

Rolling for ataxia research

For many people, October in Minnesota signals the arrival of costume parties and peak fall colors. But for Vern Prokoski and employees at St. Cloud-based Collection Resources, it marks the opportunity to bowl a few games and raise money for the Bob Allison Ataxia Research Center (BAARC).

The company has held an annual bowl-a-thon to benefit BAARC since 2001. For Prokoski, co-owner (with Phae Waldron) of Collection Resources, the decision to support BAARC was both professional and personal.

"Our trade association, the American Collectors Association, had developed a program for encouraging involvement in philanthropy," recalls Prokoski. "We decided to do something, and this was the thing that hit us close to home."

That's because ataxia had already made its way into Prokoski's life. Nearly 30 years ago, Prokoski's wife, Ruth, was diagnosed with ataxia. After initially receiving treatment in St. Cloud, she learned of the University of Minnesota Ataxia Center's reputation in

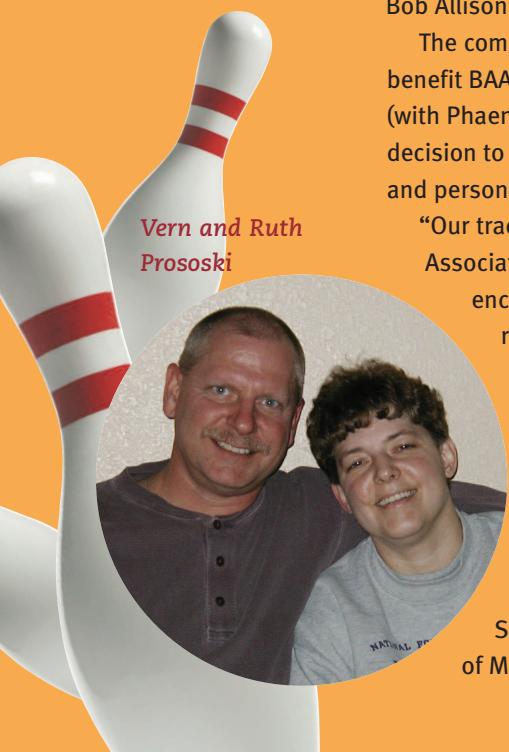
ataxia management and soon started making the hour-long drive to receive care in Minneapolis.

Last year 16 of the company's 25 employees participated in the bowl-a-thon, first generating funds by seeking pledges from friends, neighbors, and relatives, and then meeting their end of the bargain by playing two games. Family members also attended, and bumper bowling quickly became a hit among the event's youngest attendees.

This year's event, held October 4, drew 22 bowlers and raised another \$2,465 for ataxia research at the University. That brings the bowl-a-thon's total raised to more than \$22,000 for BAARC since its inception.

To Prokoski, the most rewarding part of the event is witnessing the generosity that donors exhibit year after year.

"It's really nice to see people who have made contributions annually," he says. "It takes a big commitment for them to step up to the plate like that, time and again, especially with the tough times that some people are going through these days. Our hope is that we can continue to step up, too, and hold this event for years to come."



Vern and Ruth Prokoski

the LINE UP Fall 2008

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before it does damage
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the LINE UP

The Bob Allison Ataxia Research Center (BAARC) at the University of Minnesota provides vital support for research on diseases of the nervous system, such as ataxia and related disorders. BAARC is an affiliate of the Minnesota Medical Foundation.

New biosciences building will bring medical experts together to accelerate advances

Sometimes the beginning of a breakthrough happens on a short walk down the hall to a colleague's office. For ataxia researchers and other neuroscientists at the University of Minnesota, whose offices may be scattered in buildings across campus, bouncing ideas off of one another in person is not always so easy.

That will be changing soon, thanks to the 2006 Minnesota State Legislature's decision to fund the 100,000-plus-square-foot Medical Biosciences Building (MBB), which is scheduled to be completed by the end of 2009.

Most of the MBB will be devoted to the neurosciences and will include space for the N. Bud Grossman Center for Memory Research and Care. The new building will house existing programs in neurodegenerative and neuromuscular diseases such as ataxia, muscular dystrophy, Parkinson's, and ALS (Lou Gehrig's disease). The MBB also will house immunology research and be linked by skyway to the University's internationally renowned Center for Magnetic Resonance Research (CMRR).

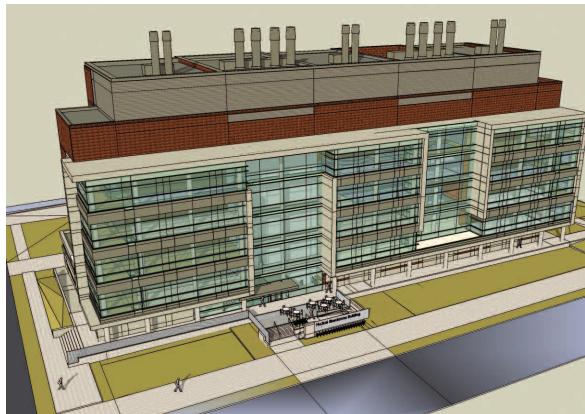
Lead ataxia researcher Harry Orr, Ph.D., says the new building will create three key opportunities for ataxia investigators and other neuroscientists. "It will allow us to recruit new faculty in this area, it will allow us to develop and access state-of-the-art core facilities, and it will allow ataxia researchers and other neuro-scientists to be in close proximity to one another, which will synergize our research," he says.

Assistant professor of laboratory medicine and pathology Michael Koob, Ph.D., will soon join his neuroscience colleagues in the new space but currently is physically separated from them.

"It has really cut down on the spontaneous interactions that would occur on a daily basis between researchers who share lab space," Koob says.

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Image courtesy of Perkins + Will



The Medical Biosciences Building, scheduled to open in fall 2009, is designed to foster collaboration among neuroscience researchers.

Biosciences building

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Looking forward to the move are Michael Koob, Ph.D. (front), and his lab team of (from left) Kellie Benzow, Young Yoon, Ph.D., and Yi-Wei Yang, M.S.

"I expect that coming together as a research community with shared interests and research goals will result in a huge increase in the number of collaborative projects our group is able to pursue."

Becoming one of the top public research institutions in the nation remains an important initiative for the University. The 2008 state Legislature propelled the University a giant step forward when it approved funding for four additional state-of-the-art research buildings. The five-year project, backed by university-sold bonds, will cost \$292 million and will provide additional space for the CMRR and research in infectious disease, cancer, and heart disease.

Neuromuscular disease researcher John Day, M.D., Ph.D., believes that the new space will be a valuable selling point for the 15 new neuroscience investigators the University is hoping to recruit.

"One of the things a candidate may ask is, 'Do you have the space to do all the things you want

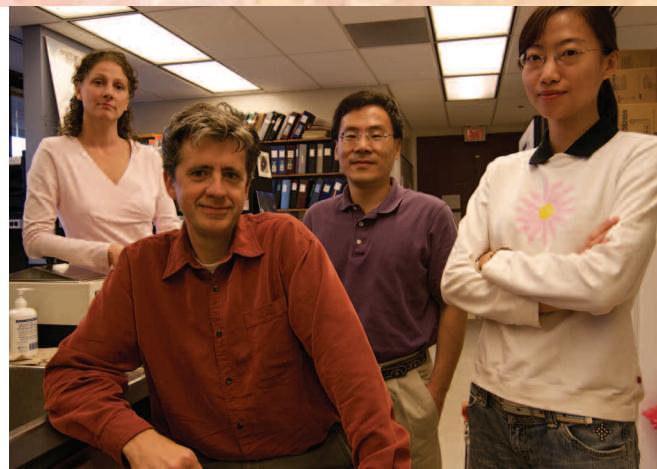


Photo by Richard Anderson

me to do?' And we can honestly say yes," says Day, a professor of neurology and director of the University's Paul and Sheila Wellstone Muscular Dystrophy Center. "Top-notch investigators will be able to come in and right away have the physical resources they need to contribute, and that can give us the edge we need to maintain our leadership in biomedical sciences research."

DIAMOND AWARDS



Join us for this year's Diamond Awards

The Diamond Awards, Minnesota's premier baseball charity event, is back for its fourth year of Twins baseball, philanthropy, and fun. Proceeds from the Diamond Awards support the University of Minnesota's innovative research and patient care in ataxia, muscular dystrophy, multiple sclerosis, Parkinson's, and ALS (Lou Gehrig's disease).

This event, which will be held January 22, 2009, begins with a VIP reception with Minnesota Twins players, followed by a general reception and silent auction. The evening culminates with dinner and a televised awards ceremony, during which the Minnesota chapter of the Baseball Writers Association of America honors contributions Twins players and coaches have made both on and off the field.

For tickets or more information on the Diamond Awards, visit www.minnesotadiamondawards.org or contact Valerie Petermann at 612-624-4444 or v.petermann@mmf.umn.edu.



Golf tournament raises nearly \$47,000—plus a match—for ataxia research

The 7th annual Karen's Hope Ataxia Benefit raised nearly \$47,000 for the Bob Allison Ataxia Research Center, which supports ataxia research and care efforts at the University of Minnesota. In its history, the event has raised about \$315,000 for this work.

This year longtime ataxia research supporter Connie Bakken matched the event's proceeds through the Whitney Arcee Foundation, making an even larger impact on the future of ataxia research.

Three University researchers receive grants from BAARC

The Bob Allison Ataxia Research Center's board of directors has awarded a total of \$225,000 to three University of Minnesota ataxia investigators. Each grant provides seed funding that allows these researchers to test their new ideas about how to better diagnose, treat, or prevent ataxia.

Michael D. Koob, Ph.D., assistant professor in the Department of Laboratory Medicine and Pathology, received a \$75,000 grant to start developing a gene therapy to treat Friedreich's ataxia.

Ramaiah Muthyala, Ph.D., associate professor in the College of Pharmacy, received a \$75,000 grant to develop novel therapeutics for spinocerebellar ataxia type 1.

Laura Ranum, Ph.D., professor in the Department of Genetics, Cell Biology, and Development, received a \$75,000 grant to investigate the role of spectrin and interacting proteins in sporadic and familial ataxia.

Catching a chemical before it does damage

Long before it leads to loss of function, ataxia causes changes in the brain that cannot be detected through physical symptoms.

At first, biochemical changes to brain nerve cells, or neurons, are small. Gradually, however, they alter the metabolism of neurons and then impair them. Left unchecked, these changes can lead to the death of neurons and signal the arrival of ataxia symptoms. And once neurons die, their function never returns.

University of Minnesota ataxia researcher Gülin Öz, Ph.D., is using magnetic resonance spectroscopy (MRS) to try to detect cellular changes before they cause irreversible damage. Öz is looking beyond structural changes of the cerebellum to explore the biochemical makeup of this region of the brain.

Using high-field MRI scanners three to six times stronger than those in most hospitals, Öz is able to measure 18 chemicals found in the cerebellums of mice and up to 12 found in human cerebellums and then detect alterations in a subset of those chemicals that change with disease. Monitoring these changes, says Öz, could lead to earlier detection of ataxias and better assessments of therapies in future clinical trials.

So far, Öz's team has scanned people with spinocerebellar ataxia (SCA) types 1, 2, 6, Friedreich's ataxia, ataxia with oculomotor apraxia type 2, and multiple system atrophy and has found different patterns of chemical

changes with these ataxias.

"In neurodegenerative diseases such as ataxia, biochemical changes can occur years before symptoms occur," says Öz, an assistant professor of radiology. "If we can intervene while the dysfunction is occurring, then there's a chance that treatments can reverse any alterations and rescue the cell."

Thanks to seed money provided by the Bob Allison Ataxia Research Center last year to get this research off the ground, Öz recently received funding from the National Institutes of Health for two studies. The first study will explore how MRS can help detect pre-ataxia changes that occur in mice that are bred to have SCA1. The second study will compare MRS brain scans of people who have ataxia with brain scans of people who do not have the condition—to determine which biochemical changes can be markers for ataxia's presence.

Öz, who did her postdoctoral training at the University's renowned Center for Magnetic Resonance Research before accepting a faculty position here in 2006, says the University offers a unique opportunity for research.

"Having the equipment is great, but it's not enough on its own," she says. "You need the expertise and support surrounding you, too, to get the good science, the good data. All of that is here. This is the best place to be doing research on neurodegenerative diseases."



Gülin Öz, Ph.D.