

MINNESOTA

UNIVERSITY OF MINNESOTA ALUMNI ASSOCIATION

WINTER 2013

JUDY HELGEN WANTS ANSWERS

AN ALUMNA'S UNWAVERING
QUEST TO FIND THE CAUSE
OF THE **DEFORMED FROGS**

Research to Move
Minnesota Forward

Dentistry's
Molar Authority

Goldy Goes
for Bronze



Extraordinary Patients Deserve Extraordinary Care



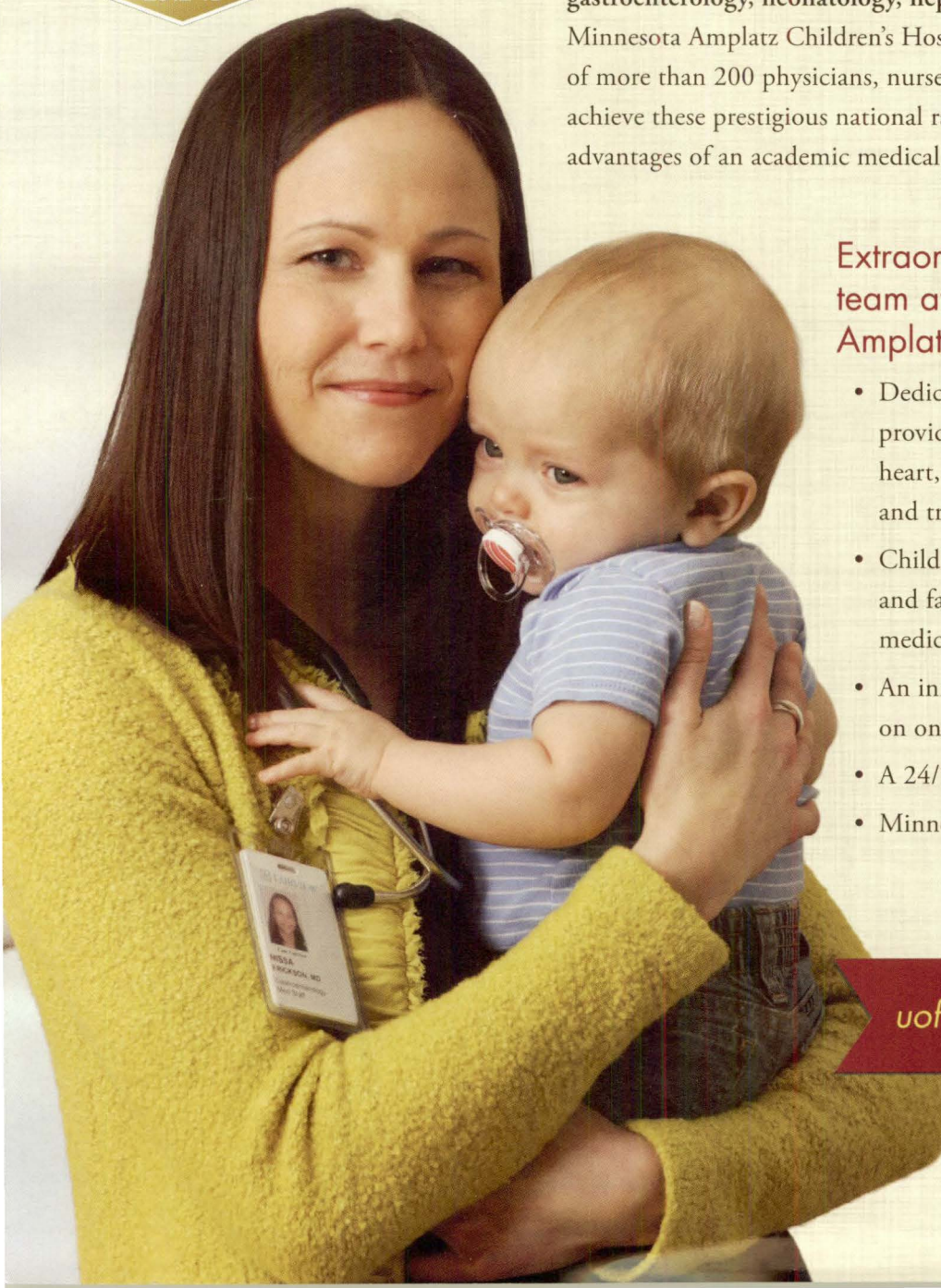
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uofmchildrenshospital.org/alumni





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ON THE COVER: Judy Helgen, photographed by Mark Luinenburg. This page, clockwise from top: photograph by Sara Rubinstein; Alfred Owre, photograph courtesy of University Archives; illustration by Scott Benson

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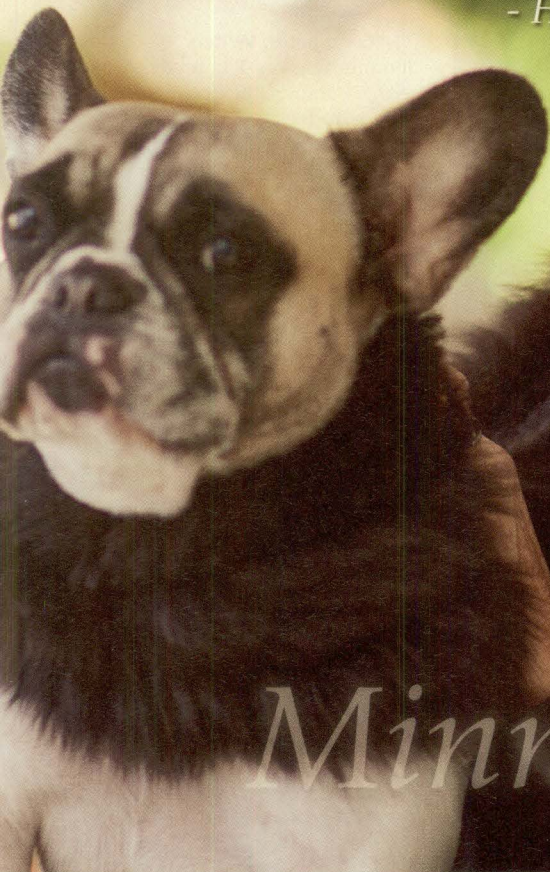
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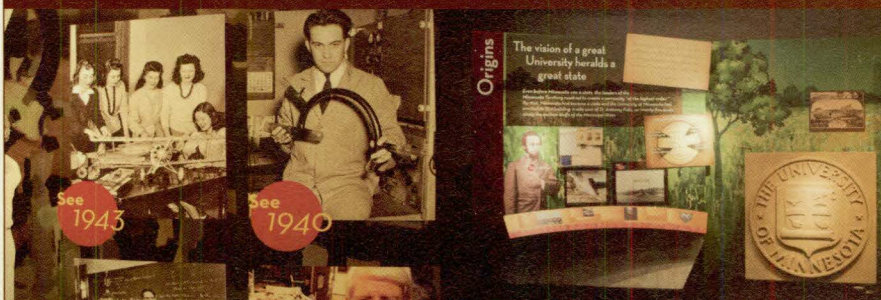
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Editor's Note

A Funny Thing about Hope

I saw the most remarkable thing November 7. I was driving near the University of Minnesota's St. Paul campus when I came to a red light. Idling on my left was a UPS truck, to my right a FedEx truck. In that brief interlude when all traffic is stopped before one set of lights turns green, the man in purple smiled and waved to the man in brown, and—this is where it gets even more bizarre—the man in brown waved back. Then the light changed, the Earth began turning on its axis again, birds that had been frozen in midair continued on their trajectory, and the two delivery trucks drove off in opposite directions.

Weird, right?

I tested out logical explanations. Maybe they're neighbors. Maybe their kids play on the same soccer team. But, no, it wasn't that kind of wave. What I saw was two hard-working people on opposing teams sharing a patch of common ground. That flip of the wrist that in a café might mean "bill, please," here said, "Yep, it's going to be a long day. Hang in there. You look nice in brown." OK, maybe not that last bit, but you get the point.

It gave me hope. A couple hours earlier, I had been lying in bed uncertain whether I could get up and step back out into the world. What if today turned out to be a much meaner place than yesterday? What if any scrap of civility left in society had been trampled to death along with so much campaign literature the night before? (I'm a professional worrier and am able to keep bad things from happening if I sacrifice sleep and grind my teeth to nubs. You're welcome.)

But then fate put the delivery men in my path and restored my hope. We would all figure out how to go on—how to work together for what needs to get done. I hit the gas. I had work to do.

Perhaps it's obvious that hope underlies most of the work at the University. But whenever I encounter evidence of what drives our alumni and faculty, I feel a little shiver. You get a sense of it in "Future Forward," an article about four of our faculty researchers who are leading proposed initiatives to tackle economic as well as medical, environmental, and other challenges in Minnesota.

High expectations propelled Dr. Alfred Owre, the subject of our historical article, "Molar Authority," who was fixed not just on preparing students to become leaders in dentistry, but to become people of character. "A life based upon truth, justice, and a keenly developed ethical sense is almost a curiosity," he wrote in the 1908 *Gopher* annual. "Lives so based are seldom colossal financial successes. But... in the final summing up, they must be classed as among the most beautiful things."

And then there's Judy Helgen (Ph.D. '82), our cover subject. Before finally meeting her, I'd read several articles about her work investigating frog deformities and the political battles she fought, and I wondered if she'd be an angry person, jaded or bitter. Instead, I met a charming woman with uncontainable zest for her work.

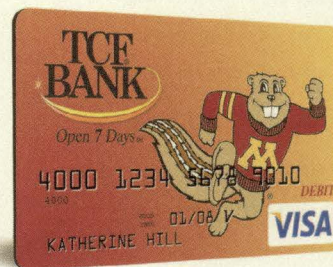
She allowed me to borrow her collection of old articles about frog deformities that informed her new book and that she plans to donate to the Minnesota Historical Society someday, and there I found her secret—how she maintained perspective in the face of adversity. Mixed among files bursting with newspaper clippings, radio transcripts, and Data Practices Act requests is a well-thumbed file labeled "Frog Humor." ■



Shelly Fling

Shelly Fling is editor of Minnesota. She may be reached at fling003@umn.edu.

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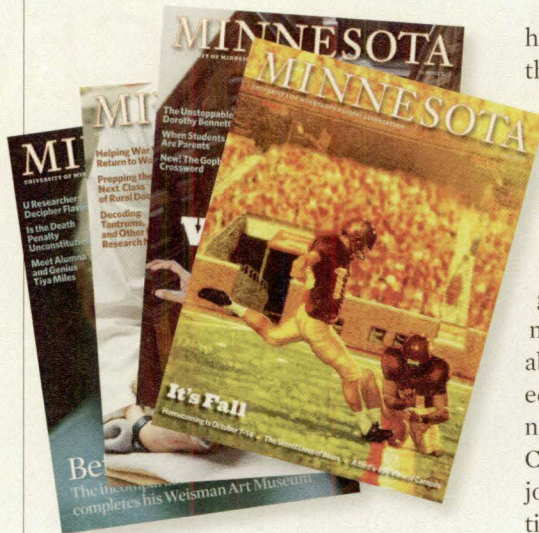
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Letters



BEARS FANS

We are graduates of the University of Minnesota, and neither of us are sports fans, particularly football. Research suggests that football is extremely hazardous to participants. For us, the focus on sports—particularly football, the new stadium, and the efforts required to operate and maintain the facility—detract from the scholastic accomplishments of the institution. From our perspective, the article about the bears [“The Secret Lives of Bears,” Fall 2012] would have been a significantly better choice for a cover than football.

John Blackstone (B.C.E. '76, M.S. '04) and
Linda Kjerland (B.S. '73)
St. Paul

A LITTLE HELP GOES A LONG WAY

Sincere thanks for the profile of the Student Parent HELP Center in the Summer 2012 issue [“Great Expectations”]. I was a student adviser under director Diane Wartchow while in graduate school in the mid-1990s and can confirm the struggles and triumphs of the very motivated students with whom I worked.

I've often thought about what powerful stories the University of Minnesota could gather by talking to former students and staff of the HELP Center, most of whom were also parents—single and partnered. I'm sure the HELP Center's work has strong ripple effects across generations: When children see their parent working that hard to achieve their goals, they understand the payoff of diligence in the face of obstacles. I hope your article

helped broaden readers' minds about the capability and competence of many young parents.
Brigid Riley (M.P.H. '98)
Minneapolis

A SHOO-IN AND A SHOE-OFF

I graduated from the University of Minnesota in 1952 and hardly a day goes by when I don't think and/or comment about the positive things I saw about the University of Minnesota. My education there brought me to California. I went to the placement bureau at Cal in Berkeley and within a day had a job teaching. I did not have my credentials with me, but when I told the superintendent of the Campbell schools that I graduated from the U of M he hired me.

I have lived in the San Jose area ever since and upon my retirement started to run and now do marathons. When I come to Minnesota next summer to visit family and run Grandma's Marathon, I plan to come by the tree at the end of the Washington Avenue Bridge [“A 500-Foot Tree?,” Summer 2012] and add an old pair of running shoes to the tree. A classmate of mine, Nancy Larson, and I used to walk across that bridge every day when we were student teaching to catch our bus.

Joy Kratzke Johnson (B.S. '52)
San Jose, California

PRE-K THROUGH LIFE

When I received my Summer 2012 edition of *Minnesota*, I was eager to read the cover article about Roxanne Givens [“Where Are They Now?”]. She and I were students at University High School in the 1960s, which was then located in Peik Hall.

But before I got to the article, I read the Letters section. To my amazement, a letter writer mentioned being a student at University High (David Berman, “A Class Act”). Oh, and a number of Butwins (“Tackled by the Past”) also attended U High.

The College of Education produced many lifelong University of Minnesota alumni, some starting as young as the age of 3, who attended preschool, elementary, and high school programs. Many continue to be generous and civic-minded citizens in their post-University lives. The college also produced many, many educators and

administrators who student-taught at the lab schools and who then went on to educate Minnesotans for the remainder of the 20th century and beyond.

Caroline Christian Dunn (kindergarten '55, elementary school '61, U High '67, B.A. '71)
Navarre, Florida

READ AND RECIRCULATE

Your magazine has many success stories. Perhaps University of Minnesota Alumni Association members could give their read copies to high school and college libraries. Students could learn about how some members have used their education—also that careers do not always come easy. Many students need ideas for goals to follow. Your magazine could help.

Corinne Mase
Rochester, Minnesota

WIDENING THE SPOTLIGHT

I noted the letter (“A Class Act”) concerning the great Art Ballet [who taught theater at the University of Minnesota] and mentioning Doc Whiting and Merle Loppnow. I would add Wendell Josal, Ken Graham (my adviser), the superior Bob Moulton, and many others. They all impressed me at the time and gave me so much in my life’s journey. I had roles in several plays during that period (1948–50), including *Anthony and Cleopatra* and *Young Arthur and the Magic Sword*, which was written by Keith Engar, another luminary of the period. I was on crews for many others. Those were halcyon days, to be sure.

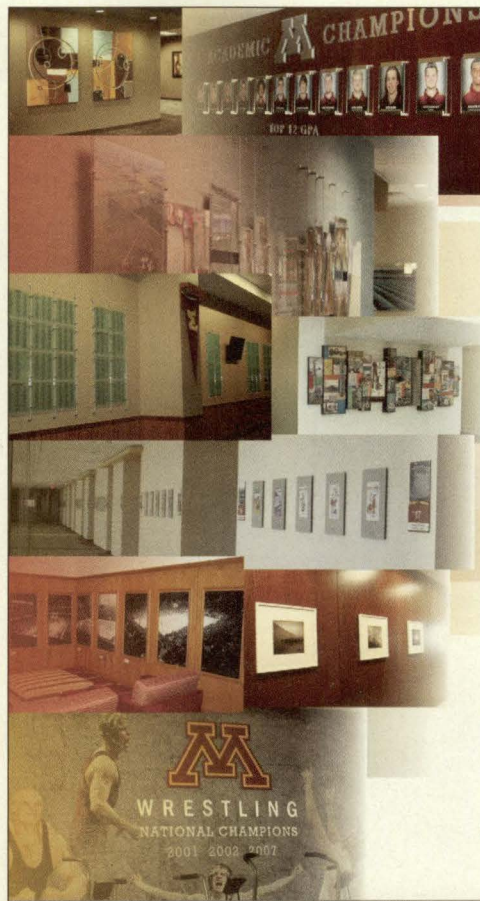
I am now in my 83rd year and am trying to keep moving.

Leroy Gardner (B.A. '60, M.A. '66)
Silver Spring, Maryland

CORRECTION

Minnesota published a letter from Leroy Gardner in the Summer 2012 issue as well. In it, he was mistakenly said to have attended University High School. He did not. He graduated from Murray High in St. Paul in 1947. The editors regret the error.

Submit a letter at www.MinnesotaAlumni.org/opinion or write to *Letter to the Editor*, *Minnesota Magazine*, McNamara Alumni Center, 200 Oak St. SE, Suite 200, Minneapolis, MN 55455. Letters may be edited for style, length, and clarity.



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A rendering of the Goldy statue in front of Coffman Union

I've always said if I was going to write a book about coaching men and women it would be two paragraphs—no, two sentences. No matter how good looking, intelligent, wonderful, fantastic a woman is, she can figure out 15 reasons why she's a piece of crap. And no matter how ugly, stupid, or idiotic a guy is, he thinks he's the next Rock Hudson or whoever."

Retiring Gopher women's cross-country coach Gary Wilson in an interview for *Minnesota*. See page 38.

Goldy Goes for Bronze

On September 7 students launched a campaign to raise \$45,000 toward creating a bronze sculpture of Goldy Gopher outside Coffman Memorial Union. Students conceived the idea last year. "We constantly hear that there aren't enough traditions on campus," says Ashley Kaser, who serves on the Student Unions and Activities Program Board. Kaser expects the bronze Goldy to become the heart of new campus traditions. "Maybe for Homecoming week everyone will dress the statue, or rub the tail before finals for luck," she says.

The total project cost for the sculptor, materials, and installation is \$95,000, with the Office for Student Affairs and the Dean of Students matching funds up to \$50,000. Margaret Carlson Citron (Ph.D. '83), former CEO of the University of Minnesota Alumni Association, and her husband, Paul Citron, made an initial \$2,500 matching gift toward the project.

Students selected sculptor and alumnus Nick Legeros (M.F.A. '83) of Minneapolis to create the statue. Goldy will be 6 feet 3 inches tall and will lean against a large granite "M."

For more information on the Goldy statue project, visit www.sua.umn.edu/goldystatue.

—Erin Lengas

Giving Is Up

Private giving to the University of Minnesota in 2012 totaled \$244 million, a 10 percent increase over last year and 31 percent more than in 2010. Gifts included funds to create an endowed chair in pediatric cancer research, expand neuroscience research, and develop new therapeutic

drugs. Donors also committed \$60 million for scholarships, \$52 million more than the previous year. The figures are from a combined report on giving presented to the Board of Regents by the University of Minnesota Foundation and the Minnesota Medical Foundation on October 12.

A Hall of Fame First

University of Minnesota Professor Stephanie Valberg became the first woman ever inducted into the Equine Research Hall of Fame on September 23.

Valberg, director of the U's renowned Equine Center, is a pioneer in unraveling the mystery of "tying up" and other muscle disorders in horses. She established the Equine Center's Neuromuscular Diagnostic Laboratory, which receives muscle biopsy submissions from around the world. The Hall of Fame's selection committee described her work in myopathies as having revolutionized equine practice. The Equine Hall of Fame is based at the University of Kentucky's Gluck Equine Research Foundation.



Stephanie Valberg

I want to be around young black men because it's powerful to be together and do good things around the community. Our image hasn't always been favorable."

University of Minnesota freshman Eric Dormoh, quoted in UMNews about Huntley House, a new section of Sanford Hall for African American first-year male students named for Horace Huntley (B.A. '70), who pressed for the establishment of African American Studies at the U

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Exhibiting Women

Josephine Lutz Rollins (B.A. '20, M.A. '40) was one of the first female faculty members in the Department of Art at the University of Minnesota. An accomplished watercolorist, she spent nearly 40 years at the U, from 1927 to 1965, teaching and mentoring students while helping to establish the study of studio art within the U curriculum.

When Lutz Rollins died in 1989, her family established the Josephine Lutz Rollins Fellowship, awarded annually to an outstanding female painter in the graduate program. The Department of Art and the Lutz Rollins family will collaborate on a special Fellowship Exhibition at the Quarter Gallery



Josephine Lutz Rollins

at the Regis Center for Art January 22 through February 23. The exhibition will include approximately 20 paintings by Lutz Rollins and work by several fellowship artists. All the artwork will be for sale and 100

percent of the proceeds will benefit the Josephine Lutz Rollins Fellowship Fund.



Women Workers Canning Factory, Le Sueur, Minnesota, 1948, watercolor with ink, by Josephine Lutz Rollins

Running concurrently with the Fellowship Exhibition will be *The House We Built: Feminist Art Then and Now* at the Katherine E. Nash Gallery at the Regis Center. *The House We Built* will survey the feminist art movements that emerged across the nation in the 1970s, locating the historic contributions made by female artists in Minnesota within the national context.

The Regis Center for Art is located on the West Bank at 405 21st Avenue South.

Administrative Unit Eliminated

In keeping with his commitment to reduce administrative costs, University of Minnesota President Eric Kaler announced on November 1 that the Office for Academic Administration (OAA) will be eliminated and its functions reassigned. The change, which was recommended by a task force charged with reviewing the duties of OAA, comes with the impending departure of Senior Vice President Robert Jones, who led it for the past eight years. Jones will become president of the University at Albany, State University of New York, on January 1.

The Office for Academic Administration is responsible for coordinating academic operations across all five campuses. The move is expected to save \$1.1 million annually and \$500,000 on a one-time basis.

The full task force report is available at www.MinnesotaAlumni.org/OAA.

New VP for Research Named

President Eric Kaler has named Brian Herman the University of Minnesota's new vice president for research, succeeding Tim Mulcahy, who will retire in December. Herman will oversee all aspects of the U's \$786 million research enterprise on all five campuses, including providing guidance and support to individual researchers and identifying future directions and facility and infrastructure needs. A professor of cellular and structural biology at the University of Texas, Herman previously served as vice president for research at the UT Health Science Center. He will begin his new duties January 1.

Research discoveries at the U led to the launch of a record 12 start-up companies in 2012, topping the previous record of nine last year.

What really scares the hell out of me is that they're totally unprepared for old age. This is the nasty little secret no one talks about."

Dr. Robert Kane, director of the University of Minnesota's Center for Aging, quoted in the Star Tribune about baby boomers in denial about hearing loss and other age and health issues



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PREDICTING CONCUSSIONS

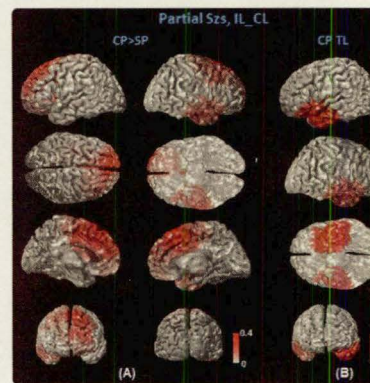
Research conducted at the University of Minnesota's School of Kinesiology has discovered a correlation between pre-bout body sway and post-bout nausea in boxers. Body sway is the slight postural movements made by an individual to maintain a balanced position. The study, conducted by kinesiology professor Thomas Stoffregen, found that boxers with more body sway before a bout reported feeling nausea afterward. Concussion is also associated with nausea and with changes in body sway, both in the immediate aftermath of head trauma and up to six months later. Stoffregen says the research raises the prospect of being able to measure boxers' susceptibility to concussions by examining the relationships between pre-bout body sway, post-bout sickness, and concussion.

The study was published in the October 3 issue of *PLOS ONE*.

ZEROING IN ON SEIZURES

A team of University of Minnesota biomedical engineers and researchers from the Mayo Clinic has developed a noninvasive brain scan that gives additional insight into possible causes and treatments for epilepsy.

Professor of biomedical engineering Bin He from the U's College of Science and Engineering and his team discovered that studying the brain using the new technology immediately after a seizure instead of during, as is currently standard practice, can provide critical information about where in the brain the seizure occurs. Most severe seizures occur in the frontal lobe, and the most common seizures in adults occur in the



temporal lobe. Locating the part of the brain responsible for the seizure is critical to determining treatment. Studying patients during a seizure, or what is technically called the "ictal" phase, has sometimes involved invasive methods such as surgery.

He's team created special imaging technology and a specialized type of noninva-

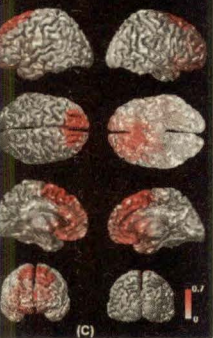


LET THERE BE LIGHT—AND POWER

A team of researchers in the University of Minnesota's College of Science and Engineering has invented a microscale optical device that uses light instead of electricity to power a mechanical switch. The invention uses the force generated by light to flip a mechanical switch on and off at a very high speed.

Lead researcher Mo Li, an assistant professor of electrical and computer engineering, and his team previously found that nanoscale light conduits can be used to generate a strong enough optical force to move mechanically the channel of information that carries light. But the recent discovery is the first time that the mechanical effect has been achieved without first converting optical signals to electricity. The development could lead to advances in computation and signal processing using light instead of electrical current.

The research was published in the October 2 issue of *Nature Communications*.



Brain images showing areas affected by seizures using the new scanning technology

CHEMICAL LEADS FISH ASTRAY

A manmade chemical released into rivers leads to interspecies breeding among fish, according to a study led by a researcher in the University of Minnesota's Department of Fisheries, Wildlife and Conservation Biology.

Jessica Ward's research on Bisphenol A (BPA) determined that the chemical, which emits estrogen-like properties, disrupts a fish's endocrine system, which controls the release of hormones. This affects behavior and appearance, which in turn can lead a fish to mistake a member of a different species as a potential mate.

Previous research on BPA and other hormone-mimicking chemicals has focused on their impact on individual fish, but Ward's study examined the effect on a population level. The research concluded that the presence of BPA poses long-term ecological consequences by breaking down species barriers, leading to a greater likelihood of hybridization and the decline of native species.

BPA is used in the manufacture of polycarbonate and other plastics. Its use is banned from baby bottles and children's cups in 11 states, including Minnesota.

The research was published in the July 10 issue of *Evolutionary Applications*.



sive electroencephalogram with 76 electrodes attached to the scalp, more than double the number used in previous research. The method yielded thousands of data points about the patients that were previously attainable only by invasive means.

The research was published in the August 24 issue of *Brain*.

A TASTE OF RISK

A team of researchers in the University of Minnesota's Center for Drug Design has discovered that diacetyl, an ingredient found in artificial butter flavoring for popcorn, might speed up the progression of Alzheimer's disease.

The team, led by Professor Robert Vince, found that the risk of Alzheimer's increased among popcorn factory workers who were exposed to the compound in large quantities for extended periods of time. Under those conditions, the body's inability to metabolize diacetyl led to its harmful buildup. The small amounts found in a bag of popcorn or other foods have not been proven to result in negative health consequences.

The research was published in the June 25 issue of *Chemical Research in Toxicology*.



RETHINKING CO₂ ABSORPTION

Scientists may have overestimated plants' ability to absorb increased levels of carbon dioxide in the air, according to a new study at the University of Minnesota.

Researchers Peter Reich, a Regents Professor in the College of Food, Agricultural and Natural Resource Sciences, and Sarah Hobbie, a professor in the College of Biological Sciences, concluded that even though plants absorb large amounts of carbon dioxide and can benefit from higher levels of it, they may not get enough of the nutrients they need from typical soils to absorb as much CO₂ as scientists had previously estimated. Carbon dioxide absorption is an



important factor in mitigating the effects of fossil fuel emissions. Their study is based on 13 years of research, one of only three such long-term experiments in the world.

The research was published in the September 30 issue of *Nature Climate Change*.

Discoveries is edited by Cynthia Scott. University of Minnesota Alumni Association members may access many of the journals that publish these studies through the Libraries Online member benefit. Go to www.MinnesotaAlumni.org/Libraries.



The Best Therapy in the

FIRST PERSON

It is late on a Friday afternoon after a trying week at the state psychiatric hospital where I work as a psychologist. The entire month has been taxing, with numerous meetings, mounting deadlines, and rumors of facility closure—all on top of my regular duties with patient assessment and therapy. Exhausted, I make my way home, long overdue for a therapy session of my own.

My wife, Carla, greets me at the door, takes one look at my expression, and says, “Randy, you need a night under the stars.”

I pack my gear with lightning speed and drive from our western Minnesota home to our lake cabin a half-hour away.

The pre-sunset sky is deep blue and calm, not a cloud in sight. I turn off the ignition and make my way over to where my daughter’s trampoline waits on the lawn. No, I do not plan to bounce ever closer to objects on the celestial screen above me. Rather, I had discovered years earlier that the trampoline is a comfortable observing platform for naked-eye (no telescope or binoculars) astronomical observations.

The air is sharply cool for mid-September, but a sleeping bag keeps me warm and a pillow props up my head. I lie in the center of the trampoline, my body’s mass pushing the old, stretched circle of mesh downward. My thoughts turn toward how gravity distorts space-time, and I fantasize about having crossed the event horizon of my own personal black hole, being sucked in toward who knows what?

I gaze upward and recognize the constellation Cygnus (the Swan), but it’s not what I’m looking for or at. Instead, I let my eyes go into a trance-like state. I maintain this wide-field panoramic anti-fixation for several minutes, my way of warming up to more visually focused views as the night unfolds. The distinctive, haunting calls of loons on the lake seem to herald a night of great viewing.

Artificial satellites crisscross the sky, reflecting the rays of a sun that had set almost an hour ago. Some satellites wink as they glide across the silent sky. Then I recall that they tumble

as they move, the shinier parts reflecting the sun intermittently.

Minutes turn into hours as I explore the night sky. Many of the constellations have a mythological origin. When our ancestors looked at the sky, they must have had vividly rich imaginations to see birds, bears, and warriors.

My lower southwestern sky displays the constellation Sagittarius (the Archer). But no matter how many times I’ve viewed it, I don’t see a centaur drawing a bow! However, the brightest stars of this constellation are informally known as the Teapot. I can relate to this vessel, complete with handle. Even a cloud of steam (numerous faint stars and glowing gas) seems to puff from the spout.

The constellation Perseus (the Hero) presents an even greater challenge. I struggle to see the man responsible for severing the Medusa’s head, but I can trace, from memory, the stars forming this constellation and use them as markers to locate the wide Pleiades star cluster near its lower end and the beautiful double cluster of stars just beyond its pointed top.

And when it comes to the classic zigzagging segments of Cassiopeia (the Queen) that form a spread-out “W” (I see no throne-sitting queen), I’m OK with my grandchildren calling it a lazy McDonald’s “M.” After all, Cassiopeia rotates like a clock’s hand around the North Star.

Eighty-eight groupings of stars, connected arbitrarily to outline recognizable figures, make up the official list of constellations. These lines seem to anchor randomly positioned stars as seen from Earth. I ponder how constellations might look from other planets. “Quite different,” is what I tell myself. Time has dated the constellation names that were coined in antiquity and periods of world exploration by ship. Perhaps this pays homage to humankind’s awe when gazing upward at night and simply wondering.

I continue my childhood game of connect-the-dots, recalling outlines seen in celestial atlases. But these dots are actually real stars, so far away that it would take an untold number of human lifetimes to journey to the nearest ones. Even so, I can discern differences in color—ever so subtle at times—among the brighter stars.

When the pressure becomes astronomical, there is only one place to look for answers.

ESSAY BY RANDALL WEHLER // ILLUSTRATION BY SCOTT BENSON

Universe

From one horizon to the other, the broad expanse of the Milky Way, containing roughly 200 billion stars, is positioned right above me. With Earth and our solar system about two-thirds of the way out from our home galaxy's center, we can look into the plane of our galaxy's disk where stars, gas clouds, and cosmic dust appear most concentrated. I imagine myriad other habitable planets like Earth circling stars similar to our sun.

My eyes and imagination loom toward specific deep-sky objects far beyond our own solar system that can be seen without optical aid: several other galaxies, a host of star clusters, pockets of glowing gas clouds, and a smattering of dark dust lanes. Admittedly, the list of what can be seen with the eyes alone is short. How about tonight? What will I be able to see through the pristinely clear and steady atmosphere? I remember not to stare directly at the fainter objects; looking to one side of them stimulates the more sensitive part of my retina.

As the night sky moves ever closer to daylight, no longer am I thinking about deadlines or other demands. Right now, it's just me and the cosmic show.

An occasional streak of a meteor causes me to think about the minute, sand grain- or pebble-sized pieces of rock circling the sun, appearing so luminescent for their tiny sizes when striking Earth's air. Perhaps a larger chunk of rock will intersect our atmosphere and I'll witness the grand flash of a bright fireball called a bolide that seems to explode as it falls.

These infrequent and dramatically bright displays (especially during a major meteor shower) may drop on Earth a treasure for a meteor hunter. But just seeing the intense light of these on a handful of occasions has been reward enough.

The blinking lights of a jetliner prompt me to imagine what the sky views might be like from a passenger window six miles above me. I ponder how bright and powerful the sun is for what astronomers term an "average" star with the rise of an auroral glow that later erupts into colorful beauty, progressing from a pale green to shades of red and bluish purple. I consider how intimate the connections are between Earth and our home star.

Born from an accretion of particles and gas circling the early coalescing sun, the planets are safely locked in place through gravity. Earth developed an atmosphere that protects us from most meteoric bombardments. Earth's magnetic poles shield us from the sun's lethal radiation via magnetic field lines. My thoughts return to lying *alive* on the trampoline, protected by the Earth from the sun (which, paradoxically, sustains life) and from space rocks left over from planetary formation.

I eventually drift off into a nap until the cold of the night wakens me and I return to the cabin. As I ready myself for a good night's sleep, I think of all that can be viewed on a clear night with eyes alone. Such an experience with the sky would be close to seeing it as our ancestors saw it—but, of course, with more light pollution today.

Before turning off my nightstand light, I take inventory of what other types of observation are effectively done by our eyes alone: close-together pairings of planets in the twilight sky, color-changing moon risings and settings, sun dogs, rainbows, solar and lunar eclipses, bright comets. No, I won't be boxing up my telescopes, binoculars, or digital cameras. There are just those times when you want to astronomically "take it all in" as much as your eyes will allow. It is a longing solitude that greets the cosmic appearances.

Many of life's disappointments and frustrations fade when held up to the grandeur of the cosmos. It's a way to take a journey toward something far removed from the pressures and stress—the gravitational pull—of everyday life. To reach out and touch a star, even figuratively, is to lighten one's earthly load. ■

*Randall Wehler (B.A. '70), an amateur astronomer, recently published a historical suspense novel, *Whispers at Willowbrook*, inspired by his 34-year career as a psychologist in a Minnesota state hospital. He lives in Spicer, Minnesota. • First Person essays may be written by University of Minnesota alumni, students, faculty, or staff. For writers' guidelines, go to www.MinnesotaAlumni.org/firstperson.*





Judy Helgen at the Lee & Rose Warner Nature Center near Marine on St. Croix, Minnesota



JUDY HELGEN WANTS ANSWERS

To this day, no one knows what caused the epidemic of deformed frogs found by schoolchildren on a nature hike 17 years ago. Within a couple of years, deformed frogs began showing up around the world. The scientific community moved on from the issue, but retired research scientist and University of Minnesota alumna Judy Helgen is unwavering in her quest to learn what is happening to the frogs—and what it means for the environment.

BY J. TROUT LOWEN ::: PHOTOGRAPHS BY MARK LUINENBURG

"I WAS SORT OF INNOCENT," JUDY HELGEN SAYS. "I DIDN'T PUT IT TOGETHER THAT GOVERNMENT AGENCIES WORKED FOR THE EXECUTIVE [BRANCH] AND THAT MEANS POLITICS REALLY MAKES A DIFFERENCE."



SEVENTEEN YEARS AFTER THE PHOTOGRAPHS FIRST APPEARED in newspapers around the country, looking at Judy Helgen's deformed frogs is still disturbing. The images of those tiny, spotted bodies—some with extra sets of limbs jutting out from places where they don't belong, some with nubs where limbs ought to have been, others with eyeballs gazing out from places where eyes shouldn't be—hit like a punch to the gut.

Helgen (Ph.D. '82), a retired research scientist who spent years investigating the deformed frogs for the Minnesota Pollution Control Agency (MPCA), remembers the first time she saw those misshapen bodies and the worried looks on the faces of the middle school students who found the deformed frogs while on a nature hike in August 1995. Unsure of what to make of the strange frogs, teacher Cindy Reinitz called the MPCA. Helgen describes her first visit to Ney Pond, near Henderson, Minnesota, in her new book, *Peril in the Ponds: Deformed Frogs, Politics, and a Biologist's Quest* (University of Massachusetts Press):

I reached into the bottom of the five gallon pail, its bottom crowded with frogs the students had collected. I grabbed one and then another. The first frog had one rear leg completely missing—like a total amputation except the skin looked normal. The second had a stumpy leg, half the normal length. It swung around uselessly. This is awful, I said quietly. . . . Feeling my stomach churn, I looked up at the expectant faces.

Over the next couple of weeks, Helgen and fellow MPCA research scientist Mark Gernes would examine nearly 200 frogs from Ney Pond, more than 60 percent of them deformed. Over the next year, deformed frogs would turn up in three-quarters of Minnesota's 87 counties, in several other states, and in Canada. What was going on?

In her quest to find out, Helgen became Minnesota's de facto frog lady, the go-to person in an investigation that often pitted her against MPCA higher-ups and state lawmakers who, in her opinion, seemed more concerned with placating the farm lobby than protecting the environment.

But 17 years later, the investigation into deformed frogs has grown as cool as the skin of a Northern Leopard Frog fresh from the pond. The MPCA shut down its frog research in 2001, and while deformed frogs continue to turn up across the country and around world, no one has yet found a clear and compelling answer to the question: What's happening to the frogs?

That question has continued to preoccupy Helgen in the 10 years since she retired from the MPCA. Her concern isn't just for frogs, she says. They're an indicator species, and frog health reflects the health of the environment. Frogs breathe and "drink" through their skin, which also easily absorbs pollutants, and biologists believe frogs can alert us to threats to human health.

At the time, many researchers accepted the theory that trematodes, parasitic worms, were the cause of frog deformities. Much of the attention has since shifted to mass deaths of frog populations and species extinctions occurring around the world and the spread of chytrid fungus that is believed to be the cause.

"Deformed amphibians—they're not a big issue right now," says Michelle Boone, an amphibian research scientist at Miami University of Ohio who has been studying the impact of pesticides on frogs for nearly two decades. "I think in part it's disappeared because people thought it had been answered."

Helgen's book challenges the trematode theory, Boone says, and provides new evidence that chemical pollutants may play a significant, if not exclusive, role in frog deformities. "I think it opens more questions than it answers, which is what good books do."

Even during her investigation, Helgen says she knew she'd one day return to the frogs. She kept copious notes, e-mails and correspondence, newspaper and journal articles—enough to fill six large plastic containers. Four years ago, she decided it was time to dust them off and get to work, before the deformed frogs were completely forgotten.

"It used to be there were a lot of articles on amphibian decline. Where do you ever hear anything now?" Helgen asks. "Nobody's looking. Not even the students down at the Ney Pond."

TESTING THE SCIENTIST

A slender woman with close-cropped silvery hair, Helgen seems to have lost none of her passion in retirement. She puts on a pot of coffee before sitting down at her kitchen table to talk about the frogs, but she's off and running before the first cup is poured. She leapfrogs from topic to topic, a newspaper article on the impact of hydrofracking on North Dakota's waterfowl, the weakened state of environmental protection, an eco-toxicology workshop she attended at the World Congress of Herpetology, and her next book topic: women in science, an idea inspired by her mother.

Helgen's career as a research scientist seems predetermined. She grew up outside of Boston in Winchester, Massachusetts, an upper-crust town adjacent to the working-class community of Woburn, made famous in the book and movie *A Civil Action* for industrial groundwater contamination and cancer clusters in the 1970s.

She is the daughter of scientists. Her father was a chemist and pharmacist, and her mother majored in microbiology and was Phi Beta Kappa at the University of Southern California in the 1920s.

Although her mother gave up her career for reasons she never fully shared, Helgen says the decision left her bitter. "And yet, when she would talk about teaching and talk about what she'd done, she would glow," Helgen recalls. "It was very puzzling."

In college at Mount Holyoke, Helgen planned to major in zoology, news that prompted her mother to send her an angry letter, detailing her experiences in the sciences, including being shunned in meetings. She also admonished her daughter that a woman should have one degree less than her husband. "She had a master's and dad had a Ph.D.," Helgen says.

Helgen earned her master's degree in zoology and cell biology at Columbia University, got married, and moved to Washington, D.C., where she got her first taste of social activism by demonstrating against the Vietnam War with her toddler son



Helgen saved hundreds of magazine and newspaper articles published over the course of her investigation of the deformed frogs.

in tow. When her husband fell ill, however, Helgen decided to return to school and reignite her career. They moved to Minnesota to be closer to his family, and Helgen was accepted into the University of Minnesota's graduate program in zoology to study aquatic ecology.

She found things hadn't changed that much for women since her mother's day. "There was plenty of rabid sexism in the zoology department," Helgen says, and tells a few stories. Helgen says that she and other female grads also noticed that they were routinely left out of informal academic discussions, so they began meeting on their own at Coffman Union.

"The first time we met, we all had to unload the sexism stuff," she says. "After that, we each took turns and would talk about our research. Without that group of women, I don't know how many of us could have made it through."



IT WAS CLEAR THE
PROBLEM WAS
WAY BIGGER THAN
MINNESOTA, OR EVEN
NORTH AMERICA.
DEFORMED FROGS
WERE SHOWING UP
IN JAPAN AND RUSSIA.
THERE WERE OTHER
DISTURBING REPORTS,
TOO, OF FROG
POPULATIONS DYING
OFF AND SPECIES
EXTINCTIONS.

PESTICIDES AND POLITICS

Helgen came under a different kind of pressure at the MPCA. When she and Gernes began investigating whether chemical contaminants, especially pesticides and herbicides used in agriculture, could be causing frog deformities, it became clear to her that the agency wasn't interested in upsetting the farm lobby, something that became even clearer in hindsight, she says.

"I was sort of innocent," Helgen says. "I didn't put it together that government agencies worked for the executive [branch] and that means politics really makes a difference."

Helgen had joined the MPCA in 1989 on a short-term research project looking at the ecology of organisms inhabiting sewage ponds. She had also been involved in studying the health of freshwater invertebrates. At about the same time, the MPCA was shifting its focus away from punitive enforcement toward a more cooperative regulatory strategy. By the mid-1990s, as the frog investigation was moving into high gear, Helgen says her passion for frogs had begun to clash with the agency's new approach.

Frog research was taking up too much time and money and angering too many people inside and outside the agency. Helgen's request for information about the Department of Agriculture's sampling protocols for pesticides sparked criticism, purportedly from chemical company representatives, that the MPCA was on a "witch hunt." Helgen and Gernes were repeatedly threatened with funding cuts and, after Governor Jesse Ventura took office, with the loss of their jobs when funding for wetlands research was slated for elimination from the state budget. Regardless, Helgen felt obligated to forge ahead. If something in the water was causing these deformities, then humans, too, could be affected. She wanted answers.

Theories abounded: Had predators nipped limbs? Was it a fungus or disease? Climate change? Even radioactive fallout was considered, along with a host of chemical contaminants. That first winter, tests conducted on embryos from Ney Pond frogs showed deformities even at the earliest stages. The finding was alarming, not just for frogs but because of its implications for human health.

Then, in the summer of 1996, the deformed frog problem blew up into a statewide phenomenon. By the end of that summer, deformed frogs had been found in 172 locations in 55 counties. The epidemic was attracting attention from the Environmental Protection Agency and the national news media. Other states were reporting deformed frog problems as well, and scientists from other states got involved. The theory that trematodes were the cause was gaining credence, much to Helgen's dismay. She was certain that the parasites, which were part of the ecosystem long before frog deformities began to appear, weren't the cause. She argued that more research was needed, and, indeed, the trematode theory has since been debunked.

Reports of deformed frogs continued to pour into the MPCA in 1997. Helgen and Gernes were no closer to finding an answer, although pesticides seemed a likely culprit. At an international conference on frogs Helgen attended in Prague that summer, it was clear the problem was way bigger than Minnesota, or even North America. Deformed frogs were showing up in Japan and around nuclear plants in Russia. There were other disturbing reports, too, of frog populations



Helgen holds one of the preserved deformed Northern Leopard Frogs that she donated to the University of Minnesota's Bell Museum after the MPCA ended the investigation.

dying off and species extinctions as far away as New Zealand. A British scientist reported on a new disease-causing fungus, *Batrachochytrium dendrobatidis*, now known in shorthand as Bd or chytrid fungus, which would soon become a lethal epidemic among amphibians worldwide.

Given the rapidly expanding scope of the frog problem, MPCA leadership was increasingly reluctant to allow Helgen and Gernes to continue the investigation. Both were supposed to be developing biological indexes for invertebrates and plants that would help monitor the quality of the state's wetlands.

In her book, Helgen documents her frustrations with the competing demands and her battles with government officials in minute but gripping detail. "It dredged up a lot of memories," Gernes says of the book, "and not all the memories were necessarily all that pleasant. There were a couple of things I would just as soon almost forget."

Gernes, who worked side by side with Helgen, confirms her account but adds that his interpretations didn't always jibe with hers. "She's a very passionate person. Strong convictions," Gernes says. "We complemented each other in a number of ways. I tend to be a little bit more the bureaucratic type. I can

work the system a little bit more. . . . Judy, I don't know that she has much patience for some of the process of bureaucracy."

Helgen and Gernes managed to keep the frog investigation alive for a few more years. But in 1998, the MPCA was embarking on a reorganization plan and deformed frog research wasn't in it. In June 2001, the MPCA formally announced it was ending the frog investigation. Helgen retired from the MPCA the following year. Although the agency still maintains a web page about deformed frogs, it has taken no action on the issue in more than a decade.

WHAT DEFORMED FROGS?

In retrospect, Helgen agrees that the frog problem was too big and too complex for the MPCA, but she is still frustrated that the agency has stopped even monitoring it. "Maybe every other year they could send a crew out to visit some hot spots," she suggests. "If they don't look, there might not be a problem to deal with. It's sort of Kafkaian."

But the MPCA has shifted its focus to monitoring the health of wetlands' plants and microinvertebrates (insects, snails, crustaceans, and leeches), work Helgen and Gernes helped develop. Reports of deformed frogs have dropped off consistently since 2001, points out Ralph Pribble, the MPCA's public information officer. The last report of a significant population of deformed frogs came from the Hibbing area around 2007, he says.

Without knowing what is causing frog deformities, Gernes says, the agency can't really do much. It can't formulate new regulations against an unidentified threat. "The evidence suggests that there is reason to suspect that pollutants can cause these sorts of things, but when you look back during the investigations, it's not always consistent," he says. "So, from an agency response, you'd like to have a more reliable indicator . . . something you can take action on."

Some answers may be available soon. In 2000, alarmed by the decline in amphibian populations across the country, Congress directed the U.S. Fish & Wildlife Service (USFWS) to begin monitoring frog abnormalities in the country's 500 federal wildlife refuges. The USFWS is currently crunching numbers on a survey of frogs on 142 refuges where significant deformities were found between 2000 and 2009.

The study's release has been delayed, and Fred Pinkney, a USFWS field officer involved in the survey, is tight-lipped about the findings. But a recent USFWS report that looks in-depth at frog deformities on the Kenai Refuge in Alaska may offer some clue to the survey's contents. The Kenai study found an association between abnormalities and the proximity of frogs to a road.

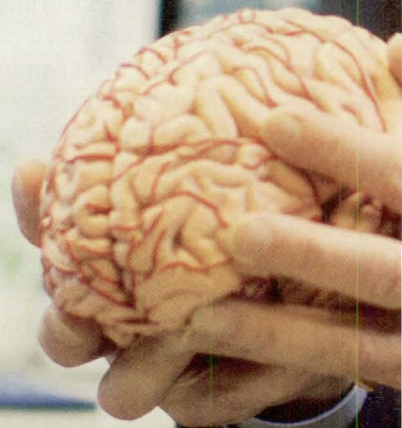
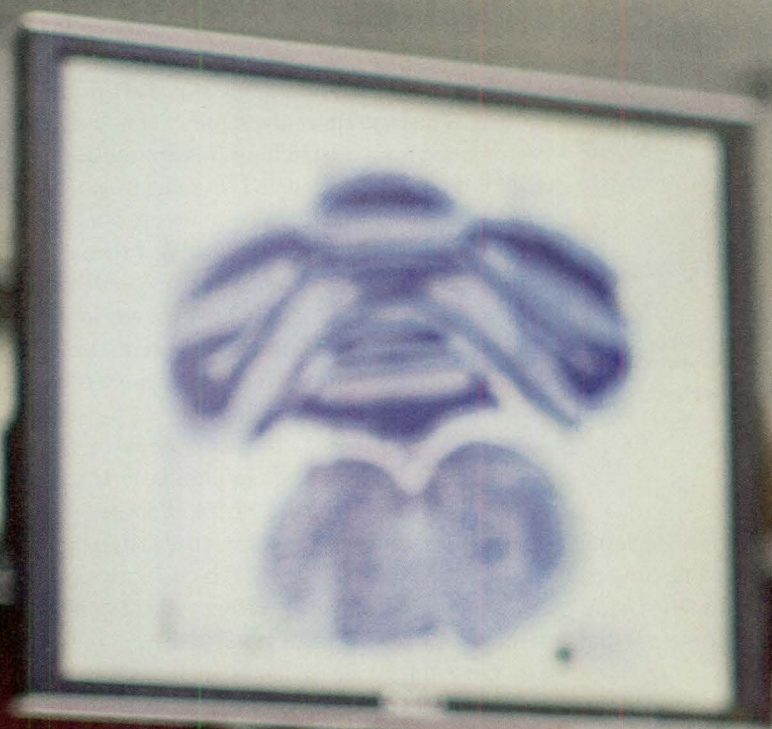
For her part, Helgen says she tries to remain optimistic that an answer will be found, and she draws inspiration from the kids who started it all at Ney Pond. Two of those students now work at the Ney Pond nature center, one as its director. They aren't likely ever to forget finding those deformed frogs, and now they're raising and teaching other kids to have a greater awareness of the importance of preserving our ecosystem and all its parts. Helgen finds some solace knowing that the future is in their hands.

"It's the kids," Helgen says, "and it's the teachers." ■

J. Trout Lowen (B.A. '89) is a Minneapolis-based writer and editor.

FUTURE FORWARD

The University of Minnesota is seeking \$18 million in state investment for a new program intended to advance the state's economy and tackle some of its most pressing challenges. If funded, MnDRIVE (for the Minnesota Discovery, Research and InnoVation Economy) will get rolling in 2014. But U faculty are already leaders in these four targeted areas: food security, neuromodulation, robotics, and bioremediation.



BY GREG BREINING AND RICH BRODERICK

PHOTOGRAPHS BY SARA RUBINSTEIN



“For many neurological diseases—and there are a lot of them and they affect lots of people and cost a lot of money—we do not have many good tools yet to improve function, let alone cure patients,” says **Timothy Ebner** (B.S. ’71, M.D. ’79, Ph.D. ’79), head of the Department of Neuroscience at the University of Minnesota. But that could soon change with advances in neuromodulation, a class of therapeutic techniques in which the activity of brain cells and circuits are modulated in ways that relieve symptoms and even cure illness.

Neuromodulation is already used with success in treating patients with Parkinson’s disease, but the techniques also hold promise for Alzheimer’s, chronic pain, Tourette’s syndrome, stroke, dystonia, and even difficult-to-treat psychiatric problems like schizophrenia and obsessive compulsive disorder.

In recent years the U has been ramping up its neuromodulation efforts, Ebner says, hiring faculty specializing in the field and initiating research into a number of disorders, including a

TREATING BRAIN CONDITIONS

clinical trial under way into the possible use of neuro-modulation to treat refractory depression—the kind that does not respond to medication.

Neuromodulation also holds promise for treating episodic ataxia, a disorder in which patients experience temporary but often debilitating loss of motor control and balance. The disorder is caused by dysfunction in the cerebellum, and one of its debilitating aspects is its unpredictability. Armed with the knowledge that episodic ataxia can be triggered by caffeine for patients who have the disorder, Ebner’s research team induced episodes in mice specifically bred to develop the disease, monitoring brain activity in the mice with imaging technology.

They discovered that, during an attack, some neurons oscillate so strongly that they become impervious to normal brain signals. As the oscillations spread through the cerebellum, the mice displayed classic symptoms of ataxia. When the oscillations came to a halt, so did the symptoms. Though neuromodulation techniques cannot yet treat episodic ataxia, such advances make treatment, or perhaps even a cure, a distinct possibility.

Meanwhile, Ebner stresses the economic potential of neuromodulation for Minnesota. The state’s medical devices industry is already a leader in the field, with Medtronic alone accounting for 59 percent of market share for neurostimulation devices, followed by St. Jude Medical and Boston Scientific. Today, these three companies generate revenue of about \$2.3 billion from this particular market, but total sales from neuromodulation are expected to rise to nearly \$15 billion worldwide within five or six years. With proper investment, Minnesota could find itself at the forefront of that growth.

Says Ebner: “It would be nice if [the state] were still getting about 50 percent of that.”

—R.B.



Maria Gini, a Morse-Alumni Distinguished Professor in the College of Science and Engineering, likes to keep a couple of small robots on chairs next to her desk.

Manufactured by French company Aldebaran, the blue and orange NAO (pronounced “now”) robots were specifically developed to play in an annual robot soccer tournament. The reason Gini, associate head of the Department of Computer Science & Engineering whose research areas include artificial intelligence (AI) and robotics, keeps the toylike devices on display is twofold. First, outfitted with cameras and face- and communication-recognition software, the 23-inch-high robots embody a state-of-the-art answer to making robotic devices fully mobile and interactive.

Second, the NAO robots are likely to draw the interest of a certain student demographic Gini wants to attract to her field.

“Because they’re cute and look like children, girls are more likely to be interested in them,” she explains.

Gini got into robotics more than 30 years ago by way of a fellowship in Stanford University’s AI laboratories. At the time, the entire field was focused on industrial uses of stationary robotic devices, but her team began to insert cameras into the equipment to help control motion. Mobility soon outstripped manipulation as the cutting edge of robotics; today, Gini says, the forefront of research is in robots that interact with other robots—or with people—based on a constant flow of two-way feedback. “With

distributed robotics, you can have many robots assigned specialized tasks and working together, or several robots doing the same task but operated by one person,” Gini explains.

Industrial uses for robotics will continue to grow, but Gini expects major growth in nonindustrial areas as well, such as automated flying robots to check crops or traffic. “The technology for this is ready; it will just take time to commercialize it,” she says. “And on the medical front, there’s continuing develop-

ment of mini-robots that can be inserted into the body, not just for surgery, but for diagnostic procedures.”

Although the large computer companies in Minnesota are gone, they left behind “a creative workforce that went on to start their own com-

panies in programming, software, design, and medical devices. Robotics are included in all of these fields,” she says. And many have strong U of M connections, including ReconRobotics, whose micro-robot systems are based on technology developed at the U.

Gini also believes robotics offers a special pedagogical advantage. “I am very passionate about education, and I think robotics presents unique potential as a tool to engage the younger generation,” she says. “Students are already hooked in with things like smart phones. I just take them a step further and ask, ‘Do you want to be a user of technology or an inventor of technology?’

“Most of them will answer: ‘An inventor of technology.’”

—R.B.

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A global food system is vulnerable at many points and from many causes, whether drought, wars, embargoes, terrorism, climate change, or foodborne illness. Better protecting that system is one of **Francisco Diez-Gonzalez's** goals.

Meeting that challenge is especially important to Minnesota, where food and agriculture make up the state's second-largest industry, with 80,000 farms and 2,300 food companies generating more than \$15 billion in agricultural products each year. And it requires a holistic approach, tapping researchers working on supply chain analysis, new food processing and preservation solutions, and novel animal health and welfare studies. "We're thinking of bringing new leaders, new innovators, and we're going to be looking at the whole aspect of food supply," says Diez-Gonzalez, a professor of food safety microbiology at the University of Minnesota.

Diez-Gonzalez's specialty is identifying, tracking, and controlling the organisms, such as *E. coli* and salmonella, responsible for foodborne illness. Industrial-scale farming and trade spread pathogens around the world. "We are seeing more and more foodborne outbreaks that are actually related to international trade," he says. For example, the 2011 *E. coli* contamination of organic bean sprouts in Germany killed 53 people and sickened some 4,000 in several countries.

Yet large industrial farms aren't solely responsible for foodborne disease. Consumer interest in local and "natural" foods, such as unpasteurized milk, creates other contamination issues. "This is an issue we thought was settled many, many decades ago," Diez-Gonzalez says. "But because people started believing

that raw milk was good for you, we're seeing increased numbers of people getting sick with this."

Much of Diez-Gonzalez's current research involves a family of pathogens known as enterohemorrhagic *E. coli*. Unknown before 1982, it is now a common and deadly bacterial contaminant of the global food supply. Diez-Gonzalez has been investigating how *E. coli* interacts with plant tissues at the molecular and genetic level to attach, survive, and proliferate on produce. Recent breakthroughs in technology allow scientists to analyze the expression of large numbers of genes simultaneously to determine how microbes metabolize and behave. By better understanding these mechanisms, Diez-Gonzalez hopes to devise new and better ways to decontaminate food before it reaches the consumer.

He's using similar analysis of the gene expression of salmonella to understand how that disease-causing bacteria stubbornly survives long periods on dry foods, even when subjected to roasting temperatures. He is also fighting microbes with microbes: combatting foodborne illness with bacteriophages, the viruses that attack bacteria. In recent projects, Diez-Gonzalez's lab has shown that a "cocktail" of bacteriophages effectively kills *E. coli* on lettuce leaves and surfaces of stainless steel, tile, and plastic.

Says Diez-Gonzalez: "Right now food is one of the ideal topics to invest in for the future of Minnesota—in particular the efforts of the University to make sure that the food products are going to continue to be safe, secure, and abundant."

—G.B.

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Michael Sadowsky wants to enlist an army to clean up industrial pollution that, left untreated, would stymie Minnesota industrial development, especially mining and agriculture. His troops are a variety of invisible microbes.

Agriculture, Minnesota's second-largest industry, and mining, which employs 4,200 in taconite mining alone, both produce water pollution. "My part of this larger project is trying to advance industry while at the same time conserving our environment," says Sadowsky, director of the University of Minnesota's BioTechnology Institute.

That's where the microbes come in. In a process called bioremediation, microorganisms clean up contamination from mining, agriculture, and natural gas exploration.

For example, fish farming in the abandoned open-pit mines of the Iron Range has contaminated the water. Various species of microbes can restore water quality by removing nitrates. "This concept is not novel," Sadowsky says. "It's the way a fish tank works to remove nitrogen toxicity." Different microbes metabolize and remove different materials. "So you have to understand what the microbes do on an individual level, understand what they do together, and then understand the ecology of that system."

One pressing issue is the anticipated development of sulfide mining for copper and other metals in northeastern Minnesota. This has the potential to produce acidic drainage, nitrate pol-

lution, and heavy metal contamination. "Fortunately, we have a lot of really good faculty here who understand microorganisms and their relationship to metals," Sadowsky says. "We'd like to harness these microorganisms for some of these mining projects to help minimize environmental impact."

Fracking—the practice of injecting water, sand, and various hydrocarbons at high pressure into petroleum formations to stimulate the flow of oil—has vastly boosted production of oil and natural gas in the United States. (It has also led to profitable mining of "frac sand" in southeastern Minnesota.) Left untreated, fracking fluids are a threat to drinking and surface water.

Bioremediation may come to the rescue. U of M researchers are developing technologies that encapsulate bacteria in silica materials to degrade the toxins in the fracking fluids "to save water and to avoid allowing those chemicals to enter the environment," says Sadowsky. "So that's nature working for you, because petroleum is a natural product and microbes have evolved to degrade those natural products."

Investment in the U's bioremediation research would allow the hiring of more faculty experts, says Sadowsky. "Right now we have some of the power needed to approach these issues. But having more faculty focused in selected groups that approach these as a team is a much more effective way of dealing with this research."


—G.B.

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Greg Breining (B.A. '74) and Rich Broderick (B.A. '76) are St. Paul-based writers.

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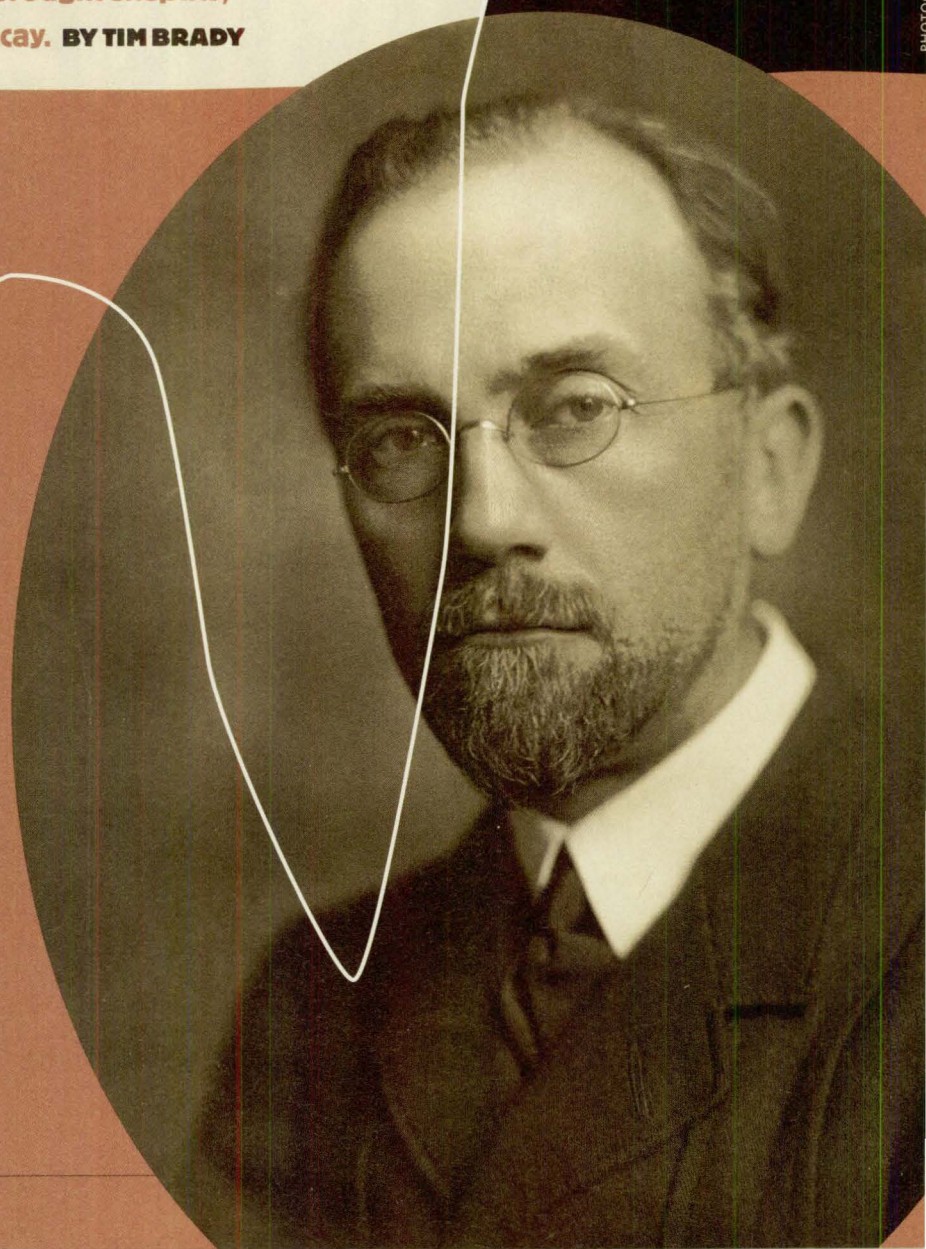
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MOLAR AUTHORITY

Dr. Alfred Owre set the standard for excellence in dental health education at the University of Minnesota and across the nation nearly a century ago. But his visionary ideas for dental health reform and affordable dental care brought skeptics, criticism, and career decay. **BY TIM BRADY**

Dr. Alfred Owre, pictured in 1920, built the U's College of Dentistry into one of the nation's foremost dental education schools.

Opposite page:
University dentistry
students in 1932





Few characters strolling the campus of the University of Minnesota in the first two decades of the 20th century cut as distinctive a figure as Dr. Alfred Owre, dean of the U's College of Dentistry from 1905 to 1927. Rail-thin and goateed, eyes fixed on the horizon, carrying a walking stick, and moving at a pace that would suggest he was just starting off on a long journey, Owre was a man who tended to concentrate more on what was down the road rather than the territory he'd already passed through.

A modernist in a variety of senses, Owre was not only an innovative advocate within the dentistry school, arguing

for a more scientific approach to dental education and instituting for reforms that implemented those ideas, he was also a forward thinker in matters of health, exercise, diet, politics, and culture.

Owre's personal habits were a bit unusual, to say the least. Like a figure out of an E.M. Forster novel, he both lived in the workaday world of the new century and at the same time followed his own distant drummer. There was, for instance, the time he decided to cap a Christmas holiday in Chicago by taking a brisk walk home—that would be 400 miles back to the Twin Cities, into a stiff westerly wind—just for the sport of it.

Or that day in London, when from the top deck of a horse-drawn bus he spied a Chippendale chair in an antiques shop below. Leaving a companion in mid-sentence, Owre leaped down from his second-level perch on the moving bus and raced off to claim the piece before some other collector happened by and grabbed it first.

While he appreciated a variety of *objets d'art*, the principal focus of Owre's collecting was cloisonné—that form of decorative arts in which enamel or jeweled inlays are fitted into compartments (cloisons) attached to metalwork pieces. He eventually built one of the world's greatest collections of cloisonné.

During a lifetime of prodigious hikes, he managed to walk across the United States, Japan, parts of China, Russia, and much of Europe. Each of his strolls he divided into hours and “owries.” Pronounced just like his name, an owrie was the final 10 minutes of each hour on a journey, during which he faithfully rested and nibbled on dark chocolate.

Owre maintained a strict 2,000-calorie-a-day diet, almost completely devoid of meat and sugar. He ate only breakfast and dinner, skipping lunch in favor of a simple glass of water, and wrote a guide to health and nutrition called *Prunes and Pancakes* (published by the University of Minnesota Press in 1926), which forwarded the then-novel theory that healthy gums were related to a healthful diet.

Through all these eccentricities, Owre remained the University's and the state's ascendant leader in dentistry, as well as a national figure in dental reform. He built the U's College of Dentistry into one of the



Owre, pictured in 1914, was known for his long hikes. He walked across the United States, Japan, and much of Europe.

foremost dental education laboratories in the land. By the time he left Minnesota to take a position as head of Columbia University's school of dentistry, Owre was considered the leading dental reformer in the United States and an advocate for what many considered radical changes in the profession. It was this progressive thinking—and consequent objections to it—that would ultimately lead to Owre's professional downfall at Columbia. Some even suggested that the conflict over his ideas and reforms wound up causing the decline in his health that brought on a premature death, in 1935.

All of this was the distant future when Alfred Owre arrived in the world in 1870. Conceived in the United States by parents in the process of emigrating back to

their native land, Owre was born in Norway to Lars and Laura Owre. His family proceeded to spend the next 14 years in the old country before returning once again to Minnesota, where Alfred's father took a job with the city of Minneapolis as the town's “poormaster”—head of the economic welfare office. Lars Owre's concerns for the downtrodden of the world would be passed on to his son and displayed throughout Alfred's career. So, too, would a sense of idealism, high-mindedness, a progressive political bent, and a strong feeling for religious egalitarianism. (Lars had brought his family back to the United States from Europe in part because of his dislike of the Norwegian state church. Both he and Alfred subsequently became Quakers.)

Alfred spent his teenage years in the bustling city of Minneapolis. His father's income, while adequate, didn't allow for luxuries like a college education, so Alfred worked to raise money for college, first in a hardware store and then as bill collector for a local doctor. It was this physician, a fellow Quaker named Clarkson Lindley, who ultimately helped pay for Owre's education at the University of Minnesota, which began in 1891 with Alfred's acceptance into the College of Dentistry.

The study of dentistry had for years been closely linked with the study of medicine, as a department within that college. But Owre's class was the first admitted to a dentistry school that now stood as a separate entity. Owre quickly proved himself an excellent student. He also apprenticed (a common practice for students in the day) with a local specialist in prosthetic dentistry. In addition to evident intellectual gifts, Owre exhibited a great deal of the manual dexterity necessary for the profession. He graduated from the College of Dentistry in 1894

Owre grew increasingly vocal in his criticism of the rising cost of dentistry and the lack of care provided to the poor.

with honors, and then took degrees in medicine and surgery as well.

Dr. Owre began his professional career working at the Minneapolis City Hospital, as well as doing dental work for the poor through his father's offices. He

also maintained a private office within the city's Masonic Temple. Neither of these endeavors was particularly lucrative. To further supplement his income, he became an instructor in the U's College of Dentistry, teaching metallurgy and operative techniques.

With the limited funds he was able to save, Owre began spending his summers tramping around Europe. He traveled as cheaply as possible, which is how he picked up what became an inveterate need to hike. These long walks in turn gave birth to his art collecting. While hiking over the untrammelled byways and back alleys of England, Austria, France, Norway, et al, Owre found just the sort of bargains and rare finds that trolling collectors still hunt for in remote places. The fact that he dressed one notch above an itinerant, in a slouch hat and battered knapsack, helped him negotiate affordable prices for the pieces, which he then shipped back to an apartment on Portland Avenue in Minneapolis. This home, soon crowded with cloisonné,

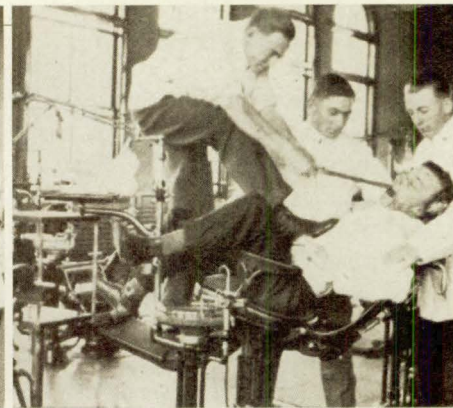
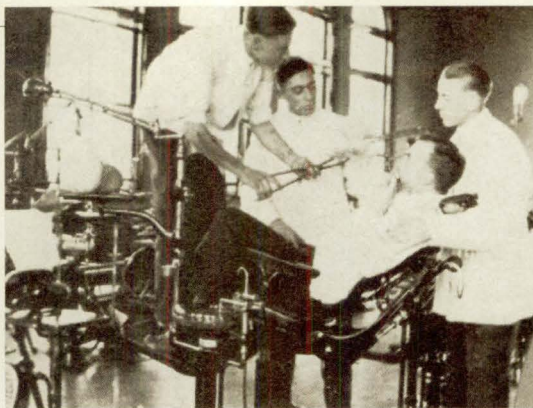
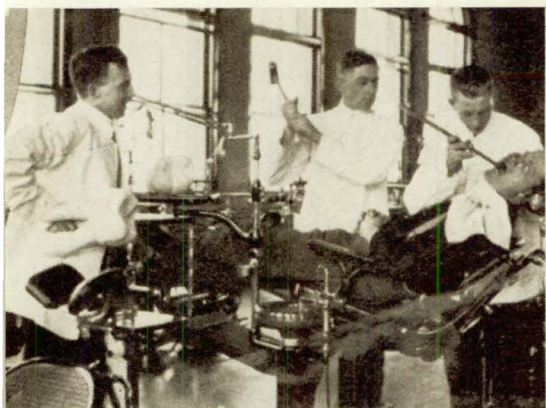
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Hamming it up in the 1914 *Gopher* annual, College of Dentistry students demonstrate particularly difficult tooth extraction procedures.

Chippendales, and books, came to be a salon for some of the brightest minds at the University, including the poet Arthur Upson and Oscar Firkin of the U's English department.

Owre continued to summer in either Europe or Asia until his marriage in 1915 to Franc Charlotte Hockenberger, an assistant to the dean of women at the University. Together they had two children, Alice and Alfred Jr., and led, by all accounts, a happy life in Minneapolis and New York, although Owre's trips abroad came to a temporary close after his mar-

riage and the outbreak of war in Europe. In all, he made 31 ocean crossings before he had to cool his peripatetic heels.

During all these wanderings, Owre's career at the University was ascending. First came a full professorship at the College of Dentistry in 1902, and then two years later an offer, when he was just 34 years old, to become the college's dean.

Owre accepted, assuming his office at a time of great growth in American education. The agrarian economy was being slowly supplanted by an industrial one, which required higher levels of

education in its workforce. The number of students entering college across the nation quadrupled from 1900 to 1925. Interestingly, however, the number of dental school graduates dipped during that same period. The same changes that necessitated a better-educated workforce also demanded a higher level of expertise in its professionals, including dentists. To help foster better quality, entrance requirements for dental school applicants were made stricter across the country by the Dental Faculties' Association of American Universities. In 1903, the requirement had been set at two years of high school; in 1908 it was four.

At the same time, length of study at college was expanded. Soon after becoming dean, Owre instituted a six-year degree program at the U. Three years of general undergraduate studies were followed by three years in dentistry; a bachelor's degree was awarded after the fourth year of studies and a degree as a doctor of surgery came after the sixth.

Owre carried the idealism and progressive thinking that characterized his personal life into the deanship with him, but joined it with the sort of practicality and discipline of the man who made certain to end every hour of a hike with dark chocolate and an "owrie." He envisioned a dental college that would be a solid part of the University experience, with dental students taking a variety of courses, including those in the liberal arts. At the same time, he emphasized both the scientific nature of oral medicine and the mechanical nature of dentistry. Dentistry students at the University of Minnesota were expected to diagnose, research, and prescribe, as well as know metallurgy and how to work properly with dental equipment.



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It wouldn't hurt if they knew about the classics of literature as well.

Despite the strictures imposed by the new dean, the school thrived under Owre. The College of Dentistry maintained both a high number of students and an increasingly high standard of excellence. Owre monitored his students closely and was not averse to weeding out those who couldn't keep up. This discipline and oversight ensured that a University of Minnesota-trained dental student was almost certain to pass the state board exams.

At a time when the study of dentistry was being dragged into a new era of higher standards of oral medicine and dental care, the U's College of Dentistry, with Dean Owre at the helm, was leading the way and gaining renown in the process. As the author of the first history of the University of Minnesota put it, "So enormously effective was he in elevating the standards of his profession that Minnesota became known to people who had no other association with it as the place where they really understood teeth. Dentists in Paris have been known to go into Gallic rhapsodies at the very mention of the name of Owre."

Owre's name signified excellence in dentistry on this side of the Atlantic as well. In 1921, the Carnegie Foundation and another leading figure of dental reform, Professor William Gies of Columbia University in New York, asked the Minnesota dean to help create a national survey of dental education practices. During the process, Owre promoted and refined his thinking about dental reform.

However, not all was sweetness and light during Owre's years at Minnesota. He ran afoul of many in the community for his antiwar sentiments during the buildup to U.S. entry into World War I. He redeemed himself in their eyes by volunteering for service when the United States eventually did enter the war, in 1917. A more serious problem from a professional point of view was the growing criticism of Owre's ideas from within the dental profession.

As well as promoting a more specialized practice of oral medicine, dental schools should advocate for more affordable dentistry for the masses, Owre

argued. This would be provided by an increased effort to teach technical dentistry at a vocational level, thus providing more dental technicians to treat more people in a cost-effective manner.

While this essential division remains a matter of professional interest in dentistry to this day, with most now agreeing with his basic premises, in Owre's time his ideas were met with collective skepticism from dental professionals in Minnesota, in New York (following his move to Columbia University in 1927), and around the country as he broadcast his ideas through writings and dental education associations. Owre didn't help his cause by trumpeting examples of dentistry in Europe and, ultimately, the Soviet Union.

Dentists and dental colleges, fearful of diminished practices through Owre's reforms, rallied against him. His years at Columbia were marked by near-constant squabbles over his leadership there. Owre grew increasingly vocal in his criticism of the rising cost of dentistry and the lack of care provided to the poor. He was forced to take a leave of absence from Columbia in 1933 and further inflamed matters by using the time to visit the Soviet Union, Hungary, and Austria and then proclaimed the felicitous benefits of socialized medicine and dental care.

Columbia ultimately forced Owre to resign in 1934 and he died just a few months later, the day after New Year's 1935, following the rapid onset of pulmonary tuberculosis.

Back in Minnesota, Owre was honored with a widely attended memorial service, during which his idealism and character were saluted. A dozen years later the dean of the U's dentistry school, William Crawford, and the school's faculty, voted to rename the Medical Sciences building on Washington Avenue after Alfred Owre. Owre Hall stood for more than 50 years. On its site now is the Molecular and Cellular Biology Building.

But perhaps a more fitting tribute to Owre, a man always with his eye on the future, is the simple fact that his visionary ideas about dental education and reform are taught widely to this day. ■

Tim Brady is a writer living in St. Paul and regular contributor to Minnesota.

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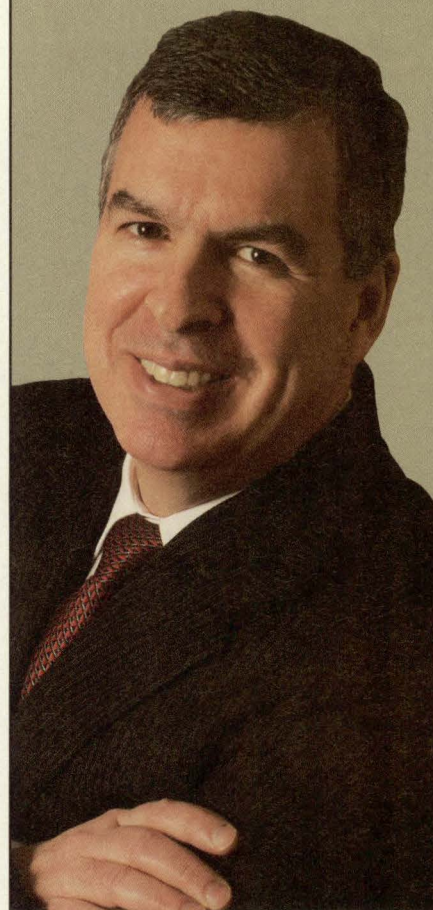
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Old School Mentor

Gary Wilson is on a last-name basis with his athletes. They are to call him Wilson—not Coach, not Mr. Wilson, not Gary. In an odd way, it's one of the traits—along with his bluntness, high standards, and insistence on maximum effort—that endears him to the many women who consider him a mentor.

Wilson will retire next spring after 45 years of coaching, 28 of them as head coach of Gopher women's cross country. "After 36 years of marriage my wife, Suzy, deserves a bit of my time. Without her support, this program wouldn't be where it is today," says Wilson, who took the Gophers to the NCAA championships for the first time in 1989 and 13 times since.

Behind the white moustache, the glasses, and the gruff exterior, Wilson cares deeply about his runners, even while chewing them out. "Nobody leaves my office without me giving them a hug, even if I've just said, 'This is nuts, you're not going to do it,'" Wilson says. "Maybe that's old school. But to me, it's the only school."

Wilson influenced a number of former runners who are now coaches, none more so than Sarah Hesser (B.A. '06, M.S. '10), who will succeed him as head coach. Hesser, a former Gopher walk-on and team captain, spent eight years as an unpaid assistant to Wilson and turned down paying jobs at other universities to stay and learn from him. "This job has always been my dream job since I decided I wanted to be a coach. It's hard for me to envision myself coaching anywhere else," she says.

Wilson wasn't always a champion of female athletes. Barbara Hartwig ran on his team at the University of Wisconsin-La Crosse, his last stop before coming to the U in 1985, and recalls that at the first team meeting he proclaimed himself a chauvinist with no interest in coaching women. And she remembers getting an earful when she called Wilson on a Sunday night asking about the next day's workout, when he had already spelled it out in practice.

"Sometimes it stung a little bit when he was blunt," says Hartwig, who is in her 24th season coaching women's cross country at the University of Rochester. "But we appreciated it, because we knew where we stood. It helps me talk to my athletes—sometimes, you've just got to put it the way it is."

Over time Wilson's chauvinism went by the wayside. "The women will listen to you and give it everything they've got, while the men are like, 'You've got to prove to me what you say you are.' I've always said, women should coach men and men should coach women. Sometimes you get too much estrogen in the room with a female coach and female athletes. And for sure you get too much testosterone with males coaching males," he says.

Wilson has no doubts about Hesser's ability to carry forward what he built at the U. "As an old coach, you look for somebody to carry on the legacy of good coaches in the country," Wilson says.

"Who do we want to leave it to? We leave it to people who care about kids, not just winning."

—Pat Borzi

Left to right: Sarah Hesser, Gary Wilson, and Nikki Swenson. Hesser will succeed Wilson as head coach, and Swenson is a volunteer assistant coach.



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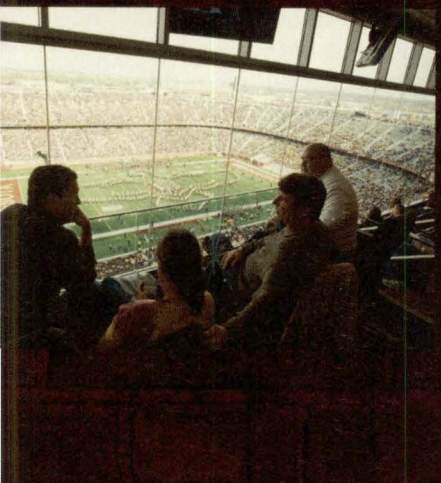
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Fool for Princeton

One of the nation's leading literary biographers, Scott Donaldson (Ph.D. '66) has written eight books about 20th century American authors, including John Cheever, Ernest Hemingway, and Archibald MacLeish. But he says *Fool for Love*, his biography of F. Scott Fitzgerald first published in 1983, contains his best writing ever.

Fool for Love (University of Minnesota Press, 2012) is part of a series that publishes new editions of significant out-of-print books pertaining to Minnesota or the Midwest. Donaldson, who spent five years researching his subject, traced Fitzgerald's life from his birth in St. Paul to his death in Hollywood at age 44. He examined how the artist's deep social insecurity, preoccupation with wealth and class, and "overweening compulsion to please" dominated his life and work, including his years at Princeton.

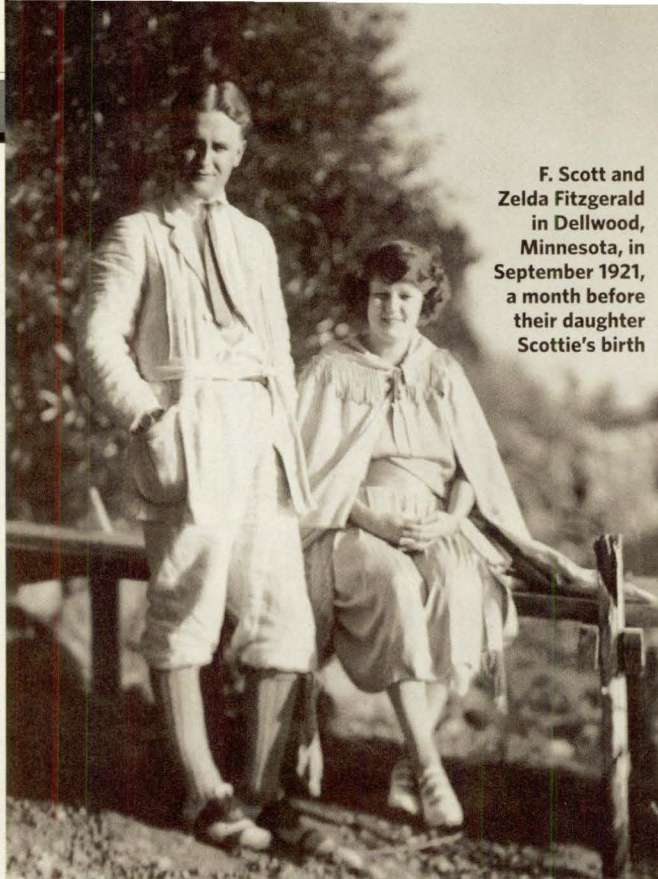
Fitzgerald set his heart on attending Princeton as early as age 9 and was devoted to the school his entire life, despite that his time there was marked by failure—he failed to graduate “and above all failed to impress his fellows as a man of promise.”

Excerpted from *Fool for Love*, University of Minnesota Press:

LIKE AN OVER-EAGER SWAIN, Fitzgerald repeatedly made a hash of his courtship of his Alma Mater. Had she succumbed to his blandishments, he might have modified the idealized picture of Princeton that he carried in his heart. But the university kept its distance and so remained a hallowed place for him. “I hope,” his daughter Scottie wrote in 1942, “that Princeton is as proud of [my father] as he was of Princeton.” Only recently has that hope begun to be realized.

When, shortly after his death, Zelda Fitzgerald attempted to sell her husband's papers to Princeton for \$3,750, the librarian declined the offer. The university had no obligation, he commented, to support the widow of a second-rate Midwestern hack who'd been lucky enough to attend Princeton. Similarly, Edmund Wilson's 1941 efforts to persuade the university to bring out a book honoring Fitzgerald were unsuccessful. Fifteen years later, when the Princeton University Library did publish *Afternoon of an Author*, a collection of Fitzgerald pieces, some sons of Princeton were less than pleased. The March 9, 1956 *Princeton Alumni Weekly* ran several articles about Fitzgerald in connection with the book's publication. By way of introduction, the editor called Fitzgerald “the greatest of Princeton authors, not only because of the distinction of his work but because he was the most Princetonian.” That last observation provoked a few indignant responses. “Come, come,” one alumnus wrote in protest, “how do you get that way in stating that he was ‘A Princeton type?’” To characterize Fitzgerald as “most Princetonian” was ridiculous, another objected. “Let us not contribute unnecessarily to the caricature [sic] of ourselves.”

Fitzgerald himself was tastelessly caricatured in the fall of



F. Scott and Zelda Fitzgerald in Dellwood, Minnesota, in September 1921, a month before their daughter Scottie's birth

1959, when the Princeton band—in the midst of a halftime show at the Yale–Princeton game—played “Roll Out the Barrel” and reeled about in mock tribute to “Princeton's gift to literature, F. Scott Fitzgerald.” The incident was especially ill-timed, since Sheilah Graham, who that morning had presented to university president Robert Goheen a sheaf of Fitzgerald manuscripts, happened to be in the stands. The editor of the alumni weekly rose to Fitzgerald's defense: “The mind boggles at the inane spectacle of publicly vilifying the memory of a Princeton alumnus—almost literally dancing on his grave—and especially of one so pathetically devoted to Princeton.” In the early 1960s, John Kuehl, then a member of the English department, asked President Goheen to investigate awarding a posthumous degree to Fitzgerald. The suggestion, Goheen reported, met with opposition.

Only belatedly has the college he loved and assiduously courted come to recognize the accomplishment of F. Scott Fitzgerald, class of 1917. During its fiftieth reunion his class sponsored a faculty-alumni forum on “F. Scott Fitzgerald '17—The Man, the Myth, the Artist.” Articles about him have appeared on several occasions both in the *Princeton University Library Chronicle* and in the *Princeton Alumni Weekly*. An award has been established in his name to recognize “student creative writing achievement.” But Fitzgerald's ghost might best be pleased to know that his once-spurned papers, originally donated to the university in 1950 and supplemented by additions over the years, are examined more frequently than those of any other author in Princeton's vast manuscript collection. He built his own monument with words.

Donaldson expects his 19th book, about the craft of writing literary biographies, to be published in late 2013.

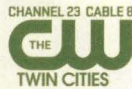
—Shelly Fling

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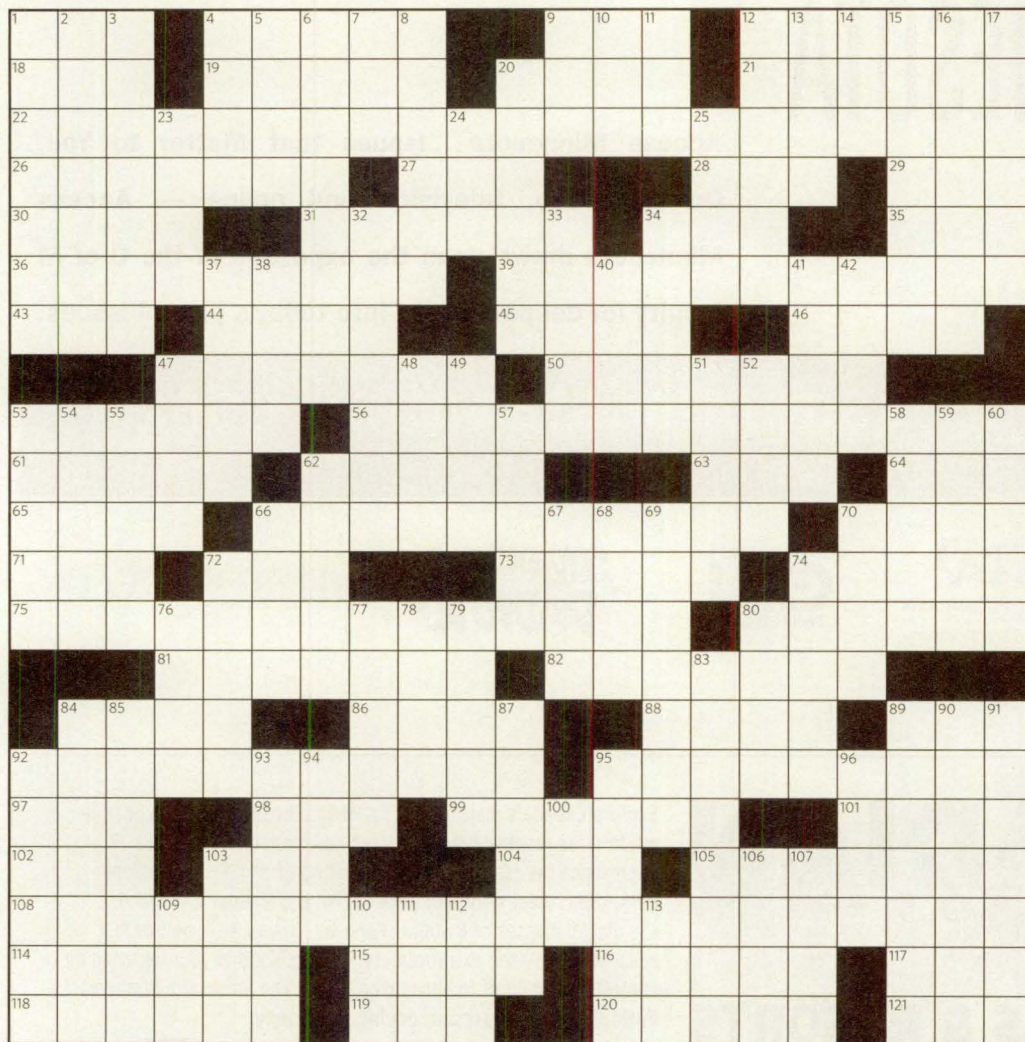


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Over the River and through the Grid

By George Barany and Deane Morrison



- 64 Chant heard when Bin Laden's death was announced
- 65 Element that makes up about a quarter of taconite
- 66 River that bisects the campus of 108-Across
- 70 Onetime 108-Across coach Haskins
- 71 N.Y. engineering sch.
- 72 Constellation near Scorpius
- 73 Quotes or references
- 74 Motif
- 75 Mental state of 108-Across geologist Newton Horace Winchell?
- 80 It is played after every home team touchdown at TCF Bank Stadium
- 81 "___ I know not why I am so sad" (Antonio's opening line in *The Merchant of Venice*)
- 82 Harshly bright
- 84 "El Condor ___": Simon & Garfunkel song
- 86 Undergrad degrees for future CEOs
- 88 Marquee gas
- 89 It's higher on the hwy.
- 92 Architect who designed the mall at 108-Across
- 95 Annual late-summer event that devotes a day to 108-Across
- 97 Giant of a Giant
- 98 Comedienne Elaine or 108-Across Regents Professor of American Studies Elaine Tyler
- 99 Illegal coercion
- 101 Coastal raptor
- 102 Ireland's palindromic coronation stone, ___ Fail
- 103 Div. of 108-Across that deals with 103-Down div.
- 104 For each
- 105 Some occupants of shells on 66-Across
- 108 Perennial hockey power and home to a rare combination of schools of medicine, agriculture, and technology on one campus
- 114 Henner of *Taxi*
- 115 Salacious look

ACROSS

- 1 Engl. unit of pressure that is ca. 1/3 torr
- 4 Medical term for slight continuous contraction in healthy muscle
- 9 Word before vadis or after status
- 12 Sing like a canary
- 18 Had a little lamb, say
- 19 Cleveland who was president of *The Harvard Crimson*
- 20 Matched couple
- 21 Roughly: Abbr.
- 22 Six former faculty and one alumnus of 108-Across have been called to Stockholm for this
- 26 Volkswagen Beetle designer Ferdinand
- 27 "___ out!" (ump's cry)
- 28 Lulu
- 29 Grain in 47-Across
- 30 Netman Nastase
- 31 ___ onto (grab or seize: infinitive)
- 34 Son of Prince Valiant
- 35 Windy City rail inits.
- 36 108-Across building namesake and onetime regent whose family made a lot of dough
- 39 Cheerleader for 108-Across who never says "Ski-U-Mah"
- 43 A foot wide?
- 44 Day before today, in Turin
- 45 Word with teen or matinee
- 46 Zorro's marks
- 47 Cereal dear to health nuts
- 50 Follower and then some
- 53 All-time scoring leader at 108-Across who has since won an Olympic gold medal and a WNBA championship
- 56 Oldest rivalry trophy in American college football, dating to 1903, when a Wolverine coach left it on a 108-Across field
- 61 Harasses, as a fraternity pledge
- 62 Culture dish
- 63 Goose, in Genoa

Answers to the Gopher Crossword appear on page 53. To solve this puzzle online, go to www.MinnesotaAlumni.org/crossword_winter13.

- 116 Ancient Greeks saw it as a river encircling the Earth
 117 Small amount
 118 Compass spinner
 119 Field of study at 108-Across in a building named for a former vice president
 120 Care for
 121 Mrs., in Madrid

DOWN

- 1 Instrument played by a man-goat of myth
 2 Rat
 3 Running a temperature
 4 Source of after-bath powder
 5 Speed of a parked car?
 6 Like soda bottles, in pre-recycling days
 7 Educ. inst. with campuses on, and near, Narragansett Bay
 8 Eclipse alignment, e.g.
 9 Aussie airline's stock letters
 10 You might hang one after making a wrong turn
 11 Tolkien terror
 12 On the decline
 13 For each
 14 Unit of engine speed, for short
 15 Croissant cousin
 16 Pinpoints
 17 Former standout or a small black hole
 20 Dumpling stuffed with cheese
 23 Donkey, in Dortmund
 24 It's a moray (maybe)
 25 Grand Ole ____
 32 Team that lost to the Miracle Mets in the World Series
 33 Relating to form
 34 Off-the-cuff
 37 Pedigree figures
 38 ____ counter (parsimonious department head, e.g.)
 40 Score before 15
 41 Boston Symphony Orchestra music director 1973-2002
 42 Keystone State eponym
 47 Hidden valley
 48 Wagons-____ (European sleeping cars)
 49 Abruzzo bell town

- 51 Ophthalmologist's order
 52 Epicenters
 53 Mechanical operation noise
 54 Silent film star who liked to blow his own horn
 55 Kind of dye
 57 Table, in Tübingen
 58 Sci-fi author Verne
 59 Bill Withers song (1972) about being taken advantage of (in a good way)
 60 Player
 62 Forte's partner
 66 Med. scanners
 67 Victory, to Wagner
 68 Slanted: Abbr.
 69 Schoolmarmish teachers
 70 Guzzle
 72 Hit ____ (run into trouble)
 74 1,000 kilograms

- 76 Smooch
 77 It's done for fun
 78 *Let ____* (Beatles album)
 79 Glass fragment
 80 Go wild
 83 Original *60 Minutes* cohost Harry, who studied journalism at 108-Across
 84 Coatings
 85 His screen test report is said to have read, "Can't sing. Can't act. Balding. Can dance a little."
 87 Narcotic effect
 89 Coarse-haired burrowers
 90 George Brett famously used it to get a better grip on his bat
 91 1983 U.S. invasion site
 92 Op-ed piece, e.g.
 93 Permeate

- 94 Gaelic gal
 95 Yak in the pulpit?
 96 ____ up (admit wrongdoing)
 100 Whistle-blower in a striped shirt
 103 See 103-Across
 106 Literary collections
 107 Mathematician Descartes, microbiologist Dubos, or painter Magritte
 109 Kid-____ (Saturday a.m. fare)
 110 Laid up
 111 Beverage for two
 112 Taxol source
 113 Hospital sect.

George Barany is a professor of chemistry, and Deane Morrison is an editor and science writer in the Office of University Relations at the University of Minnesota.

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In Pursuit of Wholeness

When Aimee Prasek (M.A. '10) was 18 years old, her father died by suicide. Prasek couldn't know it at the time, but his death set in motion a process of healing and discovery that would eventually lead to her life's work. A Ph.D. student in the University of Minnesota's School of Nursing, Prasek's research focuses on different cultural perspectives on depression and anxiety, particularly Tibetan medical practices that emphasize healing mind and body.

As she grappled to come to terms with her father's suicide, Prasek unearthed a family secret: He was not the only male in the family to die of suicide. "No one ever talked about it," Prasek says. So strong was the taboo that her great grandfather's death certificate said he died of a bloody nose, when in fact he had shot himself in the face. "I began to ask what it was about this culture and I also began to question whether pharmaceuticals were the best way to treat depression."

Prasek, 30, who has a master's degree in health journalism from the U, continues to plumb those questions at the University of Minnesota's Center for Spirituality and Healing, one of the world's premier centers for research on integrative health practices. Prasek is the center's inaugural Dalai Lama Fellow, which comes with a \$10,000 fellowship. (His Holiness the 14th Dalai Lama authorized the use of his name and supports the goals of the program but does not fund it.)

During her fellowship year, Prasek is developing an online program for University of Minnesota students struggling with depression and anxiety. Online, or eHealth, programs are not uncommon, but Prasek's approach is. Individually tailored for each participant, it will draw on a variety of holistic practices such as yoga, tai chi, meditative practices from a variety of traditions, diet and lifestyle guidance, and acupuncture. "This is about



Aimee Prasek

working from the inside out. It's about bridging and connecting the mind, body, and spirit in a way that reaches my generation," Prasek says.

The Dalai Lama Fellows is a global leadership program that partners with selected colleges and universities. The U is one of only 17 institutional partners worldwide and was selected because of the renowned work of the Center for Spirituality and Healing.

One of the first challenges of helping students who are struggling with depres-

sion and anxiety is breaking through their isolation. Dropout rates for eHealth programs are notoriously high, Prasek says. But students struggling with depression and anxiety tend not to use resources available on campus. Prasek believes that allowing students to choose from a variety of healing practices will increase the odds that a student will benefit from it. "Yoga is hot right now," she says. "If wanting to have a good butt brings students in, that's just fine with me."

—Cynthia Scott

Art Walk

For most people, a sidewalk is just an even surface for strolling or rolling from point A to point B. But Marcus Young (M.F.A. '07) asks us to see it differently—each concrete slab a page, each street a chapter, and each city a book. If that's true, he says, "Why are we living in a big blank book? Shouldn't the residents express themselves on its pages?"

Young is in a unique position to ask. For the past six years, he has been city artist-in-residence for St. Paul, a position funded by the organization Public Art St. Paul. Most urban public art programs are housed in an office of cultural affairs or an arts commission, but Young's office is in the city's public works department, placing him directly in what he calls the "citymaking" process. "We expect the traffic engineer, the planner, the forester, and the architect to be there," he says. "So what happens when you put an artist at the table?"

The answer: streets paved with poetry. One of Young's projects, *Everyday Poems for City Sidewalk*, features selected poetry written by St. Paul residents stamped into sidewalks as a routine part of the city's ongoing maintenance program. To date, 41 poems have been poured at 470 sites throughout the city's neighborhoods and downtown, with new ones added annually. "It's a very low-tech, inexpensive, and efficient way to install public art as a natural course of the city's work," he explains.

It's also, Young believes, a fulcrum to shift the psyche of the city. "The public realm has a genuine impact on our inner lives," says Young, whose M.F.A. major was theater direction. "I'm asking, can the city take care of its citizens' inner life as much as it



Marcus Young

takes care of its citizens' outer life? We're human beings who need to get around and get our mail delivered, but we're also human beings who need mystery—and creativity."

Pam Haas, one of last year's winning sidewalk poets, would probably agree. She wrote:

There's no place I'd rather be
than here
in this quiet common place
where late morning sun
meets the scent of concrete and cut grass
stirring.

To read more sidewalk poems and poetry entry guidelines, visit www.MinnesotaAlumni.org/sidewalkpoetry.

—Joe Hart



Eugene Loubier

Winging It

Eugene Loubier (M.H.A. '72) set his sights sky high for retirement. In 1996, one year after retiring as CEO of a Massachusetts hospital, Loubier and a friend cofounded Angel Flight Northeast (AFNE), a nonprofit organization that provides free flights for patients who need to travel for medical treatment. AFNE is one of seven regional Angel Flight organizations around the nation.

Pilots have volunteered more than 60,000 missions since AFNE began. "We've transported one patient from northern Maine nearly 300 times in the last three years," Loubier says. AFNE flew the elderly man, who suffers from a rare form of prostate cancer, to his destination two or three times a week. "He would not be with us today if he didn't have us.

"It just fit my ability to help in something that I was obviously fond of," Loubier says of AFNE. "I was able to retire but keep doing something that was worthwhile." Loubier recently stepped down as chairman of the board of directors after serving for 15 years. He lives with his wife, Phyllis, in Massachusetts.

—Erin Lengas

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Alumni Association Angle



Fit Together Judging from this photo, expressing individuality was not a priority on campus in 1904, the year it was taken. But physical fitness was. These dumbbell-hoisting women were enrolled in a weight lifting class in the Armory, which was built in 1896 to house military training and physical education. Located at University and 15th Avenues Southeast, the Armory is in the Old Campus Historic District, which is listed on the National Register of Historic Places. Today it's still used for classes in military science and kinesiology and for student events.

INSIDE

Homecoming on Parade

Honoring Alumni Volunteers

A Winter Sampler and Other Member Benefits

Our Annual Report

Awards Ceremony Honors Alumni Contributions

The annual Alumni Awards ceremony on October 11 recognized the extraordinary contributions of alumni to the Alumni Association and the University of Minnesota.



The College of Design Alumni Society was named Society of the Year. Left to right: Alumni Association National Board Chair Kent Horsager, Design Student and Alumni Board (DSAB) Alumni President Marc Partridge, DSAB Student President Coleman Iverson, former DSAB president Mai Xiong, former DSAB alumni president Ada Johnson, College of Design Dean Tom Fisher, and Regent Linda Cohen.



Alumni Association National Board Chair Kent Horsager and Regent Linda Cohen presented the Chapter of the Year Award to the Washington, D.C., chapter, represented by Susan Heltemes.

The University of Minnesota Alumni Association Awards honor selected societies, chapters, and individuals for their outstanding contributions in the past year.

Outstanding Alumni Society of the Year: College of Design Alumni Society

The College of Design Alumni Society engaged more than 1,000 students, alumni, and professionals. Its Design Student and Alumni Board is uniquely composed of an equal number of students and alumni.

Outstanding Alumni Chapter of the Year: Washington, D.C.

The Washington, D.C., chapter hosted numerous events during the year, including game-watch parties, a dinner with University President Eric Kaler, and a scholarship fund-raiser featuring Garrison Keillor.

Program Extraordinaire—Society: School of Nursing

Last spring, the School of Nursing reinvigorated its annual alumni celebration and reunion. The Power of Nursing: Building Healthy Communities was a daylong event showcasing innovative nursing projects and community partnerships.

Program Extraordinaire—Society: College of Science and Engineering

More than 170 alumni and friends attended the College of Science and Engineering's 50th class reunion that featured a class reception, a tour of TCF Bank Stadium, continuing education presentations, and lunch with Dean Steven Crouch.

Program Extraordinaire—Society: College of Pharmacy

The Pharmacy Alumni Society's Student Outreach Program spearheaded a campaign that doubled pharmacy student membership over the previous year.

Program Extraordinaire—Society: College of Food, Agricultural and Natural Resource Sciences

The college's Sponsorship Program promotes connections among students, faculty, staff, and alumni. During the past year the program raised \$27,500 to support its events and programs.

Program Extraordinaire—Chapter: Arizona West Valley

More than 100 alumni and friends attended the Minnesota College in Surprise, Arizona, in January, affording them the opportunity to engage in discussions with University staff, faculty, and President Eric Kaler.

Advocate of the Year: Christopher Tastad

Tastad (B.S. '12) has been an ardent and active advocate for the University of Minnesota, effectively presenting his perspective as a student to policymakers. He was instrumental in forming the Minnesota Legislative Coalition, which united students from all five University campuses in advocating for the U at the state capitol and in Washington, D.C.

Student Volunteers of the Year: Prescott Morrill and Luke Nichols

Morrill, a graduate student in landscape architecture and urban planning in the College of Design, served on the Design Student Alumni Board as a student representative. "The work is important because of the connection between students and the larger design community," he says. "Minneapolis is a rising center of design services, and some of the strongest firms are the ones with a great connection to the University."

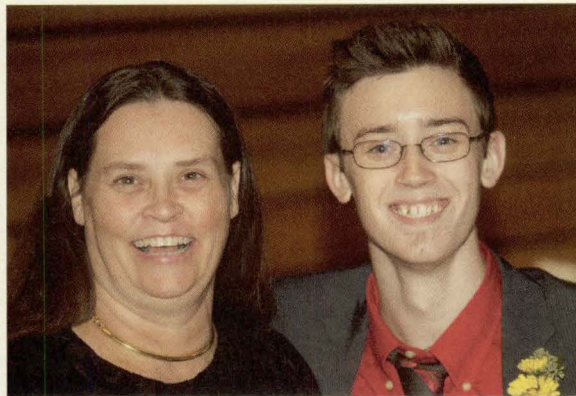
Nichols (B.S. '12), whose degree is in environmental sciences and policy management, emerged as a dedicated student leader within the college his first year on campus. He has volunteered in numerous roles, including serving as president of the CFANS Student Board and student representative to the CFANS Alumni Society Board.



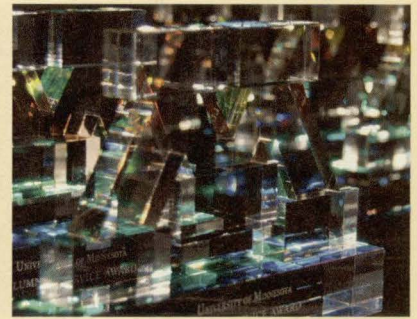
Student Volunteer of the Year Prescott Morrill, second from left, with, left to right, Kent Horsager, College of Design Dean Tom Fisher, and Regent Linda Cohen



Advocate of the Year Christopher Tastad



Student Volunteer of the Year Luke Nichols with his mother, Jane Nichols



Alumni Service Awards

The University of Minnesota Alumni Service Awards recognize these alumni volunteers who have had a significant impact on the University or the University of Minnesota Alumni Association.

- ★ Roberta Anderson, School of Dentistry
- ★ Ann Carlson Birt, College of Design
- ★ Robert Bjork, Carlson School of Management
- ★ James Chosy, Law School
- ★ June LaValleur, Medical School
- ★ Marie Manthey, School of Nursing
- ★ Padraic McGuire, College of Science and Engineering
- ★ John Mendesh, College of Science and Engineering
- ★ Carol Mulligan, College of Education and Human Development
- ★ Jan Anderson Myers, College of Liberal Arts
- ★ Rusty Nelson, College of Food, Agricultural and Natural Resource Sciences
- ★ Robert Schultz, College of Pharmacy
- ★ Katherine Siggerud, Humphrey School of Public Affairs
- ★ Ertugrul Tuzcu, College of Science and Engineering
- ★ David Walstad, Carlson School of Management

Read more about the recipients at www.MinnesotaAlumni.org/2013AlumniAwards.



Participants enjoy one of last year's Headliners events. Pictured in the center are Paul Thomas and Cynthia White.

A Winter Sampler

The University of Minnesota College of Continuing Education (CCE) celebrates its 100th anniversary in 2013 with a stellar winter lineup.

CCE's personal enrichment department, LearningLife, will offer a Sampler on January 15 at 7 p.m., featuring short presentations by three of the college's instructors.

LearningLife's popular Headliners series will feature expert discussions by University faculty on timely topics on January 10, February 7, March 7, and April 11. Tickets are \$15.

Evening short courses are scheduled as well, among them Buddhism and Poetry: From *Cold Mountain* to the American Beats led by Paul Rouzer, chair of the Asian Languages and Literatures Department, and a course with award-winning local author William Souder, who recently published the book *On a Farther Shore: The Life and Legacy of Rachel Carson*. Also, Kenneth O'Doyle, associate professor in the Department of Journalism and Mass Communication, will teach his provocative course on the symbolic meanings of money.

LearningLife will also help celebrate CCE's centennial in 2013 by looking ahead to what's next in the coming century. Speakers in the series of Saturday morning seminars include College of Design Dean Tom Fisher; Institute on the Environment Director Jon Foley; Technological Leadership Institute Director Massoud Amin; and Professor Heather LaMarre, School of Journalism and Mass Communication.

All events are open to the general public. Alumni Association members receive a variety of special discounts on CCE offerings. Go to www.MinnesotaAlumni.org/cce.

—Cynthia Scott

Show Up, Stand Up, Speak Up

University of Minnesota President Eric Kaler and the Board of Regents have submitted an innovative biennial budget request and legislative proposal for 2014–15 that aims to forge a new partnership with the state of Minnesota. It would freeze tuition for undergraduate students, reduce costs by \$28 million, reduce student debt, and launch four targeted research initiatives that address some of the state's toughest problems.

Learn more about this innovative request and proposal at the annual Legislative Briefing at the McNamara Alumni Center on January 23, hosted by the Alumni Association and the University of Minnesota's Government & Community Relations office. Networking and a light dinner will begin at 5 p.m. with a program featuring President Kaler and Alumni Association National Board Chair Kent Horsager at 6 p.m. Participants will have the opportunity to record a personalized video message to their legislators.

Alumni voices will be key to insuring that funding the U is a priority during the legislative session. Show up, stand up, and speak up for the U by attending the Legislative Briefing. Register at www.SupportTheUmn.edu by January 16.





Raising their glasses in a toast, Campus Club members sample wines from Chile, Argentina, and France at an April 2012 Wine Baron Tour.

Farmer, professor emeritus of history and global studies who taught modern Chinese history at the University for more than 40 years, will explore new electronic media effects on Chinese intellectuals' free expression.

The Campus Club is located on the fourth floor of Coffman Union. University of Minnesota Alumni Association members can join the Campus Club for \$260 per year—a \$40 annual savings. Details on this offer and a special rate for alumni living outside of the Twin Cities metro area can be found at www.MinnesotaAlumni.org/campusclub.

—Jennifer Benson

A Toast to the Campus Club

Looking to add some holiday spirit to your next party? From specialty dinners to wine classes and scotch tastings, the Campus Club hosts a variety of educational and social events throughout the year.

Cocktail expert Lindsay Bryda will host the Campus Club's holiday cocktail class on December 13, demonstrating both chilled and warm drink recipes.

In the new year, the Campus Club invites members and guests to a Feast of Words program cosponsored by the University of Minnesota Libraries on January 24. Ted

Joffrey Ballet Takes the Stage



Joffrey Ballet in *Le Sacre du Printemps*

On February 26, Northrop Dance presents the Chicago-based Joffrey Ballet, one of the nation's premier ballet companies, at the Orpheum Theatre in Minneapolis. The Joffrey brings a unique and inclusive perspective to the stage. Nowhere is that better seen than in its staging of *Le Sacre du Printemps* (*The Rite of Spring*), whose world premiere in Paris 100 years ago ended in a riot due to its outrageous costumes, audacious choreography, and innovative score. The performance also includes *Son of Chamber Symphony*, a new work choreographed by Houston Ballet artistic director Stanton Welch, and *In the Middle, Somewhat Elevated*, a contemporary piece with an intense score.

Audience members are invited to attend a free performance preview one hour and 15 minutes prior to the show at Solera Restaurant. Carl and Emilie Flink of the local dance company Black Label Movement (BLM) will converse with members of the Joffrey artistic staff. Carl Flink is chair of the University of Minnesota's Theatre Arts and Dance Department.

Alumni Association members receive a \$4 savings on up to two tickets for Northrop Dance season performances. Go to www.MinnesotaAlumni.org/northrop.

—Shannon Edholm



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612-625-6000 www.bookstore.umn.edu

Alumni Association Angle

Home Sweet Homecoming

Thousands of alumni returned to campus to renew acquaintances and celebrate the U during homecoming week October 8 through 13. As part of the week's festivities, the Alumni Association's parade contingent featured national board chair Kent Horsager and recipients of the Alumni Association annual Awards. Prior to the homecoming game on October 13 the Alumni Association hosted the first-ever Ski-U-Mania gathering at the McNamara Alumni Center, which featured a festive brunch, face-painting, and coronation of the homecoming royalty.



Alumni Association National Board Chair Kent Horsager and his wife, Beth, led the parade contingent that included recipients of the 2012 Alumni Awards.



Homecoming Queen Katie Kranz and King Brett Johnson joined in singing *The Rouser* following their coronation.



Future alumni from the College of Education and Human Development were represented in the parade.



University of Minnesota President Eric Kaler and his wife, Karen Kaler



Grand Marshal and former Alumni Association CEO Margaret Carlson Citron and her husband, Paul Citron



A special welcome to
our newest life members.

(reflects July 16-October 12, 2012)

HOLLEY J. ARVIG
SHANZA ALAM
ANNE B. ANDERSON
STEWART C. ANDERSON
DEBORAH J. ANDERSON
GARY L. ANDERSON
JENNIFER M. ANDERSON
TAKESHI ARASHIRO
DAVID R. ARVIG
MARILYN P. BACH
MARY S. BAREMORE
PAUL W. BAURES
MATHEW R. BEAULIEU
PHILIP J. BERGH
ANN L. BRANCH
RONALD A. BRANCH
RICHARD E. BREDEHOFT
BRYAN A. BROCK
JOHN L. BURBIDGE
NANCY S. BURBIDGE
JOHN A. CARLSON
BARBARA K. CAVANAUGH

MICHAEL J. CENTOLA
PAUL F. CHERMAK
KEVIN J. CHURCH
REBECCA M. CLEAVER
TIMOTHY A. CLEAVER
LYNETTE T. COLLIER
ANDREW T. COOK
RACHEL N. CORDES
JEANNE O. CORNISH
ROBYN DAHL-DHEIN
YVES DEFRENNE
WILLIAM J. DELFS
TRAVIS G. DHEIN
DENNIS M. DONNELLY
SHARON B. DONNELLY
MARGARET A. EGLI
ERIC A. EGLI
JOHN R. FENYK
DIANNE C. FENYK
JOHN A. FERCELLO
BARBARA A. FISCHER
BRIAN S. FREDRICKSON

DAVID R. FRONK
KATHRYN A. GIGLER
STEVEN E. GRAVSETH
JOHN P. GUIDER
RICHARD B. GUTHRIE
MICHAEL J. HAFNER
ALLSON M. HANLEY
CRAIG M. HANSON
JOHN R. HART
ROSS M. HEDLUND
KATIE L. HEDLUND
OTIS F. HILBERT
JOHN A. HILL
JUDITH C. HILL
WILLIAM K. HOLCOMB
MARCIA L. HONOLD
BRADLEY G. HONOLD
DAVID H. JOHNSON
MARILYN E. JOHNSON
DEBORAH J. JOHNSON
DAVID J. KENYON
ROBERT W. KING

SCOTT R. KIRBY
MARY S. KIRBY
LARA B. KLUGE
HEATHER L. KOERING
ADAM KOERING
NANCY J. LANDES
VIRGINIA E. LEDO
CHARLES P. LEMKE
PATRICIA I. LEVIS
HAROLD R. LINDSTROM
CHARLOTTE A. LINDSTROM
PAMELA J. LOHR
MICHAEL D. LOUGEE
WENDY P. LOUGEE
JOHN D. LUTTER
BRIDGET C. LUX
BRIAN MARK
ROSEMARY M. MARTIN
VIRGINIA R. MASSEY
JOSEPH G. MASSEY
LAWRENCE J. MAUN
JO ANN F. MEYER
CHARLES H. MEYER
CARLETON C. MEYER
PHILLIP L. MINERICH
GAIL L. MINERICH
HARRISON M. MISEWICZ
KEITH J. MODERT
DIANE L. MOEN

ROLF P. MOEN
DAVID NASSIMI
ARVIND NATARAJAN
ROGER M. NELSON
LINDA M. NELSON
DE VONNE J. NILSSON
DENNIS E. NILSSON
PRISCILLA J. NORTHEMSCOLD
MARVIN D. NUORALA
THOMAS L. NYMAN
KARIN ONGKO
HELEN J. PARRY
JOSEPH H. PERRA
NATALIE A. PETERSON
RUTH M. PRASETIO
VICTORIA A. RANUA
ERIK J. RASMUSSEN
MATTHEW J. REED
MARY J. ROGERS
STEPHANIE A. ROOT
SUELLEN M. RUNDQUIST
CARL N. RUNDQUIST
MYRA C. RUSTEN
CHRISTOPHER N. SANDS
DOUGLAS J. SCHMALZ
JO A. SCHROEDER
CHARLES H. SCHUVEILLER
PATRICIA R. SCHUVEILLER
BARBARA J. SHIN

PAUL O. SKATVOLD
LINDA K. SKATVOLD
JAMES M. SMITH
KRISTINE J. SMITH
MARY J. STEVENS
KEITH R. STEVENS
JAMES D. STROM
DESIREE S. STROM
ASHLEY STUCKY
JANE M. SWEET
CLARK H. SWEET
LYLE E. TAIPALE
NATALIE K. TEJEDA
JESSE W. TEJEDA
JULIE L. TESCH
RYAN S. THELEN
JOHN P. THOMAS
BERNARD H. VAN ZOMEREN
ELIZABETH R. VAN ZOMEREN
CLIFFORD D. VRIEZE
DAVID C. WAGNER
ROBERTA B. WALBURN
SCOTT M. WALTERS
MARCIA WATTSON
GLEN M. WIESE
THOMAS W. YOEMANS

Answers to The Gopher Crossword on page 42

P	S	F		T	O	N	U	S		Q	U	O		W	A	R	B	L	E	
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R	O	C	K	S	I	N	H	I	S	H	E	A	D		R	O	U	S	E	R
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N	E	E	D	L	E		L	A	W		N	U	R	S	E		S	R	A	

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FY12 ANNUAL REPORT



To the Members of the University of Minnesota Alumni Association:

Thank you for participating in the University of Minnesota's global community through your involvement in the University of Minnesota Alumni Association, whose vision is to support and advance the University's excellence.

I encourage you to peruse this annual report, which highlights the Alumni Association's activities during the past year. Our strategic plan has set us on an ambitious compass heading. We expect to innovate, experiment, and improve our programming in the key areas of engagement, partnerships, and advocacy and to make new connections among alumni worldwide with the University of Minnesota and with each other.

We are grateful to you, our alumni and friends, whose passionate involvement in Alumni Association activities create a voice that is critical for the success of the Alumni Association and the University of Minnesota.

Go Gophers!

Kent Horsager
National Board Chair
University of Minnesota Alumni Association

UNIVERSITY OF MINNESOTA ALUMNI ASSOCIATION 2011-2012 HIGHLIGHTS

- Welcomed more than 14,000 new graduates to the ranks of alumni with a complimentary one-year membership in the UMAA
- Hosted 509 alumni on 62 unique group travel experiences around the world
- Published the 2012 Alumni Directory, purchased by nearly 5,000 alumni, and collected and updated more than 120,000 alumni records
- Recognized colleges and chapters for exceptional alumni programming and honored 15 recipients of the University's Alumni Service Award at the Alumni Awards Celebration during Homecoming
- Connected nearly 1,500 students with alumni mentors through the Mentor Connection Program in partnership with collegiate alumni societies
- Hosted more than 400 students and alumni at the 2011 Etiquette Dinner
- Collaborated with the University of Minnesota Foundation and Minnesota Medical Foundation to plan out-of-state travel and alumni chapter appearances for President Kaler in Arizona, Florida, Washington, D.C., and Seattle
- Collaborated with the president's office to plan in-state alumni receptions for President Kaler in St. Cloud, Fargo/Moorhead, and Willmar
- Co-sponsored 'Sota Socials and pregame alumni and fan gatherings at away football games, the men's basketball NIT Final Four, and the men's hockey Frozen Four
- Hosted the largest Legislative Briefing ever, with 500-plus attendees, resulting in more than 750 letters to legislators
- Reached more than 2,000 people across Minnesota via the Statewide Speakers' Tour
- Collaborated with major universities across the country to provide career job fairs in Washington, D.C., Chicago, and Los Angeles
- Geographic Alumni Chapters hosted more than 125 events, programs and meetings.

STATE CHAPTERS

NATIONAL CHAPTERS





UNIVERSITY OF MINNESOTA ALUMNI ASSOCIATION®

FINANCIAL SUMMARY

for fiscal year ended June 30, 2012

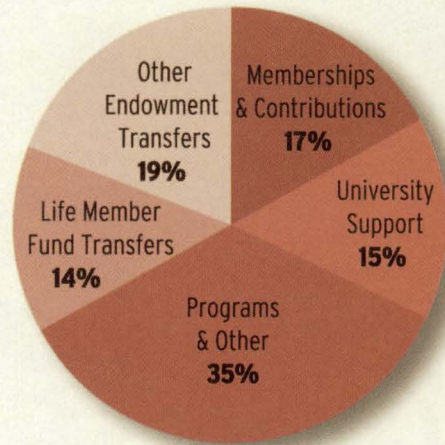
FINANCIAL POSITION

Cash and Investments	\$ 23,051,000
Accounts Receivable and Prepaid Expenses	455,000
Fixed Assets	237,000
Total Assets	\$ 23,743,000
Accounts Payable and Accrued Expenses	\$ 148,000
Deferred Revenue	4,253,000
Total Liabilities	4,401,000
Net Assets	19,342,000
	\$ 23,743,000

OPERATIONS

Memberships and Contributions	\$ 717,000
University Support	629,000
Programs and Other	1,508,000
Life Member Fund Transfer	599,000
Other Endowment Transfers	835,000
Total Revenues and Transfers	4,288,000
Programs and Activities	1,309,000
Membership	1,046,000
Communications	1,148,000
Advocacy and Service	357,000
Supporting Services	434,000
Total Expenses	4,294,000

REVENUES AND TRANSFERS



EXPENSES



INTERNATIONAL CHAPTERS



COLLEGIATE SOCIETIES

- Band Alumni
- College of Biological Sciences
- School of Dentistry
- College of Design
- College of Education and Human Development
- College of Food, Agricultural and Natural Resource Sciences
- School of Journalism and Mass Communication
- Law School
- College of Liberal Arts
- Carlson School of Management
- Medical School
- Mortuary Science
- School of Nursing
- College of Pharmacy
- Humphrey School of Public Affairs
- School of Public Health
- College of Science and Engineering
- College of Veterinary Medicine

For more information about your Alumni Association visit:
www.MinnesotaAlumni.org



Hugo Ochoa and other Aztec dancers with the Minneapolis-based Kalpulli Ketzal Coatlicue performed on campus for El Día de los Muertos (Day of the Dead) November 2. The University of Minnesota's Department of Chicano & Latino Studies, Casa Sol Living Learning Community, and La Raza Student Cultural Center sponsored the event.

PHOTOGRAPH BY SHER STONEMAN

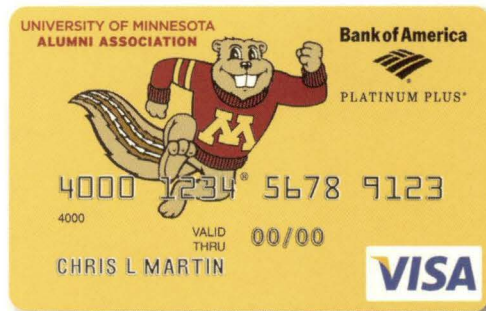


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