

Medical Bulletin

A powerful force

U researchers push the limits
of medicine's strongest magnets

WINTER 2009 Invention thrives where medicine and engineering intersect □ Dynamic duo combats health disparities □ Public health leader puts environmental toxins on his hit list



DEAR FRIENDS,

Medical advances don't happen in tidy compartments like specialties or academic divisions. They cross boundaries, occurring, for example, where physicists connect with oncologists, neurologists, and engineers.

At the University's Center for Magnetic Resonance Research (CMRR), recognized as one of the world's best imaging labs, scientists are making important discoveries in diseases as diverse as diabetes, breast cancer, ataxia, and schizophrenia. And, led by Kamil Ugurbil, Ph.D., a chemical physicist and professor in the Departments of Radiology, Neuroscience, and Medicine, they're expanding the boundaries of imaging science itself (see our cover story).

Now undergoing a major expansion in the University's emerging Biomedical Discovery District, the CMRR will be obtaining a 16.4 Tesla magnet, the world's strongest. And it will be linked to neighboring labs in such fields as neuroscience, cardiovascular medicine, and stem cell research so scientists in those areas have easy access to the

state-of-the-art imaging technology, and the CMRR, in turn, can benefit from their expertise.

Collaboration also is fueling invention in the Institute for Engineering in Medicine (IEM), established in 2007 by the Medical School and the Institute of Technology. As you'll read in our story on page 8, the IEM's 118 faculty members represent more than 30 academic disciplines.

Meanwhile, medical students Suzanne Garber and Ngozika Okoye, profiled on page 14, are working to eliminate boundaries that result in lower medical standards for people of color and underserved communities. As copresidents of our Student National Medical Association chapter, they are building alliances that benefit our patients and communities.

In today's economic climate, such collaboration is more crucial than ever, and you will find it at the heart of our Medical School's success stories.

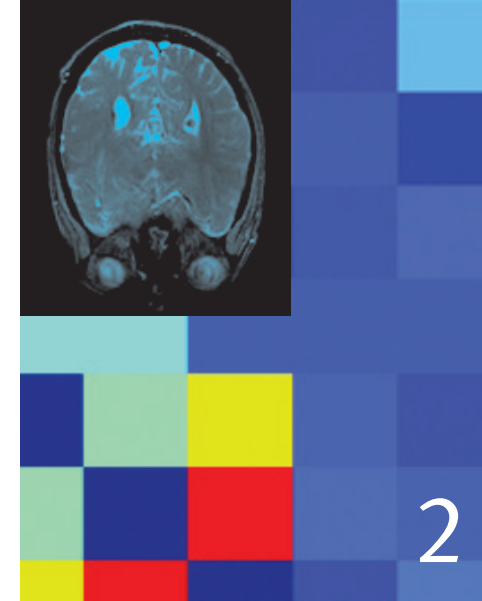
Deborah E. Powell, M.D.
Dean, University of Minnesota Medical School
McKnight Presidential Leadership Chair

**MINNESOTA
MEDICAL
FOUNDATION**

UNIVERSITY OF MINNESOTA

The mission of the Minnesota Medical Foundation is to improve the quality of life for the people of Minnesota, the nation, and the world by supporting the advancement of health-related education, research, and service at the University of Minnesota.

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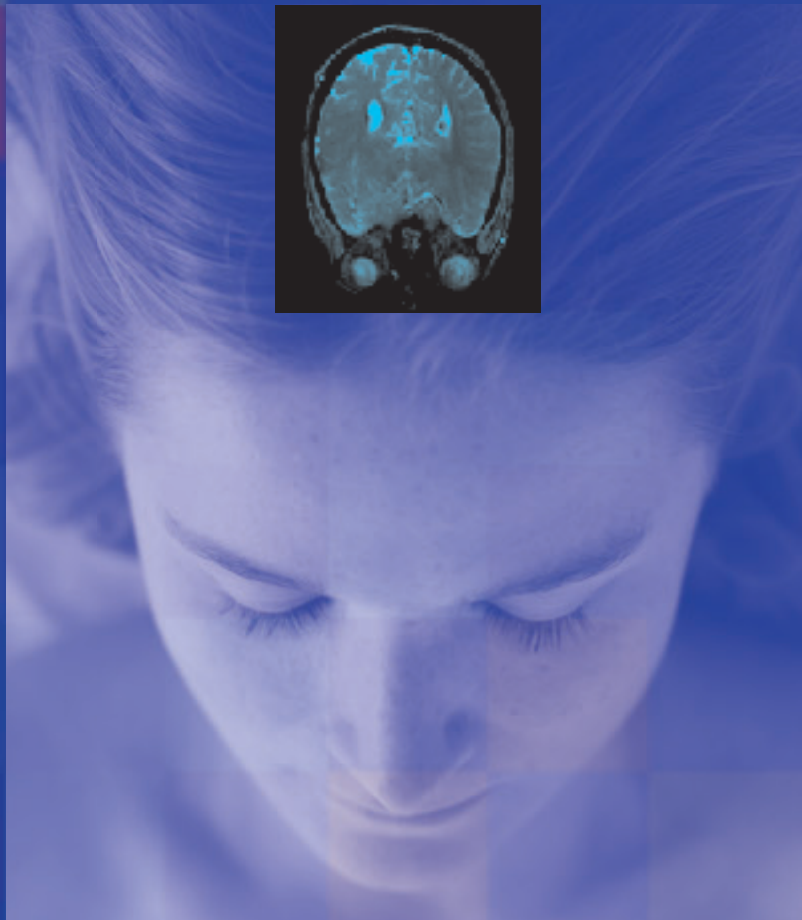
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ON THE COVER

Photo of Center for Magnetic Resonance Research director Kamil Ugurbil, Ph.D., by Tim Rummelhoff

A powerful force

The Center for Magnetic Resonance Research, soon to house the world's strongest magnet, is pushing the technology's limits

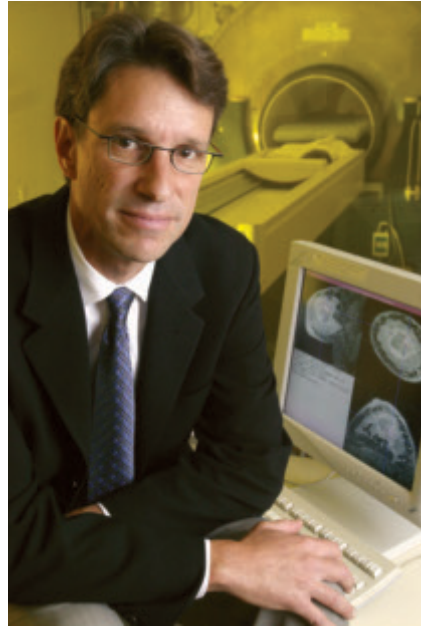


Some scientists make strides in biomedical research by acquiring state-of-the-art equipment and then using it to answer questions about living systems. “Good research can be done in that fashion,” says Kamil Ugurbil, Ph.D., director of the University of Minnesota’s Center for Magnetic Resonance Research (CMRR).

But Ugurbil takes a different approach. A chemical physicist by training, he has always veered away from using new machines straight out of the box. Instead, he likes to develop novel technologies and pushes them beyond what anyone ever imagined they could do. Even at points when other experts in the field believed magnetic resonance tools had reached their limits, Ugurbil and his colleagues have persisted, extending the capabilities of the magnets and finding new applications for them.

He puts it this way: “We’re excited when we can get information that is beyond the bread and butter of the technology.” That desire to test the untapped potential of new high-field magnets has placed the CMRR among world leaders in imaging. It’s also stretched every parameter of the discipline.

Today the burgeoning center, which Ugurbil has led since 1991, has 21 faculty members and six high-field magnets, with an additional “ultra-high-field” magnet on the way. As the latest construction project in the University’s developing research park, called the Biomedical Discovery District, the CMRR building is undergoing a renovation and large-scale expansion expected to be completed by fall 2010. A \$53 million budget, provided in part by the state, will add approximately 65,000 square feet for new research and clinical studies.



Brain scans performed by cancer researcher Michael Garwood, Ph.D., in the late 1980s showed the advantage of high-resolution 4 Tesla images over 1 or 1.5 Tesla, then thought to be the optimal magnetic field for research and clinical use.

The expanded building will house a new magnet that will be the highest field ever attained for human studies. (The magnets are referred to by the strength of their magnetic fields; typical magnetic resonance imaging [MRI] machines used for hospital diagnoses have a 1.5 Tesla magnet.) And an astounding 16.4 Tesla magnet currently being installed in the renovated section of the building will be the largest magnet in the country; the only other one of its kind is in Europe. These technologies are so new that even Ugurbil isn't certain what they'll be capable of revealing, although his team's track record with new tools suggests that remarkable discoveries are on the horizon.

A paradigm shift

The changing geographic location of magnetic resonance (MR) research on the University campus tells the story about the rising promise and prominence of Ugurbil's group. When Ugurbil arrived at the University of Minnesota in 1978 after working at Bell Laboratories and then at Columbia University, his lab was housed with the Gray Freshwater Biological Institute, located on the St. Paul campus, far from the University's medical center. (The institute is no longer part of the University.)

At Bell Labs, Ugurbil had written papers about applying MR spectroscopy to cellular metabolism that would shortly become classics. At the University, he intended to continue exploring what magnetic resonance technology could do with cells and even intact organs.

But then, with a program project grant from the National Institutes of Health and matching funds from the University's administration, the Freshwater Biological Institute obtained a 4.7 Tesla

magnet with a bore capable of holding small animals. Ugurbil's group began to think about studying intact living organisms with the high-field magnet.

"We had the basis to believe we could succeed in that area," Ugurbil says. The magnet was so new that the group had to develop its own software applications to use it. But as they succeeded in attaining useful images of rat organs, they became intrigued by a bigger challenge: applying the technology to humans.

It turns out that humans are complicated subjects for MR studies. Both building the high-field magnet to accommodate a person and creating an image as the magnetic fields increase become more difficult. In the late 1980s, no groups anywhere were having success with increased field strength for human imaging.

"It was accepted at the time that 1 to 1.5 [Tesla] would be the optimal magnetic field for doing MR research and for clinical diagnoses," says Michael Garwood, Ph.D., associate director of the CMRR, who was then a postdoc at the University.

Higher and higher

But keen on improving the magnets' resolution and sensitivity, Ugurbil linked his group with the Medical School's radiology department. Bill Thompson, M.D., the department chair at the time and an ardent supporter of advancing MR research—aided by David Brown, M.D., who was dean of the Medical School—enabled Ugurbil to acquire one of the first industry-built 4 Tesla systems. The instrument was set up in the CMRR's first home, a building near the University's medical center on East River Road.

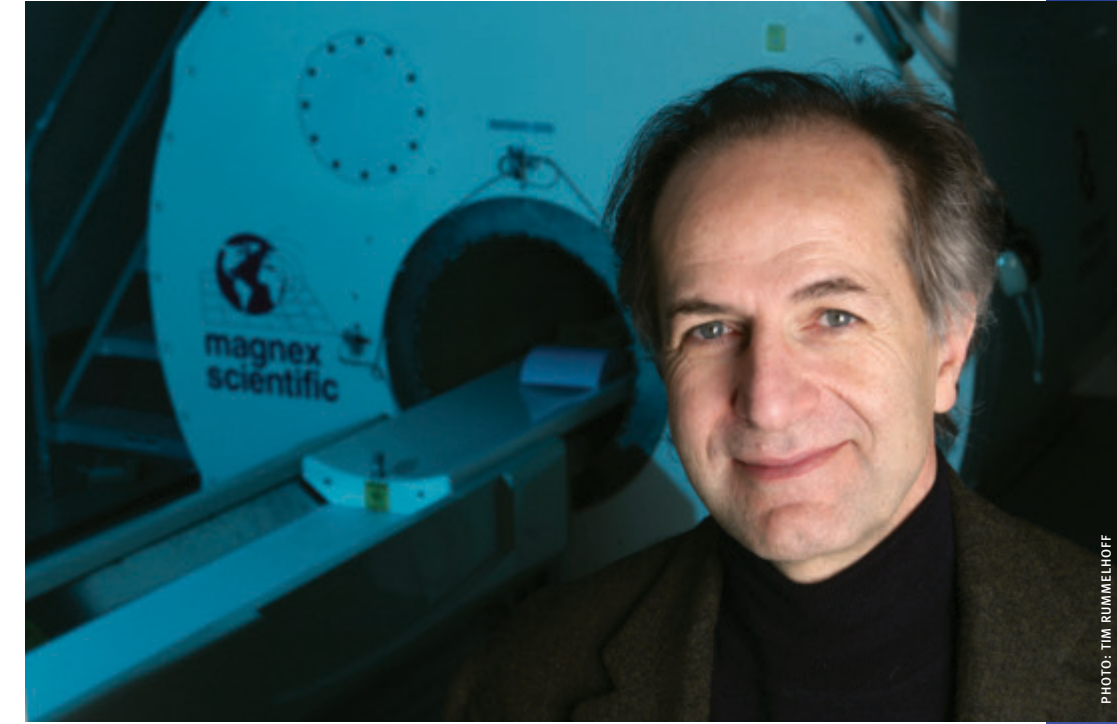
Acquiring that magnet involved a leap of faith, Ugurbil acknowledges today. Even industry members had abandoned the idea of developing a 4 Tesla magnet to study humans; the images it produced were less clear than a standard magnetic resonance image. But Ugurbil believed the magnet's higher sensitivity offered an opportunity to map brain activity, and his group developed strategies to address some of the confounding factors.

He and his team forged ahead with plans to use the magnet to study increased oxygenation in areas of the brain. In collaboration with Bell Laboratories, they mapped active neuronal regions of the brain in living subjects, a technique known as functional imaging or fMRI. At the same time, Garwood demonstrated that, contrary to expectations at the time, it was feasible to obtain beautiful anatomical images of the human brain at 4 Tesla.

"The very first experiments we did on the 4 Tesla were great successes," recalls Ugurbil. They offered a paradigm shift in how MR could be used.

At the time, along with the 4 Tesla machine, the group had two magnets for in vivo animal studies and continued to advance MR spectroscopy. But with little room to expand, and with an interest in attaining new magnets, in 1998 the CMRR moved into its current building, a low, brightly lit structure that helps anchor the emerging research park on the north side of the University's new TCF Bank Stadium.

Over the next decade, the group acquired an array of new magnets for both animal and human research, and the building underwent three separate renovations to accommodate them.



Center for Magnetic Resonance Research director Kamil Ugurbil, Ph.D., develops novel imaging technologies and pushes the boundaries of what they can do.

The 7 Tesla magnet the group acquired in 1999 was the world's first of its kind developed for human studies. A recently acquired 9.4 Tesla brain imaging system—another world first—is now in place as well.

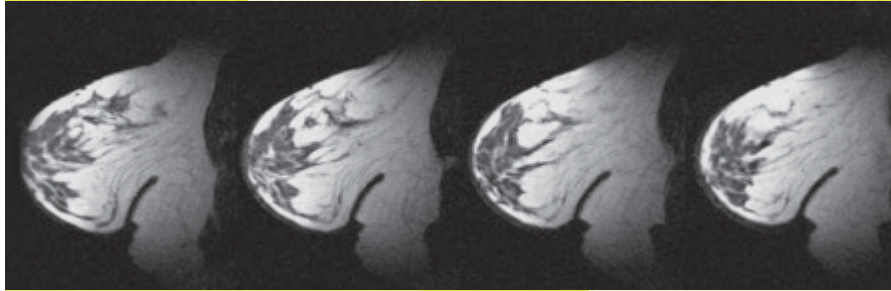
Focused on the brain

For University researchers from a variety of disciplines, the collection of magnets and the in-house expertise at the Center for Magnetic Resonance Research offer unparalleled opportunities to study diseases. With funding from the National Institute of Mental Health, University psychiatry professor Kelvin Lim, M.D., for example, has collected magnetic resonance images of anatomical differences in the brains of people with schizophrenia. In particular, he's looking at the gray matter deficit that occurs early during the disease course.

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To view high-resolution body scans and hear experts describe the technology and its applications, go to www.mmf.edu/mb/powerful.cfm.



A new tool for evaluating breast tumors

MAGNETIC RESONANCE IMAGING has long been studied as a noninvasive tool for detecting breast tumors, and in fact, has nearly 100 percent sensitivity for detecting breast cancer. But the technology, which offers telling views of a tumor's morphology, margins, and associated blood vessels, still can't always discern whether the lump is benign or malignant.

A decade ago, some groups began looking at lumps using magnetic resonance spectroscopy, which can detect choline, a chemical that increases in the presence of a cancerous tumor. Then, in 1999, oncologist Douglas Yee, M.D., director of the Masonic Cancer Center, University of Minnesota, and Center for Magnetic Resonance Research (CMRR) associate director Michael Garwood, Ph.D., became curious about using MR spectroscopy from another angle: Could it be used to quantify the presence of choline and could the amount it revealed determine whether a therapy was working?

What the researchers found using a 4 Tesla research magnet was that spectroscopy could pinpoint the choline levels, says Patrick Bolan, Ph.D., who joined the project as a graduate student a decade ago and continues to advance this line of research as a CMRR faculty member today. Even further, their experiments determined, a tumor that was responding to an effective drug would show a drop in choline within a single day, and the technology was sensitive enough to detect the decrease.

That pilot study, published in 2004 in the journal *Radiology*, has led to a multicenter trial now under way using MR spectroscopy to get a glimpse of how tumors are responding to chemotherapy one day after it's given. One long-term challenge will be whether the highly technical spectroscopy can be implemented with standard magnets for easy, widespread use in a clinical setting, but the potential benefits of the technology seem clear.

"If you can actually determine whether a drug works after a day, you can switch drugs or try new ones without exposing a patient to a long-term course [of chemotherapy]. There are no other tools like this one in oncology right now," Bolan says. "It could have a very big impact."

At the same time, he's been able to measure changes in brain activity using fMRI. The studies so far have looked at humans in the CMRR's 3 Tesla magnet, but Lim hopes to develop techniques to use the center's even higher-resolution 9.4 Tesla magnet to do magnetic resonance spectroscopy, which will offer a glimpse of specific neurochemical changes in schizophrenic patients.

"Access to this type of hardware gives us a tremendous advantage here," he says. Ultimately, these refined views of the brain may reveal subcategories of schizophrenia, each with its own unique characteristics. "One of my goals is to get to the point," Lim says, "where we have important biomarkers [for each subcategory] that can help us guide treatment."

Down the hall, CMRR biochemist Gülin Öz, Ph.D., is studying the effects on the brain of a mutant gene that causes a neurodegenerative disease known as spinocerebellar ataxia. In humans, where her MR investigations began, the genetic condition eventually results in irreversible damage to the cerebellum, causing movement problems like loss of balance and coordination as well as awkward gait. But as she sought more specific and controlled biochemical information about what was happening to the cells, Öz redirected her MR spectroscopy studies to look at the brains of mice that have the mutation.

In collaboration with ataxia expert Harry Orr, Ph.D., in the Department of Laboratory Medicine and Pathology, who provided a mouse model for the disease, Öz is conducting research to pinpoint chemical precursors to the devastating structural changes that the neurons undergo.

"It's been shown that if you can intervene early on in the disease, you can reverse the changes and rescue the cells before they die," Öz explains. What's more, better understanding of the neurochemistry may reveal commonalities among a range of neurodegenerative disorders, providing information about other diseases like Alzheimer's and Parkinson's.

Other projects delve into different aspects of various disease processes, from a study taking place with the Mayo Clinic that looks at the amyloid plaques that form in people with Alzheimer's disease (researchers at the CMRR were the first ever to visualize those plaques in living organisms) to a collaboration with University of Minnesota diabetes researcher Elizabeth "Betsy" Seaquist, M.D., who is investigating how diabetic "sugar crashes" affect metabolism in the brain.

A \$7.9 million grant from the National Institutes of Health in 2006 helps ensure that the CMRR's state-of-the-art equipment is available to these and other neurosciences researchers across the University.

An unprecedented resource

Now, with sights set on bringing in new ultra-high-field magnets, the CMRR faces new research possibilities—and new challenges. Even though the 16.4 Tesla magnet for studying animals is powerful enough to visualize a process as minute as the development of a rat embryo, it may take years to develop the methodologies that can take full advantage of the magnet's capabilities. In typical style, Ugurbil pushed to acquire the tools to get that work started. (The project received University support as well as \$2 million from the NIH.)



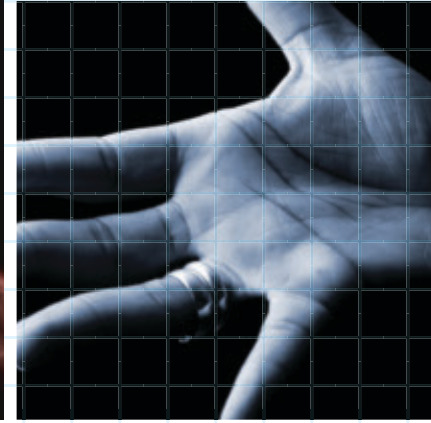
Biochemist Gülin Öz, Ph.D., is using magnetic resonance spectroscopy to track chemical precursors to spinocerebellar ataxia with the hopes of disrupting the process before the condition causes irreversible damage to the brain.

What's clear is that the work Ugurbil began 25 years ago has created an unprecedented resource. "There's no setup quite like the one we have here, in scope of instrumentation and quality of leadership," states Charles Moldow, M.D., vice dean for research and operations in the Medical School.

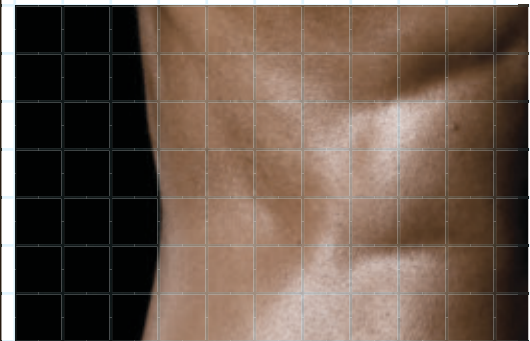
The construction planned for the research park around the CMRR will situate the building among other medical research as it's never been positioned before, notes Kevin Ross, capital planning project manager for the expansion. New skyways linking the building to its neighbors will connect it with labs in such fields as neuroscience, immunology, and stem cell research. Until now, the building has "stood very much isolated from campus, kind of on the outskirts," says Ross. "Now, when the CMRR expansion is completed, it will be in the heart of a state-of-the-art research community." ^{MB}

By KATE LEDGER, a free-lance writer living in the Twin Cities who specializes in topics related to medicine and research.

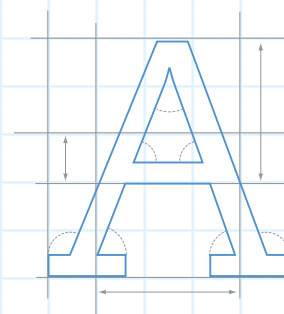
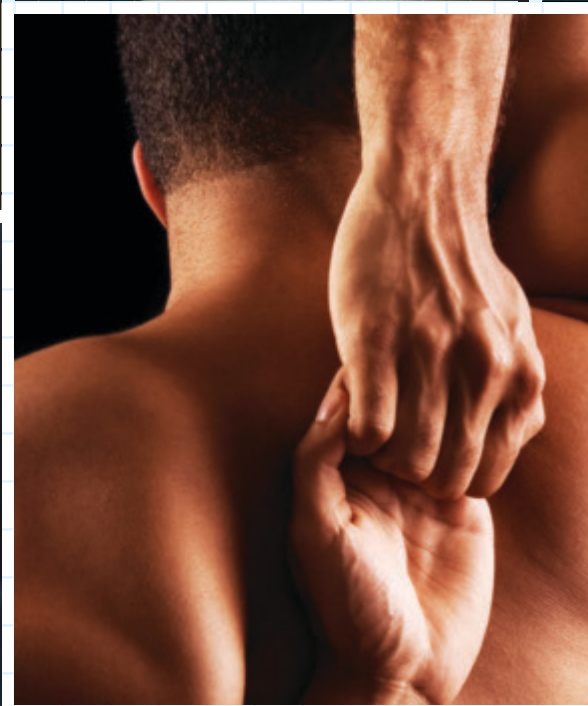
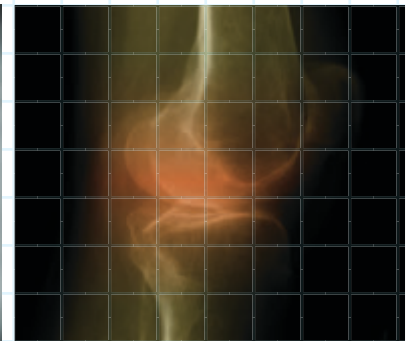
Better understanding of the neurochemistry may reveal commonalities among a range of neurodegenerative disorders, providing information about other diseases like Alzheimer's and Parkinson's.



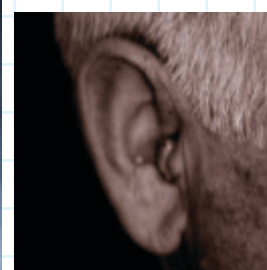
Biomedical invention thrives at the University's Institute for Engineering in Medicine, where scientists are finding better ways to tune up the ultimate machine



Body mechanics



constant hum fills the air at the University of Minnesota's Medical Devices Center. It's not the whir of high-tech equipment, but the talk of the three engineers and one medical student taking part in the 2008-09 Medical Devices Fellows Program, and the energy they're generating makes it clear why the University is gaining renown as a fertile ground for collaborations between physicians and engineers.





Jeffrey McCullough, M.D., director of the Institute for Engineering in Medicine, is bringing together engineers and physicians to solve complex medical problems.

There's still a lot of mystery in the mechanics of the body, and it is fascinating to try to go where nobody's ever gone before.

— Bryan Rolfes, medical student and medical devices fellow

In the early weeks of their program — one of many under the umbrella of the University's Institute for Engineering in Medicine — fellows Benjamin Arcand, Ph.D., Joseph Hale, Ph.D., Nikhil Murdeshwar, Ph.D., and Bryan Rolfes bulldozed through a crash course on intellectual property, entrepreneurship, creativity, fund-raising, and coaching in business networking. Affectionately called Boot Camp, it was a nonstop parade of lectures, demonstrations, tours, trips to the operating room, and discussions.

Next, they began documenting hundreds of medical needs that new medical devices and technology might satisfy. And finally, by the end of the academic year, the fellows will have identified about 20 needs with the most attainable and commercially attractive solutions, created prototypes of the devices that would meet those needs, and applied for provisional patents.

They accomplish most of this work in the Medical Devices Center, which houses laboratories for mechanical prototyping, computer-aided design and precision instruments, electronics fabrication, assembly and molding, and SimPortal technology that allows direct three-dimensional viewing and

voice communication with surgical suites during medical procedures. One of the center's goals, according to its director, Art Erdman, Ph.D., is to make it easier for engineers and physicians to collaborate in creating innovative medical solutions.

"I've been impressed by the interest in this program from the medical device industry and the University," says Bryan Rolfes, the medical student among the fellows, who previously worked for a product innovation firm and has been building and fixing things since his childhood on a Nebraska farm. "The human body is the ultimate machine," he says. "There's still a lot of mystery in the mechanics of the body, and it is fascinating to try to go where nobody's ever gone before."

Interdisciplinary research

That thrill of discovery, accompanied by medical and engineering rigor and a disciplined approach to commercial possibilities, infuses the collaborations that thrive in the Institute for Engineering in Medicine (IEM). Established in the summer of 2007 on the foundations of the Medical School's former Biomedical Engineering Institute, the IEM is jointly sponsored by the Medical School and the Institute of Technology. Its 118 faculty members represent more than 30 academic disciplines.

"We're capitalizing on the synergies and applications of engineering to medical problems to help patients," says IEM director Jeffrey McCullough, M.D. "You need this institute to have feet in both engineering and medicine. At the University, the Institute of Technology and the Medical School are right across Washington Avenue from each other. We can bring together engineers and physicians, and we

have the local industry to tap as our research gets to the point of commercialization."

The IEM's mission focuses on interdisciplinary research that applies engineering to medical problems and the improvement of medical care. Bolstered by donations from individuals and corporations, it supports centers devoted to the study of medical devices and cardiovascular repair, and it funds a wide variety of research that crosses traditional academic boundaries.

"Minnesota is uniquely positioned, with major strengths in biomedical engineering research and development," says John Bischof, Ph.D., the IEM's associate director of research. "We have talent, resources, and a unique environment that includes not only strong schools of engineering and medicine and an academic health center, but also local industry unmatched in the medical device area."

In fact, medical technology businesses play a big part in advancing the IEM. Businesspeople lead workshops and events, mentor students who make up the next generation of device engineers and inventor-clinicians, and ultimately hire them. Much of the equipment in the Medical Devices Center arrives through corporate donations.

In turn, the IEM participates in educational opportunities offered by the Department of Integrative Biology and Physiology aimed at people working in the medical device industry, including a cardiac physiology and anatomy class and a cadaver lab available for dissections. Because many engineers in the medical industry have never thoroughly studied anatomy — much less worked with cadavers — these courses allow them to pick up crucial

Feet in two worlds

WHEN BRYAN ARMITAGE enrolled in the University of Minnesota Medical School, his background made him stand out. As an undergraduate at Cornell University in Ithaca, New York, he earned a dual degree in chemical engineering and biology, and soon after graduation, he interned for a medical device manufacturer. Later, he spent five years working as an engineer for a company that made orthopaedic medical devices.

"When I had conversations with the doctors involved with the company as well as the machinists on the floor, I felt like I could speak multiple languages," he says. As a medical student, he continued his involvement with medical devices, assisting a start-up company that produces knee braces.

Armitage hoped not to abandon these interests as his medical studies grew more demanding. "For me, the *what* of medicine isn't as interesting as the *why*," he says.

"Some medical students may be content simply knowing that atherosclerotic plaques happen in arteries, for instance, but I want to know why. The answer is related to how rivers flow and other issues of fluid dynamics."

His background and way of thinking made Armitage a perfect candidate for the University of Minnesota's M.D./M.S. Dual Degree Program in Medicine and Biomedical Engineering, offered in cooperation with the Biomedical Engineering Department. Launched by a \$1 million endowment gift from Medical School alumnus Scott Augustine, M.D., and his wife, Susan, the program lets students complete both an M.D. and M.S. in biomedical engineering in five years. Armitage completed his M.S. in fall 2008 and will earn his M.D. in May.

His biomedical engineering and medical studies have frequently illuminated one another. When he studied clinical problems with bones in medical school, he could refer to what he had learned about artificial bones as a biomedical engineer. In turn, his clinical experiences helped him understand why medical devices do or don't work. "I could see things a little differently than my fellow medical students," says Armitage, who hopes to go into orthopaedics after completing medical school.



Bryan Armitage will graduate in May after completing the University's 5-year M.D./M.S. Dual Degree Program in Medicine and Biomedical Engineering.



PHOTO: NANCY JOHNSON

Medical devices fellow Benjamin Arcand, Ph.D., shapes a piece of material for a new device while Joseph Hale, Ph.D. (foreground), looks on. Bryan Rolfes and Nikhil Murdeshwar, Ph.D. (background), make a model of another mechanical part.

knowledge as they gain an understanding of the University and its strengths in engineering and medicine.

What if?

It's possible to look into the future of the medical industry by examining the projects that the IEM funds: a diverse range of multidisciplinary collaborations, most involving engineering students and medical staff and faculty. Interest group grants of \$5,000, for example, are designed to get researchers talking and hatching collaborations. These nascent discussions might lead to a concrete project, or they might flicker out.

Larger grants of \$100,000 or more go to projects already carrying significant momentum, such as those close to obtaining major support from the National Institutes of Health (NIH) or other funding sources in such areas as multimodal biomedical imaging (combining various brain imaging techniques to enhance their results), cell-based cardiac regeneration and repair, and medical device design.

In addition, the Medical Devices Center gives its own grants to member groups that are conducting research on new medical devices. Its recently funded projects include efforts to develop computer-assisted screening for retinal disease, to facilitate the design of medical devices in virtual reality, to create new magnetic heating devices for cancer therapy and drug and stem-cell delivery, and to produce a robotic scrub nurse that surgeons can use to retrieve tools and supplies in the operating room.

The IEM also supports innovative investigations with What If? grants. When IEM members pinpoint a medical need and settle upon an approach

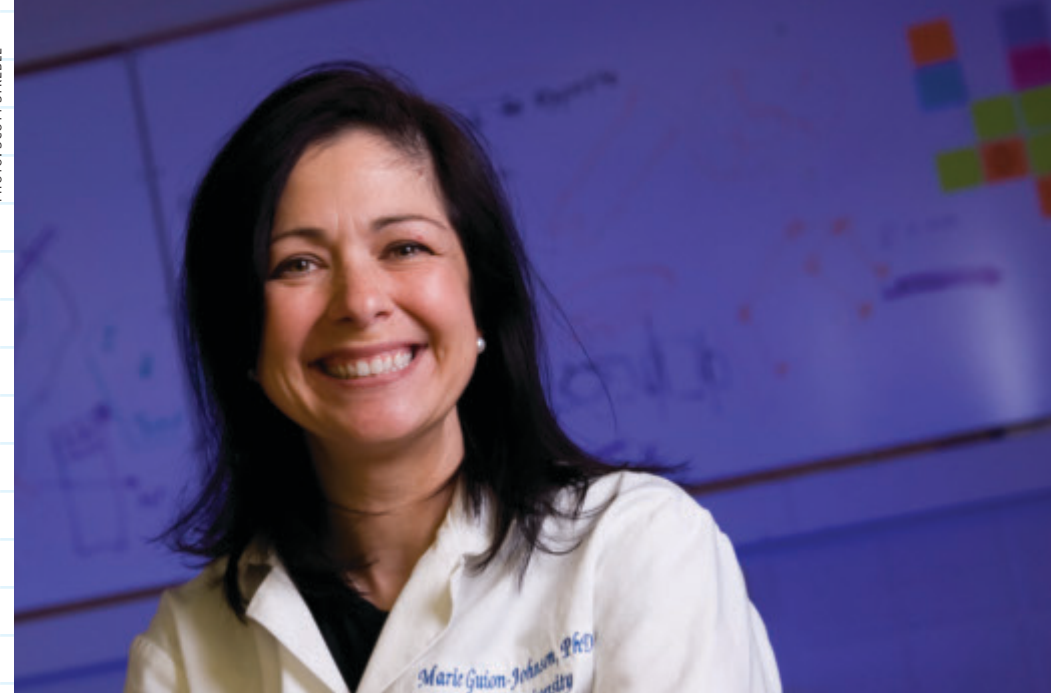
using new technology that offers a solution, What If? funds provide seed money of \$5,000 to \$15,000 to get the project going. It often allows the researchers to accumulate enough data to file provisional patent applications and attract interest from the NIH, NASA, and other major funders.

"We support the 'eureka' of the idea itself," Bischoff says. "A clinician and an engineer may need to explore how a prospective medical device would change medicine and affect the special need they have identified. It's speculative—a forward-thinking and progressive way of funding ideas."

In the What If? program's first two years, the IEM awarded \$170,000 to 18 project teams. Three of those projects progressed to NIH grant applications for more research, two produced medical device prototypes, two (an absorbable nasal stapler and a bioartificial arachnoid shunt to prevent swelling and fluid buildup in the brain) resulted in provisional patents, and one sparked a clinical trial now under way. Currently funded projects include:

- An implantable electrical sensing and stimulating catheter that also delivers drugs, being developed by a team of surgeons and a biomedical engineer;
- A system to monitor hand disinfection compliance, in development by investigators from the departments of Electrical and Computer Engineering, and Medicine, including the Division of Infectious Diseases; and
- A cooling device to aid in the treatment of head and neck injuries, under investigation by a neurologist and a mechanical engineer.

PHOTO: SCOTT STREBLE



Medical Devices Fellows Program director Marie Johnson, Ph.D., says she's looking for "tinkerers."

Collaborators

Marie Johnson, Ph.D., director of the Medical Devices Fellows Program, knows exactly the kind of person who thrives in the interdisciplinary development of medical devices at the IEM. That type herself, she invented a computerized stethoscope to noninvasively detect coronary disease, and she improved her tiny office in the Shepherd Labs by building a platform that supports her desk and equipment while providing ingeniously designed storage space underneath.

"Tinkerers, that's who we're looking for," she declares. "They identify unmet medical needs and find solutions. But they don't rogue-invent devices that no one wants or will pay for. They hear the clear voice of the customer." Johnson, who has completed three postdoctoral-level fellowships, scrutinizes the many applicants for the fellows program by putting top contenders through an eight-hour interview that includes mock brainstorming sessions.

After their selection, this year's four fellows took the Myers-Briggs Type Indicator assessment, and three emerged as INTJs, an uncommon personality type distinctive for its drive to make sense of the world, design systems, and find out why things work. That sounds like a perfect summary of the University's medical inventors.

Erdman, the Medical Devices Center director, believes medical-engineering inventors have other qualities that contribute to the success of such collaborations at the University: "They usually have a combination of a desire to improve health care—they don't say the status quo is fine—with an entrepreneurial spirit that says, 'Let's make this work.'" ^{MIB}

By JACK EL-HAI, author of *The Lobotomist: A Maverick Medical Genius and His Tragic Quest to Rid the World of Mental Illness*.

It's possible to look into the future of the medical industry by examining the projects that the IEM funds.

^{MIB} To watch a video about the intersection of medicine, engineering, and business, go to www.mmf.umn.edu/mb/body.cfm.

‘Complementary’ medicine

A yin-yang dynamic makes the Student National Medical Association copresidents more effective as they combat health disparities

One was born in Rochester, Minnesota, the other in Nsukka, Nigeria. One is 39; the other is 24. One is passionate, maybe even a bit of a hothead; the other is analytical and judicious. □ Both are deeply committed to medicine and to combating health disparities—locally and globally. Together, as copresidents

of the University of Minnesota’s chapter of the Student National Medical Association (SNMA), Suzanne Garber and Ngozika Okoye make a formidable team.

The SNMA’s mission is “to achieve better medical standards for people of color and underserved communities” (see sidebar, page 17). Among its goals are increasing the number of culturally competent physicians through volunteer work in underserved areas and helping to educate and encourage pre-medical and medical students of color. About 60 of the 964 medical students at the University of Minnesota are active SNMA members, says Mary Tate, SNMA adviser and director

of the Office of Minority Affairs and Diversity. The group meets monthly and sponsors a wide array of lectures and events.

Choosing to dedicate their scarce free time to the SNMA wasn’t a hard call for Okoye or Garber. Okoye, whose family moved from Nigeria to Mississippi when she was 2, knows firsthand of the need the SNMA attempts to fill. “When I grew up, we were poor immigrants. We didn’t have health care; we used free clinics. My brother had asthma, and when he had his attacks, where did we go? The ER. That’s where we got most of our care,” she recalls. “We need to educate people, including providers, would-be providers, and the

PHOTO: SCOTT STREBLE



public, about health-care disparities here and around the world,” she says.

Garber’s upbringing informs her commitment to the SNMA, too. “One of the important [issues] to me has always been health-care disparities. My mom, who is Mexican, worked as a migrant health nurse for 20 years, and it’s just horrendous, the health care these people get.

“The SNMA became the group that best fit my needs,” Garber continues. “Plus, the people in it are fantastic. I spend 15 hours a day on this campus, and it’s nice to know that almost everywhere I turn there’s going to be somebody from the SNMA whom I’ve gotten to know. I have a family here.”

Complementary strengths

There’s a definite yin-yang dynamic in Garber’s and Okoye’s collaboration. “We feed off of each other very well,” Okoye says. “I’m like the calm for her fire sign. I’m the water sign—I throw water on her and cool her down,” she laughs.

Garber agrees. “I try to be [diplomatic], but when I get mad about something, she’s the first one I go to. She makes it so easy for me to ask for help.”

Garber’s path to medicine was longer and a bit more circuitous than the average medical student’s. An MIT graduate, she began her career as an aerospace engineer. After her second layoff, Garber was an IT consultant for

Vastly different backgrounds inform medical students Suzanne Garber and Ngozika Okoye, their attitudes toward health care, and their coleadership of the University chapter of the Student National Medical Association.

The SNMA has really helped put the U of M Medical School on the map. It's won regional and national awards. The students who join SNMA, serving is at their core. They just have a heart to serve.

— Mary Tate, SNMA adviser and director of the Office of Minority Affairs and Diversity



PHOTO: TIM RUMMELHOFF

Mary Tate, director of the Office of Minority Affairs and Diversity, advises the University's award-winning chapter of the Student National Medical Association.

12 years, working part of that time in England, Germany, and Luxembourg. She returned to Minnesota, primarily to be with family, and started medical school at the University last fall.

Okoye took a more direct route, completing her undergraduate degree in biology at the University of Minnesota in 2006 and starting medical school in 2007.

"Ngozika comes in from the new side, and I'm coming from the nontraditional side," Garber says, so both younger and older students can relate to SNMA's leadership.

Tate agrees that the pair's symbiotic relationship brings tremendous value to SNMA. And that, in turn, benefits the Medical School and the University as a whole. "The SNMA has really helped put the U of M Medical School on the map," Tate says. "It's won regional and national awards. People I've run into—parents, faculty, people outside of the school—know about the group's efforts. The students who join SNMA, serving is at their core. They just have a heart to serve."

Inspiring future providers

The SNMA emphasizes pipeline programs designed to spark an interest in health professions among young people of color. "We're letting the youth know, 'There's a need for you,'"

Okoye says. "We're hoping that by sending a delegation of people who may look like those students, they may say, 'Hey, if she was able to do it, there's no reason I can't do it.'"

To that end, they've been working with students at Higher Ground Academy, a K-12 St. Paul charter school composed mostly of immigrant Somali students. The SNMA's intent is not simply to groom future physicians, but to let students know about opportunities in health care generally. "Not just doctors, but also nurses, pharmacists, dentists," Okoye says.

"Some students have this great aptitude, but they don't have support at home," she continues. "Maybe their parents aren't educated, or maybe they're busy with other things. And unfortunately, some students, from a very young age, are in the company of people who tell them that this is out of reach. And they start thinking, 'College is not for me—it's too hard, we can't afford it,' not knowing that there are all these possibilities out there."

College and medical school are more accessible than many young people realize, Garber adds. "A lot of students aren't aware of how many [financial aid] resources are available. That's part of our mission—explaining to them how you can do it."

Outreach with impact

Each year, Midwestern members of SNMA and of the Minority Association of Pre-Health Students (MAPS) gather for a regional conference. The weekend-long event includes workshops, lectures, panels, and service and networking opportunities.

Another highlight of the year is SNMA's annual health fair at the Mall of America (MOA). The largest health fair in Minnesota, it served 300 people last year. Sponsored by the SNMA with support from the University of Minnesota Medical Center, Fairview, the Medical School's Department of Ophthalmology, and the MOA, the all-day event offers free screening and information on a wide range of health topics.

"It's direct outreach to the community," Garber says. "We get to talk to people who have so many different questions. One guy came in with a glucose level that was way too high. We have people wanting information about pregnancy, heart attack, substance abuse."

Okoye is buoyed by how the University's health professional students—not just SNMA members—donate their time and support the cause. "The energy is just incredible," she says. That collaborative spirit shows in other alliances, too. The SNMA recently cohosted a lecture with the Women in Medicine group and is talking with students in the School of Dentistry about collaborating on a national bone marrow registration drive.

Garber and Okoye say their SNMA experiences will have a lasting impact on their lives and will influence their career choices. Garber is currently leaning toward surgery and community health, while Okoye is intrigued by pediatrics and a global focus. Both women are certain that wherever they end up, the service ethic that the SNMA promotes will remain paramount.

"I have to give," Okoye says. "If I don't give, I just won't be happy." ^[MIB]

By SUSAN MAAS, a Minneapolis-based free-lance writer.

SNMA at a glance

FOUNDED IN 1964, the Student National Medical Association (SNMA) is the nation's oldest and largest student organization for students of color and minority communities. It aims to achieve better medical standards for people of color and underserved communities.

The University of Minnesota's SNMA chapter—which earned the Region II Chapter of the Year Award in 2007—is open to all U of M medical students. It offers a mentoring program, hosts lectures and workshops, participates in regional conferences, and coordinates the largest health fair in Minnesota. The 2009 health fair is slated for March 14 at the Mall of America.

LEARN MORE AT:
www.student.med.umn.edu/snma

The organization works with undergraduates interested in medicine as well. In 2007, the University's SNMA chapter hosted its first annual Pre-Medical Forum. Interested undergraduates are encouraged to contact the SNMA's affiliated MAPS (Minority Association of Pre-Health Students) chapter.

LEARN MORE AT:
maps@umn.edu
www.tc.umn.edu/~maps

U of M receives \$40 million for type 1 diabetes research

THE RICHARD M. SCHULZE FAMILY Foundation in December made a \$40 million pledge to the University of Minnesota for diabetes research. The gift will capitalize on the University's strength in this field and aims to shorten the timeline for translating research into a cure for people with type 1 diabetes.

The gift is the second largest in University history and the second largest by an individual or family foundation to diabetes research in the United States. In recognition of the gift and the future of diabetes research, the University will rename its Diabetes Institute for Immunology and Transplantation (DIIT) the Schulze Diabetes Institute.

"We have the capacity to cure this devastating disease and help people enjoy a happy and productive life no longer constrained by diabetes and constant fears and worries," says Bernhard Hering, M.D., an internationally recog-

nized diabetes researcher and scientific director of the Schulze Diabetes Institute.

The Schulze gift focuses on specific efforts to implement a cure for type 1 diabetes through three promising concepts: human islet transplantation, pig islet transplantation, and stem cell-derived islet cells.

University researchers — world leaders in these areas — have had success reversing diabetes with human islet transplants, but because of the severe shortage of donor organs and the challenges of immunosuppression, few people have benefited from this experimental treatment. The Schulze family's pledge will help the physician-scientists seek a cure by developing an abundant



PHOTO: PATRICK O'LEARY

Richard M. Schulze addresses the media at a December 11 news conference, while diabetes researchers Bernhard Hering, M.D., and Meri Firpo, Ph.D., listen in.

supply of islet cells and better and safer immunosuppressant techniques.

"The scientists... and their teams at the University have the passion, determination, experience, and knowledge to find a cure for type 1 diabetes," says Schulze. "We felt the time was right to choose a direction that would advance to a cure in the next five years." [MIB](#)

Cerebral malaria may be a major cause of brain injury in African children

University of Minnesota researchers discovered that one in four child survivors of cerebral malaria shows long-term cognitive impairment. In Sub-Saharan Africa, malaria is the leading cause of death among children. Cerebral malaria, one of the most deadly forms of the disease, affects more than 750,000 children per year.

Chandy John, M.D., the study's principal investigator and associate professor of pediatrics at the University of Minnesota, worked with neuropsychology expert Michael Boivin, Ph.D., M.P.H., from Michigan State University to evaluate the cognitive function of children

with cerebral malaria who were admitted to the Mulago Hospital in Kampala, Uganda. They evaluated 5- to 12-year-olds in three major areas: attention, working memory, and tactile learning six months after the malaria episode and again two years later.

At six months, they found cognitive impairment present in 21 percent of children with cerebral malaria, compared with 6 percent of healthy Ugandan peers. At two years, the impairment rose to 26 percent, compared with 8 percent in the peer group. These findings suggest that impairment manifests itself months after the initial cerebral malaria episode.

"If 26 percent of children with cerebral malaria have long-term cognitive impairment, that means more than 200,000 children a year may have significant long-term brain injury because of cerebral malaria," John says.

In hopes of finding an intervention, he and Boivin are now studying how the body's response to malaria infection may be leading to brain injury. [MIB](#)

Prostate cancer researcher receives Young Investigator Award

Scott Dehm, Ph.D., a prostate cancer researcher at the Masonic Cancer Center, University of Minnesota, has received a Young Investigator Award for 2008 from the Prostate Cancer Foundation.

Dehm is one of 19 researchers in the United States, Canada, and the United Kingdom to receive this award. He will use his \$225,000 award to continue his research on how to block the progression of recurrent prostate cancer that is resistant to conventional treatments.

Surgery and radiation therapy are the most common treatments for prostate cancer. If those treatments are ineffective, the next step is often androgen deprivation therapy to stop the cancer's growth and survival. This therapy inhibits the androgen receptor (AR), a type of hormone receptor in the prostate that promotes prostate cancer growth. However, this treatment is not curative, and over time the cancer can progress.

With his research award, Dehm will create laboratory models that show how the AR continues to cause prostate cancer growth even after AR activity is blocked. He hopes these models will provide better understanding of how prostate cancer progresses and potentially lead to the development of new treatments for men with advanced prostate cancer. [MIB](#)



Scott Dehm, Ph.D.

Physicians recognized for global engagement

The University of Minnesota in November awarded Phillip Peterson, M.D., and Paul Quie, M.D., codirectors of the International Medical Education and Research Program, its 2008 Award for Global Engagement.

The award recognizes University faculty and staff for outstanding contributions to global education and international programs.

"In their commitment to knowledge both scientific and cultural that transcends borders, these two men are inspirational colleagues and mentors to all of us in the Medical School," Dean Deborah Powell, M.D., remarked at the award ceremony.

Last May, Peterson also received an honorary medical degree from the Karolinska Institute in Sweden in recognition of the collaboration he initiated between the institute and the University of Minnesota resulting in joint symposia, graduate education opportunities, and student exchanges related to inflammation and infection. [MIB](#)

Medical School News

Researcher gets Gates grant for HIV stem cell research

The Bill & Melinda Gates Foundation awarded the University of Minnesota a \$100,000 Grand Challenges Exploration grant for a global health research project that will explore the use of new stem cell-based therapies to fight the human immunodeficiency virus (HIV).

Project leader Dan S. Kaufman, M.D., Ph.D., is an associate professor of medicine in the Division of Hematology, Oncology, and Transplantation and associate director of the Stem Cell Institute. He has

previously demonstrated that natural killer cells — blood cells that work as part of the body's immune system to attack tumors and HIV-infected cells — can be developed from human embryonic stem (ES) cells. For this project, he is testing the ability of these natural killer cells to fight HIV infections.



Dan Kaufman, M.D., Ph.D.

Kaufman is also investigating the potential of a newly described kind of stem cell, an induced pluripotent stem (iPS) cell, to generate natural killer cells to fight HIV. The iPS cells are derived from skin cells but reprogrammed to have the potential to act as ES cells.

Both approaches provide a novel means of harnessing stem cells to treat patients infected with HIV. [MIB](#)

Cancer rates high among American Indians of Minnesota, Northern Plains

IN THE FIRST NATIONAL large-scale study of cancer rates among American Indians and Alaska Natives, researchers found that American Indians in Minnesota and the surrounding Northern Plains have a colorectal cancer rate 39 percent higher than non-Hispanic whites. Related studies indicate that this group also has a 197 percent higher rate of liver cancer, a 135 percent higher rate of stomach cancer, and a 148 percent higher rate of gallbladder cancer compared with non-Hispanic whites.

David Perdue, M.D., a physician-researcher with the Masonic Cancer Center, University of Minnesota, was

lead author of the colorectal cancer study and co-author of the studies on rates of stomach, liver, and gallbladder cancers among American Indians and Alaska Natives. The findings were published in the August 20 online edition of the journal *Cancer* and in a supplement to the journal's September 1 print edition.

The researchers also discovered that for all cancers combined, the incidence rates were 50 percent higher for American Indians in the Southwest and Plains and for Alaska Natives than for non-Hispanic whites. American Indians in the Northern Plains had the highest rate of

lung cancer, and Alaska Native women had the highest rate of breast cancer.

"It is evident from this research that more needs to be done to close the disparity gap in cancer screening and treatment among American Indians and Alaska Natives," says Perdue. "Resources and culturally sensitive programs aimed at decreasing risk factors and increasing the use of screening are desperately needed."

The research was sponsored by the National Cancer Institute, Centers for Disease Control and Prevention, and Indian Health Service. MIB

Psychiatry professor honored by APF

A University of Minnesota psychiatry professor is being honored for his contributions to severe mental illness research and for his education efforts.

Irving I. Gottesman, Ph.D., who holds the Bernstein Professorship in Adult Psychiatry and a senior fellowship in the Department of Psychology, received the 2008 Alexander Gralnick Investigator Prize from the American Psychological Foundation (APF) in August. The award recognizes exceptional individuals who research serious mental illnesses — including schizophrenia, bipolar disorder, and paranoia — and train younger investigators.

"There is no higher honor than being recognized by your peers for research you have dedicated your life to," Gottesman says. "It is also a bonus to receive this prize money from APF, when I would do my research for free."

And that's not just talk: Gottesman donated \$18,000 of the \$20,000 prize he received to severe mental illness research at the University. He also has donated to the cause his recent \$50,000 Lieber Prize for Outstanding Achievement in Schizophrenia Research from the National Alliance for Research on Schizophrenia and Depression.

A 1960 graduate of the University's Clinical Psychology Training Program and founder of its Behavior Genetics Training Program, Gottesman is internationally known for his research on the genetics of schizophrenia and bipolar disorder. His interests include the psychoses, personality disorders, genetic counseling for psychopathology, and assessment.



PHOTO: PATRICK O'LEARY

Leading mental illness researcher Irving I. Gottesman, Ph.D., donated his prize money to research at the University.

Gottesman also is chair of the Institute of Medicine's World War II Veteran Twins Committee and an advisory committee member of the institute's Medical Follow-up Agency, which is concerned with the health of military veterans. MIB

Medical School News

Mondale on medicine: First and foremost, establish trust

In a lecture at the University of Minnesota last fall, former U.S. Vice President Walter Mondale encouraged his audience of largely Medical School faculty and other health-care professionals to above all build trust with those whom they're serving.

It's a lesson he learned in his political career, Mondale said, but it also applies to medicine: "I learned that public trust is indispensable to any kind of service."

Leaders in both medicine and politics should strive to do better than simply comply with the law, he said — they should strive to be ethical.

Mondale addressed a full crowd in the Mayo Memorial Auditorium as the presenter of the first annual David A. Rothenberger Lecture on October 2. The lecture series honors the work of David Rothenberger, M.D., professor and deputy chair of the Department of Surgery, as a leader, surgeon, mentor, and researcher and is meant to stimulate dialogue between health-care professionals and the community at large regarding today's evolving health-care system.

The lecture also launched the Medical School's Emerging Physician Leaders Program, a three-year curriculum designed to build skills and prepare participants for future leadership roles.

Drawing from his many years in public service, Mondale offered advice to the crowd on how to deal with the constant challenge and stress from working in a multilayered, complex environment. "Of course, if medicine is like politics, even if reform is accomplished, your practice will continue to be challenging," he said.



PHOTO: JERRY VINCENT

Department of Surgery chair Selwyn Vickers, M.D. (left), and deputy chair David Rothenberger, M.D. (right), flank former Vice President Walter Mondale, the speaker at the University's first David A. Rothenberger Lecture.

But Mondale urged the audience to tackle the difficult issues, particularly in the area of health-care reform.

"Things can change. Reform can occur. Leadership can make a difference," he said. "I think almost certainly in the next Congress, we will see legislation introduced and seriously considered that moves profound changes in medicine."

And to the emerging leaders in the audience, Mondale offered a message of hope. "We now not only depend upon you for our health and our lives, but through your example, many of us hope you could help us improve medicine in America and help restore our belief as Americans in our community and in our shared values of excellence, decency, and service," he said. "We sure need it." MIB

To hear Mondale's lecture, visit www.surg.umn.edu/surgery/Conferences/Mondale.

UMPhysicians joins new cardiology partnership

University of Minnesota Physicians and Edina-based Minnesota Heart Clinic (MHC) in October merged their cardiology programs, and with Fairview Health Services, they have established a new integrated cardiology program.

The merger brings together community and academic physicians to create one of the largest cardiology programs in the state. People 18 and older will be able to take advantage of a full continuum of care, from heart disease prevention and treatment to heart transplantation and access to the latest medical research.

Minnesota Heart Clinic will continue to see patients at the clinic's current locations in Edina, Burnsville, Princeton, and Wyoming, Minnesota. Support and ancillary staff, including those in imaging, billing, and information services, will be employed by Fairview.

The merger will help University of Minnesota Physicians and Fairview's hospitals and clinics meet growing patient demand for cardiovascular services statewide. MIB

Alzheimer's researcher awarded new EUREKA grant

MEDICAL SCHOOL neuroscience researcher Karen Hsiao Ashe, M.D., Ph.D., is among the first investigators to receive a grant through the National Institutes of Health's EUREKA program.

Grants distributed through EUREKA—which stands for Exceptional, Unconventional Research Enabling Knowledge Acceleration—are awarded to scientists who are testing novel and unconventional hypotheses or working to overcome major methodological or technical challenges. This is the first time these grants have been awarded.



Karen Hsiao Ashe, M.D.


Ashe, whose lab has been responsible for multiple breakthroughs in Alzheimer's disease research in the past dozen years, was one of 38 investigators honored with an award.

She will receive \$200,000 per year for four years to

investigate the molecules that are responsible for memory loss in a group of degenerative diseases, including Alzheimer's disease, that are caused by abnormalities in a protein called "tau."

This protein has been found to cause memory problems even before brain cells begin to die.

"This award will enable me to pursue this... potentially high-impact project," Ashe says. "Defining the molecular basis of memory disturbance has eluded the most prominent and productive scientists in the field of Alzheimer's disease. In fact, there is still a certain amount of skepticism that people can have significant memory deterioration without loss of neurons."

Understanding the molecular mechanisms of memory loss offers hope for preventing or reversing it, she adds. 

University gives record flu vaccinations in a day

The University of Minnesota reserved its spot in the book of Guinness World Records on October 28, when it immunized 11,538 people against the flu.

By noon that day, the University already had immunized 4,371 students, faculty, staff, and their dependents, breaking the previous world record of 3,271 set in Florida in November 2006.

"This has been a wonderful success," says Ed Ehlinger, M.D., M.S.P.H., director and chief public health officer at the University's Boynton Health Service.

"Not only have we broken the record, but we vaccinated so many people and raised awareness about the importance of flu vaccines when it comes to the health of college students."

Boynton Health Service—with help from the Medical Reserve Corps, School of Nursing, College of Pharmacy, and the Minnesota Visiting Nurses Association—dispensed the free flu vaccine from 8 a.m. to 5 p.m. that day at four locations around the Minneapolis and St. Paul campuses.

The mass vaccination effort also served as a test of the University's emergency response system, showing how many people could be inoculated in a short period of time.


"If we need to mobilize our Medical Reserve Corps to deal with an influenza outbreak or a smallpox outbreak, we'll have had the training with this event to allow us to do that," Ehlinger says. 



PHOTO: EVELYN KHOO

Georgia Nygaard, D.N.P., R.N., prepares to administer a flu shot to University President Robert Bruininks at the record-breaking October 28 event.


Gerald Hill: Doctor, mentor, leader

TIFFANY BECKMAN, M.D., the first Native American endocrinologist in the nation, stepped up to the podium and took a deep breath. "I told myself I wasn't going to cry," she began, but cry she did as she told Gerald Hill, M.D., what his encouragement had meant to her during medical school.

Similar stories and tears of thanks were shared by alumni Brett Benally Thompson, Jason Deen, Kansas DuBray, Amy DeLong, Shanda Lohse, and Joycelyn Dorscher. All of them physicians, Native Americans, and University of Minnesota Medical School alumni, they gathered with family and friends in Minneapolis last fall to honor Hill, one of the first directors of the University's Center of American Indian and Minority Health (CAIMH), and to acknowledge his positive influence on their career paths.

A Klamath/Paiute from Oregon, Hill became one of the first directors of CAIMH on the Duluth Campus in 1990. Under his leadership, CAIMH established programs that aim to decrease health disparities in American Indian communities by recruiting American Indian students into the health professions.

"Dr. Hill's dedication, advocacy, mentorship, and passionate, visionary leadership helped me and so many others truly realize our capabilities and prepare us to serve as Native American physicians," says Dorscher, who followed Hill as CAIMH's director.


Hill currently practices emergency medicine with HealthEast in St. Paul. Among the gifts alumni presented to him was a Pendleton blanket picturing the Circle of Life and inscribed with the words "Doctor. Mentor. Leader." 

Alumni Connections



PHOTO: BILL ALKOFER

An event in October honoring Gerald Hill, M.D., one of the Center of American Indian and Minority Health's first leaders, drew a grateful crowd of colleagues and former students.

 View a slideshow of event highlights at www.mmf.umn.edu/mb/Hill.cfm.



Building a better future

Charitable gift annuities are a wonderful way to help others while helping yourself and a loved one.

Your charitable gift annuity to the Minnesota Medical Foundation helps advance world-class health-related research, education, and service at the University of Minnesota while providing substantial tax benefits and a lifetime income for you and your spouse.

To learn more, contact Gift Planning at 800-922-1663, 612-625-1440, or giftplanning@mmf.umn.edu.

Visit our Web site at: www.mmf.umn.edu/giftplanning

Gift annuities from the Minnesota Medical Foundation are currently not available in some states.

Alumni Spotlight | David Wallinga

Creating a healthier environment for children

EVERY DAY, DAVID WALLINGA, M.D., M.P.A., sees missed opportunities to prevent chronic disease. As director of the food and health program at the Minneapolis-based Institute for Agriculture and Trade Policy (IATP), Wallinga examines how environmental factors, including how our foods are made, affect human health.

If it sounds like a broad topic, it is. For example, Wallinga, Medical School Class of 1989, studies how the antibiotics used to help livestock and poultry grow bigger faster might contribute to a major public health concern — drug-resistant “superbugs” — in people.

He also investigates how chemicals put into the environment affect the way children’s brains and nervous systems develop. There are 80,000 industrial chemicals in the Environmental Protection Agency (EPA) inventory, but Wallinga says very few of them have been comprehensively tested for safety. “A lot of those chemicals end up in food packaging or in products like kids’ toys,” he says.

“The kicker is that with many of these products, there are safer alternatives already on the market,” Wallinga adds. “There’s really no good reason not to phase these things out, knowing what

we know, even when there are questions remaining, in favor of safer alternatives.”

In recognition of his work focused on safeguarding health, in November Wallinga received the Blue Cross Blue Shield of Minnesota Foundation’s 2008 Upstream Health Leadership Award. The award includes a \$15,000 grant supporting his work.

“Dr. Wallinga is a leading voice for science-based public policies that better protect children from environmental pollutants, especially those that enter the food chain,” says Joan Cleary, the foundation’s vice president.

Thanks to a fellowship from the W. T. Grant Foundation designed to bridge research, policy, and practice, Wallinga will be a part-time fellow in the University’s School of Public Health, Division of Epidemiology and Community Health, for the next two years.

A path to prevention

Wallinga found an unconventional path for merging his interests in health, the environment, and public policy. He studied government and political science as an undergraduate at Dartmouth College. After medical school at the University of Minnesota, he earned a master’s degree in public affairs at Princeton University.

In the mid-1990s, he completed an American Association for the Advancement of Science fellowship in science and diplomacy through which he studied environmental health policy issues in India, Peru, Mexico, and Ecuador via the U.S. Agency for International Development. Wallinga describes his fellowship years as an “awakening” to the larger field of public health risks from widespread pollutants such as lead, mercury, polychlorinated biphenyls (PCBs), pesticides, and solvents and how they affect children’s health specifically.

Later, at the Natural Resources Defense Council, Wallinga served as the public’s watchdog over how the EPA assessed children’s cancer risks related to pesticide exposure.

In 2000, the Roseville, Minnesota, native returned to his Midwestern roots with his family. Since then, Wallinga has been in his current position at IATP, where he’s focused much of his attention on environmental factors that affect children’s health.

“What we do know — both scientifically and as parents — is that a lot of chronic diseases are on the rise, and nobody has a really good explanation for it,” he says. “From certain cancers in children to childhood asthma and obesity to certain learning and developmental disabilities ... all of these have been associated with environmental chemicals.”

Return on investment

But Wallinga says it’s never too late to build a healthier future. “There is incredible opportunity to invest in new ways to grow food and make products in order to prevent environmental causes of chronic



PHOTO: SCOTT STREBLE

David Wallinga, M.D. (Class of 1989), M.P.A., is working to eliminate environmental causes of chronic disease, especially those affecting children.

disease,” he says. “Part of our work is to argue that these are some of the best public investments we can make.”

It’s been done before. Kids today are a lot healthier and smarter, for example, because research showed that lead in gasoline might be harming children’s intellectual development, Wallinga says. Exposure to lead at a young age was linked to lower IQ, which in turn was related to lifetime earning potential. The EPA moved to phase lead out of gasoline, although plenty of scientific questions remained. This simple step produced an estimated economic benefit of \$100 billion to \$300 billion annually.

Topping Wallinga’s hit list today: polybrominated diphenyl ethers (PBDEs). Also known as brominated flame retardants, PBDEs are added to products such as mattresses and com-

puters “with good intent,” Wallinga says. But they belong to a class of chemicals that has been linked to disturbed brain development in animal studies, and today they’re becoming exponentially more prevalent in breast milk in humans, which could potentially be dangerous for breastfeeding babies.

Another of Wallinga’s targets: polyvinyl chloride (PVC), which has been labeled “the poison plastic” by some environmental groups. Toxic compounds like lead and phthalates are often added to vinyl products for kids, such as baby bottles, toys, lunch boxes, and food wrapping, and can seep into food and the larger environment.

“There are safer alternatives, so let’s use them,” he says.

Eliminating even one chemical from production can be a complicated

Alumni Connections

RECOMMENDED RESOURCES

For those who want to learn more about eating safer foods and protecting the environment from toxic chemicals, Wallinga recommends these Web resources:

- eatwellguide.org
- healthyfoodinhealthcare.org
- healthylegacy.org
- iatp.org
- keepantibioticsworking.org
- noharm.org


process, but Wallinga believes it can significantly improve long-term community health. “I think the progress we make in our jobs is never easy, but we do it,” he says. “And when we do take those forward steps, they have really big implications.” ^[MB]

BY NICOLE ENDRES

Renewing medical school connections

Nearly 150 alumni reconnected with their classmates during Alumni Reunion Weekend on September 26–27, 2008. In total, 258 alumni and guests attended the weekend's activities. To view a slideshow of the festivities, visit www.mmf.umn.edu/mb/reunion.cfm.

Save the date

Mark your calendars for Reunion Weekend 2009, which will be held September 11 and 12 at the University of Minnesota and the Minneapolis Marriott City Center. This year the Medical School's classes of 1949, 1954, 1959, 1969, 1979, 1984, 1989, and 1999 will reunite with their classmates. Invitations will be sent to members of reunion classes as the date approaches. If you would like to help plan your reunion, please call Katrina Roth at the alumni office, 612-625-0336 or 800-922-1663. 



Classmates Christine Sarkinen, M.D. (left), and Katie Layon, M.D., catch up at their 10-year reunion.

PHOTO: TIM RUMMELHOFF

Call for award nominations: celebrating outstanding alumni achievements

Help us recognize exceptional accomplishments by those affiliated with the University of Minnesota Medical School.

The Medical Alumni Society is now accepting nominations for three alumni awards, to be presented September 11 during the 2009 Alumni Reunion Weekend:

- The Harold S. Diehl Award honors individuals who have made outstanding professional contributions to the Medical School, University, and community throughout their careers. This is the Medical Alumni Society's most prestigious award.
- The Distinguished Alumni Award recognizes Medical School alumni who have made outstanding contributions to their local, regional, or national community through medical practice, teaching, research, or other humanitarian activities.
- The Early Distinguished Career Award honors physicians for exceptional accomplishments within 15 years of medical school graduation.

Nominations must be received by March 13, 2009. For more information about these awards and to see a list of past winners, please visit www.mmf.umn.edu/alumni/awards.

Former dean was committed to students, international collaboration

N. L. ("NEAL") GAULT Jr., M.D., beloved former dean and alumnus of the University of Minnesota Medical School, died December 11 of pancreatic cancer at his St. Paul home. He was 88.

"We are saddened at the loss of Neal Gault, who was a devoted advocate for our Medical School and its students throughout his tenure as dean and well into his retirement," says Medical School Dean Deborah Powell, M.D. "During his time as a student and faculty member, he inspired countless classmates, colleagues, and students; established partnerships with medical schools across the world; advocated tirelessly for medical students; and healed patients from all walks of life."

A member of the Class of 1950 and dean of the Medical School from 1972 to 1984, Gault was known for his commitment to students, especially for helping them deal with the financial pressures of medical school. On a few occasions, he had even offered cash to students when


they were flat broke. This commitment led Gault and his wife, Sarah, a University alumna and physician who died in 1994, to create several funds to help medical students finance their education.

In addition to his devotion to students, Gault also was passionate about facilitating international collaborations. In the wake of the Korean War, Gault and his family lived in Seoul, where he helped to rebuild the medical education system while at Seoul National University. This visit sparked the Medical School's first international collaboration, a partnership that continues to flourish today.

Gault provided exemplary service and leadership to the Minnesota Medical Foundation, serving on its board of trustees from 1959 to 1992, and he continued to raise philanthropic support for scholarships and research for many years thereafter. He also served on the Medical Alumni Society Board from 1973 to 1991 and as a mentor for medical students long after his retirement in 1996.

Additionally, Gault helped establish the world's first endowed chair in sexual health at the University and served on the leadership advisory council for the Program in Human Sexuality.


Among his many awards were the University of Minnesota Alumni Service Award, presented to him in August of 2008; the Harold S. Diehl Award, the highest award given by the Medical Alumni Society; the University's Outstanding Achievement Award; and the Order of the Rising Sun, Gold Rays with Neck Ribbon, given by the emperor of Japan in 1992. He was also made honorary alumnus of Seoul National University College of Medicine in 1994.

A memorial service was held January 16 at the University of Minnesota's Mayo Auditorium. In lieu of flowers, Gault requested that memorials be directed to the Drs. Neal and Sarah Gault Medical Student International Study Fund through the Minnesota Medical Foundation. 



To make a gift to the Drs. Neal and Sarah Gault Medical Student International Study Fund, visit www.mmf.umn.edu/giveto/gault.

PHOTO: RICHARD ANDERSON

 To view a brief slideshow on Gault and learn more about his life, visit www.ahc.umn.edu/news/gault.


Remembering a trusted adviser

Helene Horwitz, Ph.D., spent her entire career mentoring and helping students. As associate dean for student affairs at the Medical School for the last 19 years, she helped University of Minnesota medical students get through difficult academic, financial, and emotional times. Before that, she served students as director of student aid and related programs at the Minnesota Medical Foundation.

During her career, Horwitz always enjoyed working with medical students, whom she found to be bright, giving,

and committed. In turn, students found her to be wise and approachable.

Sadly, on October 24, 2008, Horwitz died at age 66 following treatment for a brain tumor. To many who knew her, it wasn't surprising that she—along with her husband, Charles Horwitz, M.D., a University professor of laboratory medicine and pathology—had requested that memorials be directed to a scholarship fund they had earlier established to help relieve students' financial burdens.

The Drs. Helene and Charles Horwitz Scholarship Fund for Altruistic Medical Students will provide scholarships to Medical School students who have a demonstrated financial need, with preference given to members of the Gold Humanism Honor Society. The fund also recognizes the Horwitzes' dedication to the Medical School. 

To make a gift to the Drs. Helene and Charles Horwitz Scholarship Fund for Altruistic Medical Students, visit www.mmf.umn.edu/giveto/horwitz.



A scholarship fund established by Helene Horwitz, Ph.D., and her husband, Charles Horwitz, M.D., will support medical students in need.

PHOTO: COURTESY OF CHARLES HORWITZ, M.D.

In Memoriam

ROBERT G. BJORNSON, M.D., Class of 1944, Ma'alaea, Maui, Hawaii, died January 31, 2008, at age 87. Dr. Bjornson served as chief of radiology at Bethesda Hospital in St. Paul, Minnesota, as chief of radiology at St. Paul-Ramsey Hospital, and as an associate professor at the University of Minnesota Medical School. He also practiced at the Maui Memorial Hospital and with the Maui Medical Group. Dr. Bjornson is survived by his wife, Ann-Marie; 6 children; 11 grandchildren; and 1 great-grandchild.

PETER L. BOMAN, M.D., Class of 1965, Duluth, Minnesota, died November 12 at age 70. An orthopaedic surgeon, Dr. Boman worked at the Duluth Clinic for more than 20 years. He was president of the board of Benedictine Health Systems, chief of staff at St. Mary's Medical Center, and a pioneer in hip replacement surgery. Dr. Boman is survived by his wife, Susan; 4 children; 4 grandchildren; and former wife, Judy Giese.

HERSHEL B. COPE, M.D., Class of 1946, Virginia, Minnesota, died December 2, 2007, at age 85. Dr. Cope specialized in obstetrics and gynecology. He was preceded in death by 1 son and is survived by his wife, Molly; 6 children; 19 grandchildren; and 11 great-grandchildren.

NANCY I. ENGLISH, M.D., Class of 1992, Duluth, Minnesota, died August 8 at age 57. Dr. English practiced in Duluth, where she served as chief of staff at St. Luke's Hospital and as a member of the medical staff executive committee at St. Mary's Medical Center. She also helped start programs in public health, transitional living, chemical dependency, and adult protection at the Ebenezer Nursing Home. Dr. English is survived by her husband, Tom Crook, and 2 children.

JAMES R. FOX, M.D., Class of 1945, Edina, Minnesota, died December 18, 2007, at age 85. Dr. Fox, an internist, served as medical director for Minneapolis Public Schools personnel, Control Data, and United Capital Life Insurance. He founded the Academy of

Occupational Medicine and was a leader in the Hennepin County Tuberculosis Association. Dr. Fox was preceded in death by his wife, Shirley Leidl. He is survived by his former wife, Elizabeth Webster Curtin; 4 children; 2 stepchildren; and 16 grandchildren.

N. L. ("NEAL") GAULT Jr., M.D., Class of 1950, died December 11 at age 88. Dr. Gault was preceded in death by his wife, Sarah, and is survived by his 3 children, 4 grandchildren, 1 great-grandchild, and special friend, Britt-Marie Nyman. *Read about Dr. Gault's remarkable legacy on pages 26–27.*

ROSCOE A. GUTEKUNST, M.D., Class of 1945, Plano, Texas, died February 6 at age 91. Dr. Gutekunst practiced medicine in Phoenix, Arizona, where he specialized in thoracic surgery and pulmonary diseases. He later worked as a general practitioner and was a charter member of the Academy of Family Practice. Dr. Gutekunst is survived by his wife, Cynthia.

KENT O. HANSON, M.D., Class of 1954, died August 13 at age 80. Dr. Hanson practiced medicine for 52 years, serving as a family practitioner in Flagstaff, Arizona, and establishing a private practice in Phoenix. He is survived by 3 children and 4 grandchildren.

HELENE M. HORWITZ, Ph.D., died October 24 at age 66. Dr. Horwitz is survived by her husband, Charles Horwitz, M.D.; 3 children; 4 grandchildren; and former husband, Hans Rudnick. *Read more about Dr. Horwitz's many contributions on pages 26–27.*

JAMES JANECEK, M.D., Class of 1959, New Brighton, Minnesota, died September 14 at age 75. Dr. Janecek was one of the first psychiatrists to serve in the Vietnam War. In the 1980s, he acquired Familystyle Homes in St. Paul, Minnesota, which provided transitional housing to mentally ill individuals. He also worked at the Veterans Administration Medical Center in Minneapolis for many years. Dr. Janecek is survived by his wife, Jeanette; 3 children; and 4 grandchildren.

ALAN R. JOHNSON, M.D., Class of 1960, Moorhead, Minnesota, died November 18 at age 74. Dr. Johnson practiced medicine in Windom, Pelican Rapids, and Minneapolis, Minnesota. He also taught residents at the University of North Dakota Medical School and was a Bush fellow, charter diplomat of the American Board of Family Practice, and fellow of the American Academy of Family Practice. Dr. Johnson is survived by his wife, Jeannine; 3 children; and 6 grandchildren.

HOWARD K. KALIHER, M.D., Class of 1944, Portland, Oregon, died August 10 at age 90. Dr. Kaliher practiced medicine in Foley and Pelican Rapids, Minnesota, where he also owned a hospital. He later practiced for 36 years in Tillamook, Oregon, where he served as a physician at Tillamook High School, volunteered for numerous public health initiatives, provided medical support to the coast guard and Federal Aviation Administration, and performed coroner services. Dr. Kaliher was preceded in death by his wife, Muriel, and is survived by 3 children, 3 grandchildren, and 5 great-grandchildren.

JAMES H. KELLY, M.D., Class of 1947, St. Cloud, Minnesota, died September 18 at age 84. Dr. Kelly founded the St. Cloud Clinic of Internal Medicine in 1958 and served on the boards of the St. Cloud Hospital and the Allina Health Care System. He was president of the Minnesota Heart Association, medical director of St. Benedict's Senior Community Center, and Minnesota chapter president of the American College of Physicians. He received the American College of Physician's Laureate Award in 1988. Dr. Kelly was preceded in death by 2 children. He is survived by his wife, June; 8 children; 14 grandchildren; and 1 great-grandchild.

GERALD W. KOOS, M.D., Class of 1956, Duluth, Minnesota, died August 10 at age 78. Dr. Koos helped establish a medical practice in Heron Lake, Minnesota, worked for Urologic Physicians in Edina, Minnesota, and was a clinical professor at the University of Minnesota Medical School. He also served

as president of the Minneapolis Academy of Medicine and as chief of staff at Abbott Northwestern Hospital in Minneapolis. Dr. Koos is survived by his wife, Mary Jo; 6 children; and 16 grandchildren.

DONN E. LEUZINGER, M.D., Class of 1953, Wichita Falls, Texas, died November 7 at age 82. Dr. Leuzinger specialized in urology and practiced in Texas for nearly 40 years. He is survived by his wife, Lesley Serano, M.D.; 3 children; and 3 grandchildren.

LEROY D. OLSON, M.D., Class of 1967, Mankato, Minnesota, died November 13 at age 65. Dr. Olson practiced radiology in Mankato, Minnesota, for nearly 20 years. He is survived by his wife, Becky; 2 children; and 4 grandchildren.

CHARLES R. PELUSO, M.D., Class of 1946, St. Anthony, Minnesota, died November 15 at age 86. Dr. Peluso was a professor of medicine at the University of Minnesota, where he taught family practice residents and served as a member and chair of the Medical School's admissions committee. He also practiced medicine in northeast Minneapolis, served as chief of staff at the former St. Barnabas Hospital in Minneapolis, and led the family practice residency program at the Medical College of the University of Georgia. Dr. Peluso is survived by his wife, Lorrie; 8 children; and 13 grandchildren.

LEONARD SADOFF, M.D., Class of 1954, Playa del Rey, California, died September 2 at age 78. An oncologist and internist, Dr. Sadoff worked for Kaiser Permanente Medical Group for 35 years. He also conducted clinical cancer research and cofounded a humanities in medicine program at Kaiser Sunset medical center in Los Angeles. Dr. Sadoff is survived by his wife, Elizabeth; 2 children; 3 stepchildren; 3 grandchildren; 7 step-grandchildren; and former wife, Eileen.

JOSEPH A. SCHAEFER, M.D., Class of 1944, Santa Rosa, California, died April 26, 2007, at age 86. Dr. Schaefer was one of the first pediatricians to practice in Santa Rosa

CAROLE J. BLAND, Ph.D., Class of 1974, Plymouth, Minnesota, died August 23 at age 62. Dr. Bland spent her entire career at the University of Minnesota Medical School, most recently as assistant dean for faculty development. Nationally recognized for her research on mentoring, she was director of clinical research fellowships for the Department of Family Medicine and a principal architect for mentorship programs at the Medical School. She was also codirector of the leadership/mentoring component of the Committee on Excellence in Women's Health.

SAMUEL W. HUNTER, M.D., Class of 1947, St. Paul, died October 22 at age 86. A heart surgeon, Dr. Hunter studied at the University of Minnesota under Owen Wangensteen, M.D., Ph.D., and later conducted heart surgery research with C. Walton Lillehei, M.D., Ph.D. He developed an improved electrode for use with an existing pacemaker with Medtronic engineer Norman Roth and in 1959 became one of the first to use the device on an adult, extending the patient's life by 7 years.

and one of the first to practice at the Santa Rosa Memorial Hospital. He was chief of staff and chief of pediatrics at the hospital and, following his retirement, became one of the first volunteer physicians to work in the hospital's mobile clinic. Dr. Schaefer was preceded in death by his wife, Patricia, and is survived by 5 children, 1 grandchild, and 3 great-grandchildren.

ROBERT W. SCHULZ, M.D., Class of 1955, Proctor, Minnesota, died August 2 at age 86. Dr. Schulz delivered more than 1,000 babies as a family practitioner in Fairmont, Minnesota, for more than 20 years. He helped to build and served as medical director of the Lutheran Retirement Home in Truman, Minnesota, and was a health officer in Fairmont and a health officer and deputy

Dr. Bland wrote numerous scholarly articles and several educational books about faculty development and research. She also received a number of awards for her work, including the Distinguished Career and Outstanding Research Publication awards from the American Educational Research Association and the Hames Research Award from the Society of Teachers of Family Medicine. Dr. Bland is survived by her husband, Dick.



Dr. Hunter also worked for a private medical practice in St. Paul and was a trustee of several arts and professional organizations, including the St. Paul Chamber Orchestra and the Health Care Evaluation Board.

He was preceded in death by 1 son and is survived by his wife, Thelma; 5 children; and 9 grandchildren.



Alumni Connections

medical examiner for Martin County in southern Minnesota. He also served as medical director of the Moose Lake State Hospital. Dr. Schulz is survived by his wife, Susan.

DONALD A. SUTHERLAND, M.D., Class of 1946, Los Angeles, died March 9 at age 85. Dr. Sutherland specialized in internal medicine. He worked for St. Paul's Hospital in Dallas, Texas, and for the Kaiser Permanente Medical Group in Harbor City, California.

CORRECTION

The obituary for Carl O. Bretzke, M.D., Class of 1952, published in the fall 2008 edition of the *Medical Bulletin*, should have stated that he was from Hutchinson, Minnesota. Dr. Bretzke died July 28 at age 80.



Erling S. Platou, M.D. (Class of 1920), a Minneapolis pediatrician and member of the Medical School's clinical faculty, led the charge to start the Minnesota Medical Foundation in 1939 and served for 10 years as its founding president.

Cause for celebration

Minnesota Medical Foundation turns 70

Seventy years ago when a group of forward-thinking Medical School alumni got together to create the Minnesota Medical Foundation (MMF), the notion of establishing a foundation to help support an educational institution was a relatively new idea.

But its visionary founders—including Harold S. Diehl, M.D., Owen Wangensteen, M.D., Ph.D., and Maurice Visscher, M.D., Ph.D.—created the foundation because they realized that state support alone was not enough to build a strong medical school. They also hoped it would help to rekindle alumni interest in the Medical School, which had waned in the wake of the Depression.

MMF's importance to the Medical School has grown tremendously in the years since 1939. Today MMF raises millions of dollars annually in private support for health-related research, education, and service in the Medical School, School of Public Health, Masonic Cancer Center, and related centers and programs. In fiscal year 2008, the foundation raised a record \$122.2 million from more than 19,000 donors. This included a pledge of \$65 million—the largest donation ever made to the University—from Minnesota Masonic Charities to support cancer research.

On the occasion of MMF's 50th anniversary in 1989, Neal Gault Jr., M.D., the recently deceased and beloved dean of the Medical School from 1972 to 1984, recalled receiving the Masons' first gift to the University: "I remember I went in

January of 1956 to the Masonic Lodge in Dinkytown and accepted 500 silver dollars from the Masons and Eastern Stars as the initial contribution toward building the Masonic Cancer Center."

With the country on the brink of war, 1939 was not the best of times for building a fund-raising organization. Nevertheless, by 1940 MMF had 415 "members," as contributors were then called, and was administering a few special-purpose funds for the Medical School. One was a research grant from Munsingwear, a Minneapolis-based clothing manufacturer, that enabled the Department of Physiology to investigate the insulating properties of fabrics designed for military use in arctic and tropic combat zones.


Also in 1940, MMF's first faculty research grants, totaling \$800, were issued, the first endowment was established, and the inaugural issue of the *Medical Bulletin* was published. Visscher, an eminent cardiac physiologist and chair of the Department of Physiology at the time, was the publication's first managing editor.

By 1944, the foundation was able to contribute \$1,000 to launch the Medical School's campaign to build the Mayo Memorial Building. Five years later,

MMF awarded its first scholarships. Also in 1949, Wangensteen, who was chair of the Department of Surgery—and known simply as "the Chief"—became president of the foundation. He succeeded Erling S. Platou, M.D., a Minneapolis pediatrician and clinical faculty member who led the effort to establish MMF and served for 10 years as its founding president.

MMF gained momentum in 1959 with the appointment of its first full-time executive, Eivind O. Hoff Jr., who launched an ambitious and successful effort to expand MMF's endowment base. Early milestones included a

\$200,000 bequest in 1961 from a North Dakota farmer for medical research and a \$4 million bequest in 1967 from the estate of Royal and Olive Stone of St. Paul to support research in heart disease and cancer.

By the turn of the 21st century, MMF was making giant strides. During the University's seven-year Campaign Minnesota, concluding in 2003, the foundation raised \$516 million through gifts from more than 66,000 benefactors—a far reach from its humble but promising beginnings. 

BY KRISTINE MORTENSEN

Today MMF raises millions of dollars annually in private support for health-related research, education, and service at the University of Minnesota. To learn more or to make a gift, visit www.mmf.umn.edu.

A SPECIAL ADVISER

CARL N. PLATOU, M.H.A., special adviser to Medical School Dean Deborah Powell, M.D., has a unique association with the Minnesota Medical Foundation (MMF). One could almost say MMF is in Platou's genes, because it was his uncle and mentor, Erling Platou, M.D., who in 1939 started the foundation, together with a small but illustrious group of other Medical School alumni. Carl lived with his uncle at the time, having moved to Minneapolis from Brooklyn, New York, to finish high school after his mother died.

Now 85, Carl Platou has been at the forefront of Minnesota's health-care industry for more than half a century and understands MMF's importance to the Medical School. He still goes to work every day, to an office at MMF where a

picture of Erling Platou hangs on his wall.

A tireless and eloquent advocate of the Medical School, Carl Platou fervently believes that MMF's work to raise financial support for medical education and research is more important than ever to the health and economic well-being of both the University and the state. "The medical industry is the strongest industry we have," he says, "and it comes about from the research that emanates from the Medical School and spawns new industry."


In his advisory roles today, Platou is a key player in the effort to raise the



Carl N. Platou, M.H.A.

private money that will be needed to breathe life into the University's new biomedical research park. The state in 2008 authorized \$292 million in bonding to build the facilities, but it will be largely up to MMF to raise the additional funding needed to equip and populate the four new buildings with scientists and support staff.

What might MMF founder Erling Platou think if he were here today? "He would be enthralled," his nephew declares. "He would say, 'How in the world did we ever get this far? It's thrilling!'"

 To view a slideshow featuring MMF milestones, go to www.mmf.umn.edu/mb/MMF70.cfm.

MMF board selects new officers, welcomes new members

The Minnesota Medical Foundation (MMF) elected four new officers, including one who is new to the board, and five other new members to its board of trustees at the foundation's annual meeting on October 27.

The newly elected officers, who will serve two-year terms, are:

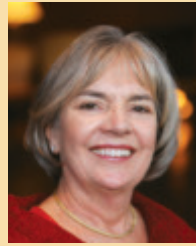
Chair: **Mary K. Stern, CFA**, CEO of MKS Associates and the former president of Sit Mutual Funds. Stern joined the MMF board in 2001 and most recently served on the executive committee and chaired the investment committee. She replaces John M. Murphy Jr.

Vice chair: **Thomas Olson**, executive vice president of the Business Bank and co-managing director of Prime Mortgage, a division of the Business Bank. A certified public accountant, Olson joined the MMF board in 2007.

Secretary: **Susan Gunderson**, CEO of LifeSource, a nonprofit organization that coordinates organ and tissue donation in Minnesota, the Dakotas, and portions of western Wisconsin. Gunderson has been an MMF board member since 2006.

Treasurer: **Eric Neetenbeek**, president and CEO of Minnesota Masonic Charities, the philanthropic arm of Minnesota Masonry. Grand Master of the Masons of Minnesota in 1996-97, he is a new trustee as well.

NEW OFFICERS



Mary K. Stern
CHAIR
CEO, MKS Associates



Thomas Olson
VICE CHAIR
Executive vice president,
Business Bank



Susan Gunderson
SECRETARY
CEO, LifeSource



Eric Neetenbeek
TREASURER
President and CEO,
Minnesota Masonic Charities

In addition to Neetenbeek, the following trustees were elected to serve four-year terms on the MMF board:

David Cannom, M.D., who previously served on the board from 1999 to 2007. Cannom founded Los Angeles Cardiology Associates and is a clinical professor of medicine at the UCLA School of Medicine and medical director of cardiology at Good Samaritan Hospital in Los Angeles.

Mark Eustis, president and CEO of Fairview Health Services, a large nonprofit health system that includes the University of Minnesota Medical Center, Fairview. He was formerly president of Regional Ministry Operations at Ascension Health in St. Louis, Missouri.

Beverly Grossman, who is a member of the University of Minnesota Medical School Dean's Board of Visitors, a group of community leaders that advises Medical School Dean Deborah Powell, M.D. In 2007 she made a significant gift to

establish the N. Bud Grossman Center for Memory Research and Care at the University in honor of her husband.

Selwyn Vickers, M.D., a surgeon and a nationally recognized leader in pancreatic cancer research. Vickers joined the University in 2006 as the Jay Phillips Professor and Chair of the Department of Surgery. Previously, he was chief of the gastrointestinal surgery section at the University of Alabama in Birmingham.

Winston Wallin, chief executive emeritus of Medtronic, Inc. He established the Winston R. and Maxine H. Wallin Land-Grant Chair in Cancer Prevention with his wife, Maxine, and played leadership roles in establishing the Masonic Cancer Center and the John H. Kersey Chair in Cancer Research at the University. He currently chairs the Dean's Board of Visitors.

For a complete roster, please see the following page.

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Professor of medicine,
UCLA School of Medicine



Mark Eustis
President and CEO,
Fairview Health Services



Beverly Grossman
Member, Medical School
Dean's Board of Visitors



Selwyn Vickers, M.D.
Chair, Department of
Surgery



Winston Wallin
Chief executive emeritus,
Medtronic, Inc.

Minnesota Medical Foundation

The Minnesota Medical Foundation is a nonprofit organization that provides support for health-related research, education, and service at the University of Minnesota Medical School and School of Public Health.

For more information or to update your address, please contact us at:

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