

NORTH DAKOTA MEDICINE

THE UNIVERSITY OF NORTH DAKOTA SCHOOL OF MEDICINE & HEALTH SCIENCES

Under the Microscope

**The North Dakota Statewide
Cancer Registry**

**Celebrating 20 Years of
Helping Native Elders**

Teddy Bear Clinic

**Center for Comparative
Effectiveness Analytics**

Holiday 2014
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“Dr. Schuh, thank you for donating my stethoscope! It means so much to have physicians from North Dakota support us in our journey to become physicians. I can’t wait to begin using it.”

*—Jocelyn Fetsch, first-year medical student
Grand Forks, N. Dak., native*

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UNIVERSITY OF NORTH DAKOTA SCHOOL OF MEDICINE AND HEALTH SCIENCES

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How you can help your fellow North Dakotans

“We'd love to have you **participate.**”



In prior Dean's Letters, I've tried to keep you abreast of what the SMHS is doing to try to ensure an optimal educational experience for our students. I've also outlined many of our efforts to advance knowledge through various research ventures designed to improve the lives of North Dakotans. And I've stressed what the School is doing to help with the healthcare challenges facing North Dakota. I'm especially proud of the numerous components of the Healthcare Workforce Initiative (HWI).

But in this Dean's Letter, I'd like to stress what you can do for your School—and thus positively influence the lives of our students and your fellow North Dakotans. Your contribution can be of two types. First of all, if you are a healthcare professional, you can help our students by volunteering to teach them in your local community. And many of you already do so. For example, of the roughly 1,600 physicians in the state, about two-thirds are members of the School's clinical faculty ranks. But for those of you who are not—or are on the faculty but haven't taught recently—we'd love to have you

participate. Believe me, there is little that is as professionally satisfying as being a mentor and role model for a health professions student.

The second big way that you can help is through a generous financial contribution to the UND Foundation, with a gift earmarked for the SMHS. “But why should I contribute to the School when the North Dakota Legislature has been so generous to the School?” you

“ So why should you contribute? For three reasons: **to reduce student debt; to enable the SMHS to recruit the best and brightest faculty; and to build programs of distinction.**”

might ask. And I’d answer that you’re absolutely correct—the Legislature has been incredibly supportive of the HWI and other School programs. So why should you contribute? For three reasons: to reduce student debt; to enable the SMHS to recruit the best and brightest faculty; and to build programs of distinction.

First, let’s consider student debt. As I’ve pointed out before, our medical students face a paradoxical situation—low cost to attend and high debt load when they graduate. Why? Because many of our students come from rural families that don’t have the same financial resources as some families, so students have to borrow a lot to afford school. Additionally, we simply have far fewer scholarship dollars than many schools, so we have less to give to needy students. That’s where you come in. Increasing the availability of donor dollars to enhance our scholarship programs for healthcare students is the School’s number one philanthropic goal.

Second, as we grow our student class sizes, we must recruit additional faculty. But we compete for faculty recruits on a national stage, and attracting top talent to North Dakota remains a challenge, quite frankly. But a huge benefit occurs when we can offer an endowed lectureship, professorship, or chair as an added inducement to come to UND. Again, that’s where you come in. A major gift to establish such an endowed position is an extremely powerful recruitment incentive.

Finally, the realities of budget prioritizing and allocating invariably mean that certain programs, despite being highly meritorious, can’t be adequately developed because of a lack of funds. But your gift can help us develop programs of excellence that otherwise might not exist.

So for the many of you who already give of your time and treasure, thank you! And for those of you who might consider donating your time and your financial

support, please consider making such a commitment right now. If you are considering a financial gift, please see the note from Dave Miedema in the Honor Roll of Donors insert of this issue. Our students will thank you, but perhaps as importantly, all North Dakotans will thank you.

In closing, Susan and I want to thank you again for making us feel so welcome in this special place. Thank you for your support of the UND SMHS, and best wishes for a wonderful holiday season and a fantastic 2015!



Joshua Wynne, MD, MBA, MPH
UND Vice President for Health Affairs
and Dean

Booth new associate dean for the Southwest—Bismarck—Campus at UND School of Medicine and Health Sciences

A. Michael Booth, MD, PhD, has been named associate dean for the Southwest (Bismarck) Campus at the University of North Dakota School of Medicine and Health Sciences. Booth is a cardiovascular and thoracic surgeon. He practices at the St. Alexius Heart and Lung Clinic in Bismarck.

Booth succeeded Dr. Nicholas Neumann as Southwest Campus dean. Neumann retired at the end of September.

“Dr. Booth has been an outstanding faculty member at UND for the past 25 years, and has coordinated the surgical clerkship at the Southwest Campus for years,” said Joshua Wynne, MD, MBA, MPH, UND vice president for health affairs and dean of the UND School of Medicine and Health Sciences. “He has a strong commitment to medical education and will be devoting about half of his professional time to this new position. I am thrilled that he has accepted our offer to be the next Southwest Campus dean.”

Booth, a native of Fulton, New York, graduated from Johns Hopkins University, where he was elected to membership in Phi Beta Kappa, the nation’s oldest and most widely recognized honor society. He earned his Doctor of Medicine from Johns Hopkins University and completed his surgery residency at the University of Minnesota, where he served as chief resident and was the recipient of a National Institutes of Health National Research Award. He earned his PhD in Physiology from the University of Minnesota School of Medicine.

Booth has practiced with St. Alexius since 1989. He began

teaching in the Department of Surgery at the UND School of Medicine and Health Sciences in 1989, where he is a clinical professor of surgery. In 2000, the School honored Booth with the Wayne Swenson Teaching Award in Surgery. He was elected by the School to be a member of the Alpha Omega Alpha Honor Medical Society, which recognizes and advocates for excellence in scholarship and the highest ideals in the profession of medicine.



A. Michael Booth

He has served as president of the North Dakota Medical Association, the North Dakota Chapter of the American College of Surgeons, and the Sixth District Medical Society of the NDMA.

Booth is board-certified by the American Board of Surgery and the American Board of Thoracic Surgery. He also is certified in cardiac pacing and cardioversion defibrillation. He is a fellow of the American College of Surgeons, the American College of Cardiology, and American College of Chest Physicians. He is also a member of the Society of Thoracic Surgeons, Association for Surgical Education, and North Dakota Medical Association. Booth has published over 20 articles on cardiovascular physiology and thoracic surgery.

Interment Ceremony honors donors of Deeded Body Program

An interment ceremony honoring the memory of those who donated their bodies for the benefit of medical education took place on Friday, September 19, at the University of North Dakota School of Medicine and Health Sciences’ plot at Memorial Park Cemetery in Grand Forks. At the service, the School pays respect and tribute to donors of the Deeded Body Program.

“The interment service is to recognize and thank the special men and women who had the foresight to donate in a sincere effort to advance our teaching program and to make a profound difference in the lives of many aspiring physicians,” said Kenneth Ruit, PhD, assistant dean for Undergraduate and Graduate Education, and associate professor in the Department of Basic Sciences.

The School conducts this ceremony once every three years to inter the cremated remains of donors who have chosen to be interred in the UND School of Medicine and Health Sciences’ plot. Family members of donors being interred were invited, as were the School’s faculty, staff, and students.

Dr. Ruit and Haris Ali, MD, assistant professor in the Department of Basic Sciences, spoke from a faculty perspective about the value and significance of the Deeded Body Program.

Local clergy who participated in the service were pastors Chad Brucklacher of Christus Rex Lutheran Campus Center at UND and Jerry Bass, retired from Wesley United Methodist Church.

The director of the Deeded Body Program at the School is Mandy Meyer, PhD, assistant professor in the Departments of Basic Sciences and Occupational Therapy.

For more information, please contact the Department of Basic Sciences at the UND School of Medicine and Health Sciences, (701) 777-2215.



Combs receives grant from the Michael J. Fox Foundation

Professor Colin Combs, PhD, in the Department of Basic Sciences at the University of North Dakota School of Medicine and Health Sciences was awarded \$88,200 from the Michael J. Fox Foundation for Parkinson's Research. The Rapid Response Innovation grant is for a project titled "Defining the Contribution of Neuroinflammation to Parkinson's Disease in Humanized Immune System Mice."

Inflammation is a defensive response by the body's immune system to an injury, infection, or allergy. In the central nervous system — the brain and spinal cord — the immune response is performed by specialized cells called microglia, which patrol the central nervous system and clear it of cellular debris and dead neurons. Overactivation of microglia during the immune response has been associated with neuroinflammation and the cellular degeneration that occurs in Parkinson's disease.

"This suggests that brain inflammation may influence the course of disease and that anti-inflammatory therapies might be useful," said Combs. "However, it is difficult to answer this question with the typical lab approach of using rodents to study the disease since the rodent immune system may differ quite a lot from that of a human."

Combs and his lab team will overcome this limitation by using a unique model with a "humanized" immune system to test whether specific inflammatory changes in the brain contribute to degeneration during disease. The mice that Combs will use in his study have been "humanized" with stem cells derived from the bone marrow of human adults. Adult bone marrow stem cells form all the types of blood cells in the body.

"The mice have a compromised immune system already," said Combs. "The adult human stem cells in the mice subsequently develop into mature immune cells essentially replacing the mice's deficient immune cells. This allows laboratories like ours to ask questions regarding how the human

immune system works although the model remains a mouse." Laboratory mice, *Mus musculus* to scientists, have been bred for generations to be genetically identical. Because mice are genetically and physiologically similar to humans (mice and humans share 95 percent of their genes), scientists find mice to be incredibly valuable experimental tools for research into the genetic basis of neurodegenerative diseases such as Alzheimer's and Parkinson's. Scientists have developed a vast knowledge bank of lab mouse DNA that they can use to study how the effect of changes in specific genes may underlie certain diseases.

"An immediate next step will be to verify that the immune changes in the mice also occur in human patients," said Combs. "We will then need to check whether broad anti-inflammatory drugs or targeted immunomodulatory drugs are most effective in slowing disease in the mice to provide candidate drugs for human trials."

The Michael J. Fox Foundation, which was founded in 2000, is the world's largest nonprofit funder of Parkinson's disease research. With no endowment, MJFF rapidly deploys non-dilutive capital as well as intellectual and other resources with one goal in mind: to accelerate development of improved therapies and, ultimately, a cure for those living with Parkinson's today. Their internal team of experts and ever-evolving funding strategy allow the foundation to invest in research that will have the greatest impact and potential to change patients' lives.

More information about Combs' project and the Michael J. Fox Foundation can be found at https://www.michaeljfox.org/foundation/grantdetail.php?grant_id=1357.



Colin Combs

Krohn named NDAFP Physician of the Year

Dr. Kimberly Krohn received the Physician of the Year Award from the North Dakota Academy of Family Physicians at the academy's annual meeting on November 14 in Grand Forks. Krohn, MD, MPH, FAAFP, has been with the Center for Family Medicine since 1995; first as a medical student, then resident, and finally as a faculty member. She has served as program director since 2006. Her professional interests are varied and include the quality improvement of medical education and of clinical care, care of children, maternity care, care of the elderly, primary care research, and procedures. Krohn has a bachelor's degree in dietetics from Michigan State University, a Master of

Public Health in Health Systems Administration from the University of Minnesota, and her MD from the University of North Dakota School of Medicine and Health Sciences. She is a forensic medical examiner for the Northern Plains Children's Advocacy Center, a previous president of the North Dakota Medical Association, and vice-chief of medicine at Trinity Hospital in Minot.



Kimberly Krohn

Center for Rural Health receives funding to support cardiac care



The Center for Rural Health at the University of North Dakota School of Medicine and Health Sciences has received funding from the Leona M. and Harry B. Helmsley Charitable Trust in

the amount of \$2,198,154 to support the evaluation of the cardiac-care systems in Wyoming, Minnesota, Nebraska, Iowa, and Montana. These states join South Dakota and North Dakota, bringing the total states under the project umbrella to seven.

The project's director, Ralph Renger, PhD, has worked with the North Dakota Department of Health, the South Dakota Office of Rural Health, and dispatch, ambulance, and hospital services in both states to develop a strategy for evaluating the cardiac-care system. Lessons learned from work in the Dakotas will be applied to the evaluation strategy in the five additional midwestern states. The evaluation includes the use of the LUCAS 2 device, which performs CPR mechanically. The LUCAS 2 device is being placed in all ambulance and hospital services in all seven states.

The evaluation project runs through August 31, 2017. Over the next three years, the project will establish a sustainable process for the states to continually evaluate and improve how heart attack patients receive care.

"The level of cooperation from all stakeholders in the

cardiac-care systems needed to successfully implement an evaluation project of this scale has been unprecedented," said Renger. "We are very fortunate to be working with such motivated and caring professionals in the health sector."

About the Helmsley Charitable Trust

The Leona M. and Harry B. Helmsley Charitable Trust aspires to improve lives by supporting effective nonprofits in health, place-based initiatives, and education and human services. Since 2008, when the Trust began its active grantmaking, it has committed more than \$1 billion to a wide range of charitable organizations. The Trust's Rural Healthcare Program funds innovative projects that use information technologies to connect rural patients to emergency medical care, bring the latest medical therapies to patients in remote areas, and provide state-of-the-art training for rural hospitals and EMS personnel.

To date, this program has awarded more than \$220 million to organizations and initiatives in the upper Midwest states of North Dakota, South Dakota, Nebraska, Wyoming, Minnesota, Iowa, and Montana. For more information, visit <http://www.helmsleytrust.org/>.

Editor's Note: Dr. Renger and the CRH Evaluation Team's work in North Dakota and South Dakota was the subject of the article "Collaborating to Improve Cardiac Care," which appeared in the fall issue of *North Dakota Medicine* on page 20 or it can be accessed at http://issuu.com/oacr/docs/fall_2014_north_dakota_medicine.

NDMA announces awardees and elects delegates and officers

The North Dakota Medical Association held its 127th annual meeting in Grand Forks on October 3.

- Roger Schauer, MD, FFAFP, was honored with the North Dakota Medical Association's 2014 Physician Community and Professional Services Award.

The award recognizes outstanding members of the Association who serve as role models, active in both their profession and in their community. Schauer retired in June; he was director of the SMHS's Rural Opportunities in Medical Education (ROME) Program.

- Dave Molmen, MPH, chief executive officer of Altru Health system and SMHS Northeast (Grand Forks) Campus representative on the SMHS Advisory Council, was recognized with the North Dakota Medical Association's Friend of Medicine Award.

The award formally acknowledges nonphysician citizens of the state who "have distinguished themselves by serving as effective advocates for health care, patient services, or the profession of medicine in the state of North Dakota."

Robert W. Beattie, MD, chair and clinical professor of

Family and Community Medicine at the SMHS was elected American Medical Association (AMA) Delegate of the North Dakota Medical Association.

The NDMA elected the following officers:

- President—Steven P. Strinden, MD, Fargo.
- Vice President and Board Chair—Debra A. Geier, MD, Jamestown, SMHS clinical assistant professor of internal medicine.
- Secretary-Treasurer—Fadel E. Nammour, MD, Fargo, SMHS clinical assistant professor of internal medicine.
- Speaker of the House—Misty K. Anderson, DO, Valley City.
- AMA Alternate Delegate—Shari L. Orser, MD, Bismarck, SMHS clinical associate professor of obstetrics and gynecology; and SMHS Advisory Council representative to the NDMA.
- Immediate Past President—A. Michael Booth, MD, PhD, Bismarck, associate dean for the SMHS's Southwest (Bismarck) Campus and clinical professor of surgery.

For further details about the awardees and new officers, please read more at <http://tinyurl.com/mhpoxt5>.

APA awards Presidential Citation to Jacque Gray



Jacqueline S. Gray

American Psychological Association President Nadine Kaslow, PhD, ABPP, awarded the APA's Presidential Citation to Jacque Gray, PhD, research associate professor and associate director of indigenous programs at the University of North Dakota School of Medicine and Health Sciences Center for Rural Health and the SMHS Department of Pathology. Kaslow presented the citation to Gray at the National Latino/a

Psychological Association Biennial Conference on October 25. The APA recognized Gray for her "groundbreaking scholarship with Native and rural communities, leadership of landmark programs and national organizations, mentoring of Native students and colleagues, and courageous advocacy efforts."

Gray is from Oklahoma and is of Choctaw and Cherokee descent. At the UND SMHS, she directs the Seven Generations Center of Excellence in Native Behavioral Health and the National Indigenous Elder Justice Initiative. She works with the National Resource Center on Native American Aging, National

Institute of Mental Health Outreach Partnership, ND IDEa (Institutional Development Award) Network of Biomedical Research Excellence, Death Investigator Training Grant, and the UND American Indian Health Research Conference. Gray also directs the Native Health Research Team and mentors over 25 Native students on research in Indian Country.

The APA noted in the citation that "She has worked tirelessly with tribes throughout Indian Country. Her research has advanced our understanding of suicide prevention, rural veteran health services, spirituality and health, psychometrics, and wellness and nutrition. Dr. Gray has an impressive leadership career as past-president of the Society of Indian Psychologists, consultant for the Substance Abuse and Mental Health Services Administration's Disaster Technical Assistance Center, and member of APA's Committee on Rural Health and the National Steering Committee on Health Disparities. Recipient of the Native Research Network's Excellence in Training Award, she worked on Maori and indigenous suicide prevention in New Zealand."

Gray is a Featured Psychologist for the APA; her APA profile is available at <http://tinyurl.com/mg3s55b>.

UND scientists develop a smart cocaine mimic to identify where cocaine lurks and hooks users



Cocaine grips users by targeting neurons in the brain that use the neurotransmitter dopamine to control the brain's reward and pleasure pathways. Cocaine binds to the dopamine transporter known as DAT and acts like a cork to bottle up the ability of DAT to control how much dopamine flows across the bridges—the synapses—between neurons. It's the uncontrolled flow or hyperstimulation from dopamine that leads to euphoria, craving and eventual addiction.

Chester Fritz Distinguished Professor of Biochemistry and Molecular Biology Roxanne A. Vaughan, PhD, and Associate Professor Keith Henry, PhD, set out to identify the direct contacts between cocaine and DAT. They enlisted the expertise of medicinal chemist Amy Newman, PhD, chief of the Molecular Targets and Medications Discovery Branch at the National Institute on Drug Abuse, radiochemist John Lever, PhD, at the University of Missouri, and molecular biologist James Foster, PhD, at UND. They developed and characterized a special radioactive cocaine analog—RTI 82. After RTI 82 binds to DAT, ultraviolet light is used to activate the drug causing it to irreversibly attach to the transporter, essentially handcuffing the molecule to DAT.

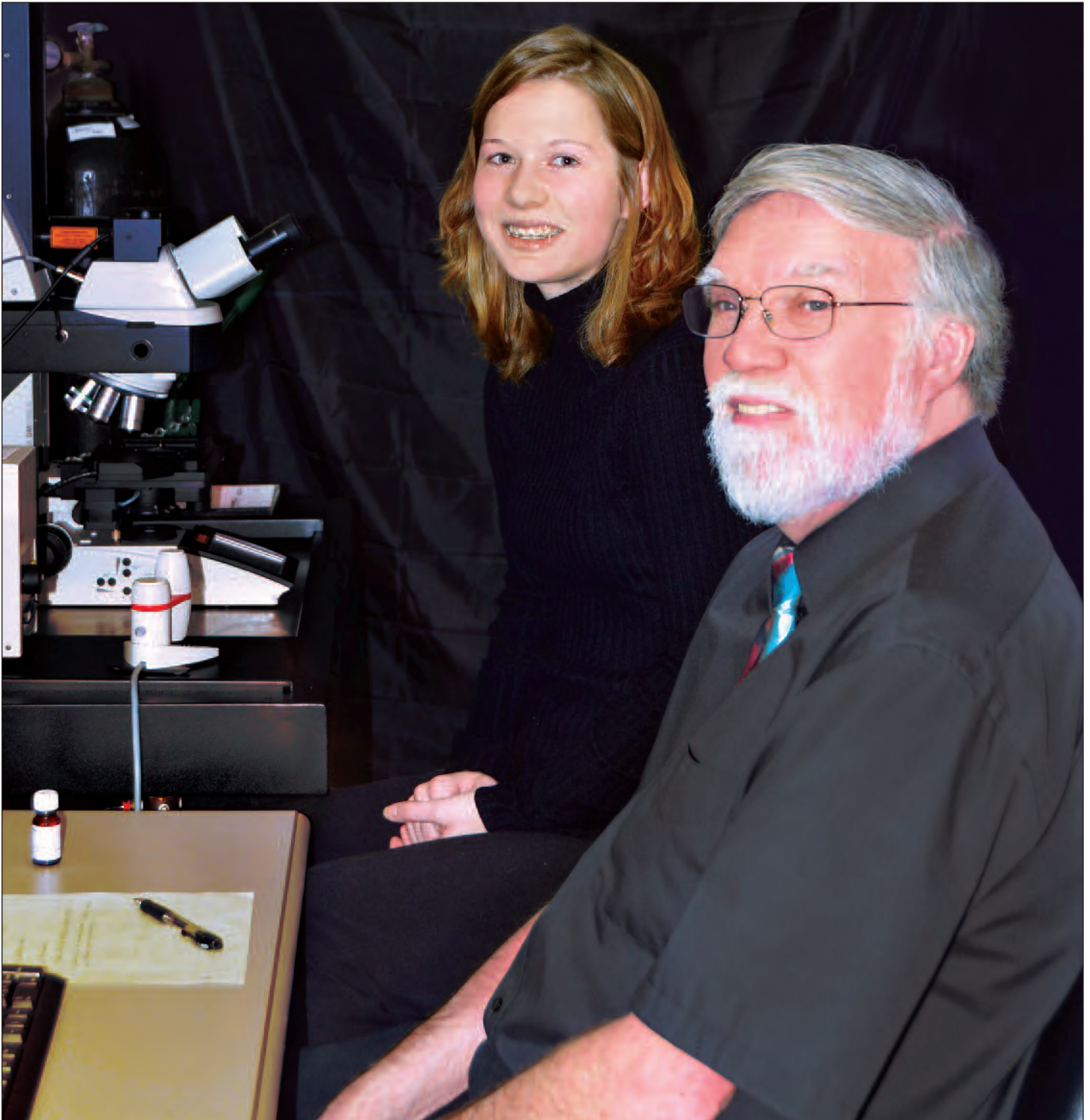
The editors of the *Journal of Biological Chemistry* deemed that the scientists' discovery and the research paper detailing their work deserved prominence as the cover article in the journal's October 24 issue (shown at left). The cover art for the article was designed by Drs. Henry and Vaughan and by Victoria Swift, a graphic designer at the UND SMHS. The article was also highlighted in the November issue of *ASBMB Today*, the online newsletter of the American Society for Biochemistry and Molecular Biology.

Please read more at <http://tinyurl.com/mvruta5>.

Under the Microscope

Basic science research pays dividends at the SMHS and across North Dakota.

By Juan Pedraza



Federal lawmakers over the last decade have put the brakes on national biomedical research funding after previously doubling the budget from 1998 to 2003.

But in this budget trimming era—when almost everyone who applies for research grants in this field expects to be disappointed—there’s a notable exception: the University of North Dakota School of Medicine and Health Sciences (SMHS).

No doubt, the research funding climate remains challenging.

However, several research groups at the SMHS have scored an enviable track record of funding success, with recent grants totaling close to \$40 million, based on the funding agencies’ judgments about the quality and future benefits of the work being done here.

Let’s start with the National Institute of Health’s recent \$16.8 million grant to Don Sens, PhD, a pathologist at the School, to continue for the third time with the NIH’s long-term commitment to work begun by Sens in 2001.

This project—known by the acronym INBRE (pronounced “in-BRAY”) or the IDeA (Institutional Development Award) Network of Biomedical Research Excellence—focuses on health and the environment with research projects that include undergraduate students.

INBRE researchers investigate the effects on human health of environmental factors, particularly exposure to environmental compounds that may be carcinogenic. Sens and his colleagues study how chemicals affect genes, resulting in the onset of cancer and other diseases.

“The goal of ND INBRE is to build biomedical research capacity by serving research universities, baccalaureate institutions, and tribal colleges within North Dakota,” said Sens. “INBRE provides a broad range of benefits in biomedical research and science education.”

Sens directs the statewide INBRE network, which is administered by the UND School of Medicine and Health Sciences. With this latest grant, the total INBRE commitment to North Dakota will be approximately \$45 million since 2001.

“The goal of this grant is to prime the pipeline that produces the next generation of professionals and researchers in biomedical and behavioral health,” said Sens. “One of our big aims related to this goal is to get undergraduates into research experiences, so we have programs at all four of our primary undergraduate institutions in North Dakota—Dickinson, Mayville, Minot State, and Valley City—including year-round research.”

The program also includes strong undergraduate research programs at tribal colleges in the state—Cankdeska Cikana Community College, Fort Totten, N.Dak., and Turtle Mountain Community College, Belcourt, N.Dak.

“This year we’re also trying to get on board with United Tribes Technical College, Bismarck, Sitting Bull College, Ft. Yates, and Fort Berthold Community College in New Town,” Sens said.

Of course, Sens noted, there’s a major INBRE-related program at UND.

“We have between 50 and 60 undergraduates—90 percent from UND—here at the School involved in hands-on research projects every summer,” he said.

“We aim for rising juniors and seniors who’ve never been in a laboratory before,” Sens said. “The reason for that: a lot of the top-ranked schools now don’t give people fellowships unless they see on a student’s application that they’ve had an undergraduate research experience. In other words, it’s getting increasingly difficult to get into post-baccalaureate professional schools, such as medical school or physical therapy programs, if you haven’t had any undergraduate research experience.”

“It’s getting increasingly difficult to get into post-baccalaureate professional schools, such as medical school or physical therapy programs, if you haven’t had any undergraduate research experience.”

“The other major goal we want to accomplish this year—and for which we got funding—is to get the state’s community colleges more involved,” Sens said, naming Bismarck State College, Dakota College (Bottineau), Lake Region State College (Devils Lake), North Dakota State College of Science (Wahpeton), and Williston State College.

“We want their top two-year students to come to UND for the summer to engage in a research experience,” Sens said. “These are students—a lot of them first-generation students from rural communities—who likely are going to transfer to one of our colleges or universities to finish their baccalaureate degrees and then on into the health professions.”

To encourage these students, Sens and his team stage an annual research symposium featuring the work of these first-time researchers.

“We hear talks from the faculty from other institutions, and then, it’s all about the students presenting their posters,” Sens said. “There’s a lot of exchange of questions, and it’s amazing how well these students do, showing what they’ve done, and explaining their data—quite impressive.”

That’s a major leap from when the INBRE program started 12 years ago.

“At that time, there were no posters to be presented,” Sens

Shown on the cover of this issue, and at left, with Donald Sens is Shelby Cyr, an 11th-grader who participated last summer in the 10-week REFUNDU Program (Research Experience for UND Undergraduates) in Dr. Jane Dunlevy’s lab. Shelby was at Valley-Edinburg high school in Edinburg, N.Dak., but is now homeschooled to allow her to take advanced classes the school did not offer.

Shelby placed in the top three in the Northeast Region at the State Science & Engineering Fair in 2013 and 2014. For her science fair projects, she conducted research with Assistant Professor Sergei Nechaev, PhD, in his lab.

“...there are a whole lot of other people who do all the work to keep this thing running.”

said. “Now, just in the summer program here at UND, we have 50 to 60 undergraduate poster presentations, and that many more during our fall symposium, so from zero 12 years ago to well over 100 per year now.”

That amazing track record also includes undergraduate students publishing their work in peer-reviewed scientific journals, Sens noted.

“INBRE is a very useful program,” Sens said.

Team Effort

“But let’s be clear, I just manage this program—there are a whole lot of other people who do all the work to keep this thing running,” Sens said. The list includes SMHS faculty members Van Doze, associate professor, who is one of the program’s mentors; Jane Dunlevy, associate professor; Scott Garrett, associate professor; Jacque Gray, research associate professor, who was really instrumental in getting the tribal colleges involved in the program; Kurt Zhang, assistant professor, a bioinformaticist; and Seema Somji, assistant professor.

The INBRE program coordinator is Lane Azure, vice president for Academic Affairs at Cankdeska Cikana Community College. Azure also puts together an annual spring conference—now in its third year—that showcases research done by undergraduate Native American students

“We also get down into the high schools,” Sens said. “We got all the high school teachers in North Dakota together and asked them how we could best help them to get their students interested in science, technology, engineering, and mathematics (STEM). A big challenge, they told us, was the lack of funding to pay for registration fees to North Dakota science fairs. So INBRE pays all the registration fees for high school students to go to science fairs in the state. That’s \$15,000 to \$16,000 we put into this effort annually.”

Additionally, Sens pointed out, the INBRE grant program has helped to launch two additional programs in North Dakota: The Seven Generations Center of Excellence in Native Behavioral Health, for which the principal investigator (PI) is

Jacque Gray; and the Indian Health Service-funded Native American Research Center for Health at Cankdeska Cikana Community College, for which CCCC President Cynthia Lindquist is the PI and Sens is the program coordinator.

“Finally, I’d like to say that none of this would work if it weren’t for the active support of UND SMHS Dean Dr. Joshua Wynne,” Sens said. “Every year he puts \$100,000 into our undergraduate research program—without that kind of support from your school, you cannot function.”

ND INBRE’s success is documented: more than 500 undergraduates have participated in lab research for at least 10 weeks since the program’s inception in 2001, with output of more than 500 posters and more than 100 peer-reviewed journal articles.

“And we’ve shown that about 54 percent of all of our students have advanced to graduate studies—master’s or PhD level or professional schools,” Sens said. “And we’ve documented that now 16 percent of our incoming class of medical students have some INBRE-related research experience. INBRE provides a broad range of benefits in biomedical research and science education to research universities, baccalaureate institutions, and tribal colleges across North Dakota.”

COBRE Grants

The NIH continues its heavy investment in proven research at UND by also funding the work of Chester Fritz Distinguished Professor Jonathan Geiger, PhD, and his colleague and collaborator Assistant Professor Xuesong Chen, MD, PhD.

For over 20 years, the Geiger laboratory has been studying neurological complications associated with HIV-1 infection, specifically HIV-1 associated neurocognitive disorders or HAND. The NIH’s National Institute of Mental Health awarded Geiger and Chen a \$1.6 million R01 five-year grant.

The NIH has long recognized the work of Geiger, who also serves as a reviewer of grant applications on the NeuroAIDS and Other End-Organ Diseases Study Section for the NIH’s Center for Scientific Review.

Geiger is the principal investigator for

the UND Center of Biomedical Research Excellence or COBRE for Neurodegenerative Disorder Research, which was originally funded in 2002. Funding for the Neurodegenerative Disorder Research COBRE has been renewed twice, most recently in 2012. By 2017, NIH grants to this COBRE will have provided investigators at UND with over \$25 million.

The COBRE for Neurodegenerative Disorder Research seeks to answer questions about neurodegenerative diseases that loom large in healthcare, such as Alzheimer's disease, Parkinson's disease, neurological complications associated with HIV-1 infection, multiple sclerosis, and seizure disorders. Causes of these diseases are complex, so the COBRE's cadre of investigators are drawn from all the medical research disciplines at the SMHS. Translating their discoveries into treatments—"from lab bench to bedside"—is a crucial part of their work.

Chester Fritz Distinguished Professor Roxanne A. Vaughan, PhD, received a \$10.5 million, five-year grant from the National Institutes of Health for a second separate COBRE at UND to research the epigenetics of development and disease. This grant is part of the NIH's Institutional Development Award (IDeA) program.

The new COBRE at UND will research the epigenetics of development and disease. Epigenetics is the study of the epigenome, the biochemical elements in the cellular neighborhood around DNA, which may direct the expression of the genetic code for good or for ill. Epigenetic changes to DNA can be passed on from cell to cell as cells divide and eventually to offspring and their children.

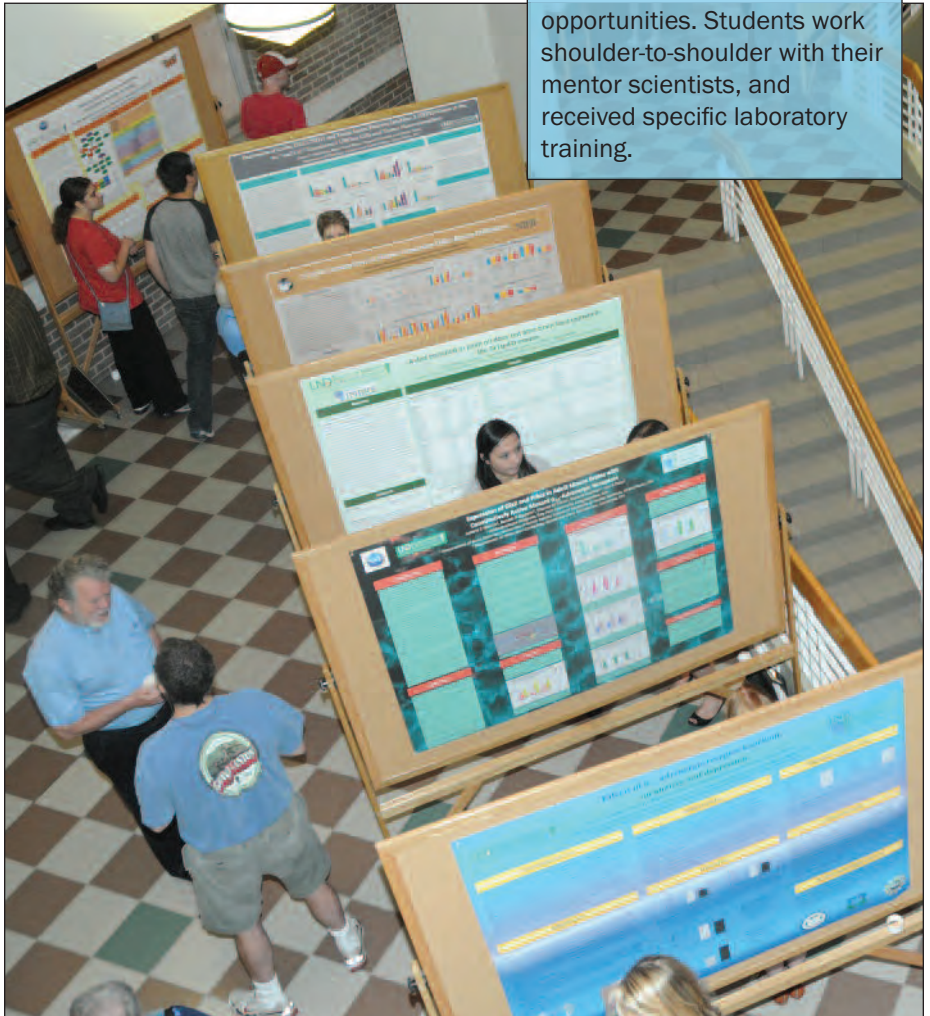
"Institutional Development Award Centers of Biomedical Research Excellence are thematic, multidisciplinary programs that develop faculty and institutional research capabilities in states—like North Dakota—that historically have had low levels of funding from the National Institutes of Health," said W. Fred Taylor, PhD, who directs the IDeA program at the NIH's National Institute of General Medical Sciences. "This COBRE is focusing on the role of epigenetic changes in human disease development and

progression, a cutting-edge field of scientific inquiry that could lead to new approaches to treatment and prevention."

"This grant will significantly expand epigenetic research at UND by instituting a variety of programs that will support young investigators at early stages in their careers," Vaughan said. "We will establish core facilities and purchase major equipment, and assist with faculty mentoring and development. Together these programs will enhance research across multiple disciplines and elevate the research capacity of the university."

As an established biomedical research scientist, Vaughan was crucial in meeting the NIH's expectation that the principal investigator for the new COBRE must be able to ensure high-quality research and has the experience to administer effectively and integrate all components of the program.

The 2014 Summer Undergraduate Biology Research poster session was held in August in the Vennes Atrium at the School of Medicine and Health Sciences. For 10 weeks during the summer, students from UND, as well as rural and tribal colleges, conducted research and participated in a number of related educational opportunities. Students work shoulder-to-shoulder with their mentor scientists, and received specific laboratory training.



The North Dakota Statewide Cancer Registry

The NDSCR analyzes and translates cancer statistics into usable information for healthcare facilities, patients, and the public.

By Juan Pedraza

When the North Dakota Department of Health wanted someone to manage its tumor registry, officials naturally looked to the University of North Dakota School of Medicine and Health Sciences.

“They approached us about managing the tumor registry, and we said, “Yes,”” said Chester Fritz Distinguished Professor Mary Ann Sens, MD, PhD, in the Department of Pathology at the School. “Definitely, that decision was tied to my profession as a pathologist” and to her many years of experience as both a county- and state-level medical examiner.

In July of 2012, the Centers for Disease Control and Prevention (CDC) awarded a \$1.65 million five-year grant to the UND School of Medicine and Health Sciences, in collaboration with the North Dakota Department of Health, to operate the North Dakota Statewide Cancer Registry (NDSCR).

The NDSCR is part of a national network of similar agencies, funded by the CDC, according to the National Cancer Institute’s (NCI’s) history of cancer registration.

According to the NCI, the idea of identifying and tracking disease dates back to sixteenth-century England, with the Crown appointing “ancient matrons” to survey the countryside for plague victims. Later, in 1665, John Graunt, a London businessperson, launched a medical movement when he mathematically analyzed decades of mortality data, thus inventing the sciences of epidemiology and medical statistics.

“It was apparent to us in North Dakota that we, too, needed to do this, in order to understand, treat, and prevent cancer,” said Sens, who has served as president of the National Association of Medical Examiners.

The CDC in the 1990s began funding statewide registries—one per state—and to organize a centralized database that collects state cancer data.

“At the state level, we examine the data critically, make sure they’re accurate and complete, and that includes removing all the duplicates,” Sens said. “We also have agreements with most states so that if one of their patients is diagnosed or treated for cancer here in North Dakota, that information is sent back to the patient’s home state, so that state has complete cancer data for its citizens.”

The point of the registry is to accurately track the incidence of and mortality resulting from cancer.

“We can also see whether the incidence of a particular cancer, for example, is increasing along a particular river,” Sens said. “That hasn’t happened here yet, but we’re always watching out for such patterns—that would be actionable information.”

Sens says people in the state already are querying the registry, which is based at UND, for more specific information about the incidence mortality of certain cancers in their home area.

“We’re using the information—which is all anonymized and completely de-identified—proactively, tracking interventions and asking questions about whether a particular screening program is working,” Sens said. “Then we can also ask questions such as, do we need more mammograms in a particular rural area, do we need more colonoscopies in a particular part of the state?”

“The data analysis also can tell you whether you need better screening at a particular site,” Sens said.

Chief analyst for this system’s cancer data is mathematician and epidemiologist

“This is the premier public health database in the country.”

Cristina Oancea, PhD, MS, who is also an assistant professor in the UND SMHS Master of Public Health Program.

“I’m the NDSCR epidemiologist,” said Oancea, who got interested in cancer research following the death in one year of five of her family members from cancer. “I look at cancer incidence and mortality rates, overall for the state of North Dakota then for each county in the state, making sure that the results are correct and precise.”

Oancea previously worked on the national Prostate, Lung, Colorectal, and Ovarian Cancer Screening Trial, set up by the Division of Cancer Prevention of the National Cancer Institute at the National Institutes of Health. She did her post-doctoral research at St. Jude Children’s Research Hospital in Memphis, Tenn., in the Department of Epidemiology and Cancer Control.

The N.Dak. cancer data are entered and managed by two certified tumor registrars who have offices just down the hall from Sens—Assistant Professors Yun “Lucy” Zheng and Xudong Zhou. Both are MDs; Zhou also is a pathologist.

The information technology infrastructure and support for the registry is provided by the Information Resources Department at the UND SMHS under the direction of Nasser Hammami, chief information officer, and Michael Fiebelkorn, systems administrator.

“A more powerful use of this registry’s data, which we’re really stepping up in North Dakota, is to relate the information back to communities and the people,” Sens said. “It’s a meaningful use of the data.”

From a broader perspective, cancer registries provide the nation “the most accurate public health info about any disease,” Sens said. “When you look at other registries, and there are many, such as diabetes and trauma, none of them are as precise and accurate, routinely checked and double-checked, as the cancer registries are. This is the premier public health database within the country.”

“Nothing so far tells us that we have another Love Canal in the works, but without the data, we wouldn’t know,” Sens said.

Every five to 10 years, an international gathering of cancer professionals evaluate the cancer classification system and



develop updated guidelines for what is a stage one, stage two, etc., cancer.

“They’re analyzing how cancers behave, how they respond to varying amounts of radiation, how do they react to a particular pharmacological intervention, and that includes all the clinical trials,” Sens said. “They know how cancer works, and they understand which interventions work and which may not.”

Understanding cancer and its related statistics is an ongoing labor.

“It’s a forever process,” said Oancea.

About the North Dakota Statewide Cancer Registry (NDSCR)

The NDSCR, set up in 1997, collects information about new cancer cases, cancer treatment, and cancer deaths. All hospitals, laboratories, physicians and other healthcare providers are required by state law to report all newly diagnosed or treated cancer patients. These data are carefully collected and kept in the registry’s secure and confidential database. Data are used to monitor cancer trends, promote research, increase survival, guide policy planning, and respond to cancer concerns.

Registry data can be used to determine if groups of people with specific exposures, such as those who work in a particular occupation or with a particular substance, are more likely to develop cancer than people who do not have these exposures.

Earlier this year, the U.S. Centers for Disease Control and Prevention recognized the North Dakota Statewide Cancer Registry as a CDC National Program of Cancer Registries Registry of Excellence. For more information about the registry, please visit <http://ndcancer.org>.

Members of the North Dakota Statewide Cancer Registry, from left to right, Mary Ann Sens, Lucy Zheng, Nasser Hammami, Xudong Zhou, Cristina Oancea, and Michael Fiebelkorn.

“A more powerful use of this registry’s data . . . is to relate the information back to communities and the people.”

Buttoning Up

Crews prepare for winter work on new building.

By **Lonnie Laffen**,
President and CEO, JLG Architects

The UND hockey teams have laced up their skates for a new season, and so if you have had the good fortune to attend a game, you will have undoubtedly noticed that the School of Medicine and Health Sciences building is quickly taking shape.

As of this writing, the concrete for the east roof has been poured, making 12 of the 36 concrete pours complete—a fact made more impressive when you realize that most of these pours have been ten feet or more above the ground level. All of the elevated slabs are designed with post-tension cables to increase the structural integrity of the entire building.

I say that “most” of the pours have been above ground for a reason. As previously mentioned, the on-grade, or ground, slab was planned to be poured during the winter season. However, due to efficient coordination, scheduling, and a bit of good luck with the weather, the construction team of PCL Construction Services and Community Contractors was able to get ahead of the schedule and the snowflakes. As underground utilities have been installed, the on-grade slab has followed. Because of the harsh effect that North Dakota winters can have on exposed concrete slabs, temporary in-floor heat has been set below the concrete to maintain soil temperatures. While we can’t get the entire building enclosed before temperatures drop, exterior walls for the east and west wings will be built, and gas, water, power, and communication lines are being brought into the building in preparation for the cold.

So much concrete—290,845 square feet, to be exact—deserves one more mention. If you have been watching the construction cameras at <http://oxblue.com/open/pcl/UNDSMHS>, you may have noticed that the majority of our slabs on-grade do not have rebar, a common product on most large sites. The new UND School of Medicine and Health Sciences building has fiber reinforcement within the concrete, negating the need for rebar.

Just as technology has transformed the medical and health sciences industry, it has greatly affected the way design and

construction teams communicate. As noted in the last issue, several of the technologies used during the design phase were so far at the forefront of our industries that we are one of only a handful of teams to have ever used them. Today, technology helps us with three-dimensional clash detection, four-dimensional modeling, quality audits/checklists, and safety audits/checklists. By integrating interactive technology in the field, pertinent information is conveyed in real time and the amount of paper used is significantly reduced. For example, three-dimensional clash detection gives construction crews hands-on knowledge of where utilities are

“...the construction team of **PCL Construction Services and Community Contractors** was able to get ahead of the schedule...”



to be placed before arriving on site, reducing the amount of rework and field fixes that generally occur.

PCL and Community Contractors continue to promote and enforce a high standard of safety and quality. The yellow straps hanging from the columns are utilized for workers to tie off to for a safer working atmosphere near the slab edges. Recently, the construction team celebrated 20,000 hours with no lost-time accidents. The crew has also given back to the community by donating blood to a local blood bank. And, of course, if you were at the UND Homecoming and Potato Bowl Parades, chances are you got some candy from JLG and PCL/Community Contractors as we participated along with

members of the School of Medicine and Health Sciences.

What to expect next? In the near future, stairs will be set in the east and west wings. Masonry brick will begin to be placed on the exterior walls. Overhead utilities will be located in the ceilings throughout the building. Excavation will begin on a retention pond just west of the building site. And, of course, concrete will continue to be poured throughout the winter and is scheduled to be complete in the spring.

As you pass by the new SMHS building this holiday season, take a look up at the tower crane and check out the lights. Until then, check out the on-site website camera and have a warm, wonderful end to 2014! 🌿



Lonnie Laffen

“The crew has also **given back to the community** by donating blood to a local blood bank.”



North Dakota's Critical Access Hospital Name of the Game

The state's quality network seeks to

By Stacy Kusler

A healthy workforce is one that sticks together, one that motivates and inspires each team member to be their best, and one that supports individual goals as they align with the goals of the larger group. From housekeeping staff to the CEO, a healthy workforce is exactly what is necessary within any healthcare organization, regardless of their size or location, to ensure a positive patient experience and ultimately improve patient outcomes. What if this supportive and cohesive environment could be spread across an entire state's network of hospitals, encouraging collaboration by sharing policies and best practices between facilities? Enter the North Dakota Critical Access Hospital Quality Network.

The North Dakota Critical Access Hospital (CAH) Quality Network was established in 2008 for the 36 CAHs to strengthen collaboration and leadership among healthcare organizations and streamline efforts around quality and performance improvement. Nikki Johnson, CEO for Cooperstown Medical Center (CMC), has been able to improve patient care and quality at her facility by using tools made available through the Network.

"The Quality Network has provided excellent opportunities for our leadership team and frontline staff to acquire the knowledge necessary to provide the best quality care possible to our patients at Cooperstown Medical Center," Johnson said. "From the virtual library resources to various Network group meetings and educational offerings, the Network has always been a cost-effective, integral part of process improvement at CMC. We frequently utilize information acquired through this networking to help ensure continuous quality improvement."

The virtual library, as Johnson mentioned, is an online library available to the members of the Network and contains a variety of documents and tools, including hospital survey results, training and management tools, sample policies and procedures, and more.

The existence of a Quality Network is not unique to North Dakota; this model has been implemented in many other states. However, what is unique to North Dakota is that our state has 100 percent participation from all 36 rural or critical access hospitals. This "all-in" participation is a result of the North Dakota CAH leaders' desire to work as a team and to have a shared voice on a local, state, and national level. Jody Ward, RN, MS, APHN, director of the Network, has been leading the team since the Network's start in 2008. She has been instrumental in maintaining 100 percent member participation.

"The Network is a one-stop shop for CAH-specific information," Ward said. Since the beginning, one of the areas of greatest improvement Ward has seen in rural hospitals as a result of the Network has been the sharing of CAH Conditions of Participation deficiencies reported in surveys. When hospitals are surveyed by a state or federal agency, they receive feedback on areas for improvement, which they have been willing to share with their colleagues in the Network. This information sharing has allowed other hospitals in North Dakota to be proactive in improving their facility and clinical processes before their own site is surveyed. "This transparency with each other has come full circle for ND CAHs. In the beginning, CAHs had many more survey deficiencies, and now, as a result of the sharing, there is increased opportunity for learning and implementing best practices that has resulted in CAHs receiving fewer survey deficiencies," Ward said.

Another benefit offered through the Network to improve quality and patient care throughout the state is the staff peer exchange program. Through this program, CAH staff are able to shadow or receive direct training from a peer in another ND CAH. This program is available to a variety of CAH staff, ranging from directors of nursing to CFOs and CEOs. Joy Vetter, an RN with Linton Hospital, recently took advantage of the program



Quality Network: Collaboration is the

strengthen hospital care for all North Dakotans.

and connected with staff at Jamestown Regional Medical Center to learn about their processes for risk management and infection control. “I learned about several different items that they were monitoring for infection control, and about different equipment and programs they were using that could also benefit our facility,” Vetter said. “I plan on bringing this information back to our committee . . . and implementing some of the useful ideas into our daily routine and practice.” When asked if the program was helpful for her, she said, “I had a great experience, and I think the peer-exchange program was very beneficial. It will be nice to continue to have them as contacts for any future questions or advice.”

Funding is, of course, vitally important to support a successful statewide network. This is accomplished through the federal Health Resources and Services Administration (HRSA) Medicare Rural Hospital Flexibility (Flex) grant program, administered by the Center for Rural Health. Flex funding is used in three priority areas: (1) quality improvement, (2) financial and operational performance, and (3) health system collaboration and community engagement. Support for quality improvement includes a variety of CAH-specific resources, including the operation of a virtual library for facilities to share best practices and evidence-based protocols, a North Dakota CAH Quality e-mail list, assistance with data collection issues, and hospital reporting for the Medicare Beneficiary Quality Improvement Project, and Hospital Consumer Assessment of Healthcare Providers and Systems. Help for financial and operational improvement includes supporting CAHs in need of financial consultation, as well as hosting financial workshops and CEO/CFO meetings to discuss common issues. Finally, support for health systems development and community engagement includes things like supporting the inclusion of emergency medical services (EMS) into local and regional trauma systems of care, and

providing funding for EMS leadership and management training. This area also includes support toward implementation of community projects related to a need identified through a Community Health Needs Assessment.

The Network is a vital hub for implementing a number of statewide healthcare activities that also includes work with the North Dakota Department of Health’s Stroke Program, with key partners such as the American Heart Association, to educate all rural and urban hospitals in North Dakota on the use of the Acute Stroke Treatment Guidelines. For hospitals who share providers or who use locum tenens provider coverage, or travel nurse coverage, the goal is for the process of caring for a stroke patient to be the same in all critical access hospitals across the state. The state stroke program is in its fifth year and has the goal of 100 percent participation from North Dakota critical access hospitals, which will allow the sharing and ongoing communication between EMS, CAHs, and the tertiary hospitals in Bismarck, Fargo, Grand Forks, and Minot. Through a variety of quality initiatives, the Network helps sustain a healthy collaboration among the rural hospital healthcare workforce in North Dakota. While the general focus of the Network is dedicated to the CAHs, Network members meet on a regular basis with the six larger hospitals in the state in order to improve care through all levels of the care continuum. Team-based care improves quality and patient-care outcomes. And health systems, as a whole, are able to perform better; healthcare staff are able to perform their jobs more effectively; and patients across the state benefit. For more information about the North Dakota CAH Quality Network, you can visit

<http://ruralhealth.und.edu/projects/cah-quality-network>.

“What is unique to North Dakota is that our state has **100 percent participation from all 36 rural or critical access hospitals.**”

NRCNAA Celebrates 20 Years Helping Native Elders

The National Resource Center on Native American Aging (NRCNAA) is celebrating its 20th Anniversary.

By Nikki Massmann

“It’s a visit from
a friend.”



NRCNAA staff (from left) Melissa Wheeler, Paula Carter, Ann Miller, and Patty Stensland.

The program, which is located in the Center for Rural Health, began in 1994 through a cooperative agreement with the Administration on Aging (now known as the Administration on Community Living) in the U.S. Department of Health and Human Services. Native American elders have many of the same needs as other elder populations, and the idea behind the program was to be able to provide a way to identify specific needs within communities. The NRCNAA accomplishes this through their needs assessment survey, “Identifying Our Needs: A Survey of Elders.”

The surveys run on three-year cycles. Each tribe that wants to participate first passes a tribal resolution so that the information gathered is theirs to use. The tribes themselves have ownership of the

data, and NRCNAA staff process it for them. Each participating tribe is provided with one-on-one training in how to collect information for the surveys, and how to use the data that are gathered. The NRCNAA just completed Cycle 5 of the surveys (2011–2014) with 262 tribes, villages, or homesteads participating across the nation.

“On reservations, the approach for surveys isn’t to send someone from our office to each of these participating areas and go door to door,” said Patty Stensland, research specialist for the NRCNAA. “We make a connection with someone from their own community, and teach them about the survey and gathering information.”

Adds Paula Carter, PhD, program

director, “For the elders, the survey isn’t just a researcher calling. It’s a visit from a friend. They might share a meal or a cup of coffee. It’s important to have that connection; it helps build a relationship and earns trust in our program from the participants—our cherished elders.”

Once the NRCNAA receives survey results from a tribe, the turnaround in analyzing the data happens within a day or two. Results, including comparisons to the previous cycles and national trends among other tribes, are sent directly to the tribal council. “It’s important to be responsive to our participants,” Stensland said. “They trust us to provide them with the information to ensure that much-needed services continue in their communities.”

Information derived from the surveys is used in a variety of ways. First and foremost, the results and technical assistance provided to the tribes help empower Native people to develop community-based solutions in addressing the needs identified. Additionally, the information helps determine funding for Title VI programs, which provide nutrition programs for Native American elders. Survey results can also be used to apply for grants and determine what types of programs would be the most beneficial for that specific tribe or reservation. They also highlight health disparities that exist on reservations.

“Through knowing where the areas of greatest need are, we can help find resources to help make changes toward better health and care of our elders,” Carter said. “Services to address needs are oftentimes inaccessible in Native American communities. The NRCNAA works to provide high-quality services while maintaining cultural values. This can enhance the elders’ self-perception, worth, and dignity—leading to overall well-being.”

For Stensland, analyzing the data for tribes is personal. She began with the NRCNAA in 1995, and was trained on collecting the surveys in her home community on the Spirit Lake Reservation in North Dakota. She collected data for the survey cycles and became the face that everyone knew would come to visit and ask questions.

“Numbers and data can sound uninteresting and honestly intimidating for a reservation community,” Stensland said. “It is so critical that the person collecting the information from the elders is someone they know. Sometimes there aren’t addresses on a reservation, so you have to know who lives where and how to find them for a visit. Once you get them interested in what you are doing with the numbers, it begins to paint a picture for them. I would often get told by an elder that they knew my visit meant the continuation of a meal program in their community.”

Now that Stensland is providing the training on collecting survey information, it has come full circle for her. “I love being able to connect with tribes across the nation,” she said. “I had some great mentors through the NRCNAA that really allowed me to see the benefit of helping tribes collect their own data.”

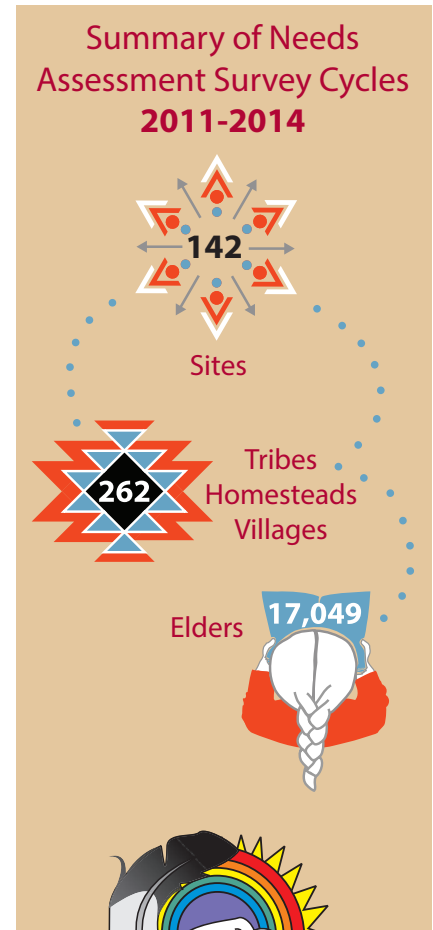
That data has led to the development of several resources available through the NRCNAA. The Service Locator is an interactive map on their website that lists all tribal elderly services available in the United States. In addition to the Service Locator, the NRCNAA provides a program called WELL-Balanced.

WELL-Balanced stands for Wise Elders Living Longer. The program was developed specifically for Native American elders. It combines exercise, information, and social interaction to help elders remain active and independent in their own homes as long as possible. The program is available free of charge to any organization serving the Native American elder community.

“The focus areas of WELL-Balanced were derived from the surveys,” Carter said. “But the key piece to the program is having fun while participating!”

The NRCNAA has many accomplishments of which to be proud. Through strong leadership and trustworthy connections with tribes, the program aims to be around for another twenty years.

For more information about the NRCNAA, visit <http://nrcnaa.org>.



Teddy Bear Clinic

Kindergartners and medical students learned from each other during clinic.

By Claire Lenard

Most children, if not all, are scared of going to the doctor's office at some point in their early childhood years no matter how many lollipops or sparkly SpongeBob Band-Aids they receive. However, now there will be some local kindergartners from the Grand Forks area who will not find the dreaded visit quite so daunting anymore thanks to the Teddy Bear Clinic.

The Teddy Bear Clinic was an idea brought to life by second-year medical students Rebecca Asp and Hasanga Samaraweera. It all began when Samaraweera witnessed a similar Teddy Bear Clinic at a hospital in Germany while he was studying there. Seeing the children's reactions, he vowed to somehow make it work during his years at medical school, so he teamed up with Asp, and they formed the nonprofit organization, TedMed. With that, the Teddy Bear Clinic was held on Tuesday, October 28, at the UND School of Medicine and Health Sciences.

About 120 local kindergartners donning their Teddy Bear Clinic T-shirts were bused to the UND SMHS from their respective elementary schools, and then they were individually paired up with



healthful lifestyles were discussed, when the kindergartners were asked about their teddies' eating habits, daily activity, hours spent playing, possible ailments, and snowman Olaf from the movie *Frozen*.

The next station was "teddy surgery." At this station, the kindergartners were able to pull puzzle pieces, marbles, and other small trinkets from the belly of the teddy bear. After teddy surgery, a new heart had to be made for teddy out of Play-Doh, and then teddy was bandaged up. Now there was only one more thing to do, which was, as Samaraweera said, "A hug from a kindergartner later, the surgeon's stethoscope was able to pick up an audible heartbeat, another successful day at the Teddy Bear Clinic."

After the busy day of surgeries and check-ups, the kindergartners gathered for story time with healthful snacks.

This was not just a great experience for the kindergartners, but also for the medical students, firefighters, nursing

“Everyone's heart could use something like that.”

medical students. They brought their teddy bears, or other favorite stuffed animals to receive a "check-up." Both the teddies' and the kindergartners' vitals were taken. The kindergartners were able to listen to their own heartbeat and play with doctoring tools, such as reflex hammers and stethoscopes. Their teddies' hopefully

students, dietetics students, and speech language pathology students who participated. For everyone involved, it was an enlightening and enjoyable experience, but the students were able to gain even more out of this event that allowed them to practice their patient-contact skills. The medical students participated in a training session before the date in order to learn the best way to interact with and keep the interest of children during the check-up, which enabled them to make the experience better for the kindergartners. This event also allowed them to practice working with children, which is not a

group they often are able to work with during the first two years of medical school.

This clinic allowed the kindergartners to learn how to exercise good health practices by learning how to keep teddy healthy, which they will hopefully practice in their own lives as well.

The kindergartners learned so much, as did the teddies, and they really enjoyed this adventure. “Everyone’s heart could use something like that,” Samaraweera said. The clinic was a truly heartwarming event, and these little locals might actually look forward to their next doctor visit now. 🌿



Two kindergartners perform “teddy surgery” aided by second-year medical students (from left) Alec Hildenbrand, Lucy Ledyard, and Wesley Halseth.

From Farming to Family Medicine

Physicians were often hard to find in rural North Dakota until one alum took a program into his own hands to make sure everyone receives deserved medical attention.

By Morgan Goulding



Reminiscing at his retirement celebration, Schauer elicits a laugh from Family and Community Medicine Chair Robert Beattie.

Graduation ceremonies are often sentimental events that make everyone emotional for different reasons. It could be because you are seeing a loved one move on in their life or because you realize a chapter is over. This was the case when one mother approached a professor during the University of North Dakota School of Medicine and Health Sciences' Doctor of Medicine Commencement and said, "See that girl up there who's just now graduating—you saved her life as a newborn." The young lady who graduated that day was the first and only baby that Roger Schauer, MD, gave mouth-to-mouth resuscitation to after delivering her. To see her then graduate from medical school that day was a perfect example of why the personal connections and situations kept him in love with his job.

Born and raised in Wishek, North Dakota, Roger Schauer spent a large

portion of his youth on his father's dairy farm. During his sophomore year in high school, his father decided to sell the farm and Schauer was left looking for something else to do. "A job opportunity came up to be a nursing aide, so I took the classes I needed to take and passed them and became one—it was simple as that," Schauer said. While working as an aide, he was sparked by a great interest in the lab and found himself hanging around that part of the hospital often. Then one day the hospital administrator working in the lab asked him, "Why don't you become a doctor?" And that was the first time Schauer ever asked himself that question and realized that he wanted to pursue it because of the lack of healthcare available to him while growing up. "Where I grew up, there was an occasional doctor, so the quality of healthcare in my community was very inconsistent."



Schauer earned both a Bachelor of Science in Biology and Bachelor of Science in Medicine from UND. He received his MD from Wayne State University School of Medicine in Detroit. He then went on to Hennepin County Medical Center in Minneapolis, Minn., for his post-medical school residency training in family medicine. Schauer said seeing the lack of medical care where he grew up and for the lower income people in Detroit inspired him to pursue providing healthcare in rural North Dakota. In 1974, he joined a dynamic group of physicians in Hettinger, where they extended healthcare to more rural and remote communities via an extensive satellite system. After 18 years of providing healthcare and delivering hundreds of babies, he accepted the challenge of teaching at the UND School of Medicine and Health Sciences.

In addition to his duties as director of the Family Medicine Clerkship, he was involved with the development of ROME, Rural Opportunities in Medical Education, and became director of the project. This project didn't come easy, but with the help of his passion for giving students more rural experience, the program allowed students to spend time learning in Devils Lake, Dickinson, Hettinger, Jamestown, and Williston. "I enjoyed my time on the road with the students and getting in contact with people in rural and remote areas," Schauer said. "Everyone has a right to healthcare, and that's what my students and I were trying to achieve." He did this while creating bonds with his students that both affected him and his pupils positively.

Many others recognized that he did.

The North Dakota Medical Association presented its 2014 Physician Community and Professional Services Award to him at its 127th Annual Meeting in October. "The award recognizes outstanding members of the association who serve as role models and are active both in their profession and in their community. Dr. Schauer embodied all of that and more during his career; NDMA was honored to present this award to such a deserving, well-known, and well-respected physician scholar," the NDMA said in a press release announcing the award. The Leonard Tow Humanism in Medicine Award was also given to Schauer this year. The New Jersey-based Arnold P. Gold Foundation sponsors these awards. The award recognizes a physician who best demonstrates the foundation's ideals of outstanding compassion in the delivery of care, respect for patients, their families and healthcare colleagues, as well as demonstrated clinical experience.

"I wasn't a great teacher, but I like to think the students connected with me," Schauer said. That is what made it hard for Schauer to retire. "I got to connect with people, and walking away from them was really hard because I loved what I was doing. I would like to think I modeled the way for students. I hope that there are doctors out there that think of me as a teacher and friend."

Now that Schauer has retired, he has found joy in all things family related. He loves to spend time with his 10 grandchildren and getting to experience things that he had to miss with his own children while they were growing up. "Just last week I got to go to two of my grandchildren's classrooms and listen to them read; it was a really great experience because I didn't get to do that with my kids because I was always working." He is also enjoying traveling, like going to experience Graceland in Memphis while visiting family that he hasn't seen in a while.

Schauer made a big impact not only on the University of North Dakota but also the state as a whole. From being a dairy farmer to renowned doctor and professor, he also knows North Dakota will always be a part of Roger W. Schauer, MD. 🌱

“Where I grew up, there was an occasional doctor, so the quality of healthcare in my community was very inconsistent.”

Center for Comparative Effectiveness Analytics

New center sets out to prove that bigger data are better when it comes to healthcare.

By Juan Pedraza

Ray Goldsteen, DrPH, MA, isn't dreaming about the future—he's counting on it!

Goldsteen and his team recently launched the Center for Comparative Effectiveness Analytics, housed in the University of North Dakota Master of Public Health Program, which he directs.

It's a process that evolved from public health concerns fired up in Goldsteen by the Three Mile Island nuclear power plant accident, March 28, 1979.

"We were living in Middletown, Pa., just three miles from that power plant, and I was three-months pregnant with our third child," said Karen Goldsteen, PhD, MPH, Ray's wife and, subsequently, professional collaborator. "Ray was a graduate student at the time at Columbia University in New York. He became involved in the President's Commission on the Accident at Three Mile Island. Even before then, he had started a survey of people in that area about their perceptions of risk and related topics."

Karen got drawn into the field of public health right then as part of a post-event survey team.

"I jumped right in, and it was a very rushed affair to mount a survey team with people working out of our home," said Karen, who until that moment had been a stay-at-home mother with no experience in graduate-level survey work. "So we got right to work, and by the end, we had collected more than 2,000 surveys. That whole process made me very interested in what public health could do and should do, and I was encouraged to enroll as a graduate student at Columbia University School of Public Health."

Karen said she'd always been interested in the social determinants of child health, so pursuing graduate studies in public health—and in learning about the statistical tools essential to understanding public health challenges and solutions—was a natural fit for her.

The Goldsteens saw early on in their professional collaboration that there was a

lot of key information to be extracted and analyzed from databases such as insurance claims data.

"Ray helped to launch a public health data center in South Carolina, and then we worked with the Health Care Cost Containment Council of Illinois," Karen said. "We learned how to use the resources of the National Center for Supercomputing Applications at the University of Illinois because our analytic demands quickly outstripped the capacity of our PC."

"I became very intrigued by the kind of information that we could extract from 'big data,'" Karen said.

The Center—a logical extension of the Goldsteens' research and practice with big data analytics—belongs to a future in which healthcare isn't about hoping for the better or the best.

"We have to know what the data tell us, and the only way to do that is to thoroughly analyze them," said Ray Goldsteen in a recent wide-ranging interview about how analytics will inform the future of healthcare delivery.

As smartphones are just about ready to become Star Trek-like medical "Tricorders," Ray envisions a much broader approach to medicine and healthcare that may rely more on what people do and how they relate than on gadgets and drugs.

"Call it fact-based, people-centered healthcare, like the kind pioneered right here at the UND School of Medicine and Health Sciences in the training of the next generation of physicians and health sciences practitioners such as physical therapists and medical lab scientists," Ray said.

Ray explains that while most medical care is delivered to one patient at a time, a broader perspective on healthcare is that efficient—and ultimately less expensive—delivery is developed by aggregating information and analyzing data from many hundreds or thousands of cases.

"Thus you're not just treating one diabetes patient, for example, but



From left, Arielle Selya, Raymond Goldsteen, and Karen Goldsteen

understanding the common factors that affect a group of diabetic patients,” he said. The new Center for Comparative Effectiveness Analytics will significantly add to the potential for extracting that kind of information that will help future practitioners deliver evidence-based care—for example, more effective diabetic treatment that is based on group information, not just on individual cases.

Ray believes that analytics of this type will ensure that people with diabetes or other chronic conditions get the most effective and efficient care possible

“When we analyze, effectively data-mine, data derived from thousands of cases, patients and their practitioners will be able to evaluate options based on a comprehensive list of options according to their quality and cost,” said Ray, the author of a seminal nationally recognized public health textbook.

This isn’t reinventing the wheel as much as it is digging into resources that, for the most part, already exist, and building on that from newly accumulated data, he noted.

“We will analyze data and produce information that will help the nation’s healthcare system make significantly better decisions about clinical care and population healthcare by looking at best practices and whether people are getting the most effective, efficient care,” Ray said.

That sounds like digging into a lot of personal medical information.

“Not so,” said Ray.

“All of these data that we will analyze are anonymized and the source encrypted—we’re looking at data that is separated from the individual,” he said.

The Center isn’t just about patients, he pointed out.

“We hope it will bring more students—training in this type of medical data analytics will prepare students to work for insurance companies or healthcare providers,” Ray said.

The Center for Comparative Effectiveness Analytics opened this fall following approval by the State Board of Higher Education.

Neuroscientist Arielle Selya joins the Center for Comparative Effectiveness Analytics

In building his team for the Center for Comparative Effectiveness Analytics, Ray Goldsteen decided early on that he needed a multitasking, broad-based group.

“That’s why we just hired a neuroscientist to be on our team,” said Goldsteen.

Arielle Selya, PhD, who came aboard this summer, is a physics major who got an advanced degree in neuroscience at Rutgers University.

“I got hooked on science early on, and I followed an advanced science track in high school,” said Selya, a Lansdale, Pa., native who did her undergraduate work at Cornell University. “I found it all fascinating, especially after reading a number of popular science books, including physics and cosmology. A group of my fellow advanced-placement students and I started a physics club and then a robotics club.”

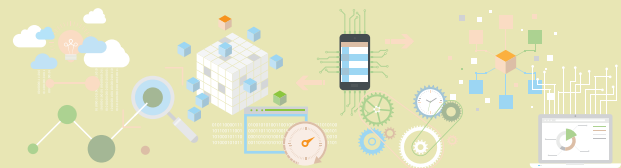
Selya, who worked as a pharmacy tech in high school, got into neuroscience after reading an e-mail from a professor at Rutgers pitching the value of her background—physics—in a graduate program he was running in neuroscience.

“He had a different take—suggesting that biology alone couldn’t answer the questions being asked in neuroscience,” said Selya, who used a computer-aided approach to study face recognition in humans. “I got into that program because the neuroscience challenges required new thinking—we tackled problems with quantitative analysis.”

Part of her expertise is in computer-aided pattern recognition and machine learning, essentially marrying her physics background with biomedical science—and tacking on her proven skills as a programmer or coder.

In her new role at the Center, Selya will spend a lot of time with data—figuring out what to do with it, how to manipulate it, and how to extract a usable flow of useful information from it.

“There are a lot of data sets out there,” said Selya. “There’s a big volume coming in fast. The fact is, all of the easy questions have been asked and answered. Now we’re asking new questions and applying new quantitative methods to answer them.”



'10s

Seth Rishi, IM Res '14, has joined the Sanford Health team in Fargo, N.Dak.

Janae Nygaard, PT '13, is now at Mountrail County Medical Center in Stanley, N.Dak. Nygaard previously worked in an outpatient orthopedic clinic in Lawrence, Kans. She focuses on postsurgical and conservative management of musculoskeletal conditions.

Matthew Gerde, MD '11, has joined the Emergency Medicine Department at Essentia Health in Fargo, N.Dak.

Ryan Siewert, MD '11, has joined the team of providers at Trinity Community Clinic in Williston, N.Dak. Siewert, a native of Grand Forks, provides primary care services to people of all ages with a special emphasis on preventive care strategies. Siewert was also recently awarded the William Buckingham Outstanding Resident Award from the North Dakota Academy of Family Physicians.



Jennifer Johnson, MD '10, has joined the obstetrics/gynecology team at Trinity Health in Minot, N.Dak. Johnson completed her OB-GYN residency at Akron General Medical Center in Ohio, where she gained experience in the areas of female urology and urogynecology in addition to performing many minimally invasive procedures using the da Vinci robotic surgery system.



Timothy Monson, Sur Res '10, has joined Essentia Health Clinic in Fargo, N.Dak. Monson also serves as the surgical services chief for Essentia's West Region.

Kagen Waage, PA-C, MPAS '10, is now practicing in the Emergency Department at Fairview Range Medical Center in Hibbing, Minn. Most recently, Waage had been working at Grand Itasca Clinic and Hospital in Grand Rapids, Minn.



'00s

Theresa Hegge, MD '08, is now practicing plastic surgery at Mercy Medical Center in Williston, N.Dak. Hegge, a native of Williston, returned in May after completing her residency in Illinois.

Chad St. Germain, MD '08, has joined the Essentia Health-Duluth Clinic in Duluth, Minn., as a radiologist.

John Hoyt, MD '07, has joined the St. Alexius Heart & Lung Clinic in Bismarck, N.Dak. Hoyt completed his internal medicine residency at Mayo Graduate School of Medical Education in Rochester, Minn., and cardiology and interventional cardiology fellowships at the University of Michigan, Ann Arbor.



Andrew McCoy, MD '07, has joined the Mark Twain Medical Center in San Andreas, Calif. McCoy obtained his Fellowship in an advanced GI and Laparoscopic fellowship Program at St. Joseph Medical Center in Tacoma, Wash.

'80s

Glenn Wiens, FM Res '89, is now at the Family Medicine Department at Essentia Health-Jamestown Clinic in Jamestown, N.Dak. Wiens has nearly 25 years of experience in family medicine with a special interest in obstetric care.

Shannon Hansen, BS MT '80, is now infection control coordinator at Altru Health System in Grand Forks.

Got news?

We want to hear it!

Please send your news items for the next issue of **North Dakota Medicine** to Kristen Peterson: kristen.peterson@med.und.edu or call 701.777.4305.



Jerold Allen Bietz, MS Biochemistry '66, age 72, of East Peoria, Ill., passed away peacefully at home on Saturday, September 27, after a three-year struggle with cancer. Jerry was born on February 22, 1942, to Mabel and Albert Bietz of Mayville, N.Dak. Jerry is remembered for his unique combination of a strong analytical mind, a great appreciation for art and music, his ability to tell the perfect story for any situation, his love of good food and drink, and his deep devotion to and caring for his family and friends. He was an early adopter of computers, using them not only to advance his science but also to keep in touch (and share cartoons and jokes) with his friends around the world. He was a founder of the Grand Exalted Society of Reprobates, a worldwide community of friends and colleagues. He was also editor of the *Lefse Times*, the annual Ole and Lena joke book-cum-invitation for Lefse Day, his family's long-running party celebrating their Norwegian heritage. He attended and graduated from the Mayville Public Schools. He then attended Mayville State Teachers College, where he met Myrna Blair, the love of his life, whom he married on June 22, 1963. After graduating summa cum laude from MSTC, he attended the University of North Dakota on a three-year National Defense Graduate Fellowship. After receiving his MS degree, he accepted a job at the USDA Northern Regional Research Center (the farm lab) in Peoria, where he became a world-renowned researcher of wheat proteins. He was named a fellow of the American Association of Cereal Chemists and received the William F. Geddes Memorial Award for service to his profession and the Thomas Burr Osborne Medal, the association's highest award for distinguished contributions in the field of cereal chemistry.

Donald Arthur Carlsen BS Med '55, age 82, died quietly at Essentia Hospital on September 24, 2014, with his wife at his side. Don was born on August 14, 1932, in Bismarck, N.Dak., to Olga and Arthur Carlsen. He grew up in Goodrich and Bismarck. He graduated from Bismarck High School in 1950. He then attended the University of North Dakota and graduated with a B.A. in 1954. He continued on at UND in the two-year medical school graduating in 1955 with a B.S. He transferred to Temple University School of Medicine and graduated as an MD in 1957. Post-graduate work included a general rotating internship at St. Vincent's Hospital in Portland, Ore. His education was interrupted for military service in the U.S. Marine Corps and the U.S. Navy in Okinawa and Japan, serving as a lieutenant in the Medical Corps. Don then returned to his education by serving an obstetrics and gynecology residency at Swedish Hospital in Seattle, Wash., and graduating in 1964. His medical practice included the U.S. Marine Corps and Navy from 1958 through 1961. In 1964, he moved to Mandan, N.Dak., and was in private family practice and OB-GYN until 1990 when he moved to Fargo. He married his wife Janice on August 22, 1975. He served as medical director at Blue Cross Blue Shield of North Dakota/Noridian Mutual Insurance Co. until his retirement in 2010. His many commitments included being mayor of Mandan, 1972–1976, Mandan Community Center Board 1972–1976, Morton County coroner for eight years, Mandan Jaycees Boss of the Year 1984, chief of staff at Mandan Hospital; Rotary

International–Mandan Rotary Club 1965–1990, and Fargo–Moorhead a.m. Rotary Club, 1994–2014. Don was a member of First Presbyterian Church, Fargo, and served as an elder, on the buildings and grounds committee, choir member, and was in the Kenya group.

Susan Marie Paulson Davis, BS MT '74, age 61, of Baltimore, Maryland, passed away on July 22, 2014, in Towson, Md. Susan was born to Lawrence and Vera Paulson on September 2, 1952, in Fargo, N.Dak. She attended Central Cass High School, graduating in 1970. She received a degree from the University of North Dakota in 1974. Susan moved to Baltimore and began working as a medical technician in the blood bank at Johns Hopkins. Later she worked for Baxter and then Medstar hospital systems. She was a member of the Roland Park Presbyterian Church. Susan volunteered her time and energy with countless organizations and events.

Patricia J. Dietrich, BS OT '63, age 73, of East Moline, Ill., died Wednesday, September 10, 2014, at Rosewood Care Center of Moline. Patricia was born on March 28, 1941, in Watertown, S.Dak., the daughter of Robert F. and Gladys W. Weaver Reiton. She married Marvin F. Dietrich on June 15, 1962, in Grand Forks. Patricia owned and operated her own business as an occupational therapist, retiring in 1999. She was a member of Holy Cross Lutheran Church in Moline.

Winston S. Ekren, BS Med '50, passed away on Friday, September 5, 2014, surrounded by family. Ekren was born in Kensal, N.Dak., on February 19, 1926. He attended the University of North Dakota, served in the U.S. Navy during World War II, and returned to complete his Doctor of Medicine at the University of Illinois in 1952. Ekren began his medical career as a general practitioner in Moab, Utah. After seven years of general practice, he was admitted to the University of Virginia Medical School and completed training for a specialization in neurological surgery. He began private practice as a neurosurgeon in Santa Rosa, Calif., in 1966, was board-certified by the American College of Surgeons, and retired in 1999.

Ekren dedicated his life to being a physician and surgeon, never losing his appreciation for the miracle and mystery of life and humbly giving credit to God as the ultimate healer. He was a member of many organizations, including the American Medical Association, the Sonoma County Medical Association, the American Association of Neurological Surgeons, Phi Beta Kappa, the Sons of Norway, and Ducks Unlimited. He and his family traveled extensively throughout the United States and Europe, but Santa Rosa was always home. Bethlehem Lutheran Church was his spiritual home for 48 years.

Raymond C. Fergusson, BA Med '42, passed away peacefully on October 7, 2014, in Seattle. He was born in Kulm, N.Dak., on November 21, 1920, and was 93 years old at the time of his death. Ray was a devoted physician, husband, father, grandfather, and great-grandfather. He was a quiet, gentle man, who was always there for his patients, his family, and anyone who needed him. God has a wonderful man with him now. He graduated from the University of North Dakota and attended New York University Medical School and interned at Swedish Hospital from 1945 to 1946 and a second internship from 1948 to 1949. He started family practice/OB-GYN/general surgery in 1949 in the Medical-Dental Building, in downtown Seattle, moving to Crown Hill and then Ballard Plaza, where he joined the Ballard Hospital Staff in 1954. He served on staff at Swedish Hospital, Seattle General Hospital, Cabrini Hospital, Doctors Hospital, and Northwest Hospital. Ray was a member of King County Medical Blue Shield Board of Trustees from 1960 to 1965, serving as vice president in 1964 and secretary in 1960. He was a member of the Physicians Bureau of King County from 1957 to 1960, serving as secretary in 1957, president-elect in 1958, president in 1959, and the Advisory Committee as general practice representative in 1956. He served on Washington Physicians Service Board of Directors from 1965 to 1968. He served on many committees at Ballard Hospital, including Institutional Review Committee, Family Practice Committee, chief of staff in 1968, Board of Directors for two terms, Executive Committee, Administrator Search Committee, and Building Committee for Tower Building. In family practice, he was dedicated to his patients, making house calls and available 24/7 for their needs. He was often being called off the sidelines at sporting events where his children were playing, for injuries of every kind. Ray was in the ROTC in college. After medical school, he served as captain in the Army Medical Corps, spending two years in the Philippines and Japan. Ray and Dorothy joined Magnolia Presbyterian Church in 1951, serving as active members all these years. Ray served as an elder and deacon, many years as an usher and wherever needed, and served as Skippers of Mariners for many years.

Edwin O. Hieb, BS Med '45, 90, of West Fargo, died in his home on September 24, 2014. Ed was born on his father's birthday, June 8, 1924 in Kulm, N.Dak., to Ed and Della (Novak) Hieb. He was raised in Kulm and graduated from Kulm High School in 1941. He and his family spent summer vacations on Little Pine Lake in Perham, Minn. Ed attended UND and graduated with a BA in 1944 and a BS in Medicine from the UND Medical School in 1945. He received his MD degree from the University of Illinois Medical School in 1947. He did his internship at West Suburban Hospital in Oak Park, Ill. He completed residencies in internal medicine at St. Luke's Hospital in Fargo and the VA Hospital in Minneapolis. Ed married Patricia Bolger of Moorhead on December 26, 1949, and they made their home in Jamestown. He began his medical practice there in January of 1950 with the De-Puy Sorkness Clinic, which later became the Jamestown Clinic. Ed was certified by the American Board of

Internal Medicine in 1957. From 1951 to 1953, Ed served as a captain in the U.S. Army Medical Corps and was stationed in France. Pat and his oldest son Mike joined him in France, and they did a great deal of travel across Europe. That experience remained one of the highlights of their married life. Ed and Pat raised their three children in Jamestown. Ed was active in local and state medical organizations. He retired in 1987, and they moved full-time to their much-loved Bad Medicine Lake cabin in Minnesota, which they enjoyed for 31 years. They wintered on South Padre Island, Texas, for 17 years, making many friends on the island.

John (Jack) Edward Leigh, BS Med '53, 83, was born on July 3, 1931, to Ralph and Bernice Leigh in Grand Forks. The youngest of three sons, he attended Shattuck in Faribault, Minn., and was destined to follow the rest of the family into the medical field. Jack attended the University of North Dakota, where he lettered in gymnastics and completed his biology degree in three years. Before heading to Harvard Medical School, he asked Grace Ann Campbell, his art, his music, and his laughter, to marry him. Jack interned at what is now Hennepin County Medical Center and was a surgical resident at the Mayo Clinic in Rochester, Minn. During his twelve years in the U.S. Air Force, Jack served at Maxwell Air Force Base in Montgomery, Ala., and spent his final year stationed in Thule, Greenland, where he was hospital commander. In 1965, the family moved from Alabama to Moorhead, Minn., to be closer to their families. Hired by St. Luke's Hospital and the Fargo Clinic, Jack, Grace, and family settled into the Fargo-Moorhead area for the next 25 years. During his time at the Fargo Clinic (MeritCare), he served as chief of surgery and was known for his outstanding surgical skill. The nurses enjoyed working with "Betadine Jack," known for his calm demeanor in the operating room, liberal use of Betadine, fondness for bow ties, and walking faster than anyone else through the hallways. Unable to pass up the opportunity to return to the Mayo Clinic, Jack and Grace moved to Scottsdale, Ariz., and Jack spent his last five years of practice at the Mayo Scottsdale.

M. Jerome "Jerry" Olson, BS Med '57, 79, a longtime Williston physician and resident, passed away Sunday afternoon, April 6, 2014, at his home in Williston, N.Dak. Jerry was born August 24, 1934, in Williston to Arnold and Emily (Schroeder) Olson. Jerry grew up and was educated in Williston. He graduated from WHS in 1952, Northern Montana College in 1954, received a B.S. degree from UND in 1956, and a two-year medical degree in 1957. Jerry received his Doctor of Medicine degree from Southwestern Medical School, Dallas, Texas, in 1959. He attended his internship in family practice from 1959 to 1960 in Seattle, Wash., and earned a degree in surgery at Seattle in 1961.


Jerry was married to JoAnn Larson in Havre, Mont., on June 16, 1957. Jerry volunteered for the draft, enlisted in the U.S. Army, and was stationed at Ft. Leonard Wood, Missouri, during the time of the Cuban Missile Crisis. After completing his military service, Jerry and his family came home to Williston so

he could practice medicine with the Williston Medical Clinic, later the Western Dakota Medical Group, now known as Trinity Western Dakota Clinic.

Jerry was a member of First Lutheran Church. He had served on the church council, taught Bethel Bible Series and junior high Sunday school. He was a member of Tuesday morning Bible Study for Men and was a member of the Men in Mission. Jerry was a member of Rotary International and held all offices at the local level. He was past-president of the Kotana Medical Society, was elected ND State Family Physician of the Year in 1997, and was given the Distinguished Service Award as President of the North Dakota Medical Association, 1986–1987. Jerry had been the chief of staff for the Good Samaritan Hospital and the chief of staff of the Mercy Medical Center, 1984–1985. For years, he was the medical director for the Opportunity Foundation, the Bethel Lutheran Home, and hospice.

John Harris Saiki, BS Med '59, known as "Jack" to many, peacefully passed away at home on August 8, 2014, surrounded by his loving family. He will forever be in the hearts of his wife Julie; his three children, Beth, Bill, and Catherine; his beloved grandchildren, Anna Priya Gupte, Anand Gupte, and Alexander Saiki; son-in-law Viru Gupte and daughter-in-law Jocelyn Saiki; and his brother George and extended family. Jack was born on December 31, 1936, in Grand Forks to Lydia Elizabeth Kuoppala and Arthur Kazu Saiki, MD. He spent most of his childhood in Grand Forks and three formative years in Kauai, Hawaii. Jack received his Bachelor of Arts and Bachelor of Science from the University of North Dakota. He graduated from medical school at McGill University in Montreal, Canada, in 1961. It was there that he met his future wife Julie Singleton. Jack served two years with the United States Public Health Service in Fort Defiance, Ariz. He completed his residency and fellowship training in medicine and hematology at the University of New Mexico School of Medicine and his oncology training at the University of Texas, M. D. Anderson Cancer Center. Jack was professor emeritus at the University of New Mexico Department of Medicine, Hematology/Oncology Division. His career on faculty spanned 44 years; it can be said he lived the history of modern day oncology. Jack joined the faculty at the University of New Mexico School of Medicine in 1970. With the support of a grant from the federally funded New Mexico Regional Medical Program, Jack developed a leukemia-lymphoma treatment program, at a time when no formal medical oncology program existed in New Mexico. He was also awarded funding from the National Institutes of Health in support of his membership in the Southwest Oncology Group, which ushered in cancer clinical trials and new cancer treatments for New Mexicans. In 1973, Jack received board certification in medical oncology, the year the subspecialty of medical oncology was first created. Jack served in various capacities while on the faculty, including clinical director of the University of New Mexico Cancer Center and principal investigator for the Southwest Oncology Group. In addition, Jack served on the Board of Trustees for Blood Systems for 29 years and was medical director of the Presbyterian

Hospice Program. Jack was the recipient of numerous awards for teaching and service, including the Laureate Award by the New Mexico Chapter of the American College of Physicians and nine Khatali Awards, an honor bestowed by each graduating class of the University of New Mexico School of Medicine in recognition of teaching excellence. Throughout his career, Jack loved teaching, but patient care was foremost in his heart. Jack was beloved for his humility, compassion, integrity and dedication.

Timothy Joseph Yellow Sr., PA MEDEX Certificate '75, age 64, Fort Yates, N. Dak., died August 23, 2014, at Fort Yates hospital. Tim was born Dec. 24, 1949, to Arthur and Georgina (Molash) Yellow in Fort Yates. He was raised and educated in Fort Yates. Tim married Jackie Larson on June 7, 1974, in Fort Yates. Tim devoted his life to two special things: his family and serving the healthcare needs of the people on the Standing Rock Indian Reservation. From the age of 20 on, he held a variety of healthcare positions until he was forced to retire because of his own health issues. Leaving for college at the age of 17, Tim graduated from Children's Hospital of Los Angeles School of Radiology in 1969. He returned to Standing Rock and worked for a year at the public clinic/hospital in McLaughlin, S.Dak. In 1971, he was hired at Indian Health Service (IHS) in Fort Yates as an X-ray technician. The following year, he enrolled in the new Physician Assistant Program at the University of North Dakota in Grand Forks, graduating in 1975. He continued to work at IHS until the WIC Program (Women, Infants, and Children) was started, and he joined the early team who established the program and were praised for the unique level of care in meeting children's needs, which were always a priority for Tim. He work at WIC for many years until asked to assume the role as tribal health director. He was a long-term employee in this position. His opinion was well respected; he worked with a variety of people from senators, the state, other tribes, the CDC, as well as being involved in regulatory commissions concerning national safety and terrorism issues and early attempts to set up a national healthcare system during the Clinton era. Tim lobbied for and was an advocate for additional federal funding for Indian people, including veterans services, South Dakota/North Dakota tribal healthcare funding for Standing Rock, and often acted as a spokesperson for other tribes as well. Tim received many job offers over the years, because doctors came and went from IHS, and organizations wanted Tim to join them in Alaska, British Columbia, Atlanta, and a variety of other places. He was always faithful to Standing Rock and would never leave. He was honored to be hired as the CEO/service unit director at IHS in 2000 and held this position until his retirement. 

The Spirit of Giving

By Alyssa Konickson

This holiday season take a moment to consider the gifts you would like to make, and then make them happen.

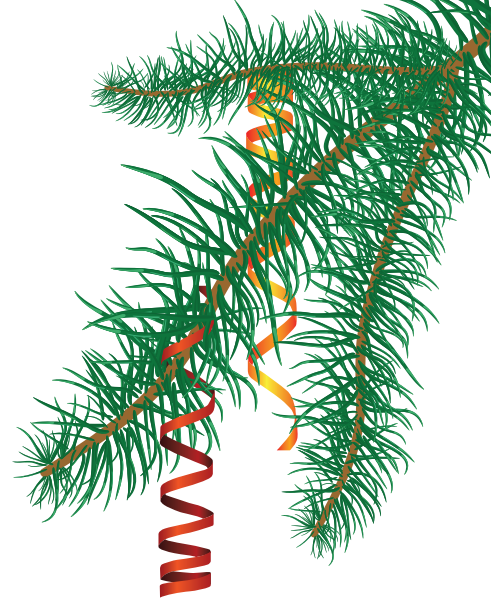
Your generosity can go a long way toward benefiting the UND School of Medicine and Health Sciences.

The remaining weeks of 2014 give you a final chance to balance your income and giving for the tax year. When you give to the School of Medicine and Health Sciences through the UND Alumni Association & Foundation, you receive an income tax deduction. Even if your income is less this year than it was last year, you may still want to offset it with a tax-deductible contribution.

Let us know how we can help you fulfill your generous intentions to students at the UND SMHS!



Contact:
 Dave Miedema, '76, CGPA
 Senior Director of Development
 School of Medicine and
 Health Sciences
 UND Alumni Association
 & Foundation
davem@undfoundation.org |
 701.777-4933 | 800-543-8764



Thank you

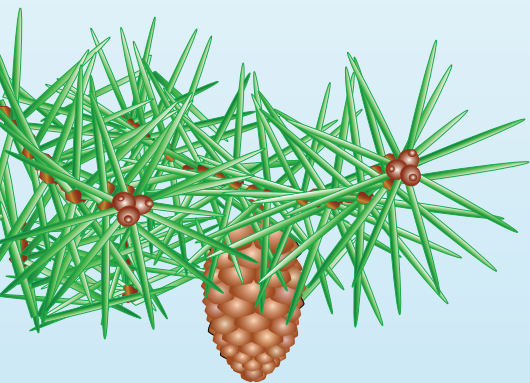
to our thoughtful donors
 who recently gave gifts or made
 pledges to support the UND School
 of Medicine and Health Sciences.

Brett, MD '92, and Jon Pinkerton of Sartell, Minn., have established the Dr. Brett and Jon Pinkerton Scholarship Endowment, which will provide scholarships for medical students at the UND School of Medicine and Health Sciences. Dr. Pinkerton is an OB-GYN at CentraCare Clinic in St. Cloud, Minn.

Richard Olafson, BS Med '57, of Fargo, N.Dak., continues to support the Dr. Richard A. and Ann M. Olafson Medical School Scholarship Endowment, which provides scholarships to second-year medical students who have demonstrated superior academic achievement. Dr. Olafson is professor emeritus of the UND SMHS Department of Surgery, where he taught for more than 20 years.

Carol Eidsvoog, MD '84, and her husband David Spencer of State College, Pa., continue to support the Eidsvoog Endowment, which provides scholarships to medical students from rural North Dakota. Dr. Eidsvoog is a native of Alamo, N.Dak.

Edward and Carolyn Fogarty of Bismarck, N.Dak., continue to support the Dr. Edward and Carolyn Fogarty Endowment, which provides funding to support research activities for students pursuing interests in clinical imaging or imaging technologies. Dr. Edward Fogarty is chair of the Department of Radiology at the UND School of Medicine and Health Sciences. He is also a staff radiologist at Sanford Health in Bismarck.



Adopt-a-Med-Student

In 2011, the University of North Dakota School of Medicine and Health Sciences created an Adopt-a-Med-Student program, which has been received by a select group of alumni, particularly milestone classes, with great enthusiasm. The stethoscope, a staple tool of all physicians and healthcare workers, is something past students had purchased when they first arrived here. Now, thanks to the Adopt-a-Med-Student program, we present each student with a stethoscope for use during their four years of schooling, residency, and beyond.

On October 21, the 2014 Adopt-a-Med-Student Luncheon was held at the School in the Vennes Atrium. Several donors were present at the luncheon to present

stethoscopes to students. Among those present were James Moller, MD, a pediatric cardiologist at the University of Minnesota who has practiced for 50 years in addition to serving as past president of the American Heart Association; Scott Engum, MD '89, a pediatric surgeon with Sanford Health in Fargo; Janine Carson, MD '86, a radiologist with Sanford Health in Fargo; Mark Koponen, MD '86, associate professor of pathology at the School; and SMHS Dean Joshua Wynne, MD, MBA, MPH. In behalf of their daughter Grace, Dr. Carson presented a stethoscope from herself and her husband Paul Carson, MD '86, an infectious disease specialist with Sanford Health in Fargo.

The students and the School thank the generous donors listed below for purchasing stethoscopes that will establish a lifetime of heart-to-heart connections between our future doctors and their patients.

Marietta Almazan, El Dorado Hills, Calif.
Richard Anderson, BS Med '64, Scottsdale, Ariz.
Steve Bagan, Fargo, N.Dak.
Philip Barney, BS Med '62, Polson, Mont.
Heidi Bittner, MD '91, Devils Lake, N.Dak.
Paul, MD '86, and Janine Carson, MD '86, Fargo, N.Dak.
Steffen Christensen, BS Med '71, Fargo, N.Dak.
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Joshua Wynne and Susan Farkas, Grand Forks, N.Dak.



Nathan Seven from Williston receives his stethoscope from Dean Joshua Wynne and Dr. James Moller (right).



The Harley E. French Library of the Health Sciences sponsored a visit by certified therapy dogs and their handlers in October. As students approached the middle of the semester and medical students took their first block exams of the year, they had the opportunity to relieve stress and reduce anxiety by visiting with the dogs. Above, 16-year-old therapy dog Molly getting to "nose" one of the students. At right, shown in the foreground is therapy dog Lina and in the background is Molly.



In September, Dean Wynne hosted Joggin' with Josh. He had this to say: "Chilly but warm! That's the way I'd categorize the Joggin' with Josh event. While the weather was cool with high temperatures only in the 50s, the event was warmly received even though it only drew about as many participants as the air temperature. We had a very pleasant walk, jog, or run around a five kilometer course that took us by the Ralph and the new building site. I was pleased to see participation from across campus as well as from across the community. Thank you to all who participated!"

Sandy Hanebrink, OTR/L, executive director of Touch the Future Inc., (right) presented an Occupational Therapy Workshop for professionals and students at the School for Homecoming. Sandy was accompanied by her service dog Buddy.



Sioux Award Winner Marlys Schuh



Above, Members of the BS Med Class of 1964 joined Dean Joshua Wynne (far right) at the homecoming dinner at the North Dakota Museum of Art. From left, Neil West, Tucson, Ariz.; Paul Bry, Saginaw, Mich.; Byron Danielson, Fargo, N.Dak.; Frank Welsh, Cincinnati, Ohio; Stephen Hanson, Virginia Beach, Va.; L. Michael Howell, West Fargo, N.Dak.; and Glenn Thoreson, Mayville, N.Dak.



Left, Students from the North Dakota School for the Blind joined the Student Occupational Therapy Association and participated with the SMHS in UND's Homecoming Parade down University Avenue.



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“Thank you for donating funds to provide me with a stethoscope. I am so thankful that we students have physicians like you supporting us in pursuing medicine.”

—Josh Brackett, first-year medical student

*Deceased

Dear Alumni and Friends,

Thanks to the generous financial support of a growing number of dedicated alumni and friends, fiscal year 2013–14 was another banner fundraising year for the School of Medicine and Health Sciences. We are excited to report new gift commitments of \$4,772,626, representing the total of all annual, major, and deferred gifts finalized for the benefit of the School of Medicine and Health Sciences. These new gifts will help continue the critically needed support for our students, faculty, and exciting new program initiatives.

A strategic priority of our development team this past year was to focus on elevating support for medical student scholarships, particularly with establishment of new scholarship endowments. We recognize that students graduate from UND with significant debt load. In recent years, this has been as much as \$170,000 per medical student. With a focus on mitigating student debt, alumni and friends rose to the challenge and enthusiastically made their investments in medical education. During this past year, over \$2.3 million was raised in direct support of student scholarships, and this has helped to reduce the average student debt load to less than \$150,000!! Nearly one-half of all gift commitments made by alumni and friends in 2013–14



Joshua Wynne, MD, MBA, MPH, UND Vice President for Health Affairs and Dean, UND School of Medicine and Health Sciences

Jessica Sobolik, Director of Alumni and Community Relations, UND School of Medicine and Health Sciences

Dave Miedema, Director of Development, UND School of Medicine and Health Sciences and UND Foundation

were in support of student scholarships. Thank you!

We are also pleased to announce the establishment of 19 new named endowments for 2013–14—an increase of 30% over last year. A complete list of these new accounts and donors can be found on the back page. Such gifts are truly “gifts that live forever.”

The future looks to be every bit as exciting as we look forward to the opening of our new School of Medicine and Health Sciences building in 2016. We encourage you to join with us in the continued support of fulfilling our purposes of teaching, research, and service. Happy Holidays!

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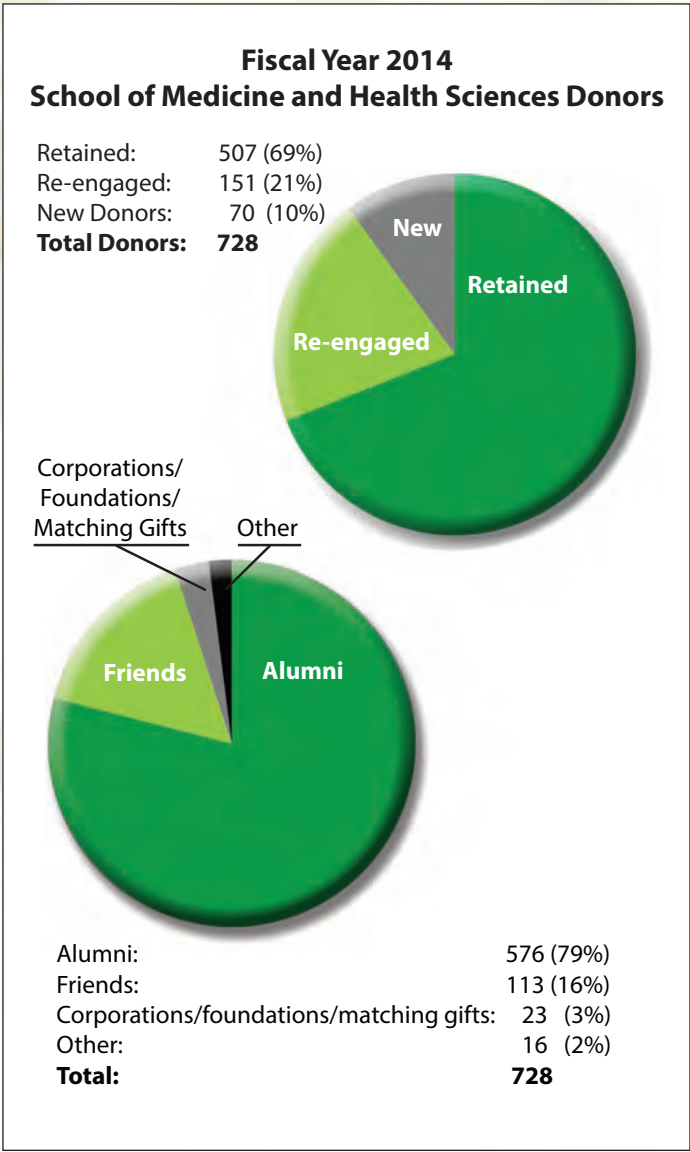
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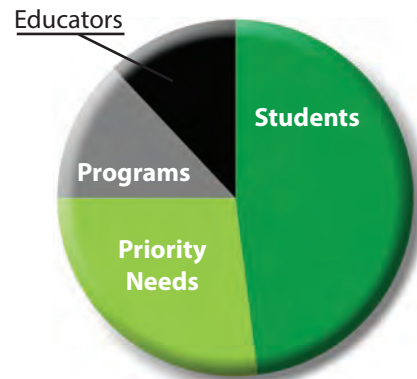
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—Aaron LaMontagne, medical laboratory science student

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In 2014, private gifts from alumni and friends generated enough support to create eight new scholarships, ensuring that students such as those in the Indians Into Medicine Program among others have what they need to complete their education.

Thank you for supporting the University of North Dakota School of Medicine and Health Sciences!

This year, our students benefited from more scholarships, improved laboratories, and high-quality faculty because of private support.

Check out the rest of this insert for a complete list of gifts given to the SMHS by alumni and friends like you in fiscal year 2014.

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“Thank you for the generous gift and for supporting scholarships at UND. I am very proud to be a recipient of the Jean Holland Saumur Hematology Award. This will greatly help me as I start clinicals.”

—Amanda Stevens, fourth-year medical laboratory science student

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Donors whose names are *in italics* participated in the North Dakota Higher Education Challenge Fund, a public and private partnership championed by Governor Jack Dalrymple and approved by the 2013 North Dakota Legislature. The Education Challenge Fund matched \$1 for every \$2 raised by a university foundation for the benefit of students. Endowment commitments to the SMHS had to be \$50,000 or more to qualify for a match.

Donors who choose to establish endowments are committed to supporting activities not just for one year, or even one generation, but for perpetuity. By their very nature, endowments require the consideration of current and future needs. Endowments provide the stability necessary for UND to remain the premier liberal arts university on the Northern Plains and one of an elite few that are home to both a medical and law school.

An endowment can be established through the UND Foundation and named with a minimum gift of \$25,000 and funded over time or with a deferred gift arrangement. Donors may also choose to designate gifts to existing endowments held within the UND Foundation to grow their base of support.

In the 2014 fiscal year, the following 19 new endowments were established with the UND Foundation to benefit students, faculty, and programs within the School of Medicine and Health Sciences.

Drs. Christopher and Allison Clapp Anderson Scholarship Endowment

Allocations from the endowment will provide for one or more scholarships to medical students from North Dakota who are enrolled at the University of North Dakota School of Medicine and Health Sciences, with preference given to students who graduated from Fargo South High School in Fargo, N.Dak.

Dr. Philip and Sandy Barney Medical Scholarship Endowment

Allocations from the endowment will provide one or more scholarships to first-year medical students from Montana. If there are no first-year medical students from Montana in any given year, the scholarships may be given to any other qualified student in any class year.

Ed and Marjean Bender Medical Endowment

Allocations from this endowment will provide one or more scholarships to students working toward an MD degree within the School of Medicine and Health Sciences.

Ed and Marjean Bender MLS Endowment

Allocations from this endowment will provide one or more scholarships to students working toward a degree in medical laboratory sciences within the School of Medicine and Health Sciences at the University of North Dakota.

Mary Coleman MLS Scholarship Endowment

Allocations from this endowment shall provide one or more scholarships to full-time senior students who are majoring in medical laboratory sciences. Selection and announcement of the Coleman Scholarship recipients shall be made when candidates are juniors in their second (spring) semester of the MLS program.

Ralph and Barbara Cushing Scholarship Endowment

Allocations from the endowment will provide one or more scholarships to medical students at the University of North Dakota School of Medicine and Health Sciences.

Judy L. DeMers Scholarship Endowment

Allocations from the endowment will provide one or more scholarships to students who are in good academic standing and pursuing a medical doctor degree within the School of Medicine and Health Sciences. Preference shall be given to students who are single parents. If there are no single parents in any given year, the scholarship may be awarded to any student.

Wesley Hoffman Occupational Therapy Quasi-Endowment

Allocations from this endowment will provide scholarships to students studying occupational therapy within the School of Medicine and Health Sciences at the University of North Dakota.

Wesley Hoffman Physical Therapy Quasi-Endowment

Allocations from this endowment will provide scholarships to students studying physical therapy within the School of Medicine and Health Sciences at the University of North Dakota.

Kriegel and Gorter Family Endowment

Allocations from this endowment will provide scholarship(s) for second- or third-year occupational health student(s).

Anthony & Junieve Lund Quasi-Endowment

Allocations from this endowment will support the priority needs of the School of Medicine and Health Sciences at the University of North Dakota.

Minot Center for Family Medicine Endowment for Excellence

Allocations from the endowment will provide funding for the highest priority needs of the Minot Center for Family Medicine.

Linda Redmann Cancer Research Quasi-Endowment

Allocations from this endowment will support cancer research at the School of Medicine and Health Sciences within the University of North Dakota.

Linda Redmann Public Health Quasi-Endowment

Allocations from this endowment will support the public health program at the School of Medicine and Health Sciences within the University of North Dakota.

Linda Redmann Rural Health Quasi-Endowment

Allocations from this endowment will support the rural health program at the School of Medicine and Health Sciences within the University of North Dakota.

Howard, Clarine, and Karen Robinson Scholarship Endowment

Allocations from the endowment will provide one or more scholarships for students pursuing a Doctor of Medicine degree at the University of North Dakota School of Medicine and Health Sciences.

Dr. Robert and Julie Roswick Medical Scholarship Endowment

Allocations from this endowment will provide scholarships for medical students attending the School of Medicine and Health Sciences at the University of North Dakota. Preference shall be given to students from North Dakota who intend to practice family medicine in the state after completion of their residency.

Sanford Health Endowment

Allocations from the endowment will provide funding for the highest priority needs of the University of North Dakota School of Medicine and Health Sciences as determined by the dean.

G. Franklin Welsh, MD, Endowment

Allocations from the endowment will fund one or more annual awards, named the Welsh Award. This Award will be presented to one or more medical students who demonstrate academic excellence through the completion of a research project in the anatomical sciences (or gross anatomy) and/or the development of an innovative resource for the teaching of anatomy.