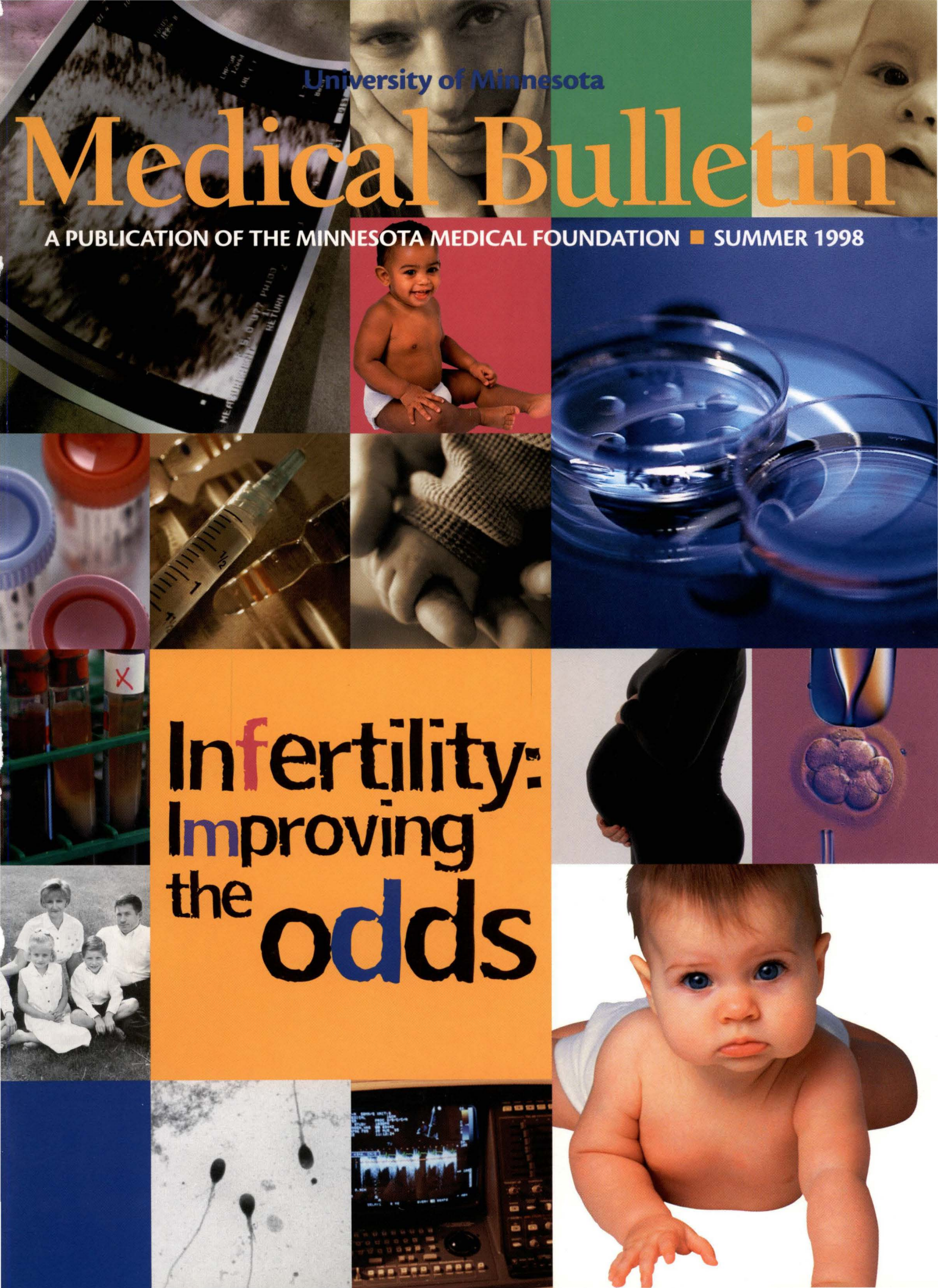


University of Minnesota

Medical Bulletin

A PUBLICATION OF THE MINNESOTA MEDICAL FOUNDATION ■ SUMMER 1998



Infertility: Improving the odds

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.

MINNESOTA

MEDICAL

FOUNDATION

at the University of Minnesota

The Minnesota Medical Foundation was founded in 1939 by a dedicated group of faculty members and medical alumni who saw the need for private support to build a strong future for the Medical School. A non-profit organization, the Foundation raises and disburses funds for medical education and research at the University of Minnesota Medical Schools in the Twin Cities and Duluth and the School of Public Health.

Publishing Information

The University of Minnesota Medical Bulletin is published by the Minnesota Medical Foundation on behalf of the University of Minnesota Medical Schools, the Medical Alumni Society, and the School of Public Health. Statements and opinions published herein are exclusively those of the authors themselves. There is no subscription fee. No advertising is accepted. Publication is made possible by contributions to the Minnesota Medical Foundation.

For information about the Minnesota Medical Foundation or to update your address, call or write: Minnesota Medical Foundation, Box 193, 420 Delaware Street SE, Minneapolis, Minnesota 55455-0392. Phone 612-625-1440 or 1-800-922-1MMF. Web address: www.med.umn.edu/mmf.

The University of Minnesota is committed to the policy that all persons shall have equal access to its programs, facilities, and employment without regard to race, color, creed, religion, national origin, sex, age, marital status, disability, public assistance status, veteran status, or sexual orientation.

On the cover:

Cover art by Lilja Baehr Design.

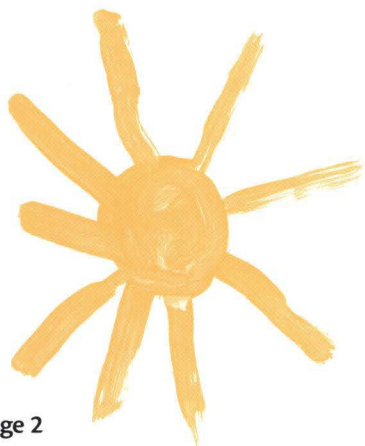


Printed on recycled paper.

University of Minnesota

Medical Bulletin

Summer 1998



page 2

Features

2

A Small Sunbeam

by Jean Murray

The University of Minnesota is the world leader in bone marrow transplants for "storage" diseases.

5

Improving the Odds

by Jodi Ohlsen Read

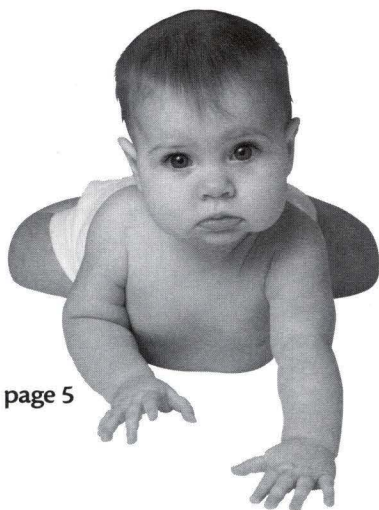
University researchers and clinicians address the challenges of infertility.

10

Getting to the Heart of the Matter

by Elaine Cunningham

Heart disease kills more people than any other disease; the Cardiac Arrhythmia Center is working to lower that statistic.



page 5

Departments

Newsbriefs	15
Students	18
Philanthropy	21
Alumni Connections	26

**The University of Minnesota is the
world leader in bone marrow
transplants for “storage” diseases.**

by Jean Murray

with quotes from Greg Macres

A Small Sunbeam



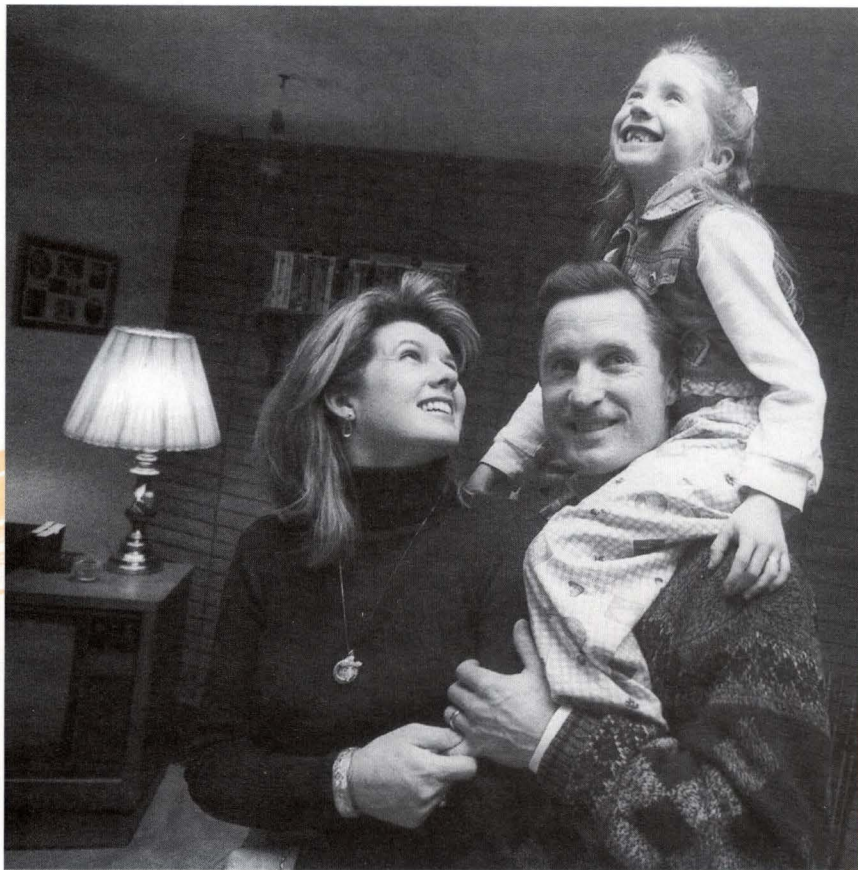
Gregory Macres in November, 1996.

Gregory Macres loved to laugh. His bright smile was irresistible, even as his small body fought, and eventually succumbed to, a rare disease. Frequent and scary medical procedures during his short life did not quench his spirit. “Done — Gregory brave,” he would announce as he got up from a treatment.

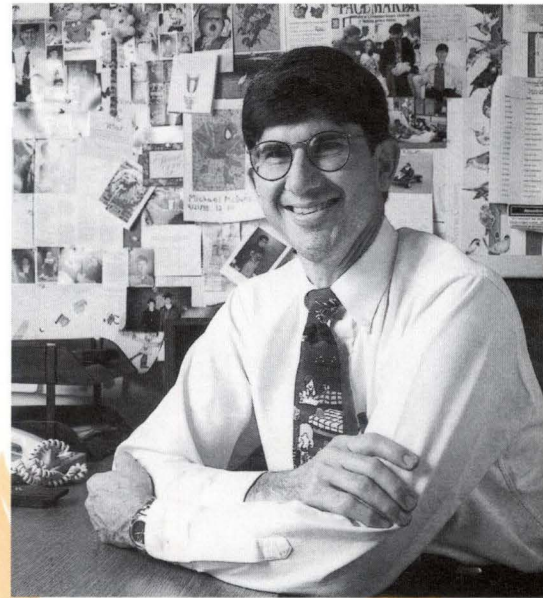
It’s been just over a year since the blond, effervescent 4-year-old died of Gaucher disease Type III — when every parent’s worst nightmare became reality for Greg and Deborah Macres of San Jose, California. Today, they are doing everything they can to prevent other families from experiencing the tragedy of losing a child to this disease.

In the back of your mind you know the day might come that you lose your child. You have many conversations with God. You beg, you plead, you bargain, you cry. You insist that God show himself, that he sit at the end of your bed so that you can ask “why?”

Gaucher (pronounced Go-shay) disease is a genetic disorder characterized by a defi-



Greg and Deborah Macres with their daughter, Ashley. Below, Dr. Charlie Peters.



ciency in the enzyme glucocerebrosidase, which helps the body eliminate worn out cells. The enzyme helps break down the chemical glucocerebroside. Without the enzyme, or enough of it, this compound is stored up in cells, injuring them and not allowing them to be eliminated from the body. The cells accumulate in many areas, such as the liver, spleen, lungs, lymph nodes, and bones. Gaucher is one of a number of conditions called "storage" diseases, because of this characteristic storing, or accumulation, of material.

The University of Minnesota is the leading center in the world for bone marrow transplants for storage diseases. "Our patients come from everywhere," says Charlie Peters, M.D., associate professor of pediatrics in charge of blood and bone marrow transplants for storage diseases at the University. "We've had patients from Bolivia, Malaysia, South Africa, and other countries, as well as from most states in the United States."

And, after extensive research, Greg and Deborah Macres decided it was Minnesota that offered the greatest hope for Gregory.

Gaucher Type III occurs only in children; the earlier it appears the more aggressive it is. There is no cure. Enzyme replacement treatment — currently used for adult patients who suffer from Gaucher Type I — does not seem to benefit children with Type II and Type III Gaucher. (Children with

They are doing everything they can to prevent other families from experiencing the tragedy of losing a child.

Gaucher Type II die of progressive neurologic deterioration at a very young age, while Type III patients often survive into the school years.)

Gregory was diagnosed shortly before his first birthday, and was treated with enzyme replacement therapy from 1994 through 1996. Just before his fourth birthday it was decided more aggressive treatment was needed, and his parents brought him to the University of Minnesota for a bone marrow transplant.

Greg Macres explains what life was like for little Gregory. "It is important to understand how much he had

to endure. The multiple operations. A tube in his stomach. A central line in his chest. Weekly injections of medicine. Innumerable tests at various hospitals. Four years that you would think would make him a sad little boy. This was not the case."

As a parent of a chronically ill child, the sleepless nights, the constant medical care, and the emotional stress can bring you down, can tempt you with self pity. When your child rejects hopelessness, shows a resilience and a love for life, you are provided with the strength to rise to the occasion and live up to the challenge. Gregory gave us our strength.

"There are thousands of genetic diseases resulting from an enzyme deficiency," says Peters. "A relatively small number of them are amenable to correction by bone marrow transplant."

When Gregory was diagnosed with Gaucher disease, Greg and Deborah Macres set out to learn everything there was to know about the disease. By the time they arrived in



A Small Sunbeam

Minnesota, they had accumulated a wealth of information. Their search began at Stanford University's Medical Library, took them across country on many occasions to the National



Ashley and Gregory Macres.

Institutes of Health, and resulted in a volume of information which they hope will help other Gaucher families as well as medical researchers.

"The Macres family had done an incredible job of researching bone marrow transplants before they came here," says Peters. "They chose Minnesota because we have done more transplants than any other center in the world for these diseases."

Gregory's bone marrow transplant went well, but 10 days later his temperature rose dramatically. Charlie Peters explains that complications involving the lungs can occur when children with storage diseases undergo a bone marrow transplant. "Gregory had a severe lung complication during the process of engraftment — the new bone marrow taking root — due to the numerous abnormal Gaucher cells present in the lungs.

"The body reacts against things that don't belong there, that are abnormal, such as the storage disease cells. This is particularly problematic as the Gaucher cells are being destroyed and the new bone marrow cells are arriving," says Peters. "Add to

that any injury or damage that may have taken place during preparation for the transplant, namely the chemotherapy and radiation children receive to prepare their bodies to accept the new marrow, and you can have a very serious situation."

Gregory died on April 13, 1997, his sister Ashley's sixth birthday. She calls that day Gregory's "heaven birthday."

One of Peters's research interests is to learn more about these lung complications that can affect children with storage diseases. "Not only will it give us more insight into events surrounding Gregory's death," he says, "but also it will help us care for other children going through bone marrow transplants for other storage diseases."

Since Gregory's passing, many have wondered how we cope after such a painful event in our life. It is impossible to explain the grief, and the feeling of loss. There is now a void. It is as though half of your body and half of your soul have been taken away. Quiet moments are now filled with memories, sorrow, and tears.

Peters's other primary research project — in partnership with the Macres family — is a survey in conjunction with the National Institutes of Health and the National Gaucher Foundation to learn more about the disease. "There's so much more we can learn," he says. "What's the typical course of the disease from the time a child first manifests symptoms through diagnosis to ultimate outcome? How rapidly does it progress? What parts of the body does it effect?"

They want to get in touch with families of children with Type II or Type III Gaucher disease to gather clinical information. "This will help develop a better understanding of the disease process so that we can make better judgments about how to intervene with various therapies," says

Peters.

He is also involved in additional research related to the general transplant program for storage diseases, looking at the means for preparing children for transplant as well as the outcomes on a disease-specific basis. The goal is to try to coordinate efforts on an international scale and collect information from transplant centers around the world.

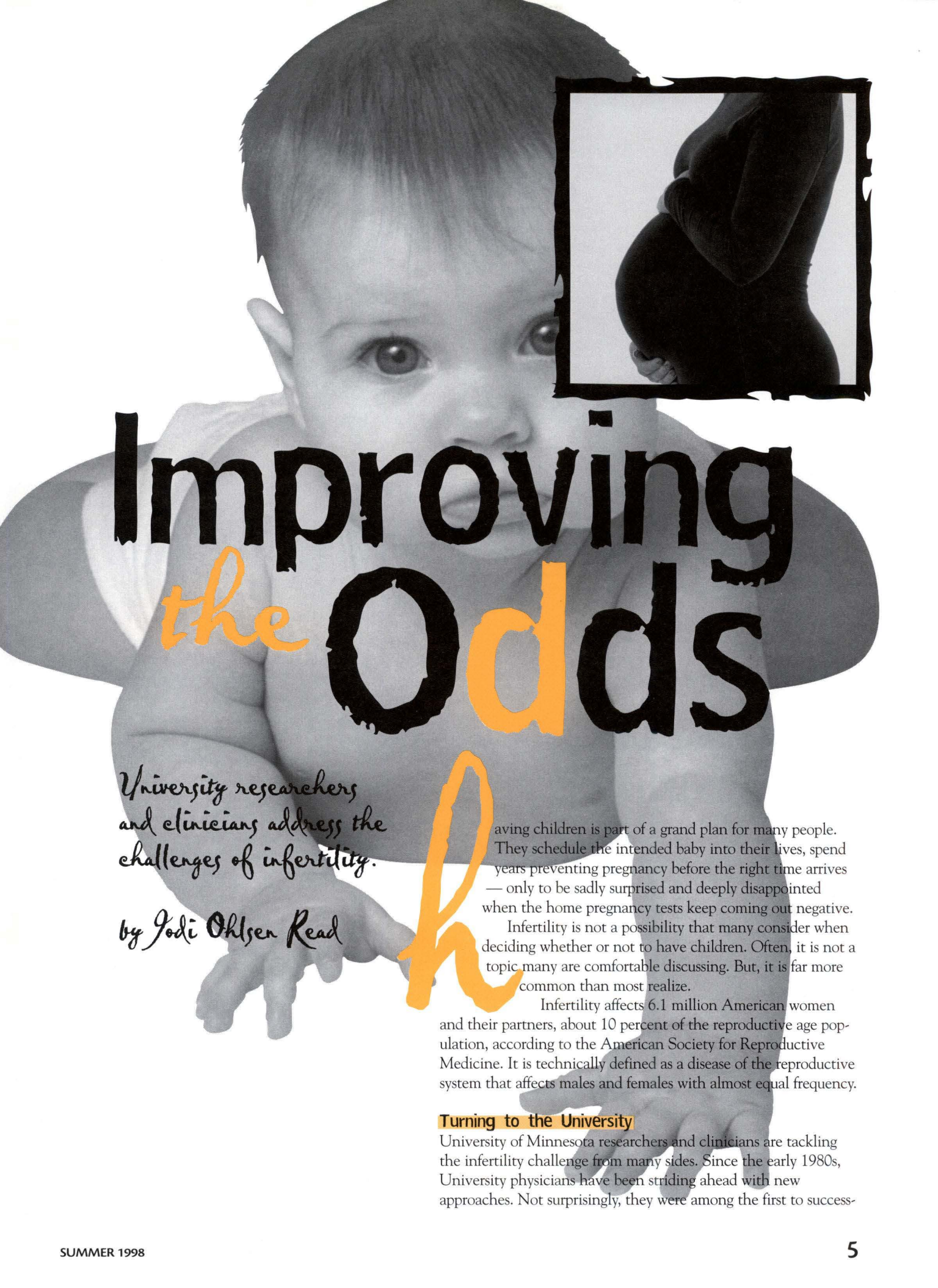
Greg and Deborah Macres are working at the grass roots level, becoming involved in local fund raisers and educating people about the disease. They developed the prototype survey which will eventually be sent to Gaucher families around the world — based on their own experiences with Gregory.

They have established the Gregory Macres Gaucher Research Fund at the Minnesota Medical Foundation to support the research of Charlie Peters and others who are working to find a cure to this disease.

Gregory Macres touched so many lives with his bright smile and his sense of humor. "He was a real joy to be around," says Peters.

*Gregory taught us to have relationships with those we may have avoided in the past. To the person diagnosed with cancer, to call them, not to avoid them. To parents of a chronically ill child, to talk about their child and offer support, not try to stay away. To the person in a wheelchair, to not be afraid to engage in conversation. To the parents who have just lost a child, to call on the phone, to drop a note, to give a hug. Gregory taught us so much about life. **MMF***

For more information, contact Mark Marshall at the Minnesota Medical Foundation, 612-625-8676 or m.marshall@main.mmf.umn.edu. Contributions can be sent to: Gregory Macres Gaucher Research Fund, Minnesota Medical Foundation, Box 64001, St. Paul, MN 55164.



Improving *the* Odds

*University researchers
and clinicians address the
challenges of infertility.*

by Jodi Ohlsen Read

*h*aving children is part of a grand plan for many people. They schedule the intended baby into their lives, spend years preventing pregnancy before the right time arrives — only to be sadly surprised and deeply disappointed when the home pregnancy tests keep coming out negative.

Infertility is not a possibility that many consider when deciding whether or not to have children. Often, it is not a topic many are comfortable discussing. But, it is far more common than most realize.

Infertility affects 6.1 million American women and their partners, about 10 percent of the reproductive age population, according to the American Society for Reproductive Medicine. It is technically defined as a disease of the reproductive system that affects males and females with almost equal frequency.

Turning to the University

University of Minnesota researchers and clinicians are tackling the infertility challenge from many sides. Since the early 1980s, University physicians have been striding ahead with new approaches. Not surprisingly, they were among the first to success-

fully use *in vitro* fertilization — a process of uniting egg and sperm in an artificial environment outside the body.

Research efforts translate into successful pregnancies for many couples. Mona and Tom Dougherty turned to the University in the mid-1980s during their struggles to achieve pregnancy. “We came to the University because we knew it was the cutting edge of infertility work. We read all we could, scanning medical journals, and found that some

of the top work was being done here, at the U,” says Mona Dougherty.

At the time, fertility drugs and artificial insemination were the available options. After several unsuccessful rounds of treatment, the Doughertys became candidates for the latest in fertility technology — *in vitro* fertilization. “New

methods kept evolving and the University was the place to be to keep up and take advantage of the new procedures,” she says.

after six *in vitro* procedures, Mona Dougherty became pregnant with her son, Andrew, now eight years old. He was only the second *in vitro* baby to be born through the University’s program. Later, the Doughertys had twins through *in vitro* fertilization. Isabella and Phillip are now five years old.

Mona Dougherty’s experiences with infertility and the University inspired her commitment to women’s health concerns. In 1992, she and others helped establish the Women’s Health Fund to raise visibility for women’s health issues and to raise funds to support research and education at the University’s Department of Obstetrics and Gynecology. The Women’s Health Fund supports many programs and activities, including women’s health research, public education about women’s health issues, service programs for volunteers and patients, and lectureships, professorships, and endowed chairs.

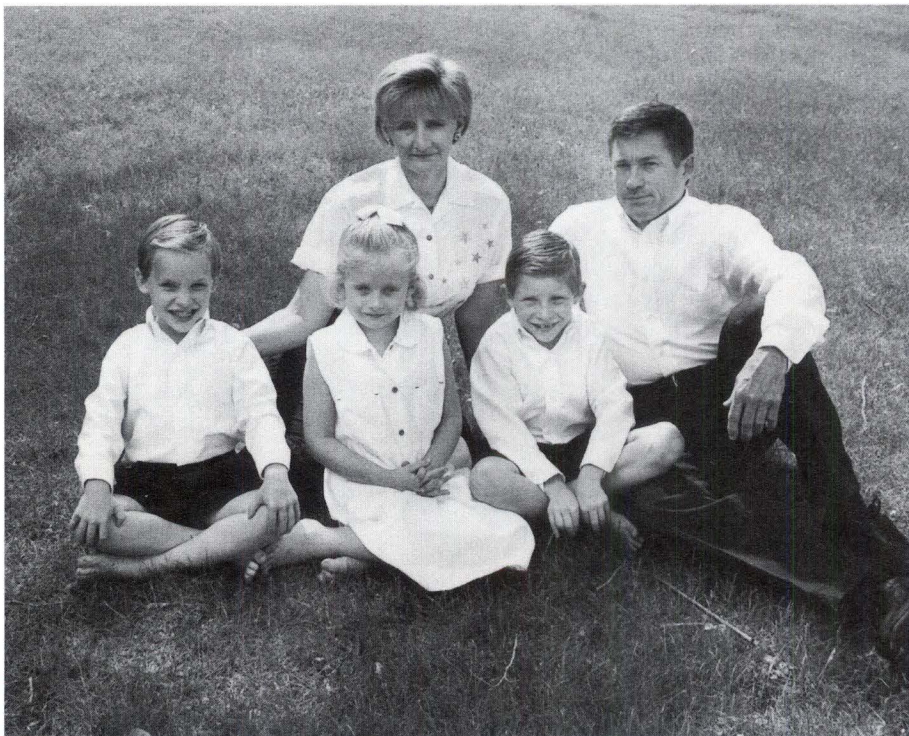
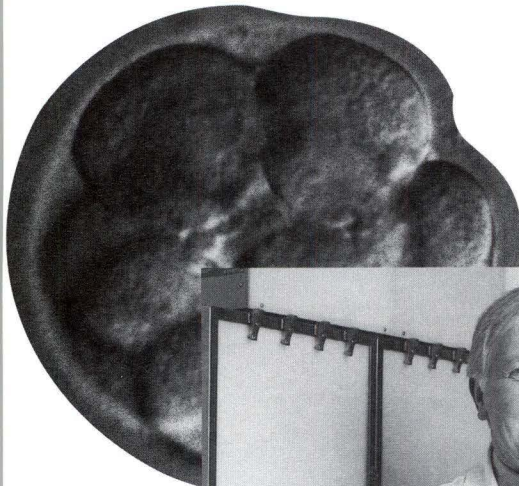
“I feel so strongly about the research component at the University,” she says. “The Medical School is where the research needs to be done. They have the good of all humankind at the heart of their work, and their research is on the leading edge.”

Evolving treatments

Today *in vitro* fertilization is fairly common, with the procedure being performed in many clinics and hospitals. The success rate has risen from 8 percent to 45 percent or more, depending on the cause of the infertility. However, there is still need for improvement and for more options.

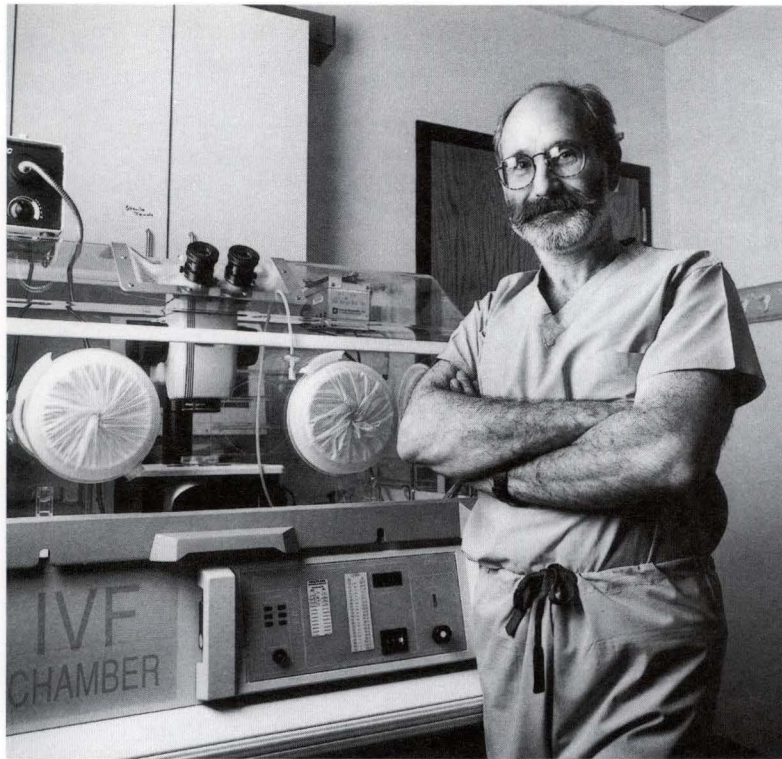
“The field of infertility treatment has changed so rapidly it is hard to believe. It’s rather awesome, quite honestly,” says Dr. Theodore Nagel, clinical

Above, Dr. Theodore Nagel. Below, Mona and Tom Dougherty with Andrew, Isabella, and Phillip.

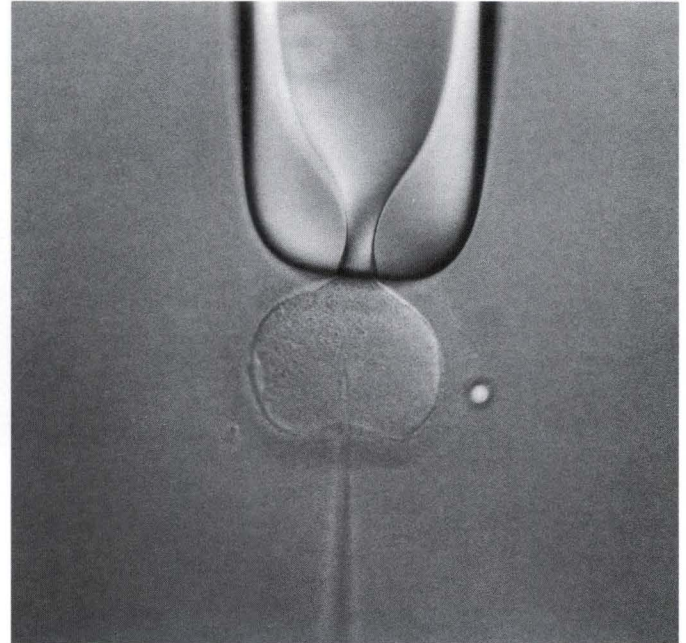




Improving the Odds



Above, Dr. Hugh Hensleigh stands by a portable laboratory which keeps embryos and culture dishes in a clean environment. At right, Intracytoplasmic Sperm Injection (ICSI).



associate professor and president of Reproductive Health Associates in St. Paul. "One of the most recent advances, after *in vitro*, is the advent of ICSI, or Intracytoplasmic Sperm Injection." Rather than simply exposing an egg to half a million or more sperm, a single sperm is inserted directly into the mature egg using a glass needle. This procedure can help couples dealing with severe male factor infertility.

"It opens options for many who previously could not consider *in vitro*. When there are not enough viable sperm for conventional *in vitro*, we now have ways to retrieve sperm and inject it directly into the egg — one egg, one sperm. We can reach a whole new group of patients who can be treated," says Dr. Hugh Hensleigh, assistant professor of obstetrics and gynecology, director of the University Reproductive Health Laboratory, and director of the *in vitro* fertilization laboratory at Reproductive Health Associates.

Strides in research

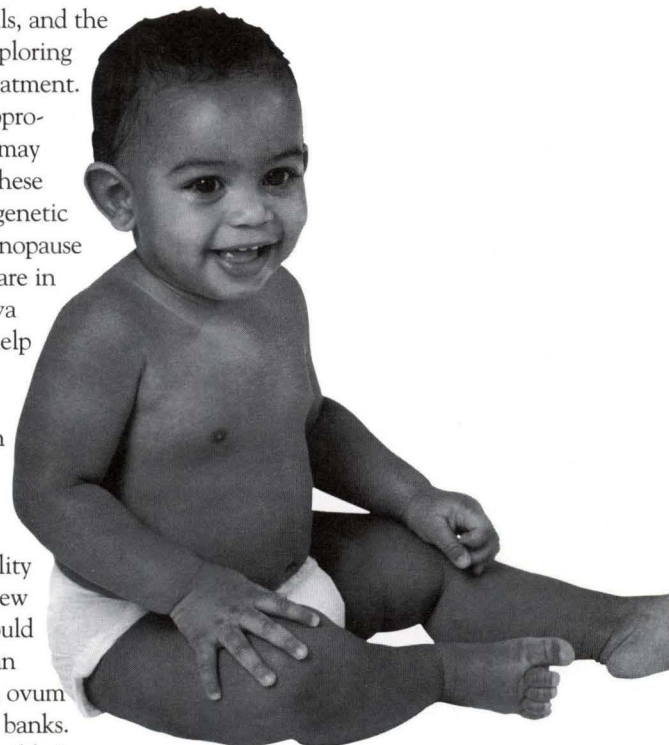
As treatments move toward high-tech methods, researchers are fine-tuning existing procedures and developing new techniques. "I think the next push is

going to be in the areas of embryo freezing, egg freezing, maturing immature eggs, and culturing embryos further," says Nagel.

Through collaborative efforts between local clinics, hospitals, and the University, researchers are exploring new methods of infertility treatment. For some women the most appropriate option for fertilization may be to obtain a donor egg — these individuals may have severe genetic problems or have entered menopause at an early age. Investigators are in the early stages of studying ova freezing, a process that may help this group.



Currently, when a donated ovum is used, it must be fresh. The ability to freeze eggs would open a new range of possibilities. "We would like to be able to freeze human ova so that we could have an ovum bank the way we have sperm banks. Right now it's technically possible," says Nagel. "It's been done but is still rarely successful."





Above, Dr. Linda Hammer Burns. Below, Dr. John Yeh.

ber of embryos implanted. We really would like to reduce the numbers of multiples, ending up with no more than twins,” says Nagel.

Developing embryo research

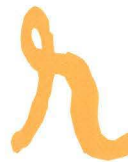
To help continue the progression of infertility treatment, University researchers are also focusing on several aspects of egg and embryo development. Hensleigh specializes in early embryonic development. He is currently exploring apoptosis, programmed cell death, in newly fertilized eggs.

“Once an egg is fertilized, it begins to divide into two cells, then four cells, then eight, and so on. Then it becomes a free-floating little animal. During that time, some of those cells break down and don’t participate in forming the embryo. As a group, the embryos that have these fragmented cells have a lower implantation rate,” explains Hensleigh.

“This is interesting to us because if those cells aren’t ‘lost’ and are incorporated into an embryo and develop, there will be problems with that embryo. Does this occur naturally? Is the embryo trying to correct its own problems? Or is it something we do in the culture environment?” Results of this work could further explain how embryos progress and help improve the process of nurturing fertilized eggs.

Dr. John Yeh, University professor of obstetrics and gynecology, head of obstetrics and gynecology for HealthPartners, and chair of obstetrics and gynecology at Regions Hospital in St. Paul, is also studying the life of cells as it relates to reproduction. “I am interested in what regulates the development of the ovarian follicles, the process which allows the eggs to develop,” says Yeh, an infertility specialist. “Each month 20 to 30 follicles develop and at the time of ovulation, only one oocyte ovulates. The rest diminish and die — probably a process controlled by programmed cell death genes. We would like to know which factors are involved in regulating this tightly controlled process. If we better understand the regulators, it allows us to possibly develop better drugs to induce ovulation.”

One advantage of using frozen ova is that laboratory tests could more carefully screen ovum donors for communicable diseases. It could also add options for women who undergo cancer treatment that might damage the ova or ovaries. Potentially, eggs extracted prior to cancer treatment could be used later for *in vitro* fertilization.



research in the area of embryo maturation could help eliminate some of the potential problems of assisted reproduction, such as excessive multiple births. Today, embryos fertilized through *in vitro* are transferred back to

the uterus after three days. If they could be transferred a bit later, at four to five days, fewer embryos may need to be implanted to ensure success.

“We would have more opportunity to see which embryos progressed adequately. This would allow us to select embryos that were dividing more normally. The hope is to reduce the num-



Addressing emotional and psychological aspects

Complete infertility treatment is more than a sum of medical procedures. With the maturing of the field and the complexities involved, the mental health aspect of treatment has become integral. “There has been recognition in the medical field that we need this aspect, the mental health program, to practice good medicine,” says Dr. Linda Hammer Burns, psychologist and clinical assistant professor in obstetrics and gynecology.

“We don’t just have a couple coming in, taking a few pills, and returning pregnant. It is more complex and truly can have a lot of psychological consequences for everyone,” says Burns. “There is some anxiety about the technology in general, the different medical procedures. And there is some dissonance about ‘this is supposed to be an intimate loving thing’ and how high-tech it really is. The increased hope, expectations, perhaps unrealistic expectations — these are some of the issues we must deal with.”

all patients who will be having *in vitro* fertilization or donor insemination are required to participate in the mental health program. “We have developed some protocols that say that anyone who is going to have assisted reproduction must have an educational, supportive counseling evaluation. It is preparation for the medical treatment — preventive medicine, in a way. We were, and I believe still are, groundbreaking in offering and requiring this,” says Burns.

Research has shown that the longer couples are in treatment, the more stress they experience, and women seem to experience more psychological distress than men. Part of what Burns and her colleagues try to do is help patients identify their coping deficits and enhance their coping mechanisms.

Previously, patients and physicians have been somewhat resistant to such counseling. “In the early days, my role was crisis intervention. When someone appeared to be having a tough time, was in distress, I was called in,” Burns says.

“Now my work is an integral part of the comprehensive patient care. I think patients are more willing to see it this way too — it is an essential part of the process.”

Collaboration feeds progress

Collaborating with community physicians and clinics opens doors for patients, physicians, and the University as a whole to continue to expand the field of infertility treatment. “This type of work is possible because none of it is happening in isolation. It is successful because people at the University are working with others,” says Hensleigh.

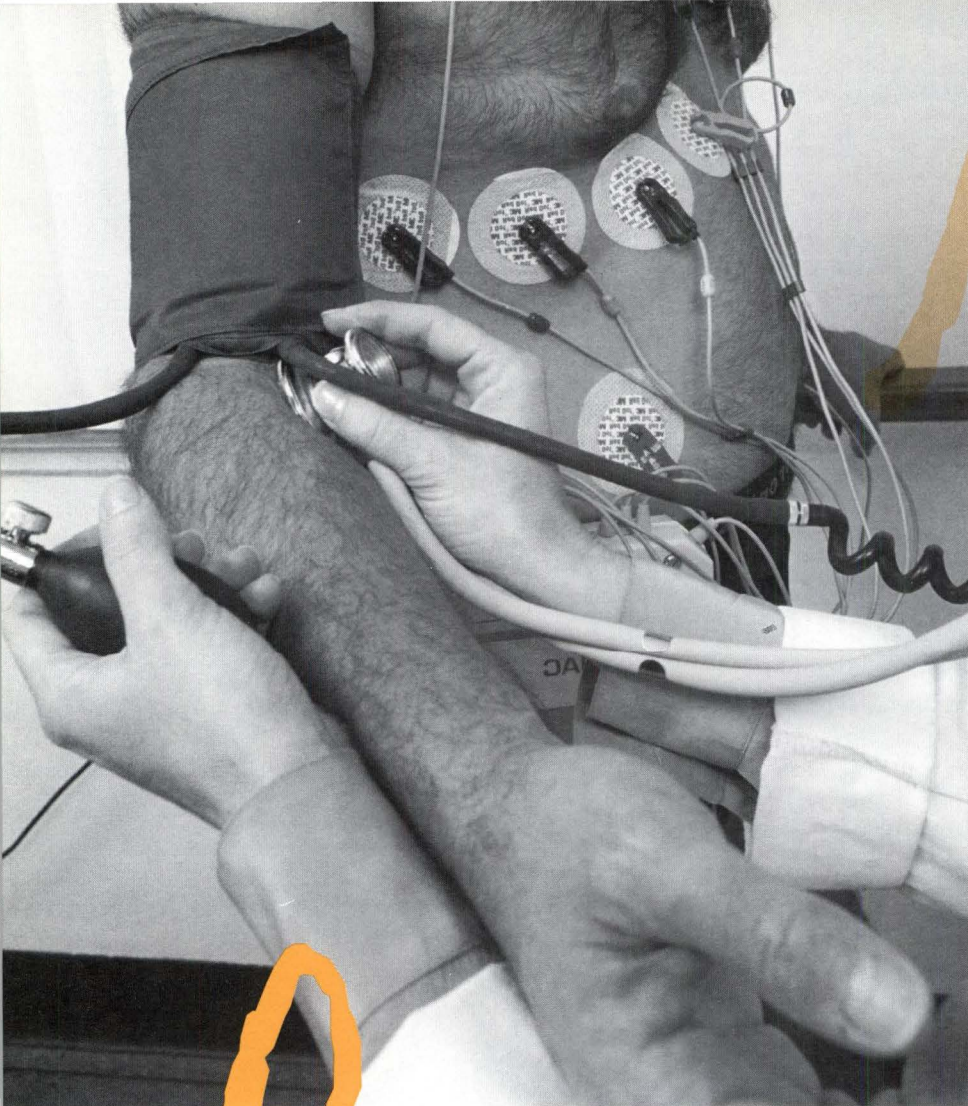
Developing working relationships with physicians technically outside the University creates opportunities for those physicians to contribute to medical education and provides a pool of patient resources for education. “I think we are seeing a shift — much of the teaching and clinical experience can be gleaned through practicing physicians affiliated with the Medical School, with physicians who have committed to medical education. Part of the Hippocratic oath deals with our obligation to pass on knowledge,” says Nagel.

Connections to the University also facilitate research in outside clinics. “By having an active research program, we are also able to give residents an opportunity to include research as part of their residency,” says Yeh, program director for the obstetrics and gynecology residency program at HealthPartners.

Continued research is also essential to maintaining progress in infertility treatments. “Research is integral to our work,” says Hensleigh. “Through the University we have the resources to pursue it.” And, says Yeh, “it is critically important to keep pushing the frontiers to understand biologically what is happening and to develop new treatments and drugs.”

As the field of infertility treatment continues to progress, the University will continue to play an important role — through training, research, and clinical service. [MMF](#)





Getting to the heart of the matter

Heart disease kills more people than any other disease; the Cardiac Arrhythmia Center is working to lower that statistic.

by Elaine Cunningham

Avoid fats. Eat fresh fruits and vegetables. Exercise regularly. Don't smoke. Drink in moderation.

These are the messages touted today by magazines, talk shows, and medical journals. So much has been reported about how healthy lifestyle choices will decrease the risk of heart disease that it sometimes appears medical attention is focused more on prevention of heart disease than on treatment.

But changing the lifestyle habits of a nation takes considerable time, and in the meantime, heart disease remains the number one killer in this country. And in spite of appearances, much current research is being directed at discovering better treatments and improving the quality of life for patients suffering from the many different types of heart disease.

At the forefront of this type of research is the Cardiac Arrhythmia Center at the University of Minnesota. Under the direction of Drs. David Benditt and Keith Lurie, the Center supports basic and clinical research into the causes and

treatment of life-threatening cardiovascular diseases. Research focuses on six areas — atrial fibrillation, cardiac arrest, congestive heart failure, cardiac conduction system disease, implantable pacemakers, and unexplained syncope (fainting).

Although progress has been made in all six research areas, Lurie, who is also an associate professor of medicine in the Medical School, believes the Center has had its most significant impact on unexplained syncope, cardiac arrest, and implantable pacemakers.

"In this area (Minnesota), which is a hotbed of new cardiovascular studies, we enjoy a good reputation as a leader in pacemakers, resuscitation, and syncope," he says.

Researching syncope and loss of consciousness

Unexplained syncope or sudden loss of consciousness is one of the leading causes of hospital admission in the United States. Estimates place it as high as 6 percent of all admissions, which represents a significant cost to the health care system.

"The challenge," says Lurie, "is determining if the loss of consciousness is something to worry about. Is it a common faint or a life-threatening situation?"

At the Cardiac Arrhythmia Center researchers are trying to better understand why people pass out, and they are working to develop new treatments. One area in which the Center has made a major contribution is diagnosis. After a significant amount of clinical research, the Center developed the tilt table study to help differentiate between patients with life-threatening and non-life-threatening causes.

The study, which was described in the *New England Journal of Medicine* in 1989, involves tilting the patient at a 65 degree angle to simulate loss of consciousness, and then analyzing the changes in heart rate, heart rhythm, and blood pressure to help determine the problem. The test is also used to evaluate the effectiveness of syncope treatments.

In addition to contributions in the area of diagnosis, the Center has helped advance new methods of treating syncope, including the development of new drug therapies and the use of devices such as pacemakers. In fact, the Center was one of the first to pioneer the use of pacemakers in treating syncope. The Center also helped establish

national guidelines that outline everything from what kinds of work-ups and therapies syncope patients should receive to which patients can be allowed to drive.

Currently, researchers at the Center are working to develop an animal model for syncope in order to better understand and predict which basic physiologic parameters will lead to a rapid loss of consciousness.

"What we're doing," explains Lurie, "is taking a relevant clinical problem (one that affects both patients in the 20- to 40-year-old age category and in the 60 and older age category), looking at the mechanism of the problem from a basic science standpoint, and using the knowledge we gain to improve diagnosis and develop better treatments."

Implanting devices and improving survival rates for cardiac arrest

In Minnesota, according to Lurie, only 10 percent of patients who come to the hospital after collapsing suddenly from a heart attack walk out alive. Nationwide the statistics are even worse — less than 5 percent. Given these figures, Lurie says, it's clear that new treatments and better methods of keeping cardiac arrest patients alive must be developed.

"When someone comes to the Cardiac Arrhythmia Center," says Lurie, "we are involved in testing and developing new therapies to keep them alive and enable them to lead more functional lives."

The Center not only seeks new methods for treating patients after they've had their heart attacks, but also during their attack. This entails developing and testing new methods of cardiopulmonary resuscitation (CPR), as well as new drugs, defibrillators, and, of course, pacemakers.

The first implantable pacemaker was invented and implanted at the University of Minnesota in 1959. Since then the University has continued to be a leader in pacer technology.

"When a heart attack occurs," explains Lurie, "often the

continued on page 13

Drs. Keith Lurie and David Benditt direct the Cardiac Arrhythmia Center.

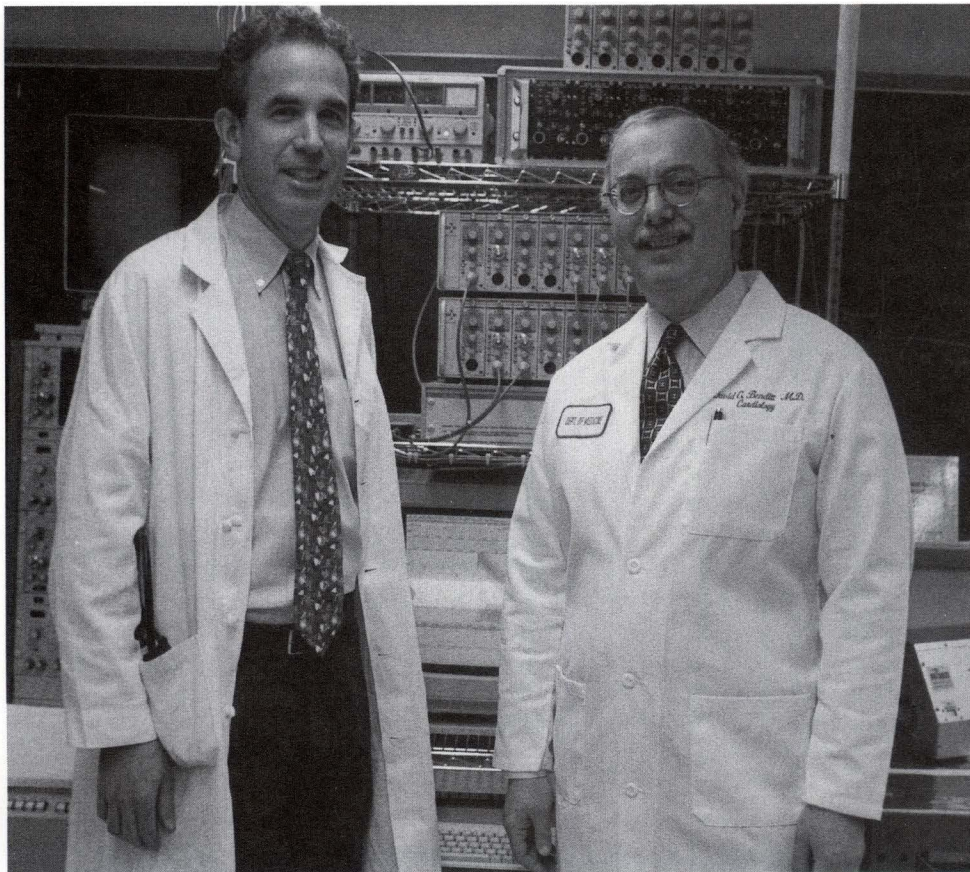


Photo by Andrea Bie

Treating Patients

The Cardiac Arrhythmia Center at the University of Minnesota is both a research center and a clinical care facility. Staff see about 40 patients a week on an outpatient basis and another 25 a week as inpatients at the University site, according to Joanne Collins, an electrophysiology nurse specialist who has worked at the Center for the past 10 years. In addition, Center staff see patients in clinics in St. Cloud and Hibbing.

"From our standpoint," Collins says, "we really haven't seen fewer cardiac problems (from healthier life styles). Some heart rhythm problems can't be prevented in that way — congenital heart defects and cardiomyopathy for example."

Most of the Center's patients are consultations or come from referrals from physicians around the state. Because it is a clinical research facility, the Center is able to test and treat these patients with the latest methodology.

Syncope and heart attacks are not the only conditions treated at the Center. Patients experiencing congestive heart failure, cardiac conduction system disease, and atrial fibrillation — the three other research areas on which the Center focuses — are also seen.

Collins is excited by the new treatments the Center helps test, such as the car-

dioverter defibrillator implant for use in patients with dangerously fast heart rhythms, the tilt table study to diagnose syncope, radio frequency ablation therapy which destroys cells at the site where a rapid heart beat originates, and pacemaker therapy. She has seen these types of new therapies result in success. For example, she explains, ablation therapy can actually cure a patient of atrial arrhythmia.

She has also witnessed the improved quality of life for patients who have come to the clinic as a last resort — patients like Richard Kofsky.

Kofsky came to the Cardiac Arrhythmia Center in 1995. He had been experiencing extreme fatigue since 1985 when he was diag-

nosed with mononucleosis.

"It never went away," recalls Kofsky, who was 34 at the time. "And it went beyond fatigue. An extreme weakness would come over me. My eyelids would get heavy, my face would flush, and it felt like the energy was being sucked right out of me. I called them my weak spells."

Kofsky got weaker and weaker and eventually became disabled. He could no longer practice as a psychologist, everyday activities became impossible, and he would be unable to get out of bed until after noon every day. Doctors labeled it chronic fatigue syndrome because they had no other explanation for his condition.

"One night," Kofsky continues, "my wife heard something on television about chronic fatigue syndrome patients improving after receiving treatment for pre-fainting conditions."

That fortuitous evening in 1995, 10 years after his weak spells had begun, led Kofsky to the Cardiac Arrhythmia Center and Dr. David Benditt.

Benditt put Kofsky through tilt table testing but came up with no explanations for his weak spells. After further discussion about when he felt weak, Kofsky was tested while standing. An interesting discovery was made. Kofsky's baseline blood pressure was 110/70, but after standing for a few minutes it dropped 30 points.

Kofsky was given medications (one a beta blocker and the other a serotonin inhibitor) used to treat syncope. "After about two weeks it was amazing how different I felt," he exclaims.

He was able to start working again and is now back to 50-hour weeks as clinical director of training for Eden Prairie Psychological Resources. He's resumed most of his daily activities. He drives, he paints, he plays with his daughter, and, at age 47, he is enjoying life more than ever. Although he still can't do everything he used to, he is hopeful that his condition will continue to improve.

"I used to be an avid basketball player," he says. "I can't play for long now, only about 10 minutes before I start to feel like I might have a weak spell."

There are also a few side effects to his medications. He sweats more and he snores and kicks in his sleep. Regardless of the side effects, Kofsky is delighted with his treatment.

"Do I want to be on medications for the rest of my life," he asks parenthetically. "No, not really. Am I willing to be on medications to prevent my weak spells? You betcha!"

As for the Cardiac Arrhythmia Center, Kofsky has just one thing to say. "It changed my life."



Richard Kofsky

continued from page 11

heart's normal pacemaker cells die. One of the causes of heart attacks is a break in the electrical circuit between the top and the bottom of the heart. If we develop a new pacemaker system that increases the heart rate when someone is walking around, then we've helped them to lead a more functional life. This group has been at the epicenter of this type of activity for two decades."

The University is fortunate to have many well-known medical device manufacturers located in Minnesota. Medtronic, CPI, Daig Corporation, Angeion Corporation, and St. Jude are just a few of the companies that researchers at the University have worked with in developing new cardiac devices. Researchers at the Center have contributed to the development and evaluation of pacemakers with sensors that increase heart rate with physiologic activity and track a patient's respiratory effort.

The Center has also been involved in developing, improving, and testing new implantable defibrillators that are, as Lurie describes, "smaller and smarter."

Although many people are trained in CPR, few realize the abysmal survival rates for sudden cardiac arrest. Lurie and Benditt and their colleagues at the Center are involved in trying to help the person who collapses from a heart attack survive. A major area of research for them continues to be in developing new devices to improve the efficiency of CPR.

Additional work at the Center is focused on drug intervention. A natural hormone called vasopressin shows promise when administered during CPR efforts. Results over the past year demonstrate that

In Minnesota, only 10 percent of patients who come to the hospital after collapsing suddenly from a heart attack walk out alive. Nationwide the statistics are even worse — less than 5 percent.

the use of vasopressin has increased survival rates when compared to other traditional agents such as adrenaline. Researchers are also looking at a "drug cocktail," using vasopressin in combination with other drugs such as nitroglycerin and adrenaline to improve survival rates for cardiac arrest.

"We are continually evaluating drugs versus devices to see which is more effective," Lurie explains.

In fact, Lurie sums up the Center's work in the area of cardiac arrest this way: "We try to help people who have collapsed from a heart attack with new methods of CPR before they come to the hospital, with new drug therapies and defibrillators once they get to the hospital, and with pacemakers to keep them alive after they leave the hospital."

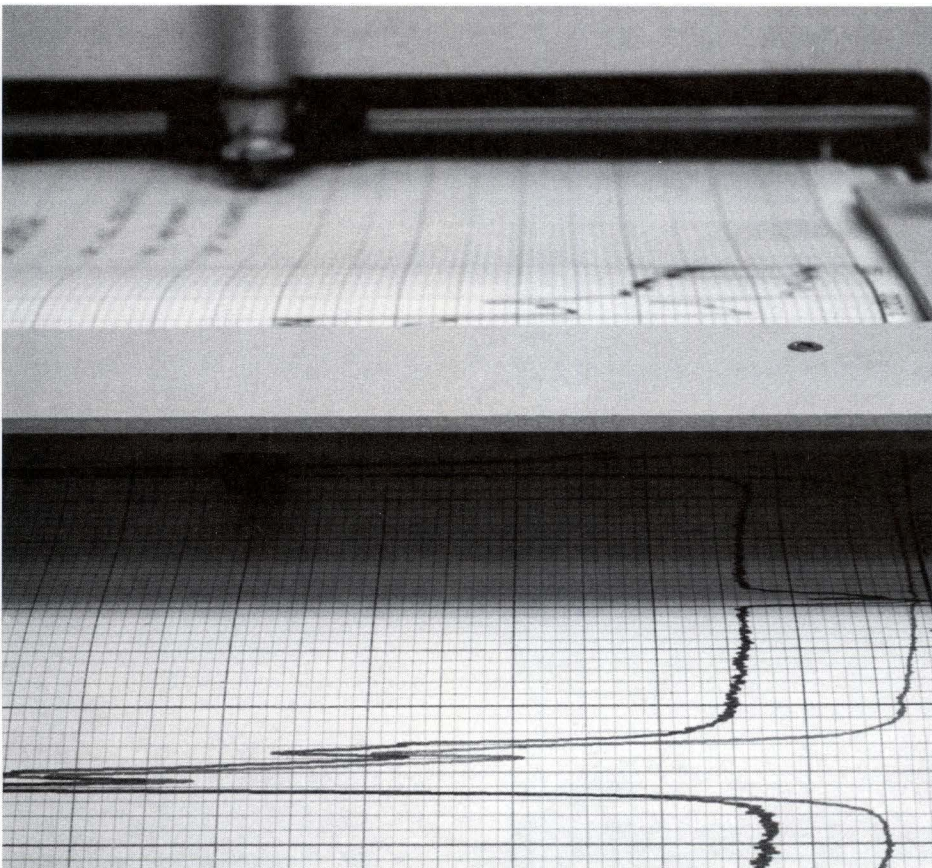
Looking to the future

"We see our Center as more than just a place that provides health care, although we do that," says Benditt. "Our vision is beyond the horizon. Our goal is to be a resource for research and education in new technologies. We want to bring about improvements."

Looking beyond the horizon, the Cardiac Arrhythmia Center is focusing on a better understanding of how the heart ages and how to keep it working longer.

"Mother Nature built a beautiful system in the heart both as a pump and as an electrical system," explains Lurie. "It would be nice if we could use the cells we were all born with longer — in other words find ways to help keep them alive and functioning properly."

By age 40, according to Lurie, people begin to lose conduction cells in the heart, which leads to slower heart



rates and an increased susceptibility to atrial fibrillation (which occurs in 10 percent of people over age 70). Researchers at the Center are beginning to look at the aging process to understand the pathological changes that occur and see if those changes can be reversed. They are evaluating both the use of pharmacological and electrical methods of manipulating these cells. They are also investigating the infusion of new growth factors into the pacemaker cell region of the heart to see if they can give the cells new life.

Keeping the heart muscle working efficiently is another area of future research. Traditional treatments in this area have relied on drug therapies. Researchers at the Center are using a more device-oriented approach, looking at what happens with both low energy pacers that don't cause muscle contractions and high energy pacers that do.

"Our goal is to better understand how we can use electrical impulses to preserve heart function," Lurie explains.

Researchers are also evaluating inserting skeletal muscle from the side of the chest and other areas around the heart to enhance the heart's pumping mechanism. They are also seeking ways to remodel the heart after a heart attack to prevent progression of heart failure.

To reflect the research activity the Center will pursue in the future, Benditt points out how the Center itself will have to evolve. "We could foresee the Center to be a multidisciplinary environment that spans medicine and surgery certainly, but also engineering and physics," he says. "If we are working with the bioengineering department, the physiology department, the molecular human genetics department, and also with industry, we will go far beyond the scope of a traditional department of medicine." [MMF](#)

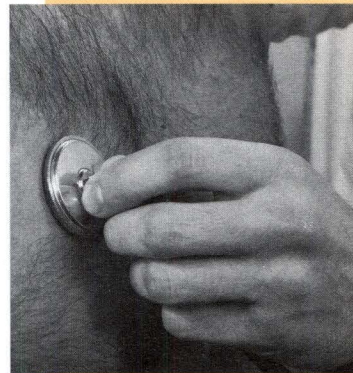
Pursuing outreach and education

In addition to being an outstanding research and clinical facility, the Cardiac Arrhythmia Center is also a center for education.

"We are the major educational source for nurses and physicians in the area of cardiac electrophysiology in the state of Minnesota,"

says Lurie.

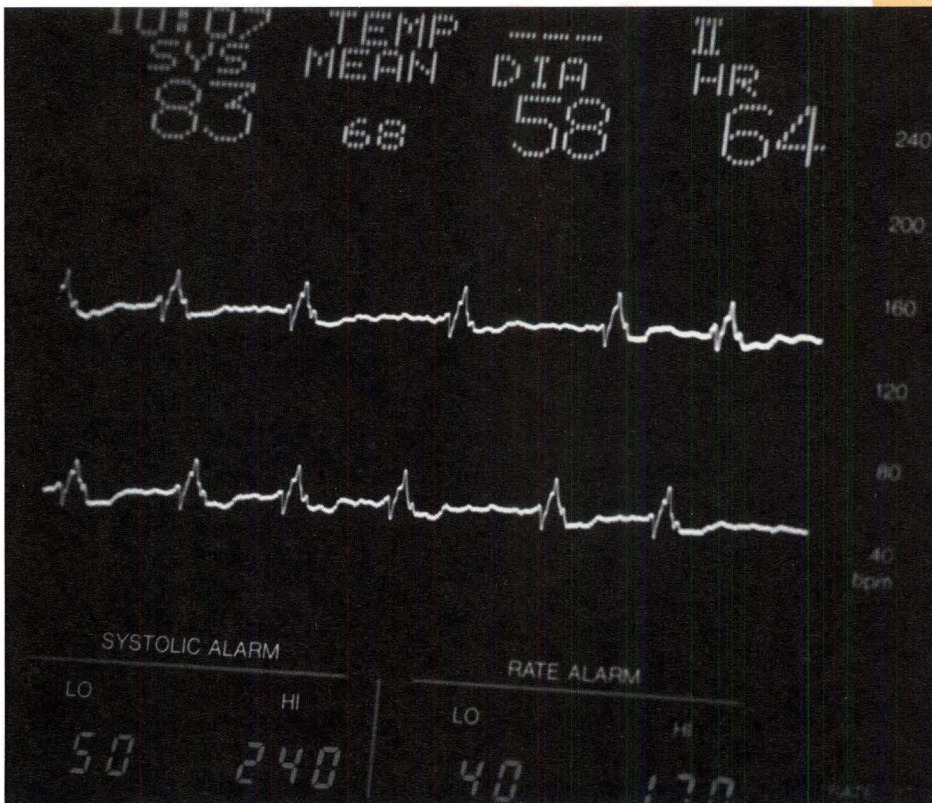
And the Center's educational efforts go beyond Minnesota's borders, extending throughout the world through the continuing education semi-



nars the staff conduct, the symposia in which they participate, the papers and books they write, and the patient support groups they sponsor.

The Center is also involved in training residents and instructing medical students, who rotate through the Center during their third or fourth years, as well as undergraduate and post-graduate students from various engineering disciplines.

In addition to serving students and health care professionals, an important goal for the Center is to provide ongoing medical education to patients and family members whose loved ones suffer from cardiovascular disease. Not only do the clinics in Hibbing and St. Cloud serve as outreach sites, but the Center collaborates with facilities and health care professionals in France, Japan, England, Germany, and Austria.



University researchers find muscular dystrophy gene

Drs. John Day and Laura Ranum and their colleagues found the gene for a second form of myotonic dystrophy by studying blood samples of 63 members of a Minnesota family.

None of the members of the family had carried the known mutated gene responsible for myotonic dystrophy — the most common form of adult muscular dystrophy — although they had all the symptoms of the disorder. This type of muscular dystrophy affects one in 8,000 people, causing weakness in the face and limbs, irregular heartbeats, delayed muscle relaxation, and other symptoms.

The results, published in the June issue of *Nature Genetics*, are only the second time scientists have been able to identify a source of the disease. In 1992, researchers funded by the Muscular Dystrophy Association identified an abnormal gene responsible for the condition in 98 percent of individuals. The findings from Day and Ranum will impact the 2 percent that could not be diagnosed using the 1992 information.

The researchers are hopeful that the discovery will lead to earlier identification of the disease, which can remain dormant in the body for many years before exhibiting symptoms. Children of parents with the disease have a 50 percent chance of developing the condition.

University researchers from the Department of Neurology and the Institute of Human Genetics have discovered a gene that causes one of the most common forms of muscular dystrophy.

New office for international education established

A new office has been established at the Medical School to promote international education and scholarly opportunities for medical and graduate students and faculty. The Office for International Medical Education and Research will focus on education and will promote exchange of students between the University of Minnesota and organizations within other countries.

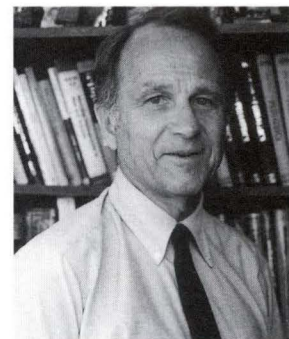
“There is a great interest in going abroad, but students don’t know where to go to set things up, or where to get funding,” says **Sarah Kesler**, second-year medical student and co-chair of the Student International Health Committee.

By providing a central location and resources such as a database of available sites and financial information, existing programs will be streamlined. “We’re going to organize what’s been going on informally for many years,” says **Dr. Paul Quie**, co-director of the office and Regents’ Professor of Pediatrics. “We hope to make the process more user-friendly for students who are interested in having experiences abroad.”

International travel gives medical students a chance to reflect on the health care system in the United States, and also provides new perspectives on different cultures and their health care systems. “The world is getting smaller and smaller, and the number of refugees and immigrants in the Twin Cities is expanding — you’ll encounter international health issues no matter what you do,” Kesler says.

“It is really inspirational to see so many faculty members committed to making international health more accessible at the University,” adds **Christine Johnston**, second-year medical student and co-chair of the Student International Health Committee.

The office, located in Owre Hall 3-170, will be directed by **Dr. Phillip Peterson**, professor of medicine and infectious disease specialist at Hennepin County Medical Center. For more information, contact Kelly Pearson, 612-626-2558.



Dr. Paul Quie

Comprehensive study highlights link between cancer and tobacco

A comprehensive review conducted by **Dr. Stephen Hecht**, professor of laboratory medicine and pathology and the Wallin professor of cancer prevention at the Cancer Center, provides new insights on tobacco-related cancer. In the first such review in over a decade, Hecht summarized peer-reviewed studies of the biochemistry, biology, and carcinogenicity of tobacco-specific nitrosamines — chemical compounds found in unburned tobacco and tobacco smoke.

“The tobacco specificity of these carcinogens is important because they provide a link between nicotine addiction and cancer that can be attributed only to tobacco,” Hecht says. Other smoke carcinogens occur in the diet and general environment, but the tobacco-specific nitrosamines aren’t found anywhere else. In a previous study, Hecht detected those compounds in the urine of non-smokers — a finding which strengthens the argument that second-hand smoke can cause lung cancer.

By understanding the way tobacco-specific nitrosamines cause cancer, Hecht believes that more effective techniques for preventing tobacco-related cancers can be found.



AHC benefits from generous legislature

The 1998 legislative funding session gave biology at the University of Minnesota a big boost — thirty-five million dollars will fund the first phase of a new Institute for Molecular and Cellular Biology.

Although the amount is only half what the University requested, Academic Health Center officials called it “a big win,” and expect more funding for the second phase from the next legislative session in the year 2000.

Construction for the new building will begin in the winter of 1999, on the site of what is now the Owre-Millard-Lyon complex. (Jackson Hall will be used for office space.) The facility is part of a University initiative to remain competitive in the field of molecular and cellular biology. Apart from the new building, the initiative also includes plans to create a technology center on the St. Paul campus and provide new faculty with state-of-the-art research equipment.

In other areas of the University, the legislature allotted \$36 million to help finance faculty and staff compensation, faculty set-up and equipment needs, digital technology purchases, and rapid-response research. Approximately \$8 million of this will benefit AHC colleges and schools.

“I was thrilled by the outcome,” said **President Mark Yudof** in the University newsletter *Kiosk*. “The funding we received is going to mean a renaissance for the University.”

The legislature also gave the state Medical Education and Research Commission \$10 million for fiscal year 1999, to be used for the clinical training of students, and an annual \$5 million commitment in general fund appropriations. Up to \$22 million in health professional training funds will be redistributed among the University, the Fairview-University Medical Center, Hennepin County Medical Center, and other training programs state-wide.

As part of a \$5 million initiative, the University and the state's Department of Health will receive \$400,000 to establish a statewide network of fetal alcohol syndrome clinics. Nearly \$260,000 has been earmarked for a rural physician student loan forgiveness program aimed at encouraging medical students to practice in small towns, and \$150,000 will fund research on sexually transmitted diseases.

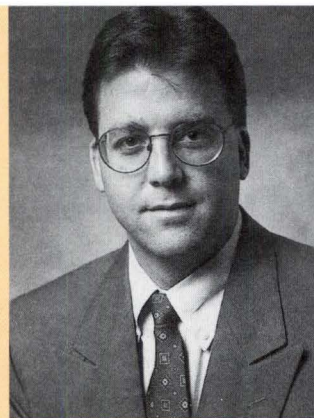
New surgical technique helps restore eyesight

A relatively new type of eye surgery — a keratolimbal allograft — helped save the eyesight of high school sophomore Benson Lund, who was involved in a botched chemistry experiment. A splash of hydrochloric acid caused corneal scarring in Lund's right eye.

Initially, doctors at the Phillips Eye Institute in Minneapolis thought that the cornea might heal itself, but after two months of eye drops, it was still unclear if the cornea could be saved. Lund's eye was sewn shut in an effort to stimulate the eye's stem cells into producing corneal tissue cells. When the stem cells failed to heal, doctors determined that surgery was necessary.

Normally, cornea transplants have a 95 percent success rate. But in Lund's case, the new cornea would soon turn cloudy because of the stem cell damage. To prevent this, **Dr. Edward Holland**, professor in the Department of Ophthalmology, transplanted new stem cells contained in the outermost portion of a donated cornea into Lund's eye. These stem cells were given three and a half months to generate new cells before a cornea was transplanted. Although it will take a few months for the new cornea and stem cells to adjust to Lund's eye, he can now see clearly out of it.

“We are giving sight to patients who previously had no options,” Holland says. The operation has an

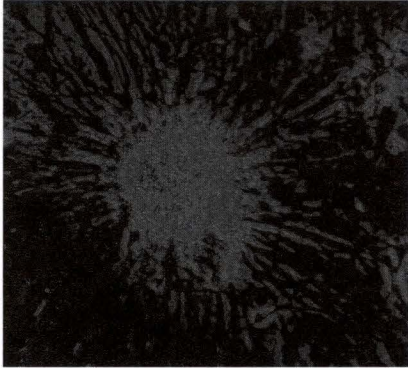


Dr. Edward Holland

approximately 70 percent success rate.

The procedure, which is practiced by only a few doctors in the United States, is made possible by organizations like the Minnesota Lions Eye Bank in the University of Minnesota's Department of Ophthalmology. The Eye Bank collects and evaluates cornea donations from all over the state.

PROSTATE RESEARCH LOOKS PROMISING



A new treatment may soon provide hope for men suffering from prostate cancer. Preliminary results from tests conducted on mice showed an 80 to 90 percent reduction in cancerous prostate cells.

"It has worked better than we had anticipated when we started the project five years ago," says **Dr. Akhouri Sinha**, professor of genetics and cell biology at the

University of Minnesota and research scientist at the Minneapolis VA Medical Center.

After injecting human prostate cancer cells into mice and allowing six weeks of cancer growth, Sinha's group treated the mice with a mixture of 5FU, a powerful anti-cancer drug, and an antibody that targets prostate specific antigens (PSA) — proteins produced by most prostate cells.

Small amounts of protein leak out of healthy cells into the bloodstream. But in patients with

prostate cancer, the percentage of PSA in the blood is much higher. This is the method by which prostate cancer is now identified in humans. PSA proteins stick to the surface of both cancerous and healthy prostate cells, thus creating a target for the drug/antibody combination.

"This is the holy grail of cancer treatment," says **Dr. John Hulbert**, head of the Department of Urology at the University. "We can target the cells we want to kill without harming the other ones."

After the 5FU-antibody conglomerate attaches to the outside of a cell, it is engulfed. Once inside, enzymes split the antibody and cancer drug apart. The drug prevents cell division in the cancerous cells, and has no effect on healthy cells. And because the cancer cells can't divide, they eventually die.

By tracing the antibody's path through the animals' bodies, the group learned the drug accumulates briefly in the kidney, spleen, and liver, but begins to vanish in about an hour. After four or five hours, 90 percent had disappeared from the organs. But in the tumors, the mixture built up steadily — reaching a peak concentration in about a day, and gradually diminishing for up to five days. The drug only requires 18 hours to kill the cancerous cells. The drug killed 80 to 90 percent of cancerous prostate cells in the mice.

"We may miss 15 to 20 percent of the cancer cells, but there are other methods we are looking into to target those as well," Sinha says. Other chemotherapy drugs can also be used to kill the remaining cancer cells.

"This could make a huge difference to patients who have failed to respond to hormone treatment for prostate cancer," Hulbert says.

Sinha is currently seeking FDA approval to test the therapy on patients critically ill with prostate cancer. If approval is granted, Sinha hopes to begin the trials in the fall. "I hope to see the same 80 to 90 percent success rate in humans," Sinha says. "We are very upbeat."

Dr. Charles Moldow named associate dean for research

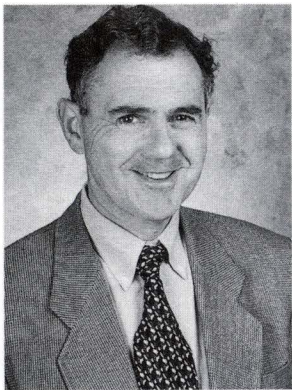
Dr. **Charles Moldow**, professor of medicine, became the associate dean for research at the University of Minnesota Medical School on June 1. He oversees and promotes research activities and distribution of research information. He also supervises the management of research grants, working closely with the Academic Health Center's Research Service Organization and the Office of Research and Technology Transfer Administration to enhance financial support for University research.

"Dr. Moldow is ideally suited to take us into a new era of increased opportunities for medical research," says Dr. Alfred Michael, Medical School dean.

"He will be effective in positioning the Medical School to take full advantage of increased federal funding for research and in carrying out the University's initiative in molecular and cellular biology."

Moldow received his medical degree from the State University of New York in 1964. After completing an internship and residency in medicine at Bellevue Hospital in New York City, he held academic and hospital positions

at New York University Medical Center and the University of Connecticut Health Center. In 1972 he came to the University of Minnesota Medical School, and served as vice chair of the Department of Medicine from 1982-96. He has been chief of staff at the Minneapolis VA Medical Center since 1996.



Dr. Charles Moldow

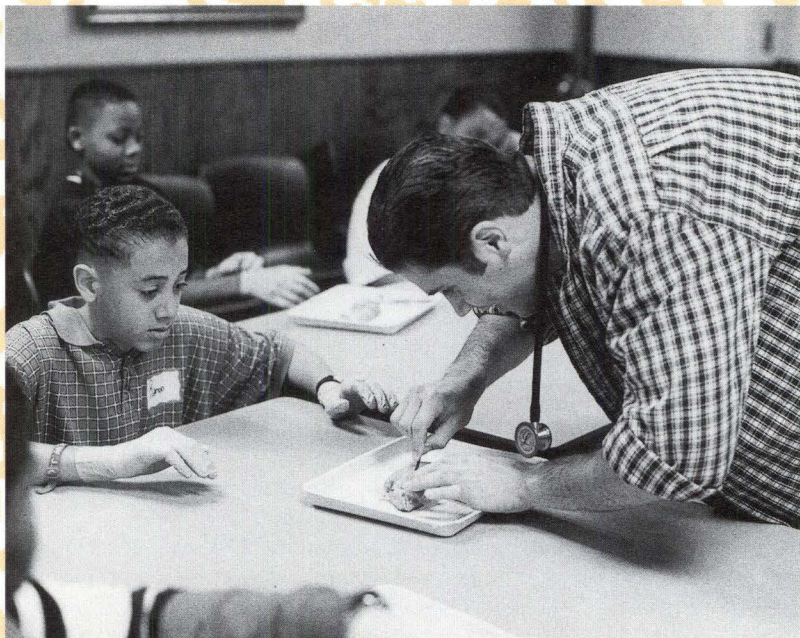
Catalyst: Sparking Interest in Science

Developed by the Medical School's Class of 2001, the Catalyst program (Community Action Through Advanced Learning for Youth in Science and Technology) introduces junior high school students to cutting-edge technology and research at the University of Minnesota through laboratory tours and hands-on learning experiences.

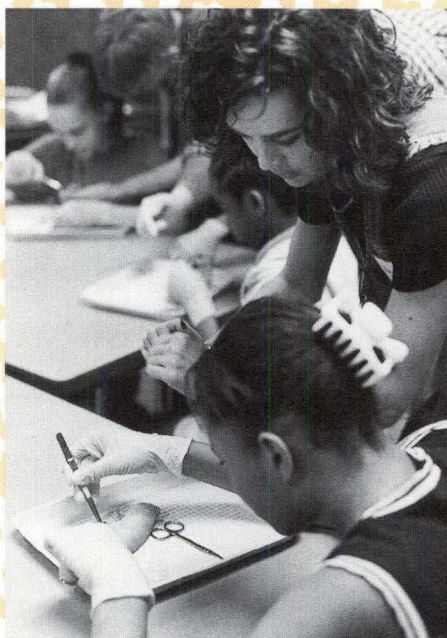
"We chose the junior high level because they still have time — if we get them excited — to choose science classes in high school," says Jim Suel, class president and program founder.

Students from Twin Cities urban schools are bussed to the University, where they spend three hours touring labs, talking to researchers, and most importantly, experimenting with scientific equipment. Students have sutured pigs' feet, given a set of computerized teeth a virtual cleaning, and experienced a rotator cuff surgery simulation. "They get to see things they don't see in the regular course of their day," Suel says.

Suel began the program in March, recruiting class members Chris Duncan, Xilma Ortiz Gonzalez, Kealy Ham, Nyasha Spears, Timothy Young, and Andrea Lampland to serve on a committee. He wanted to institute a class service project that every medical student could get involved in. But since many people were already involved in community service work, the project needed to be something that wasn't incredibly time consuming. "Then I got a call from my brother-in-law, a science teacher at Apple Valley's East View High, asking if I could arrange a tour for his class," Suel says. "I started thinking about it — this could be a perfect project!"



Photos by Andrea Bie



Above, Michael Ebbert, Class of 2001, demonstrates the art of the incision. Left, first-year medical student Melissa Mohrenweiser helps a young pupil suture a pig's foot.

"This is a nice opportunity to practice the fine art of teaching in a science setting."

University researchers also enjoy discussing their work with the classes. "The faculty has been absolutely fabulous. We've never been turned down by any clinician or researcher, and they've been quite accommodating and enthusiastic in their response," Suel says.

"The Catalyst program is a great way for our medical students to become involved in the community," says Senior Associate Dean for Education Gregory M. Vercellotti. "Our hope is that their enthusiasm will spark interest in health and other science careers in the children who participate in the program."

Medical students get involved by leading tours and working one-on-one with the young visitors. Classes of about 30 students come out twice a month from various schools in Minneapolis or St. Paul. After splitting into groups, they rotate through three different sites. "As future doctors, part of what we will be doing is teaching," Suel says.

Students Commencement



Medical students aid community

Medical students Thuan Ly, Katie Hanson, and Paul Melchert are co-directors of the V.A.L.S. (Variety, Assistance, Love, and Support) Run/Walk for kids, to be held September 26 in Minneapolis. The 5K race will raise funds for the Community-University Health Care Center/Variety Children's Clinic, located in the Minneapolis Phillips neighborhood. Through this event, medical students have the opportunity to volunteer and give back to the community.

Last year's race attracted more than 300 participants and raised \$3,000 for the clinic. An even larger turnout is expected this year, with a goal of raising \$5,000. The race is partially sponsored by the Minnesota Medical Foundation. For more information, call the Variety Children's Association at 624-6900.

Students matched with residencies

During National Residency Match Day, held March 18, fourth-year medical students were linked with medical residency programs. Students ranked their choice of residencies, and institutions ranked their candidate preferences. A computer in Washington, D.C. completed the match.

This year, 58 percent of the 235 participating University of Minnesota students selected primary care residencies (family practice, internal medicine, and pediatrics) with 31 percent of those choosing family practice. Nearly half of the students will remain in Minnesota, with more than 31 percent training at the Fairview-University Medical Center. Fifty-seven percent of the Minnesota students received their first choice of residency and 19 percent received their second choice.

The Class of 1998 looks to the future

The future holds many opportunities, but the essence of our profession is caring for patients and preventing disease," said Dean Al Michael to the 235 members of the Medical School Class of 1998. The June 5 commencement ceremony was a time of relief, celebration, and looking ahead.

Michael emphasized, "Although scientific discoveries in the 21st century will change much of what you do as physicians, the core of compassion, commitment, trust, and communication — traits that characterize the art of medicine throughout the centuries — will be your touchstone and foundation."

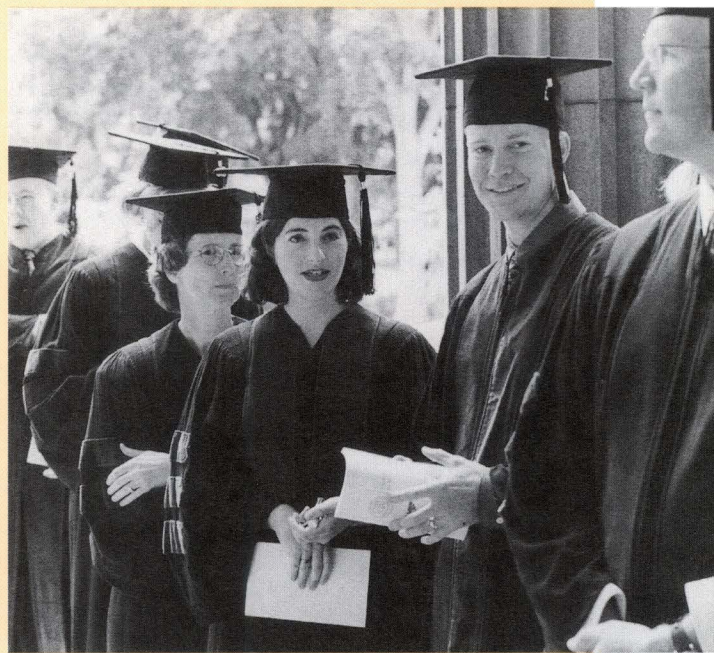
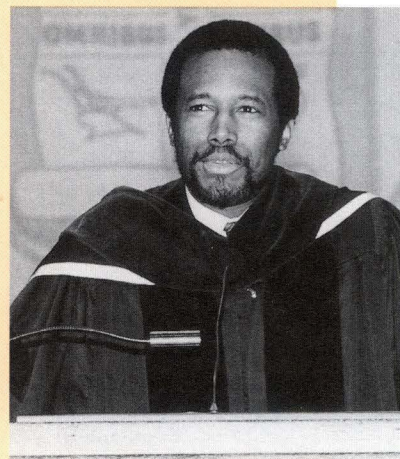
The Class of 1998 selected Dr. Benjamin Carson, director of pediatric neurosurgery at Johns Hopkins, to be their keynote speaker. He, too, emphasized the importance of compassionate care. "It's okay to become emotionally attached to your patients," said Carson. "It is not necessary to divorce yourself from them. Although because you care, you will occasionally be hurt in this world."

Carson advised the students to take part in the community, and to become advocates for patients in a world of managed care.

"If we're not willing to stand up for the rights of patients, no one else will." He also emphasized that physicians need to take the lead in being healers of society, not just of diseases. He said that those who understand human bodies have a special obligation to eradicate ignorance in the world based on prejudice. "As doctors, we know that all our brains are the same."

Carson received an enthusiastic standing ovation from the students and their guests.

Following the conferring of degrees, the graduates recited the Oath for New Physicians. After the ceremony, a reception on Northrop Mall — sponsored by the Minnesota Medical Foundation — brought graduates, families, and friends together to celebrate an end and a beginning.



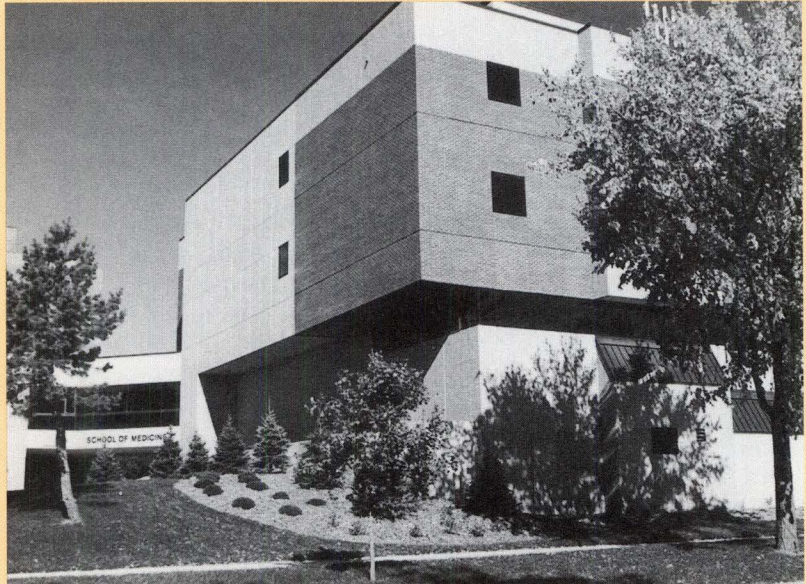
Above, Dr. Benjamin Carson. Below, medical students from the Class of 1998.

A new look for the Duluth School of Medicine

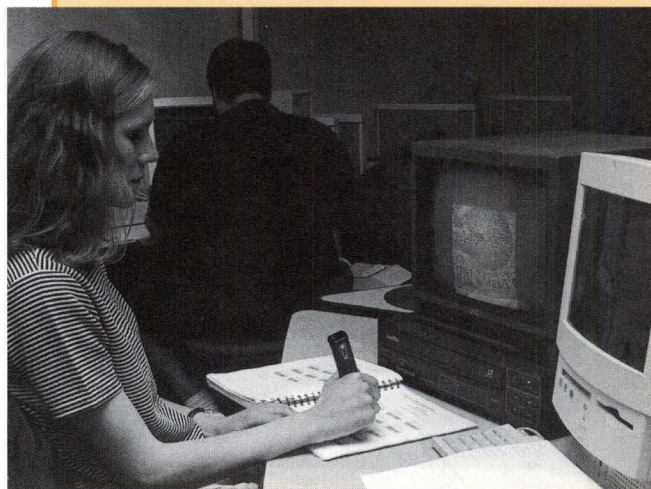
If you ask a medical student about the formula for a great education, comfortable study spaces and convenient services will be part of the equation. And in Duluth, a \$4.1 million addition to the School of Medicine provides both of these.

Medical students have 24-hour access to a new learning resources center, a facility that was planned with interaction in mind. "The room is set up as a multiple working environment, divided by tasks," says Mark Summers, senior media research producer. "Because we laid out the space to accommodate more than one person at a computer, the groups form naturally."

The center has become a hub of learning for students. "Today's students are very savvy," says Summers. "We are catering to a breed of student that actually pushes



This new, \$4.1 million addition to the Duluth School of Medicine contains expanded office and classroom space, an updated learning resources center, and comfortable study and lounge areas. Below, a student chooses an image from a catalog of bar-coded slides.



for technology, pressing faculty for more computer-based materials."

The lab's many work stations provide web-based programs, e-mail access, and specialized applications for a variety of different subjects, such as pathology and histology. For

example, students can sort through a catalogue of files illustrating different types of cells, and pull up the one they want to see on a high-resolution monitor. "We've changed the space into a highly interactive, ergonomically planned computer learning center," says Summers. "One amazing result that we hadn't expected is the teamwork that has evolved among students."

This collaboration reflects a changing medical school curriculum. "Years ago, there wasn't 'interactive' learning or small group teaching in medical school," says Dr. Jim Boulger, associate professor, Department of Family Medicine. "Now it's much more interactive — focused on small group and problem-based learning."

Whether in groups or alone, the new addition provides medical

students with ample space to sprawl out and study. Because medical students have their own keys to most areas in the building, they can use the new conference rooms, classrooms, and individual study spaces whenever they need to. "Those rooms have really been used a lot this year," says Boulger. "It's been a really good deal for them."

The arrangement of the Medical School is more student-friendly as well. Admissions and Student Affairs offices are now next door neighbors, and both have been expanded. "Students can get anywhere within the School in roughly 15 seconds," says Boulger. "The whole Medical School is right in this building."

Philanthropy

Benefactors

Welcome new major giving club members!

The following people have recently become members of the University of Minnesota major giving clubs thanks to their generous support. These are cumulative gifts, made between January 1, 1998, and June 30, 1998, which have been designated (all or partially) to the Medical Schools, School of Public Health, Cancer Center, and other areas served by the Minnesota Medical Foundation.

Builders for the Future

The University of Minnesota Builders for the Future recognizes donors who have committed \$1 million or more.

Ruth and Dr. Reinhardt L. Schmidtke, '32

Presidents Club

The University of Minnesota Presidents Club recognizes donors who have committed \$10,000 or more.

Mary L. and Dr. Quentin N. Anderson, '62

Anonymous

E. Thomas Binger and Rebecca Rand

Paul T. and Marilou S. Birkeland

Carol V. Bossman

Robert M. Bossman

Cornelia A. Burrill

Drs. Phyllis R. Monroe and David S. Cannom, '67

Dr. Flavio Castaneda

Dr. Frank B. Cerra

Laurie Ann Chozen

Mark A. and Claudia J. Cohn

William A. and Sharron L. Cooper

Evelyn M. Fehlhaber

Dr. Vincent F. Garry, Jr.

Elizabeth and Dr. William P. Gjerde, '39

Michael and Janice Hoffman

Helen and Dr. C. Sherman Hoyt, '53

Lorraine P. Jamar

Dr. Toshihiko Kato

Drs. Bernhard J. Hering and Nicole Kirchhof

Drs. Jay H. and Kathryn M. Krachmer

Drs. William J. and Rhonda Krossner, Jr.

Yun Ho and Soon Jha Lee

Julianne and Fred Lenertz

Dr. Phillip and Lynda Medof Levin

Joanne and Dr. Richard P. Linden, '66

Anne Winslow and Dr. Russell

Lindgren, '31

Charles F. and Mabel Livermore

Janice and Dr. J. Duncan MacGibbon, '60

John J. Mahn

Max and Denise McGee

William G. and Toni Meierhoff

Addie and Dr. Emerson L. Meyer, '38

Dr. Douglas B. and Maureen M. Nelson

Eugene and Linda Nelson

Frank Q. Nuttall, M.D., Ph.D.

Patty Kennedy O'Brien

David and Siobahn Olson

Joseph Peng

Drs. Stella M. Davies and John P.

Perentesis

Linda A. Peterson

Dr. Barbara Rebhuhn

Pat and Carla Ringold

Harold and Ruth Roitenberg

Elaine and Dr. Charles N. Sadoff, '51

William T. Sandberg

Priscilla and Dr. Sheldon Siegel, '45

Dr. Herman Seltz

Lois B. Shipman

Robert D. and Elizabeth J. Smith

Jennifer L. and John E. Soderholm

Richard A. and Linda Spyhalski

Barbara L. and Dr. Gordon W. Strom, '37
Vanessa and Dr. David E.R.

Sutherland, '66

Leslie C. and John G. Turner

Ercument and Dawn Ucan

Dr. Gregory M. Vercellotti

Christine Vujovich

Thomas J. Weber

Lorraine C. Westley

Maria and Dr. Joe Yamamoto, '48

Dr. Brian Zelickson and Mary
McCarthy

Heritage Society

Heritage Society members have committed future gifts such as wills, trusts, life income, or life insurance.

Beverly I. and Dr. Hubert L. Anderson, '38

Jacqueline J. and Dr. Terrance D. Capistrant, '63

Thomas J. and Patty J. Cartier

Joan M. and Dr. John G. Fee, '43

Phylis and Dr. John W. Gridley, '43

Caryl M. and Dr. James Kilian Heid, '53

A. Ruth Hubbs

Mrs. Conrad I. Karleen

Dr. Winston R. Lindberg, '46

Lois E. and Dr. Arnold O. Rholl, '48

Dr. Hildegard J. Virnig, '48

Generous benefactors show commitment to the future

Many thanks to the following people who have made significant commitments of \$50,000 or more to the future progress of health-related education, research, and service at the University of Minnesota (gifts received February 1, 1998, through May 31, 1998).

A gift from **Robert Wasson** and **Helen Wasson Coulter**, Alexandria, Virginia, will provide support for neurology research, with an emphasis on shingles.

A gift from the **Harry H. Dworsky Trust** will support the Cancer Center Fund.

Claire J. Hemingway, Kernville, California, made a gift to the Claire J. Hemingway Scholarship Fund.

Eleanor H. Spicola, Edina, Minnesota, made a gift in memory of her father, Allan Hemingway, to support the Cancer Center Fund and the Allan Hemingway Scholarship Fund.

Dr. Ray and Velmabelle Cornford

Dr. Ray Cornford devoted 30 years of medical practice to helping people, and retirement has not slowed his dedication to making the world a healthier place. Cornford and his wife, Velmabelle, recently donated more than \$1 million to a charitable trust for research into Parkinson's disease.

The Rapid City, South Dakota, dermatologist understands firsthand the debilitating effects of Parkinson's. Just a few months after retirement from active practice he experienced the early symptoms of a disease he had helped diagnose in his patients.

Although specializing in dermatology, Cornford always took an interest in his patients' total health and went out of his way to help find answers to whatever condition was bothering them. He made frequent house calls in Rapid City and the surrounding area — even occasionally caring for ranchers in distant locations — and his office was open 12 hours a day and on Saturdays. Ray and Velmabelle Cornford had driven through Rapid City on their honeymoon, and decided this would eventually be their home.

Cornford's path to his medical practice was not a traditional one, however. Following high school graduation he delayed college to help his father on their Wisconsin farm. The Korean conflict would further postpone his education, while he served in the Air Force for four years.

He met Velmabelle during his Air Force assignment in Colorado, and she encouraged him to pursue his childhood dream of becoming a physician. He entered the University of Wisconsin at age 26 for undergraduate studies, followed by medical school.



Dr. Ray and Velmabelle Cornford receive a certificate of appreciation from neurosurgeons Robert Maxwell and Walter Low, representing Supporters United for Parkinson's Education and Research (SUPER).

He came to the University of Minnesota for his residency, and at age 38 began practicing as a dermatologist. Velmabelle worked as a dietician to support the family during Ray's 12 years of education.

Part of the incentive for choosing the field of dermatology came from Ray Cornford's experience with seborrheic dermatitis as a child. He had struggled with a serious case of the scaly skin problem which causes severe redness and itching, and later found great satisfaction helping patients who had similar conditions.

"In many ways dermatology is similar to general practice," says Cornford. "You treat patients of all ages, are involved in surgery as well as medicine, and deal with a wide range of problems. The satisfying thing is, you are able to help people get better."

Cornford was familiar with Parkinson's disease. He had seen its disabling effects on his uncle, as well as in his own patients. Still, it was some time before he recognized Parkinson's in himself. He thinks that was because his first symptom was

depression, followed by a decrease in memory and thinking ability. When the tremors began in his right hand, he finally diagnosed his own condition, and a treatment program began to curb the depression.

However, Cornford knew all too well there was little treatment available for the symptoms to come — the uncontrollable limb contortions, muscle cramps, and progressive loss of control that he would eventually face. By the time symptoms appear, the area of the brain that produces the chemical dopamine is reduced to a fraction of its normal output, and the low dopamine levels cause the depression, tremors, and loss of control that typifies Parkinson's disease. At this time, there is no test available to determine when someone has the disease.

But an article in the Spring 1997 issue of the *University of Minnesota Medical Bulletin* gave Ray and Velmabelle Cornford hope. The article described the innovative research and treatment being done at the University of Minnesota, including the implanting of electrodes in a patient's brain to relieve symptoms.

The Cornfords researched the Minnesota program, visited with scientists such as Dr. Walter Low and his team, and made the decision to do what they could to help eliminate this disease. They would especially like to see the development of a test that would recognize Parkinson's much earlier, before the symptoms occur. Their gift will do a great deal to advance research on Parkinson's disease, and will no doubt have an impact on future generations. Helping people, says Ray Cornford, is what being a doctor is all about.

Philanthropy

Helping Others

Duluth Lions Club backs Diabetes Institute

The Diabetes Institute recently received a \$10,000 gift from the Duluth Lions Club. Larry Winner, a member of the Club's Diabetes Committee, presented the check to Gary Bartlett, the Institute's director of development. The gift supports the Twin Ports Region Islet Transplant Patient Fund, which provides financial help to individuals from the Twin Ports region who are eligible or chosen to be islet transplantation recipients.

The Duluth Lions Club is the first service organization to support the efforts of the Institute at this level, and will be recognized as a member of the Institute's Founders Circle. The Founders Circle gives special recognition to those who make commitments of \$10,000 or more in support of the Institute's efforts to cure diabetes. To date there are more than 40 individuals, corporations, and foundations who are members of the Founders Circle. Their gifts to the Institute total more than \$1.5 million.

For more information on research, fund raising, or volunteer opportunities of the Diabetes Institute, please call 612-626-2101.

Cities 97 and KDWB support Variety Children's Association

Variety Children's Association has been a beneficiary of local radio stations Cities 97 and KDWB, sister stations owned by Chancellor Media. In May, these stations demonstrated their continued commitment to children with gifts totaling \$435,000.

Marc Kalman, vice president and general manager of Cities 97 and KDWB, presented these gifts in separate ceremonies. Kalman has long been an advocate for children and has served as a member of Variety's board since 1995.

Cities 97 has contributed \$385,000 in proceeds from its popular Cities Sampler music CD. In 1995, Cities 97 began its generous support of Variety with Sampler proceeds of \$100,000. Variety is excited about the long-term commitment that Cities 97 has made to support the Community-University Health Care Center/Variety Children's Clinic.

KDWB continues its charitable support of Variety Children's Association with a generous gift of \$50,000 to support the KDWB Family Center, currently under construction at the University of Minnesota. This center will meet the needs of children and families living with chronic illnesses and diseases.

Over the past five years, Cities 97 and KDWB have contributed more than \$1 million to Variety Children's Association and its beneficiary programs. Variety is extremely grateful for the support of Cities 97, KDWB, and the thousands of radio listeners who support their fund-raising initiatives.

For more information on Variety Children's Association, please call 612-624-6900.

Thanks for Asking

Q • Can you illustrate how a charitable trust can help secure retirement?



Gary G. Hargroves

A: The "Thanks for Giving" article in this issue is about Dr. Ray and Velmabelle Cornford. In addition to caring for patients, Dr. Cornford helped found a medical company. Like many new companies, there were years of struggle and success was not automatic. But in the end, thanks to Dr. Cornford's efforts, the company was successful.

After he retired from medical practice, Dr. Cornford had a significant number of valuable, low-cost basis stock, all in one medical company. This investment represented a substantial portion of his life's savings and personal assets. Investment diversification would be important to protect retirement, but the capital gains tax on the sale would dramatically lower the funds left for investment.

Because the Cornfords are very generous, they decided to consider the benefits offered by charitable options. The charitable remainder unitrust offered the following benefits: sale of stock without any capital gains tax; the Cornfords serve as trustees, and continue to manage the investments with a broker; income during and after their lives, and to their child during his life; a more secure retirement income because of the nature and diversity of investments; a current income tax deduction which generates current income tax savings; and a future gift to the Minnesota Medical Foundation for Parkinson's research at the University of Minnesota Medical School's Department of Neurosurgery.

To achieve this result, the staff and legal counsel of the Minnesota Medical Foundation worked with Dr. Cornford and his legal and tax counsel.

If we can assist you by providing information about how a charitable option may help you achieve your goals and address your unique personal, tax, and investment concerns and opportunities, please call me at 800-922-1663 or 612-625-5463 or write to me at the following address.

Gary G. Hargroves
Minnesota Medical Foundation
Box 193
420 Delaware St. SE
Minneapolis, MN 55455-0392
e-mail: g.hargroves@main.mmf.umn.edu

Philanthropy

Helping Others

Cancer Center receives NCI designation and \$5.4 million grant

The University of Minnesota Cancer Center has become a National Cancer Institute-designated cancer center and will receive a five-year support grant for approximately \$5.4 million. The NCI designation and grant recognize the Center's success in bringing together researchers from varying disciplines to make significant contributions to cancer research.

"This is a tremendous accomplishment," says Dr. Frank Cerra, senior vice president for health sciences and head of the University's Academic Health Center. "In addition to outstanding individual research, cancer centers must demonstrate success in collaborative research efforts."

The \$5.4 million grant provides funding to facilitate collaboration by supplying partial salary support

for Cancer Center leadership, research-related administrative functions, and shared research resources.

Dr. John Kersey, Cancer Center director, says that \$30 million in private contributions as well as support from the University and state legislature have been crucial to the success of the Cancer Center.

The University has been active in cancer research for decades and is a national leader in the areas of blood and bone marrow transplantation and cancer prevention. "We performed the first successful bone marrow transplant, and we continue to advance the technique as a cancer therapy," Kersey says. "One of our unique areas of expertise is cancer prevention. In the 1960s, scientists here first discovered that certain vegetables can protect against cancer. Others began the fight against tobacco use by contributing to the landmark 1964 surgeon general's report on the health hazards of smoking. Since then, faculty and their colleagues have shown nicotine to be addictive, have developed ways to reduce teenage smoking, and have created strategies to help hard-core smokers quit."

Faculty receive more than \$40 million a year in cancer research funding. The Cancer Center has research programs in cancer prevention, chemoprevention and carcinogenesis, cancer etiology and risk assessment, cancer genetics, immunology, cell biology and metastasis, and transplant biology and therapy. The Cancer Center also supports its members' research efforts by offering services and materials in biostatistics, analytical chemistry and biomarkers, developmental cell therapy, data collection and support services, embryonic stem cells, flow cytometry, peptide synthesis, and tissue procurement.

More than 300 University faculty, staff, and associates are members of the Cancer Center. For more information, call 612-626-5456.



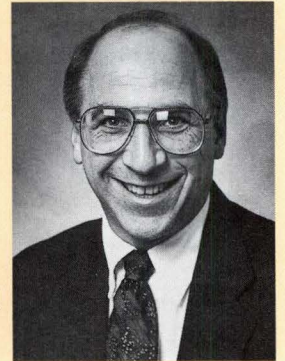
Dr. John Kersey

In fond memory

It is with deep sadness that we announce the death of our friend and colleague, Gary Bartlett, director of development for the Diabetes Institute for Immunology and Transplantation. Gary died of a heart attack on June 20, while playing in a softball tournament. He was 44 years old.

Gary had a joy and enthusiasm for life that affected everyone he met. He loved his work and was deeply committed to the mission of the Diabetes Institute. In addition to his work for the Diabetes Institute, he had also served the Minnesota Medical Foundation as director of development for the School of Public Health.

Gary leaves his wife, Liz, sons Tom and Paul, and many friends and family members. Memorials can be sent to the Diabetes Institute, Minnesota Medical Foundation, P.O. Box 64001, St. Paul, MN 55164.



International Hearing Foundation presents Eivind Hoff Award

The International Hearing Foundation gave the Eivind Hoff Award to Dr. David Olson, who graduated from the Medical School in June.

The award recognizes medical students for superior research and writing in the area of clinical or basic otology. Olson worked with Drs. George S. Goding, Jr. and Deirdre Michael on his award-winning project, "Acoustic and Perceptual Evaluation of Laryngeal Reinnervation by Ansa Cervicalis Transfer." He will begin a one-year internship in the Department of Surgery later this year, and has also been accepted into an otolaryngology program in Oakland, California.

The award honors the memory of Eivind O. Hoff, the first executive director of the Minnesota Medical Foundation. Hoff joined the Foundation in 1959 and served it for 27 years. After retiring, he continued to work with non-profit organizations and had a long-time association with the International Hearing Foundation.

University of Minnesota medical students are eligible for the annual award, which was created by a gift to the International Hearing Foundation. For more information, call 612-339-2120.



Dr. David Olson receives the Eivind Hoff Award from Dr. George Adams, head, Department of Otolaryngology.

Philanthropy Grants

Foundation approves faculty grants

At their spring meetings, the Minnesota Medical Foundation Research and Special Grants Committees approved awards totaling \$233,528 — \$115,958 for research projects and \$117,570 for equipment purchases.

SPRING FACULTY RESEARCH

GRANTS include: **James Ashe, M.D.**, Department of Neurology (VAMC), stroke, movement disorders; **Ronald R. Bach, Ph.D.**, Department of Laboratory Medicine & Pathology, heart attack, stroke; **Gail A. Bernstein, M.D.**, Department of Psychiatry, substance abuse (see profile); **Janet L. Fitzakerley, Ph.D.**, Department of Pharmacology, neuroscience; **Samuel B. Ho, M.D.**, Department of Medicine, cancer; **James B. Johnson, M.D.**, Department of Medicine, infectious diseases; **Steven K. Juhn, M.D.**, Department of Otolaryngology, Meniere's disease; **Harumi Jyonouchi, M.D.**, Department of Pediatrics, cancer; **Melissa B. King, M.D.**, Department of Medicine, pulmonary; **Benjamin S. Leung, Ph.D.**, Department of Obstetrics and Gynecology, breast cancer; **Robert D. Nelson, Ph.D.**, Department of Dermatology, infection, inflammation, cancer; and **Ann Van Heest, M.D.**, Department of Orthopaedic Surgery, musculoskeletal injury.

SPRING FACULTY EQUIPMENT

GRANTS include: **David M. Brown, M.D.**, Department of Medicine, metabolic cart; **Robert P. Elde, Ph.D.**, Department of Cell Biology and Neuroanatomy, equipment to study pain; **Julio Garcia-Aguilar, M.D.**, Department of Surgery, equipment to study cancer; **Hiroshi Hiasa, Ph.D.**, Department of Pharmacology, equipment to study bacterial infection, cancer; **Arthur J. Matas, M.D.**, Department of Surgery, equipment to study xenotransplantation; **Laura J. Mauro, Ph.D.**, and **Alex J. Lange, Ph.D.**, Department of Biochemistry, equipment to study molecular separations; **Charles A. Nelson, Ph.D.**, Department of Pediatrics, equipment to study neonatology; and **Chester B. Whitley, Ph.D., M.D.**, Department of Pediatrics, real-time quantitative PCR equipment.

Minnesota Medical Foundation grant recipient:

Gail A. Bernstein, M.D.

What is the most common drug used by children? Caffeine. Nearly 98 percent of children and adolescents ingest caffeinated products at least once a week. It is the only legally available psychoactive drug that children can purchase. And what is it doing to them?

Dr. Gail A. Bernstein, associate professor, director of the Division of Child and Adolescent Psychiatry, recently received a \$7,852 grant to study caffeine use patterns and dependence in adolescents (ages 13 to 17) who drink caffeine daily. Researchers will examine how use is linked to caffeine dependence symptoms.

"We will look at how much they consume daily, their patterns of use — times of day and location — to develop a good dietary history of consumption," says Bernstein. "Also, we will ask whether they have symptoms of dependence. For example, do they need greater amounts of caffeine to get the desired effects? Have they built up a tolerance? Do they experience withdrawal — headaches, drowsiness, mood changes — when they stop taking caffeine?"

The study will also look at whether caffeine may act as a gateway drug. Some believe that early and regular use of caffeine may make it more likely that an adolescent will pursue other drugs such as alcohol, nicotine, and marijuana.

With new high-dose caffeinated drinks like Jolt® and Surge™ being marketed to children and adolescents, there is a growing interest in caffeine and youth, and the need for research into its effects on youth is becoming clearer. "While caffeine dependence has been studied in adults, this is one of the only U.S. sites studying this topic in youth," says Bernstein. "The Foundation grant will allow us to further explore the exciting data beginning to emerge from this study. We hope to pursue a National Institutes of Health grant after data are collected. Due to the tremendous number of children and adolescents who consume caffeine regularly and the emphasis on drug abuse prevention, we believe NIH will recognize this area as an important topic of investigation."

Bernstein will be recruiting subjects this summer. Potential candidates, adolescents age 13 to 17 who consume caffeine daily, will be screened over the telephone. Those who meet the criteria will be invited to an evaluation and asked to return for a follow-up in one year. For more information, call Dr. Gail Bernstein, 612-626-6577.



Dr. Gail A. Bernstein

connections

MAS President's Report

What's Inside?

- Diehl Award winners
- Alumni Recognition Award
- Adytum
- 1998 Reunion weekend
- Explore Scandinavia!
- MAS news
- UMAA
- Class notes
- In memoriam

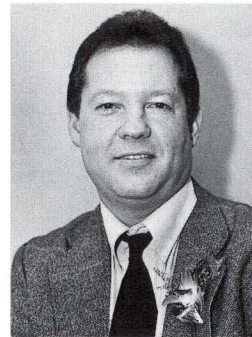
MEDICAL ALUMNI SOCIETY

As both my term as Medical Alumni Society board president and this academic year come to a close, I have taken the time to reflect on the many exciting things that have happened and the progress that has been made. Your MAS board has been working hard to communicate more effectively with you and to implement programming that benefits our fellow alumni and today's students. We hope you have seen and felt the impact of these efforts.

Through the development of the Alumni Connections section of the *Medical Bulletin*, we have tried to enhance the information we share with you and consolidate it into a single, easily identifiable section that also asks for and includes your questions and input. We have increased and diversified our board membership to make it more representative of our alumni body and have added three medical students to the group to gain their perspective

as well. In response to alumni feedback, we have restructured Reunion Weekend to allow alumni more time with their classmates by creating separate class dinners on Saturday evening.

Through gifts from alumni, we have contributed \$20,000 to the renovation of the student study lounge, the Adytum, a gift that will benefit students and their educational experiences. And finally, you should soon hear about our first endeavor to offer an alumni travel opportunity, which will bring



Wayne Liebhard, M.D., '83

Medical School graduates together for a trip to Stockholm, combined with a CME program developed in conjunction with the Karolinska Institute.

We recognize there is still more that can be done. We look to you for inspiration and guidance in these efforts. As I end my term as president, Dr. Gene Ollila, '70, will take over where I have left off. Any of you who know Dr. Ollila know that the presidency will rest in very capable hands. I thank you for your kind support during my leadership of the board and know that Gene will enjoy an equally warm reception.

Best wishes to all of you, both now and in the future.

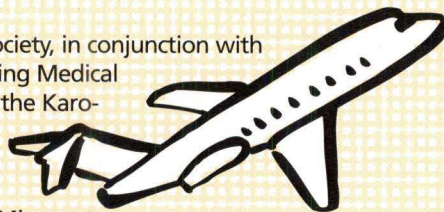
Wayne Liebhard, M.D., '83
President,
Medical Alumni Society

Explore Scandinavia!

The Medical Alumni Society, in conjunction with the Office of Continuing Medical Education (CME) and the Karolinska Institute of

Sweden, is offering alumni the opportunity to travel to Stockholm with fellow University of Minnesota

Medical School graduates. The main tour will take place May 7-13, 1999, and will include a CME program that focuses on primary care and will feature both Swedish and American presenters. An optional pre-program tour will be available as well. The optional portion of the tour begins on May 3 and includes stops in Bergen, Stalheim, and Oslo. If you have not already received a brochure about this special Scandinavian travel opportunity and would like further details, please call the Office of Alumni Relations at 612-625-1440 or 800-922-1663.



Alumni Connections

1998 Reunion Weekend

“It was a memorable weekend and we enjoyed it immensely,” said Dr. Harold Chevlen, Class of 1948. “It was truly a once in a lifetime experience.”

The Medical Schools’ 1998 Alumni Reunion Weekend was held June 4-6 with 11 classes joining in this year’s festivities. More than 300 alumni and guests from the classes of 1938, 1943 (March), 1943 (December), 1948, 1958, 1963, 1968, 1973, 1978, 1988, and 1993 took part in the celebration. The weekend began Thursday evening with a welcome reception at the Radisson Hotel Metrodome and was capped off Saturday with the cornerstone event, an all-class reception followed by individual class dinners in the Radisson Plaza and Marriott City Center hotels in downtown Minneapolis.

On Friday morning Dr. Greg

Tours of research laboratories followed, with faculty discussing topics ranging from virtual shoulder surgery to toxic shock syndrome.

Friday afternoon was marked by the induction of the Class of 1948 into the Half Century Club at the Half Century Luncheon.

As Dr. Peggy Craig recognized each member of the class, slides from their student days were shown. The Class of 1948 was later recognized at Medical School graduation. Dr. John Sanford, 50th Reunion chair, addressed the new graduates and their guests on behalf of his class.

On Friday evening, alumni and friends gathered at the Weisman Art Museum for the Deans’ Reception and Dinner. Guests browsed the Weisman’s spectacular galleries, heard from the deans of the Medical Schools, and honored Medical Alumni Society

board president Dr. Wayne Liebhard, ’83, for his leadership during his term in office. The inaugural Alumni Recognition Award was presented to Dr. June LaValleur, and the 1998 Diehl Awards were presented to Dr. John B. Sanford, ’48, and Dr. Jesse E. Edwards.

Saturday started with New Horizons in Minnesota Medicine, an annual CME



Maria and Dr. Joe Yamamoto, ’48, enjoy the Dean’s Reception at the Weisman Art Museum.

event highlighting Medical School faculty. The day’s other activities included a golf outing at the University Golf Course, an Estate Planning for Physicians and Friends seminar, and an afternoon coffee for Duluth graduates.

Saturday evening dinners highlighted the weekend. Alumni and their guests convened in the ballroom of the Radisson Plaza Hotel Minneapolis for a reception and then adjourned to rooms in the Radisson and the Marriott City Center Hotel where each class dined separately. The weekend concluded late Saturday evening as classmates spent the evening celebrating the special milestones their classes had reached, catching up, and reminiscing about their days together as medical students.

Dr. Don Derauf, ’48, summed up the reunion by saying, “It was an absolutely wonderful weekend all the way around — from the exceptional CME program to the Saturday evening celebration with old friends I hadn’t seen since graduation. It was truly a memorable occasion.”



Dean Al Michael and Jeanne Jones Michael greet Drs. Hanns Schwyzer, ’38 and Charles Eginton, ’38.

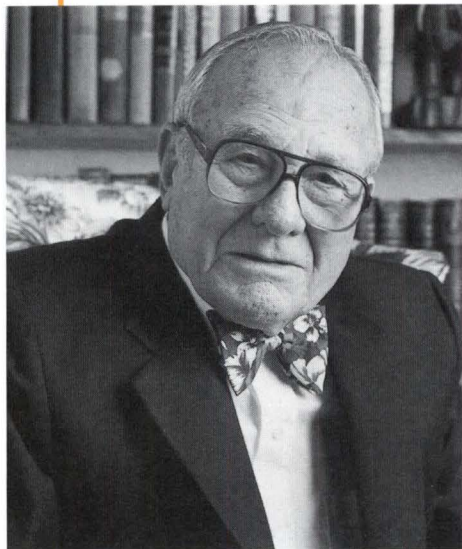
Vercellotti, senior associate dean for education, shared the latest developments at the Medical School with the alumni. Enthusiasm for the innovative educational initiatives being developed was evident as he concluded his remarks.

Alumni Connections

Diehl Awards honor outstanding contributions

Drs. Jesse E. Edwards and John B. Sanford were selected by the Medical Alumni Society as recipients of the 1998 Harold S. Diehl Award. Given in honor of the University of Minnesota Medical School's fifth dean, Dr. Harold Sheely Diehl, the awards are given to individuals who have made outstanding professional contributions to the Medical School, the University, and the community.

Dr. Jesse Edwards is considered a pioneer in the field of cardiac pathology. He has educated cardiologists



Jesse Edwards, M.D.

and surgeons from around the world. He came to the University of Minnesota in 1960 as a professor of pathology in the Graduate School and a clinical professor of pathology in the Medical School after having taught pathology for 14 years at the Mayo Clinic.

“Dr. Edwards lectured to all of the University of Minnesota medical students from 1960 onwards,” says Dr. Russell V. Lucas, Jr., professor emeritus, pediatrics. “Virtually all of the University of Minnesota cardiovascular surgeons, internists, pediatricians, and radiologists spent time in his laboratory studying cardiovascular disease.”

An interest in cardiovascular disease prompted Dr. Edwards to begin what is now known as the Jesse E. Edwards Registry of Cardiovascular Disease — quite possibly the largest collection of human heart specimens in the world. “It’s a collection of about 15,000 hearts from all kinds of diseases, both acquired and congenital,” Dr. Edwards says. “Some of the hearts go back to the days before open-heart surgery, so we have a good representation of hearts that have never been operated on and hearts that have been operated on.”

He began collecting heart specimens because he thought they would have lasting value. The collection, which is visited by medical students and doctors from all over the world, documents more than 50 years of advances in cardiology. “The collection offers a very comprehensive review of the past coupled with any progress

that was made along the line. Books are okay, but you can learn firsthand by looking at the material,” he says.

Dr. Edwards has been affiliated with a number of hospitals in Minnesota, including United Hospital, Minneapolis Children’s Medical Center, St. Paul-Ramsey Medical Center, VA Medical Center, and the Mayo Clinic. He taught at the Boston University School of Medicine in 1938, and at Tufts College Medical School from 1939-40, and served in the United States Army Medical Corps from 1942-46.

Throughout his career, Dr. Edwards has written 721 papers, 12 books, and 70 book chapters. He currently sits on the editorial board of the *American Journal of Cardiovascular Pathology*, and has previously served on the boards of six other journals. He is past president of the Minnesota Heart Association, the International Academy of Pathology, and the American Heart Association.

Dr. Edwards has played a significant role in the education of countless medical students, residents, interns, and fellows. “He has been teacher, advisor, and friend to every physician in cardiology within the area, and is loved and revered by all,” says Dr. Milton Hurwitz, Class of 1939.

Dr. John Sanford is admired for the years of service he has given the Duluth medical community, and the University of Minnesota, Duluth, School of Medicine. He has taught at UMD since its establishment in 1972. He helped plan the clinical sciences curriculum, and brought first-year students along on his clinical rounds when there was a shortage of preceptors. And although he’s been retired for the last six years, he continues to help out with the anatomy lab every fall. “It’s been a wonderful connection to the Medical School,” he says.



John Sanford, M.D.

Throughout his career, Dr. Sanford has been affiliated with the University of Minnesota in some way. He graduated from the University of Minnesota with a B.S. in science, and continued on in the Medical School, receiving his M.D. in 1948 at the young age of 21. He interned at St. Mary’s Hospital in Duluth,

Alumni Connections

and then joined the staff of the Duluth Clinic in 1951.

During the Korean conflict, Dr. Sanford began active duty with the United States Army Medical Corps, serving from 1951-53. He then completed a general surgery residency at the University of Illinois Medical School, Research, and Educational Hospitals before returning to the Duluth Clinic, where he practiced for 40 years until his retirement in 1991.

"Aside from my clinical practice, I was very active in the organizational part of medicine," he says. A member of numerous committees, Dr. Sanford was also chief of surgery of all three Duluth hospitals at various points in time, and chief of staff at two of them. He served as president of many organizations, including the Lake Superior Medical Society, the Minnesota Surgical Society, and the Duluth Surgical Society.

Apart from his medical career, Dr. Sanford is a revered member of the Duluth community. He has received numerous community service awards, including the 1996 Community Service Award from the Lake Superior Medical Society, and was nominated for the 1989 Duluth Hall of Fame Award. In 1992, he received the Chancellor's Distinguished Service Award in recognition of his contributions to medical education. He has sat on numerous boards, including the St. Luke's Foundation Board of Directors, and the Duluth-Superior Symphony Association Board of Directors.

His commitment to the Duluth community and the University of Minnesota Medical Schools has served as an inspiration to many. Two of his children attend the Twin Cities Medical School. "I'm so glad that I've kept close touch with the Medical Schools over the years," he says. "I've been supporting scholarships and keeping in touch with my classmates over the years through the Minnesota Medical Foundation — it's like staying as a member of the family."

Harold S. Diehl Award Recipients

1962	Owen H. Wangensteen, '21	1981	Eva Jane (Ostergren) Larson, '38 Carl Ragnar Wall, '28
1963	Donald J. Cowling Charles G. Sheppard, '35	1982	Stuart Lane Arey, '31 Kristofer Hagen, '42
1964	Vernon D.E. Smith, '30	1983	John J. Eustermann John J. Regan, Sr., '43
1965	Karl W. Anderson, '23	1984	Arnold S. Anderson, '43 John W. Anderson, '51
1966	J. Arthur Myers, '20	1985	Kenneth W. Covey, '43 Frank E. Johnson, '43
1967	Theodore R. Fritsche, '30	1986	A. Boyd Thomes, '42
1968	Walter H. Halloran, '15 Anderson C. Hilding, '18 Carl H. Holmstrom, '29	1987	Marcy L. Ditmanson, '54 Malcolm M. Fifield, '50
1969	Karl R. Lundeberg, '25	1988	Chester A. Anderson, '44 Robert B. Howard, '44 Arnold J. Kremen, '37
1970	Robert N. Barr, '30 LeRoy J. Larson, '20	1989	Howard L. Horns, '43 Austin M. McCarthy, '42
1971	William C. Bernstein, '27 J.C. Grant, '42	1990	M. Elizabeth "Peggy" Craig, '45 John P. Stapp, '43
1972	J. Richards Aurelius, '22 Barbara M. Puumala, '59 Marie Bepko Puumala Reino Puumala Ricard R. Puumala, '59	1991	Dorothy Bernstein Irving C. Bernstein, '42
1973	Phillip Halenbeck Olga Hansen Litzenberg, '15	1992	Frederic J. Kottke, '45 William A. O'Brien, Jr., '46
1974	Ann Arnold Roger A. MacDonald, '46 Carl O. Rice, '25 R.S. Ylvisaker, '26	1993	Howard B. Burchell John I. Coe, '45
1975	Reuben Berman, '32 Bror F. Pearson, '31 Lawrence Richdorf, '20	1994	Tague Clement Chisholm N.L. "Neal" Gault, Jr, '50
1976	Milton M. Hurwitz, '39 Leonard Lang, '28 Russell O. Sather, '32	1995	Stanton A. Hirsh, '45 Melvin E. Sigel, '56
1977	Ruth E. Boynton, '20 Virgil J.P. Lundquist, '42	1996	Stanley M. Goldberg, '57 Severin H. Koop, Jr., '55
1978	Lester H. Bendix, '28 Herman E. "Tiny" Drill, '29	1997	Joyce Funke, '50 Thomas A. Stolee, '58
1979	Miland E. Knapp, '29 Harold E. Wilmot, '23	1998	Jesse E. Edwards John B. Sanford, '48
1980	Helen L. Knudsen, '43 Donald E. Stewart, '37		

Alumni Connections

Medical Alumni Society gives first Alumni Recognition Award

June LaValleur, M.D., F.A.C.O.G., Class of 1987, recently received the Medical Alumni Society's first Alumni Recognition Award, given in recognition of exemplary achievements in the community or field of medicine, or for outstanding service to the University of Minnesota Medical Schools in the last five years.

Dr. LaValleur's commitment to women's health shows in all aspects of her work. As director of the Mature Women's Center, she "takes pride in looking at the woman as a whole being — not just as a

body, but who she is in her life." The Center, which focuses on the health of women over age 40, offers a full range of services, such as mammograms and complete physical exams, and houses a patient library with books, pamphlets, television, and videos.

A recognized leader in the area of menopause, Dr. LaValleur is actively involved in the Women's Health Initiative. The \$625 million, 15-year program launched by the National Institutes of Health researches the causes, prevention, and cures of diseases affecting women. As gynecologic investigator at the University of Minnesota site, she is involved in a number of major studies involving postmenopausal women's health issues such as the role of estrogen in the reduction of heart disease and osteoporosis.

Dr. LaValleur is also committed to the Medical School. She currently serves as an assistant professor of obstetrics and gynecology, and on the Medical School's Admissions Committee. She chaired the tenth Medical School Reunion, which had the best attendance of all the reunions last fall.

"Dr. LaValleur is a devoted physician, an inspiring instructor, a prolific writer, a caring mentor, a committed volunteer, a proud alumna, and a special friend to the University of Minnesota Medical Schools," says Dr. Greg Vercellotti, senior associate dean for education and professor of medicine.

She graduated magna cum laude from St. Cloud State University, and received her post-graduate training in obstetrics and gynecology from the University of Minnesota Medical School. She received the Minnesota Medical Foundation's Outstanding Student Award, and was named Resident of the Year, 1991, by the American Association of Gynecologic Laparoscopists.



June LaValleur, M.D., F.A.C.O.G.



Medical alumni support student study lounge renovation

If you graduated from the Medical School more than a decade ago, you probably call it the AD-y-tum. Recent graduates put the emphasis in the middle — a-DY-tum. Either way, it's a special place for medical students.

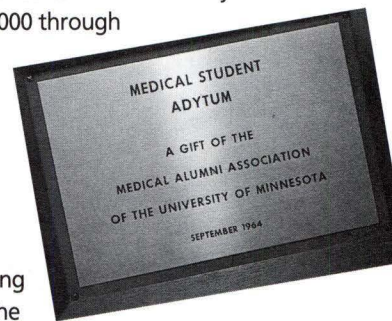
Thanks to support from University of Minnesota Medical School alumni, medical students will soon have a better place to study and congregate. The Medical Alumni Society recently contributed more than \$20,000 through the Minnesota Medical Foundation to help update the Adytum student lounge, making it a more conducive study area and a welcoming haven.

"We're thrilled that the Medical Alumni Society is willing to support improvements to the Adytum," says Donna Koning, medical student. "For many of us, it is our primary place to study, to meet for lunch and a few moments of socializing, to phone home or daycare to see how things are going. Overall, it is a comfortable place of refuge. These improvements mean a great deal to the medical students. Each time I've told a classmate that the Alumni Society is doing this for us, invariably their eyes light up as they say, 'Great!' "

The Adytum, established with the help of Medical Alumni Society members in 1964, was partially refurbished recently but still needed many upgrades, including additional seating, computers, telephones, storage space, and tables. Earlier this year a cleanup party was held with approximately 30 students working to clean and repair the facility, which is centrally located in the Mayo building.

As former medical students, the alumni understand the need for a central gathering place. "The Medical Alumni Society exists to serve both students and alumni and we are very pleased to be able to support this project through the Minnesota Medical Foundation," says Wayne Liebhard, M.D., Class of '83, Medical Alumni Society president.

Renovations will begin this summer and should be completed by Fall 1998.



Alumni Connections

Medical Alumni Society board members

Eugene Ollila, M.D., '70,
President

Stanley Goldberg, M.D., '56,
Vice President

Wayne D. Liebhard, M.D., '83,
UMAA National Board
Representative

Edward M. Beadle, M.D., '78

James R. Breitenbucher, M.D., '71

H. Mead Cavert, M.D., '50

M. Elizabeth "Peggy" Craig, M.D., '45

Kent B. Crossley, M.D., '68

Patrick J. Flynn, M.D., '75

Nicole K. Groves, 4th-year
medical student

Lisa K. Higginbotham, M.D., '95

Dorothy J. Horns, M.D., '76

Thuan V. Ly, 3rd-year medical student

Fred A. Lyon, M.D., '57

Rodney D. McFadden, M.D., '93

Arthur L. Ney, M.D., '77

Joel Oberstar, 2nd-year medical
student, Duluth School of
Medicine

Gregory A. Plotnikoff, M.D., '89

Richard Simmons, M.D., '55

Judith R. Smith, M.D., '66

Class Notes

1942

Dr. Warren L. Macaulay, Fargo, North Dakota, recently had a fund established in his honor by the MeritCare Foundation of Fargo. The Lymphomatoid Papulosis (LyP) Research Fund will distribute research grants to applicants worldwide. In 1968, Macaulay, a long-time dermatologist, described and named LyP — a continuing, self-healing eruption which is clinically benign but histologically malignant.

1943

The late **Dr. Samuel Schwartz** was honored with an Outstanding Achievement Award from the University of Minnesota in June. His wife, Goldi Schwartz, accepted the award, which is the highest given to alumni in recognition of exceptional achievement in a professional field. Schwartz is known for his work in pigment biochemistry and the porphyrin molecule.

1945

Dr. Fred Z. Hayens, Riverside, California, cares for custodial

patients of the Riverside Medical Clinic, and is on the Institutional Review Board at the University of California Riverside. He also advises UCLA medical students.

1950

Dr. N.L. Gault, Jr., St. Paul, received the 1998 President's Award for Outstanding Service from the University of Minnesota. The award recognizes faculty and staff members who have given exceptional service to the University and demonstrated unusual commitment to the University community.

1953

Dr. Ramon M. Fusaro, Plattsmouth, Nebraska, received an award for the longest continuous dedication of any full-time faculty member for teaching the Family Practice Review Course with excellence at the University of Nebraska Medical Center. The award was given by the Department of Family Medicine and the Center for Continuing Education.

1955

Dr. Shelley N. Chou, Shoreview, Minnesota, received the Distinguished Service Award from the Society of Neurological Surgeons at its annual meeting. Chou was interim dean of the Medical School from 1993-95.

1957

Dr. Leland L. Fairbanks, Tempe, Arizona, was named 1998 Arizona Family Physician of the Year by the Arizona Academy of Family Physicians. A proclamation signed by Governor Jane Hull recognized Fairbanks as a pioneer in fighting the health risks of tobacco. He is currently a family physician with CIGNA HealthCare of Arizona.

1960

Dr. Michael D. Levitt, Minneapolis, recently received the 1998 Miles and Shirley Fiterman Foundation Joseph B. Kirsner Award for Distinguished Achievement of Clinical Research in Gastroenterology from the American Gastroenterological

University of Minnesota Alumni Association

As an alumnus of the University of Minnesota Medical School and member of the Medical Alumni Society, you are also eligible to join the University of Minnesota Alumni Association (UMAA).

UMAA membership brings you many new benefits and opportunities, including a free subscription to *Minnesota* magazine, special Internet/e-mail access rates, hotel and car rental discounts, CEE discounts on independent study materials, special prices on many University athletic events, a three-month membership to the Campus Club, and more.

Your support helps the UMAA sponsor the Medical Alumni Society and activities such as homecoming and reunions. For the students, your help can provide UMAA mentor and community programs, student awards, and scholarships.

Your membership makes a difference. For more information, call 612-624-2323 or 1-800-UM-ALUMS (862-5867) or visit the web site at www.umaa.umn.edu.



Alumni Connections

Association and the American Digestive Health Foundation.

1964

Dr. John Kersey, St. Paul, was elected president of the American Society for Blood and Marrow Transplantation. Director of the University of Minnesota Cancer Center, Kersey was one of a team of physicians who developed the University's blood and bone marrow transplant program. He is a professor of laboratory medicine and pathology, pediatrics, and therapeutic radiology.

1970

Dr. K. James Ehlen, Edina, Minnesota, has been appointed chair of the Healthcare Forum board of directors, of which he has been a member for three years. He also serves on the Minnesota Medical Foundation board of trustees, and is president of Allina Health systems.

1977

Dr. Oge Young, Concord, New Hampshire, was selected as the 1997 recipient of the Excellence and Leadership in Primary Prevention Award from the New Hampshire Family Resource Coalition. The Coalition recognizes individuals who work to strengthen families and promote the health and development of children. Young has been instrumental in establishing the Healthy Beginnings Endowment Fund, which will support programs for parents and young children at Concord Hospital.

1986

Dr. Michael D. Partington, Mendota Heights, Minnesota, is returning to Minnesota to practice pediatric neurosurgery in St. Paul after four years on the University of Colorado faculty.

1990

Dr. Roberto Pineda II, Boston, recently became chief of ophthalmology at Brigham and Women's

Hospital in Boston. Last year, he received the Teacher of the Year Award at the Massachusetts Eye and Ear Infirmary.

1992

Dr. Tim Schuchard, St. Cloud, Minnesota, completed his cardiology fellowship in June and joined the CentraCare Clinic in St. Cloud as an invasive cardiologist.

1993

Dr. Chris Metz, Ann Arbor, Michigan, will join Northern Orthopedics in Brainerd, Minnesota, after finishing an orthopaedic surgery residency at the University of Michigan.

In Memoriam

DAVID B. AURAN, M.D., Class of 1961, St. Paul, died May 20 at age 65. After serving in the U.S. Air Force from 1952-53, Auran received a B.A. and a B.S. from the University of Minnesota. He completed an internship at St. Elizabeth's Hospital in Washington, D.C. in 1962, then came back to the University of Minnesota for his psychiatry residency. He practiced psychiatry for over 32 years in the Twin Cities area, and was an associate professor of psychiatry at the University of Minnesota. He is survived by his wife, Shirley, five sons, and one daughter.

RICHARD A. DUBOW, M.D., Class of 1979, Las Cruces, New Mexico, died in June at age 45. He is survived by his wife, Tami, two daughters, and his parents, Irvine and Lillian.

JOYCE L. FUNKE, M.D., Class of 1950, St. Paul, died April 8 at age 72. After completing an internship and residency in internal medicine at Minneapolis General Hospital,

she worked in a Glendive, Montana, private practice from 1954-58. She then came to the University of Minnesota as a staff physician specializing in non-invasive cardiology, combining teaching and patient care in internal medicine. She was appointed assistant director for Boynton Health Service in 1972. In addition to her medical career, Funke was an avid music lover. She became a founder and early benefactor of the St. Paul Opera, now known as the North Star Opera. Memorials are suggested to the Joyce L. Funke Scholarship for Women Medical Students at the Minnesota Medical Foundation.

HENRY J. JERONIMUS, M.D., Class of 1938, Duluth, Minnesota, died March 14 at age 85. Founder of the Lakeside Medical Center, he is survived by his wife, Betty, and five sons.

BRIAN J. MCGROARTY, Class of 1938, St. Paul, died in May. McGroarty practiced neurology in St. Paul for many years, and was chief of staff at Midway Hospital. He also served as president of the Ramsey County Medical Association. He is survived by his daughter.

WILLIS A. REDDING, Class of 1933, Delray Beach, Florida, died on December 16 at age 91. He practiced medicine in Towanda, Pennsylvania, for 40 years. Redding also served as a flight surgeon in the Army Air Corps for four years and taught at the School of Aviation Medicine during World War II. He is survived by his wife, Helen, one son, and one daughter. Memorials are suggested to the Department of Ophthalmology Equipment Fund at the University of Minnesota.

MINNESOTA MEDICAL FOUNDATION

at the University of Minnesota

Board of Trustees

Barbara L. Forster, Chair
Sally A. Anderson, Vice Chair
Judith E. Shank, M.D., Secretary
Robert D. Sparboe, Treasurer

Gail Papermaster Bender, M.D.
John H. Brown, M.D.
Richard A. Carlson, M.D.
Frank B. Cerra, M.D.
Paul Citron
Norman A. Cocke III
Daniel E. Cohen, M.D.
Kenneth W. Crabb, M.D.
M. Elizabeth Craig, M.D.
Donald E. Derauf, M.D.
Herbert B. Dorr
K. James Ehlen, M.D.
Beth Erickson
Roger L. Headrick
Peter A. Heegaard
William E. Hogan II
Robert Howe, M.D.
Paula M. Kelly, M.D.
Reatha Clark King, Ph.D.
Edith D. Leyasmeyer, Ph.D., M.P.H.
Wayne D. Liebhard, M.D.
Robert L. Lumpkins
Alfred F. Michael, M.D.
David L. Mona
David S. Patten
Oliver H. Peterson, M.D.
Ronald J. Peterson, M.D.
John B. Sanford, M.D.
Cal Simmons
James P. Stephenson
Theodore R. Thompson, M.D.
Jerry M. Willcox
Mark Yudof
Richard J. Ziegler, Ph.D.

Affiliated Organization Representatives

University of Minnesota Cancer Center,
Hinda Litman
University Children's Foundation,
Dean Edstrom
Variety Children's Association,
George Reilly
Vision Foundation,
David M. Bolt
Women's Health Fund,
Josie R. Johnson, Ph.D.

Minnesota Medical Foundation Affiliates

Alpha Epsilon Iota Foundation
Bob Allison Ataxia Research Center
Diabetes Institute for Immunology
and Transplantation
International Hearing Foundation
Minnesota Mortuary Science Foundation
Supporters United for Parkinson's
Education and Research (SUPER)
University Children's Foundation
University of Minnesota Cancer Center
Variety Children's Association
Vision Foundation
Women's Health Fund

Minnesota Medical Foundation

Brad Choate, President & CEO
Robert W. Groves, VP Development
David W. Johnson, VP Programs
Cynthia J. Kaiser, VP Finance
Daniel P. Saftig, VP Marketing
& Communications

Medical Bulletin

Jean Murray, Director of Communications
Jodi Ohlsen Read, Editor
Andrea Bie, Editorial Assistant
Graphic design: Lilja Baehr Design
Printing: Sexton Printing, Inc.
Photography: Tim Rummelhoff

MINNESOTA

MEDICAL

FOUNDATION

Box 193
420 Delaware Street SE
Minneapolis, MN 55455-0392

at the University of Minnesota

Nonprofit Org.
U.S. Postage
P A I D
Minneapolis, MN
Permit No. 155



8th Annual

MINNESOTA MEDICAL FOUNDATION

Golf Classic

**August 31, 1998
Minneapolis Golf Club**

**Limited spaces remaining — register soon!
Sign up as a foursome or as individuals.**

The Minnesota Medical Foundation Golf Classic provides a challenging, enjoyable round of golf for players of all skill levels. Last year's event raised more than \$50,000 for health-related education and research at the University of Minnesota (Minneapolis and Duluth). This year's tournament will be chaired by Dr. William Jacott, head of the Department of Family Practice and Community Health.

**For more information or to register,
call 612-625-1440 or 1-800-922-1663.**