcourt, ND, is also featured in the ad campaign.



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