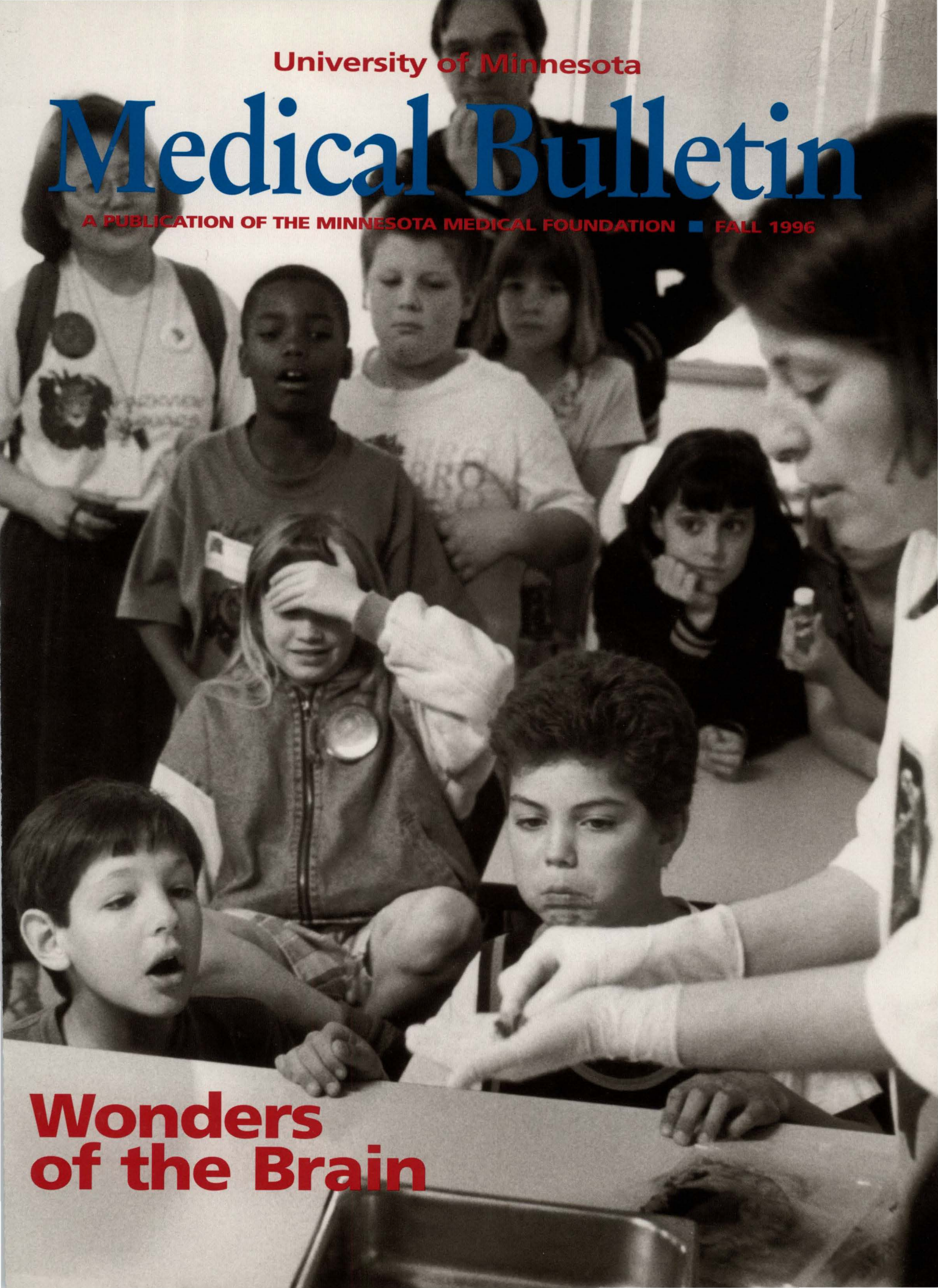


University of Minnesota

Medical Bulletin

A PUBLICATION OF THE MINNESOTA MEDICAL FOUNDATION ■ FALL 1996



**Wonders
of the Brain**

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at the University of Minnesota

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On the cover:

Children attending Brain Awareness Week react to a close-up look at brain tissue.
Photo by Tim Rummelhoff.



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Medical Bulletin

Fall 1996



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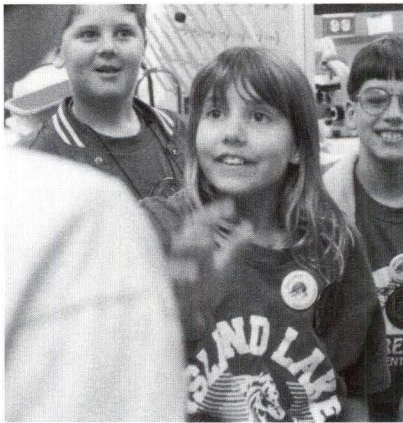
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Brain Awareness Week:



A Close-Up Look at the Wonders of the Brain



Cosponsored by the Minnesota Medical Foundation, Brain Awareness Week brought more than 4,000 children and adults to the University to learn about the neurosciences.

by Peggy Rinard

photos by Tim Rummelhoff

“Can you say ‘superior colliculous’?”

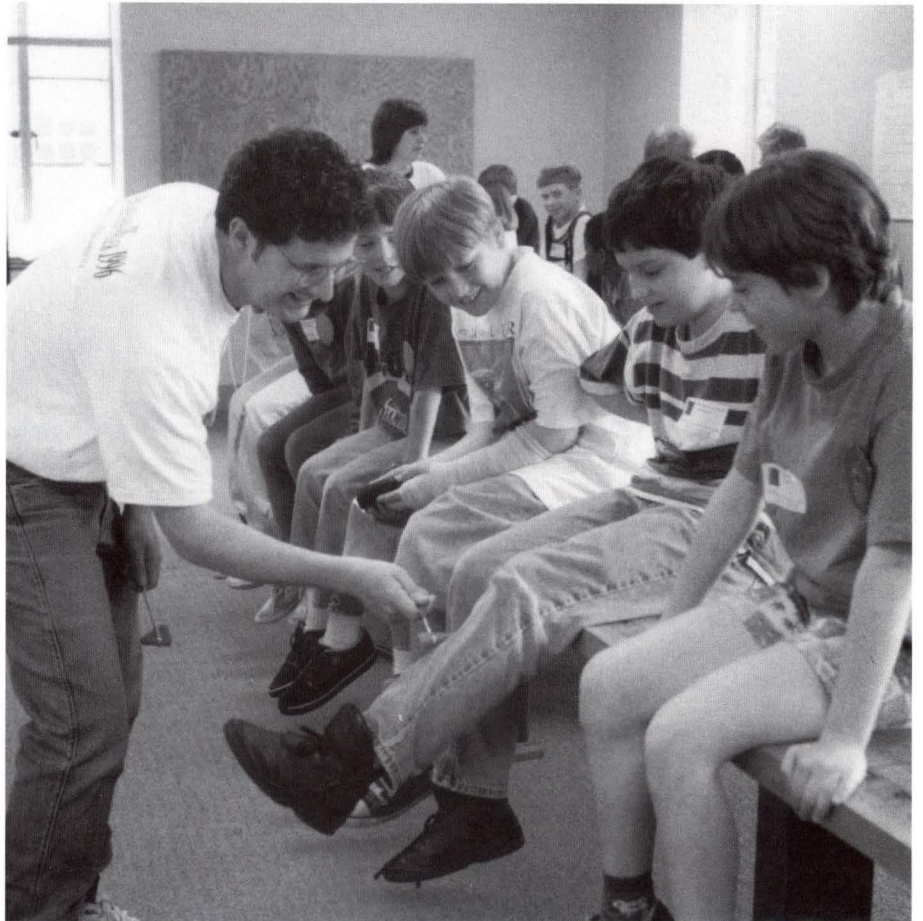
With some encouragement, the audience of 1,100 kindergarten-through-sixth-graders in Coffman Union’s Great Hall got it right and shouted the tongue twister back at Timothy Ebner, neurosurgery professor and codirector of Brain Awareness Week, an assortment of lectures, tours, skits, and other activities at the University May 12-18. After that, pronouncing “occipital cortex” was a snap.

Ebner promised the kids they would use both of these brain structures, which control the eyes and process pictures in the brain, during their day of neuroscience activities. And, he said, they would leave with new synapses that would help them bring Mom and Dad up to speed on brain science at the dinner table.

After Ebner’s warm-up, Dr. Neuroscience — Brain Awareness Week codirector Robert Miller, professor and head of physiology — took over. Miller introduced Captain Neuron and his assistant Glia, who performed a humorous skit written by Miller in which the arrogant Captain is forced to admit his dependence on humble but wise Glia. The kids got into the act in a foot race with Captain Neuron, giving them a sense of how fast brain impulses travel.

Students were split into small groups led by faculty and neuroscience graduate students to learn about the structure and function of the brain and to tour neuroscience research labs. Among other things, they learned about Twins player Kirby Puckett’s eye disorder and how a brain disease in Abraham Lincoln’s family was passed on to people living today. They saw genetically engineered mice that are helping researchers understand brain diseases and viewed live tarantulas being used in a study of how spider venom affects nerve cells.

Although some kids lost their cool over a display of brains and spinal cords, most thought the experience was “very cool,” as one fifth-grader from Apple Valley put it. White Bear Lake second-grader Emily Barger said the field trip persuaded her to abandon plans to



Students from 35 area elementary schools learned about the brain and how it works.





High school students toured labs of neuroscience researchers.

Neurological Diseases and Disorders

- Fifty million Americans have a permanent, neurological disability that limits their daily activities.
- One in three Americans will experience some form of mental disorder at some point in their lives, and more people are hospitalized with neuropsychiatric disorders than any other disease.
- Eighteen million Americans suffer from depression. Disability from depression exceeds that of diabetes, hypertension, gastrointestinal, and lung diseases, and costs \$43.7 billion annually.
- More than one in 20 Americans have developmental disorders of the nervous system, such as cerebral palsy, spina bifida, mental retardation, and learning disorders. Health care associated with these disorders costs \$30 billion annually.
- Nine million children and adolescents in the U.S. are affected by a mental, behavioral, or developmental disorder; only one third of them gets treatment.

(continued)

become a ceramic artist in favor of a neuroscience career.

Junior high and high schoolers attended a separate program on alternate days with topics tailored to their age and interests. Included were a demonstration of hand-eye coordination through juggling, mini-lectures on brain development and growth, and discussions of how bulimia, drugs, and alcohol affect the brain. Daily neuroscience lectures were also offered to the Academic Health Center community and the public. By the end of the week, more than 4,000 students, teachers, faculty, and members of the community had participated.

Brain Awareness Week was designated by the Society for Neuroscience and the Dana Alliance, a society of 140 neuroscientists that includes five Nobel laureates, to increase public awareness of brain research and its applications for understanding human nature and treating brain diseases. In a series of nationwide events, neuroscientists opened their laboratories to the general public, museums held brain exhibits, researchers presented symposia, and media events took place. The University of Minnesota event was cosponsored by the Minnesota Medical Foundation.

U of M research projects underway

Neuroscience researchers opened their labs to students and the public for Brain Science Week. Below are some of the projects underway by University researchers.

Nose drops for Alzheimer's disease?

Nerve growth factor (NGF), a protein produced by the brain, could be an effective treatment for Alzheimer's disease because it pro-



protects brain cells from damage and stimulates production of acetylcholine, the chemical messenger for memory. Unfortunately, the molecule is too large to get through the blood-brain barrier. But William Frey, assistant professor of psychiatry and neurology, has discovered an alternate route — olfactory nerves in the nasal cavity. Frey recently presented findings at the Fourth International Conference on Alzheimer's Disease confirming that NGF nose drops do indeed get into the brain via these nerves, which sense odors. He is continuing studies on intranasal delivery of NGF and other therapeutic agents to treat Alzheimer's disease, stroke, and other brain disorders. In another research project, Frey has recently shown that Vitamin E protects brain receptors involved in memory from damaging free radicals that appear to be generated in Alzheimer's disease.



More than 50 University faculty members gave demonstrations and organized tours.

New approaches to treating Parkinson's disease

Parkinson's disease is caused by the degeneration of neurons that produce dopamine, a neurotransmitter that helps relay messages from the brain to the body. As these cells die, dopamine production decreases and movement becomes impaired. Neuroscience researcher Walter Low is experimenting with

■ Four million older Americans suffer from Alzheimer's disease at a cost of \$100 billion each year, primarily from nursing home and other costs of long-term care.

■ Three million incidences of stroke are reported each year at a cost of \$30 billion. Approximately 1,200 Americans are new stroke victims every day; 1/2 of these die and 1/3 are permanently disabled.

■ Three million Americans are affected by panic disorders during their lifetimes. The suicide rate for these individuals is 20 times that of the general population.

■ Two million Americans suffer from schizophrenia, the most chronic and disabling of mental illnesses. The cost for treatment is \$32.5 billion annually. Approximately 300,000 new cases are diagnosed each year.

■ One million Americans suffer from genetic disorders resulting in brain and nerve damage. More than 500 of these genetic disorders have been identified, many of which result in disability or death.

■ One million cases of traumatic head injury are reported each year, resulting in 100,000 deaths and health costs of \$25 billion.

■ Half a million Americans suffer from Parkinson's disease, incurring health costs of \$6 billion annually.

■ More than 250,000 cases of traumatic spinal cord injury are reported each year at a cost of \$10 billion annually.

■ Forty thousand Americans are stricken with brain tumors each year, resulting in paralysis or death.

■ Twenty-five thousand Americans are afflicted with Huntington's disease and another 125,000 are at risk.

■ Approximately 4,600 people suffer from nerve and muscle disorders, such as Lou Gehrig's disease and neuropathies associated with diabetes.

(from the Society for Neuroscience, Washington, D.C.)

several innovative therapies to restore the damaged cells, including brain cell grafts, nerve growth factors, and gene therapy. Low, professor of neurosurgery, has shown that brain cell grafts can reverse abnormal movements in animal models. Colleagues Michael Johnson and Timothy Ebner are developing tests to evaluate the disease as well as the effectiveness of new and existing treatments. Neurosurgeon Robert Maxwell is using new, minimally invasive surgical techniques and brain stimulation to relieve symptoms of Parkinson's disease.

Neurochemical "pacemaker" jump-starts post-surgery digestion

Physiologist Michael Hoey has developed a chemical pacemaker that jump-starts digestive nerves stalled by abdominal surgery, which 15 million Americans undergo every year. After abdominal surgery, intestinal activity (peristalsis) stops for 24 to 36 hours, which means no food or fluids for that period. For 2 percent of these patients, the shutdown lasts longer, causing complications that can lead to death. The pacemaker, a small silicone wafer, is placed on the intestines just below the stomach where it releases acetylcholine, a transmitter that stimulates smooth muscle activity, for seven days. In animal studies, the pacemaker has been effective in 100 percent of the cases with no adverse effects. A patent has been granted and additional patents are pending.

A new approach to reducing brain damage from strokes

Most of the 500,000 people who suffer strokes each year seek medical care more than 8 to 12 hours after the episode, which is too late for most therapies that reduce stroke damage. A new treatment being developed by neurologist Costantino Iadecola may offer them hope. Iadecola has observed that strokes trigger overproduction of nitric oxide, a gas that's beneficial to the brain in small quantities but toxic in large quantities. High levels of nitric oxide contribute to brain damage following a stroke. Using a drug that inhibits nitric oxide production, Iadecola, associate professor of neurology, has shown in laboratory studies that stroke



damage can be reduced or reversed even after more than 12 hours have elapsed.

Nerve regeneration offers hope for brain, spinal cord damage

The frustration of treating brain diseases and injuries is that nerves are the only cells in the body that don't regenerate. Once a nerve is damaged or severed, it is disconnected forever. Paul Letourneau, professor of cell biology and neuroanatomy, is hoping to change that. Letourneau, whose research is focused on nerve fiber growth and regeneration, is testing the ability of nerve fibers from chicken embryos to grow in a matrix of collagen, a protein that supports cell growth in the body. In recent years researchers have learned that molecules in collagen and other extracellular proteins take a very active role in cell growth. Letourneau is attempting to decode the molecular dialogue between nerves and collagen with the goal of manipulating their interaction. His research has potential for treating hundreds of brain and nerve disorders, from Parkinson's disease to stroke to spinal cord injuries.

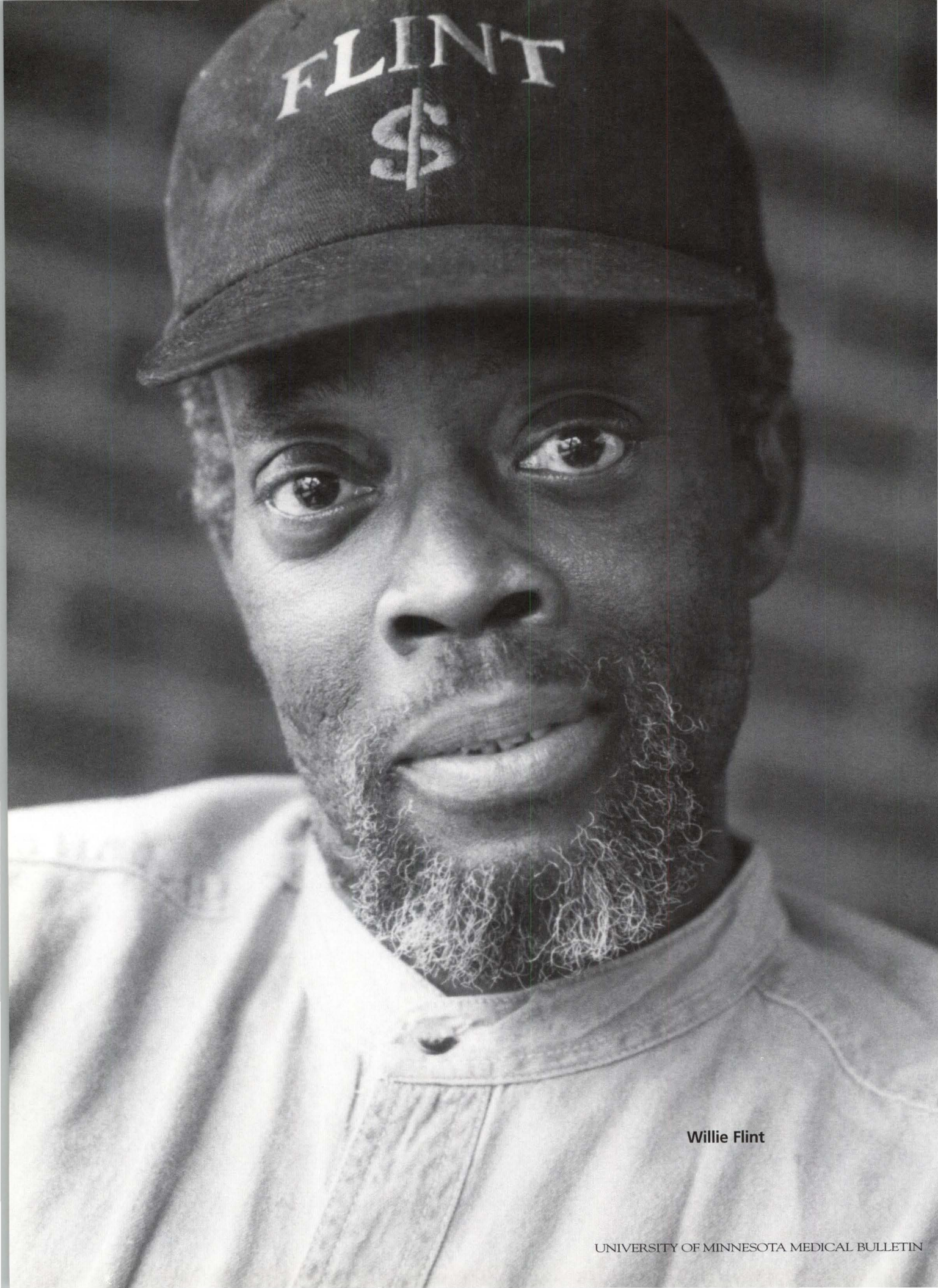
Supercomputers used to model neuron activity

Using supercomputers and high-speed graphics workstations, pharmacology professor



Hands-on activities helped students understand the structure and function of the brain.

George Wilcox and his colleagues have developed a method to stimulate neuron behavior more accurately than previously possible and to produce color displays of a stimulated neuron's electrical activity. Their goal is to better understand the role that different cell compartments contribute to nerve function and to evaluate how nerve cells interact. This information provides a foundation for creating artificial nerve networks to restore neuromuscular function in people with spinal cord injuries. ■



Willie Flint

Living with Sickle Cell Disease

“Sickle cell is pain. It’s something that makes you cry out like a child,”

says Willie Flint, a sickle cell disease patient at the University of Minnesota. For Willie, sickle cell disease has meant a series of painful crises that cannot be prevented, only managed.

The name “sickle cell” may bring to mind the phrase “sickle cell anemia” — and not much else. Many people know nothing more about this disease. “I was 13 years old when I found out I had sickle cell,” says Flint. “They thought it was some type of arthritis. They didn’t even know it was a disease, as it’s known now.”

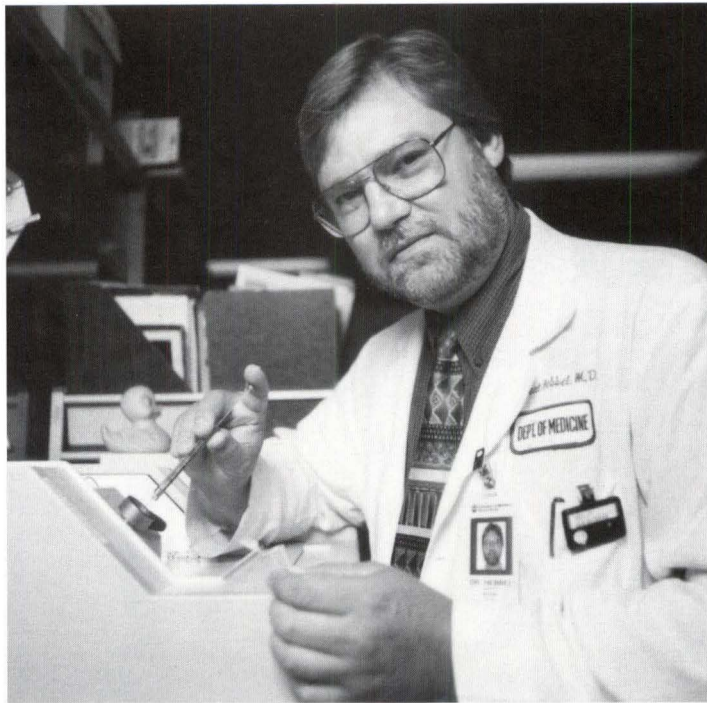
Sickle cell, an inherited blood disease, can cause a variety of symptoms including bouts of pain, damage to vital organs, increased susceptibility to infection, and in some cases death in childhood or early adulthood. “It’s a horrible disease with no truly effective available treatments,” says Dr. Robert P. Hebbel, professor of medicine at the University of Minnesota and vice chair of research for the Department of Medicine.

Hebbel has been studying sickle cell at the University for 20 years. He has helped build the base of knowledge about the disease and is now specifically examining some of its more elusive aspects. “We are using a multidisciplinary approach and the entire spectrum of available biomedical research techniques to examine its vascular biology,” says Hebbel (see sidebar).

Sickle cell disease affects a protein inside the red blood

by Jodi Ohlsen Read

photos by Tim Rummelhoff



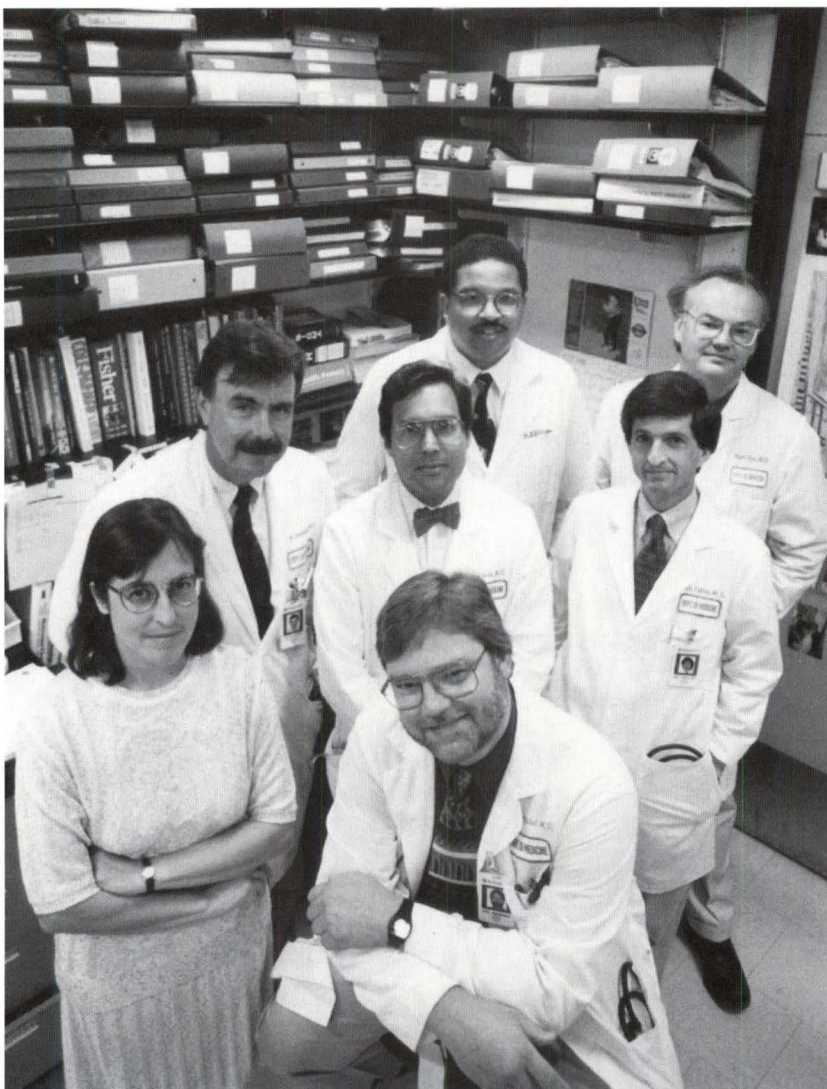
Left, Dr. Robert Hebbel. Below, (front row) Drs. Hebbel and Judy Enenstein, (middle row) Drs. Greg Vercellotti, Karl Nath, Mark Paller, (back row) Drs. Kevin Billups and Nigel Key.

cells, the hemoglobin. The hemoglobin carries oxygen from the lungs to the rest of the body. Red blood cells are normally round and flexible. In sickle cell patients, the cells become distorted, forming rigid banana- or sickle-shaped cells. These sickle cells survive for a very short time for various reasons, resulting in anemia — a shortage of red blood cells.

Sickle cells can also get stuck in tiny blood vessels, piling up and blocking the vessels. This cuts off the blood supply to tissues so that no oxygen can be delivered. One result is pain, like that suffered by Flint and others. “A crisis is another stage of pain. It’s called a crisis when you have more than one different hurt,” explains Flint. “You might hurt in your arm, maybe both arms, sometimes both arms, both legs, back and stomach. You can’t really explain it to somebody who doesn’t have it. People just can’t believe anyone could hurt that bad.”

For others, the disease can be less severe or cause different symptoms. Jane Brown has also dealt with pain crises throughout her life. Like Flint, she didn’t know she had the disease until she was a teenager. “I’m pretty much pain free,” says Brown. “But sometimes I’m in and out, in and out. Sometimes I stay out of the hospital for several months. Other times I might be in twice a month. It’s something you have no control over. When I’m not in pain, I lead a normal life just like anybody else. I can do all the things that I want to do — like play softball.”

To help patients like Brown and Flint, Hebbel and a group of University researchers and caregivers are working to improve the quality of life for sickle cell patients through research and improved care. “One of our main goals is to develop a more comprehensive program. The fact is, care given to sickle cell patients has been rather fragmented,” says Hebbel. “They often have very complicated, numerous problems. As a result, they can be referred to one doctor for one thing, to a second doctor for another, and so on. We can really give more effective care with a managed personalized approach.”



"It's a horrible disease, with no truly effective available treatments."

Although the life span of a sickle cell patient has increased, the average life expectancy is still only 40-45 years. "I think it's clear from other programs' experiences that a comprehensive care clinic that formally tries to manage all aspects of a patient's disease and its impact on their life can improve quality of life and probably longevity," says Hebbel.

Jeanne M. Harkness, R.N., M.S., University of Minnesota Division of Hematology, is a coordinator of the new comprehensive sickle cell program. "We decided to pull together a group of people from the hospital who commonly work with sickle cell patients," says Harkness. "People from the emergency room, specialists like psychiatrists, cardiologists, nurses from the ward — we've pulled them all in. We're trying to identify those who have been working with the sickle cell patients so we can help build up their expertise on the disease. The main goal is to increase the quality of care for the patients."

As part of the program, Harkness and Hebbel have standardized orders for sickle cell patients. "When the patient comes to the hospital, the two-page order sheet can go into the chart and it makes the process go much quicker. Dr. Hebbel has also written individual cards which we keep in the emergency room and in the ward. These summarize the patient's medication, and some history, so the patient and the staff don't have to search through charts and debate about what is the best thing to do," explains Harkness.

Harkness also helped establish a support



Left, Jeanne Harkness, R.N., M.S., with patient Jane Brown. Below, Program Project Investigators Drs. Anna Solovey and Kuan Sheng (seated) and Yin Lin.



group for sickle cell patients that she runs with a social worker. "It's been an important part of the program," she says, "People don't tell you much when they come in with so much pain. Once they're more comfortable, they can talk. They need support."

One topic that often comes up is conflict about pain medication. "There is some labeling that goes on with patients, which is ironic to me. If I'm in pain, I would be going to emergency rooms seeking drugs too. If they had heart disease, they wouldn't be labeled as drug

Sickle Cell Disease research team

Greg Vercellotti, M.D.

Studying the effect of sickle red blood cell adhesion to endothelium on endothelial expression of white blood cell adhesion molecules. White blood cells are large and poorly deformable so if they stick to the endothelium in the microvasculature, they could play a role in the vasoocclusive process.

Judy Erenstein, Ph.D. and Dayue Shen, M.D.

Studying signal transduction cross-talk between two types of receptor systems on endothelial cells. Understanding control of the character of these cells is critical to understanding the endothelial biology of the disease.

Kalpna Gupta, Ph.D.

Studying the mechanisms underlying thrombospondin binding by endothelial cells, with a focus on the role of glycosaminoglycans. If researchers understand the components of the binding interaction, novel therapies could potentially be designed to interfere with the binding.

Karl Nath, M.D.

Studying mechanisms underlying development of chronic renal disease in the sickle cell patient. Renal disease is a major organ complication of sickle cell anemia.

Nigel Key, M.D.

Studying abnormal activation of tissue factor, the critical regulator of coagulation.

Robert P. Hebbel, M.D., Stephanna Choong, Ph.D., Mark Paller, M.D., and Kevin Billups, M.D.

Testing the hypothesis that sickle cell disease is an example of reperfusion injury physiology. If hypothesis is correct, novel therapies could result.

Jane Little, M.D., and Gordon Ginder, M.D.

Studying regulation of expression of embryonic and fetal globin in genes in cultured cells and mice. Controlling expression of fetal hemoglobin would inhibit the sickling process. Also studying new therapy.

Anna Solovey, M.D., Ph.D.

Studying circulating endothelial cells as a way to perform an "endothelial biopsy." Could open way to therapeutics intended to manipulate the endothelial cell's status.

Kuan Sheng, M.D. and Paul Browne, M.D.

Studying aspects of the iron compartmentalization of sickle red blood cells. Defining the nature of these deposits and identifying reasons for their existence could be used to develop therapies to remove the deposits.

Summer student research projects: Laurie Wright, sickle cell adhesion to endothelium; Ann-Marie Cole-Jarvis, plasma marker of endothelial injury in sickle disease; Uhmari Shariff, oxidant induced modification of sickle hemoglobin.

seekers because they have chest pain," says Harkness. Yet medication is often crucial for pain relief during a crisis.

"People discover on their own what works," says Harkness. "Non-medical things like the distraction of tv, a soak in the tub, visualization, can help with the pain. Most patients have something at home they can take, like Tylenol, and they do it stepwise. When they first have pain, they make sure they're hydrated, decrease physical activity, then try Tylenol, maybe an oral narcotic. When it is too difficult to be at home, they come into the hospital. Once the pain gets into a cycle it's very hard to stop. Patients tell us that if they don't get on top of the pain early, then it just prolongs the crisis. Nobody wants to be in pain."

The lack of knowledge shown by some about sickle cell disease is frustrating to Brown. "Sometimes I have doctors who don't know anything about it so they tell me there isn't anything wrong or that the crisis is over. But that's not how it works. If you're already in pain, things like that don't help." Harkness agrees, "I think that in the community as a whole, there isn't a whole lot of education about sickle cell disease. Education about this disease is very important."

One common misconception is that people "get" the disease, either by catching it from someone or simply by developing it later in life. "This is entirely not true," says Harkness. "You are born with it." Sickle cell can occur when both the mother and father carry the sickle cell gene. If both have the sickle cell trait, meaning they carry only one sickle gene, there is a 25 percent chance that the child will have sickle cell disease. The disease occurs mostly in people of African ancestry and in Hispanics of Caribbean ancestry. About one in 400 to 600 blacks inherits sickle cell disease, according to March of Dimes statistics. It can also affect some people of Arabian, Greek, Maltese, Italian, Sardinian, Turkish, and southern Asian ancestry.

In 1987, a National Institutes of Health (NIH) panel recommended that all babies be screened at birth for sickle cell disease. Approximately 30 states, including Minnesota, now test newborns. Because young children and babies with sickle cell disease are especially sus-



Dr. Steven Nelson and medical student Ann-Marie Cole-Jarvis consult with a sickle cell patient and parent.

ceptible to infections, it is crucial that the disease is diagnosed early. For children with the disease, daily preventative doses of antibiotics can significantly reduce the risk of serious infections.

But, many kids with sickle cell get “lost” in the progression from pediatric care to adult care. To help adolescents make the transition, Hebbel has been working closely with Dr. Steven Nelson at Minneapolis Children’s Hospital. “As kids become older, they need to make the shift to an adult care center. But what often happens is they simply drop out of the health care system,” explains Hebbel. “We are trying to work on ways to ‘capture’ those patients. One way is to visit the children during their last year as patients at the Children’s Hospital and then to have their pediatric physician visit them during their first year at the University of Minnesota Hospital.” This summer three medical students, Uhmari Shariff, Ann-Marie Cole-Jarvis, and Laurie Wright, will be working with sickle cell patients at the Minneapolis Children’s Hospital and on research in Hebbel’s lab.

“Our clinical program continues to evolve as we move to a comprehensive care model that deals with the many facets and complications of this disease,” says Hebbel. “Our program involves not only primary, preventive, and multispecialty care, but also a multidisciplinary team including nursing, social work, home

health, health psychology, and others. We are serving the needs of children and adults with sickle disease, as well as the transitional needs of older adolescents.”

Much has been learned about sickle cell disease in the last 20 years but there is more to be done. “We have a long track record at the University of being seriously interested in this disease and we’ve had a very successful research program. The things we are doing in each of our current research projects are, in fact, completely novel in terms of the way that sickle disease has been looked at,” says Hebbel. “I’ve tried to put together the strongest research group I could and then identify and investigate what would actually make a serious contribution to the disease.”

One common misconception is that people “get” the disease, either by catching it from someone or by developing it later in life.

Currently, Hebbel’s research is funded by three individual research awards from the National Institutes of Health, plus a five-year NIH Program Project grant which supports his collaborative research with other members of the University



Jeanne Harkness with Willie Flint.

sickle research group. These grants comprise over \$1 million of annual research costs directed at solving the mysteries of sickle disease.

Over the years, Hebbel has received several smaller “seed money” grants from the Minnesota Medical Foundation that helped him generate the information needed to apply for more substantial NIH grants. “These MMF grants have been indispensable to our program development,” says Hebbel.

“Many years ago, we showed that sickle red cells are abnormally sticky and they stick to the vascular endothelial cells (the thin layer of cells that line the blood vessels). Now, for example, Dr. Greg Vercellotti is looking at the endothelial cells’ response to that sticky red cell. The idea is, when the sickle cells bump into the endothelial cells, they change their surface and make it more attractive to white cells. The reason that’s important is that the white cells are very bulky and stiff. They would tend to plug up small vessels if they were stuck on one place. This might be how vascular obstruction works, which is the fundamental characteristic of the disease,” explains Hebbel.

Vascular obstruction, which can cause the pain crises and other symptoms, is the focus of

the current research. Within that category, investigators are working on specific projects such as studying what causes the cells to decide to stick, examining the underlying development of chronic renal disease (a major organ complication of sickle cell disease), dissecting out the role of the coagulation system, defining novel aspects of endothelial cell signal transduction, and exploring new therapies.

One particular focus is on reprofusion injury, which can apply to many disease situations. As Hebbel explains, “The basic idea is that if you block blood flow to an organ, there may be some damage from the immediate loss of oxygen delivery. But, most of the damage comes when the flow is reestablished and you add the

oxygen again. We believe sickle cell could be the quintessential example of this. If that’s true, we could potentially identify a number of new therapeutic approaches to the disease.

“But, even after we know the defect underlying the disease, it’s still a long way to go before you can use that information to really help somebody.” Although completely successful treatments or a “cure” for sickle cell disease may not be available for quite a while, Hebbel and others at the University are already improving the situation for many sickle cell patients.

“Dr. Hebbel has been my doctor for 20 years. He is a great man,” says Flint. “He began giving me treatments that started giving me a life. I could go home and stay away from the hospital for three or four months. It made a big difference — I started feeling good about myself.”

When Flint was 21 years old, he was told by other doctors that he wouldn’t live past 25. “One day I just decided that I wasn’t going to die, I wasn’t going to wait for sickle cell to kill me. I had a thirst for life and I wanted to live,” says Flint. “I love life. Life is great, God is good.” Flint is now 48 years old. ■

The Minnesota Medical Foundation:

Facilitating medical progress



by Jodi Ohlsen Read

Brad Choate, who joined the Minnesota Medical Foundation as president and chief executive officer in April, sees the Foundation continuing to play a critical role in medical research and education at the University of Minnesota.

What is the Minnesota Medical Foundation's main role?

A: We help people who want to help others. We're matching the interests of benefactors with the needs of the University of Minnesota's health education and research programs. If a potential benefactor has an interest in a particular cause, our role is to help make that match. In a sense, the Minnesota Medical Foundation is an enabler, a facilitator. We assist the medical education and research enterprise by encouraging philanthropy and managing the financial resources — whether it's constructing a building like the Masonic Cancer Research Building, creating an endowed scholarship fund, or financing specific research programs.

“At the University we have people with tremendous talent, whether they are promising medical students or brilliant researchers, but they need financial help to reach their goals.”

Q: Specifically, what kinds of services does the Foundation provide?

A: Our staff members bring special skills and abilities that allow us to provide professional services to benefactors, students, and faculty alike. For example, if someone has a goal to invest in a way that will provide for their grandchildren’s future and at the same time benefit medical research, we can help them understand the options available to them. Working with their attorneys and financial planners, we can help create options to assist them in reaching their objectives.

We provide alumni services — hosting class reunions, honoring achievements, and keeping alumni up to date on happenings at the Medical Schools, among other things. For students and faculty, we offer various support, such as research grants, scholarships, and student financial aid. More than 90 percent of medical students receive some type of financial help.

Q: What do you see as some of the Minnesota Medical Foundation’s greatest strengths?

A: Our strengths fall into various areas but one that the Foundation has done exceptionally well in is working with volunteers. The Foundation has done a good job building relationships and helping people see how they can indeed have a real impact on some of the most serious health issues in our society. We have worked with many volunteers to advance important medical work. For example, the Children’s Cancer Research Fund has developed an extensive volunteer network.

The Minnesota Medical Foundation has also done a great job managing and

investing funds that we’ve been entrusted with for the benefit of programs, scholarships, and other projects. Our investment performance has been outstanding, by any standards.

Q: How would you describe the Minnesota Medical Foundation’s relationship with the University of Minnesota’s Medical Schools?

A: We are legally a separate entity yet our purpose is to benefit medical education and research functions at this University, through philanthropy. We are a service organization, here to serve our benefactors as well as the Medical Schools, the School of Public Health, and our affiliate organizations.

Q: Is the Minnesota Medical Foundation unique in its goal to raise money for the University?

A: Other foundations, including the University of Minnesota Foundation, also raise funds for the University. The University Foundation and the Minnesota Medical Foundation are separate entities that work closely together to support the University. The Minnesota Medical Foundation raises funds for medical education and research while the University Foundation raises funds for the rest of the University.

Q: Personally, what makes pursuing the Foundation’s goals an exciting challenge?

A: We have a special role here. When we help benefactors understand what they can really make happen, we get to participate in that good feeling. At the University we have some people with tremendous talent, whether they are

promising medical students or brilliant researchers, but they need financial help to reach their goals. And we get to help play that role. So, we don't do the research and we don't directly make the gifts, but yet we get to participate. Some may laugh at the idea of a psychic paycheck, but that's what I'm talking about, and I think it's valid.

Also, from a personal standpoint, it is nice to be back in the Midwest. Although I came here from Penn State, I've spent most of my life in the Midwest. My family and I are already enjoying life in Minnesota.

Q: Can you describe the future direction for the Foundation?

A: I think the past is very distinguished here, there is no doubt. Now, the Minnesota Medical Foundation has tremendous potential to reach even greater heights. With declining government funding, tuition increases, changes resulting from managed care, and with the whole financing of health care and education changing, the logical and maybe only answer is private support — gifts to help ensure that the University of Minnesota will continue to provide outstanding medical education and research.

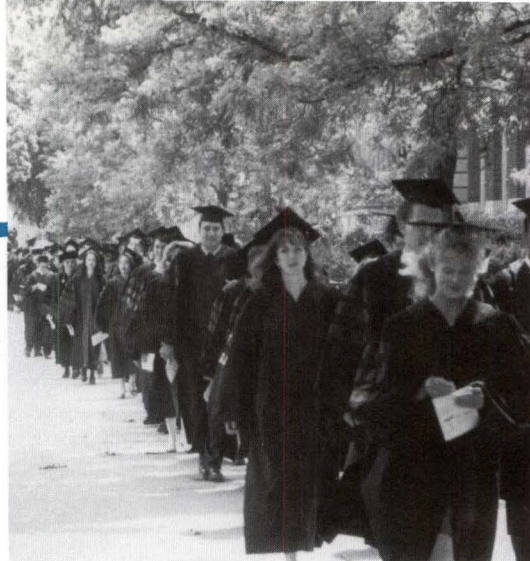
People are becoming more sophisticated and more knowledgeable about their finances and charitable giving. This creates a lot of opportunities for them to make a significant difference in the medical research and education at the University. There will be more possibilities for increased involvement from the community, volunteers, and faculty.

I think the role the Foundation plays is probably more important now than ever before. What we do is going to significantly influence the success and quality of the medical enterprise here for decades. It is truly a critical time. There are tremendous opportunities and the Foundation board of trustees, many other volunteers, and the staff and I want to help the University achieve its potential. ■

The Minnesota Medical Foundation furthers medical research and education through many channels:

- Offering students scholarships, long-term, low-interest loans, research grants, and financial counseling.
- Granting funds for initial faculty projects that often lead to greater funding for crucial medical research.
- Furthering medical research through endowments.
- Providing funding for much-needed scientific equipment and staffing.
- Recognizing exceptional faculty through award programs.
- Helping benefactors create programs that support medical progress and achieve specific objectives.
- Supporting departments' goals through faculty grants and fund-raising assistance.
- Serving as an alumni resource — hosting reunions, recognizing alumni achievement, providing information resources.
- Supporting affiliate organizations.

These are just some of the ways that the Minnesota Medical Foundation supports medical research and education at the University of Minnesota. To learn more about the services and programs of the Minnesota Medical Foundation, please call 612-625-1440 or 1-800-922-1663.



Celebration:

Medical School Graduation and Reunions, 1996

Spring came to Minnesota just in time for the 1996 Medical School reunions and graduation. The weekend of June 6-8 was a time of celebration for the new physicians from the Class of 1996 as well as for those who graduated a half-century ago.

It has become a tradition for alumni celebrating their 50th class reunion to be recognized at the Medical School Commencement. Members of the Class of 1946 were honored individually at the start of the ceremony, receiving appreciative applause from the graduates and their families (see photo at left).

Provost Frank Cerra welcomed everyone to the graduation ceremony. In his message to the graduates he said, "As the practice of medicine becomes more complex, it is not too difficult to lose focus of what our profession truly represents. One can easily be disillusioned and think that this is just a business or a profit-making entity rather than a care-giving profession. Certainly, as all of our resources gradually become scarce, we as physicians should be good citizens in terms of fiscal responsibilities. We must insist that the best caring and healing do not necessarily require high technology and its inherent high cost. More often, the best caring and healing take the form of good communication, mutual understanding, and compassion. There is no price tag on trust and compassion."

Graduation speaker Arthur Caplan, Ph.D., director of the Center of Bioethics at the University of Pennsylvania, also focused on the subject of trust. The former director of the University of Minnesota's Biomedical Ethics Center said, "It is becoming increasingly obvious, partly as a result of provider and patient con-



by Jean Murray
photos by Tim Rummelhoff

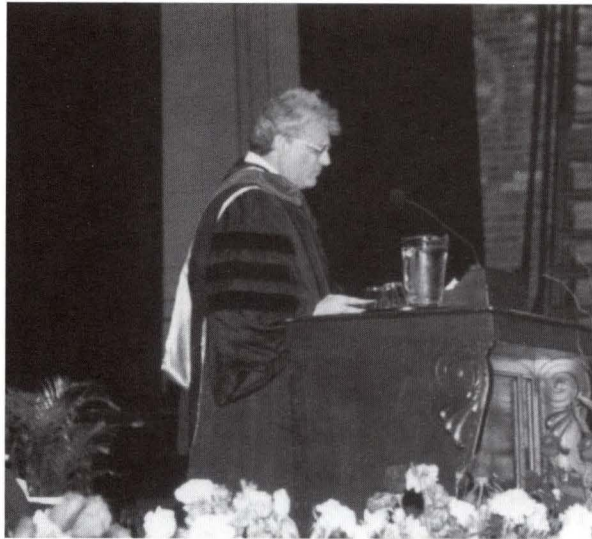
cerns, that the primary moral challenge to those practicing in health care for the rest of this century and well into the next arises from efforts to contain medical costs and achieve greater efficiencies in the delivery of services.”

Caplan continued, “Physicians are taught early on in their medical careers that their primary moral responsibility is to their patient. Zealous advocacy is expected on the part of every physician in terms of securing resources for those in their care. Current public policy is now turning more and more to the physician as the person who must control access to financial and societal resources in the name of the hospital, corporation, health plan, or society.

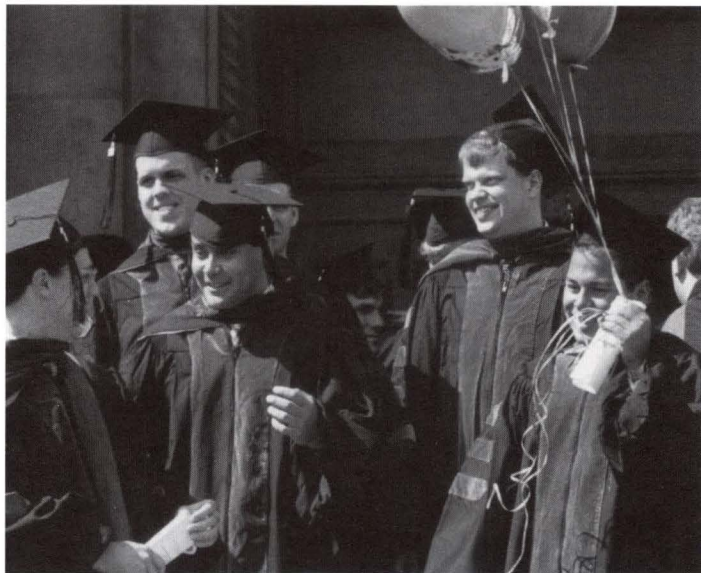
“A crucial element in any therapeutic relationship is trust,” said Caplan. “Trust is the basis for the honest and frank exchange of information and for the patient’s willingness to believe that healing and recovery will result from the physician’s ministrations. If trust is weakened or evaporates because patients are no longer sure whether the person minding the gate of health care resources is looking out for their interest then trust is imperiled.”

Caplan concluded by saying, “Virtue is the key to success in health care. A system of health care driven only by a lust for profit and a quick return on investment cannot support either professionalism or virtues among doctors. It will destroy trust between the doctor and the patient. This situation is not something that the members of this graduating class should accept or tolerate. I hope that many of you will join with me in the battle that lies ahead to ensure that the system of health care in which you practice will nurture the virtues necessary for you to practice good medicine with your patients.”

Following the conferring of degrees, Class President Connie Wolf shared highlights of the four years of medical school just completed. She talked about the good times and the struggles, the laughter and the tears, and the responsibilities ahead.



Medical School Commencement 1996 included an address by Dr. Arthur Caplan, biomedical ethicist, left.



Harold S. Diehl *Award Recipients*

- 1962 Owen H. Wangensteen, '21
- 1963 Donald J. Cowling
Charles G. Sheppard, '35
- 1964 Vernon D.E. Smith, '30
- 1965 Karl W. Anderson, '23
- 1966 J. Arthur Myers, '20
- 1967 Theodore R. Fritsche, '30
- 1968 Walter H. Halloran, '15
Anderson C. Hilding, '18
Carl H. Holstrom, '29
- 1969 Karl R. Lundeberg, '25
- 1970 Robert N. Barr, '30
LeRoy J. Larson, '20
- 1971 William C. Bernstein, '27
J.C. Grant, '42
- 1972 J. Richards Aurelius, '22
Barbara M. Puumala, '59
Marie Bepko Puumala
Reino Puumala
Ricard R. Puumala, '59
- 1973 Phillip Halenbeck
Olga Hansen Litzenberg,
'15
- 1974 Ann Arnold
Roger A. MacDonald, '46
Carl O. Rice, '25
R.S. Ylvisaker, '26
- 1975 Reuben Berman, '32
Bror F. Pearson, '31
Lawrence Richdorf, '20
- 1976 Milton M. Hurwitz, '39
Leonard Lang, '28
Russell O. Sather, '32
- 1977 Ruth E. Boynton, '20
Virgil J.P. Lundquist, '42
- 1978 Lester H. Bendix, '28
Herman E. "Tiny" Drill, '29
- 1979 Miland E. Knapp, '29
Harold E. Wilmot, '23

(continued)



Members of the Class of 1946 were inducted into the Half-Century Club.

Alumni celebrate

Medical School alumni from the Classes of 1946, 1951, 1956, 1961, 1966, 1971, 1976, and 1986 gathered on campus for three days of events and camaraderie with classmates. More than 500 alumni participated in activities starting with a Welcome Reception on Thursday and ending with the Reunion Dinner and Program Saturday evening.

In addition to the Medical School Graduation ceremony, Friday was a special day for members of the Class of 1946, highlighted by induction into the Half-Century Club at a luncheon in their honor. Membership in the club is limited to those alumni who have celebrated their 50th class reunion.

Half-Century Club members enjoyed a special program by Professor Hyman Berman, well-known University historian, talking about the University and the War Years.

Alumni also participated in campus and Medical School tours, a golf tournament at the University Golf Course, the Deans' Reception and Dinner, and an Estate Planning for Physicians seminar.

On Saturday morning, many alumni attended New Horizons in Minnesota Medicine, an annual continuing medical education (CME) event highlighting

Medical School faculty. This year's presenters were: Theodore Thompson, M.D., "Medical Outreach: Extending Beyond the University's Walls," David E.R. Sutherland, M.D., Ph.D., "Pancreas and Islet Transplantation: Current Status," Leo Furcht, M.D., "Quality, Reengineering, and Technology: Changes in Medical Education and the Academic Health Center," and Richard A. King, M.D., Ph.D., "Cancer Genetics."

The Reunion Dinner and Program on Saturday evening brought together alumni from many Medical School classes and from many parts of the country. The guests enjoyed a banquet dinner and then joined their class groups for special programs.

Diehl Award *winners*

This year the Medical Alumni Society selected Drs. Severin H. Koop, Jr. and Stanley M. Goldberg as recipients of the 1996 Harold S. Diehl Award. The awards are given in honor of the University of Minnesota Medical School's fifth dean, Dr. Harold Sheely Diehl, and are presented to individuals who have made outstanding professional contributions to the Medical School, the University, and the community.



Dr. Severin H. Koop, Jr.

Dr. Severin H. Koop, Jr.

Dr. Koop, Class of 1955, has served as a physician for more than 40 years. Many colleagues and friends refer to him as an “institution in the community” and Dr. Richard Schlorf, who practiced with Koop for 20 years, says he is an “excellent practitioner, extremely capable, bold and courageous, always trying new techniques.” According to St. Cloud Ear, Nose & Throat-Head & Neck Clinic administrator David Schlough, Koop has a genuine ability to connect with patients that is remarkable — he is very good with patients, always understanding their needs, always honest and caring. His “integrity and leadership are shown regularly by the standards he sets for us,” says Schlough. “Dr. Koop’s commitment to and representation of the medical profession is greatly admired.”

Born in 1930, he graduated from St. Thomas Academy in 1948 and enrolled at the College of St. Thomas as a pre-med student. He later transferred to the University of Minnesota and received his Bachelor of Science degree and his medical degree.

After completing an internship at Ramsey County Hospital, Koop served as a medical officer in the U.S. Army from 1957 to 1959, earning the rank of captain. He later established a family practice in St. Cloud and then returned to the University



More than 500 alumni from eight reunion classes enjoyed the Reunion Dinner.

of Minnesota to study otolaryngology. He completed his residency in 1966 and founded the Ear, Nose & Throat Clinic in St. Cloud.

In addition, Koop has been active in the Minnesota Medical Association, serving as president from 1982 to 1983, and as a delegate from 1983 to 1986. He received distinguished service awards from the Minnesota Medical Association in 1988 and from the University of Minnesota Medical School in 1994. The University of St. Thomas honored him with a Bachelor of Science degree in 1995.

He has contributed much to the community, serving in leadership roles on several community boards such as the First American National Bank, the Minnesota Orchestra, and the Central Minnesota Community Foundation. His humanitarian concerns have taken him to Peru and the University of Trujillo to participate in Project Hope.

Diehl Award Winners, continued

- 1980 Helen L. Knudsen, '43
Donald E. Stewart, '37
- 1981 Eva Jane (Ostergren)
Larson, '38
Carl Ragnar Wall, '27
- 1982 Stuart Lane Arey, '31
Kristofer Hagen, '42
- 1983 John J. Eustermann
John J. Regan, Sr., '43
- 1984 Arnold S. Anderson, '43
John W. Anderson, '51
- 1985 Kenneth W. Covey, '43
Frank E. Johnson, '43
- 1986 A. Boyd Thomes, '42
- 1987 Marcy L. Ditmanson, '54
Malcolm M. Fifield, '50
- 1988 Chester A. Anderson, '44
Robert B. Howard, '44
Arnold J. Kremen, '37
- 1989 Howard L. Horns, '43
Austin M. McCarthy, '42
- 1990 M. Elizabeth "Peggy"
Craig, '45
John P. Stapp, '43
- 1991 Dorothy Bernstein
Irving C. Bernstein, '42
- 1992 Frederic J. Kottke, '45
William A. O'Brien, Jr., '46
- 1993 Howard B. Burchell
John I. Coe, '45
- 1994 Tague Clement Chisholm
N.L. "Neal" Gault, Jr., '50
- 1995 Stanton A. Hirsh, '45
Melvin E. Sigel, '56
- 1996 Stanley M. Goldberg, '57
Severin H. Koop, Jr., '55

Koop has also remained active in the armed services, serving in the U.S. Army Reserve as Lieutenant Colonel from 1988 to the present.

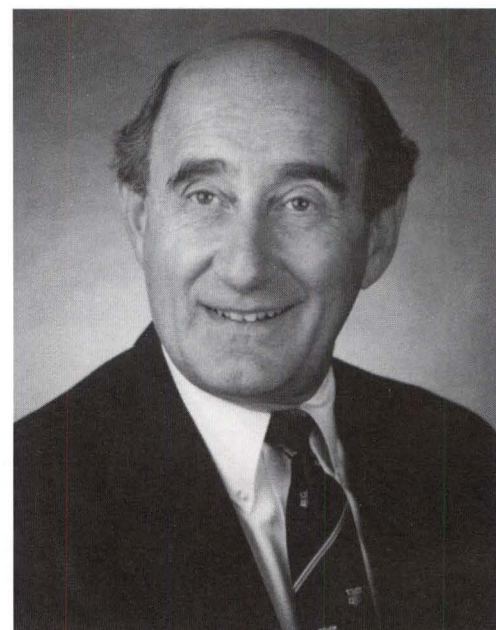
As colleague Dr. Robert Koenig says, "Truly he has been given a great talent, but more importantly, he has poured this talent out generously to his patients, community, and the organized medical structures."

Dr. Stanley M. Goldberg

Dr. Goldberg, Class of 1957, has dedicated his skills to colon and rectal surgery since 1960, when he began his residency at the University of Minnesota. "Dr. Goldberg is a giant in his chosen field of colon and rectal surgery, because of his lifelong devotion to undergraduate, postgraduate, and speciality training," says Dr. Frederic Nemer, who has worked with Goldberg for 20 years. "He has been a leader, one of the most prominent forces in this speciality in the world, for the last 30 years."

His service and expertise have been recognized with many awards, including the 1993 Mentor's Award from the American Society of Colon and Rectal Surgeons. He has been an honorary fellow of the Royal Society of Medicine, the Royal Canadian Society of Colon and Rectal Surgeons, the Association of Surgeons of Great Britain and Ireland, the Royal Australasian College of Surgeons, and the Royal College of Surgeons of England, London. Most recently, he was listed among the best doctors in 1996 *American Health*.

Goldberg received his Bachelor of Arts degree, cum laude, from the University of Minnesota in 1953 and his Bachelor of Science degree in 1954. After completing his medical degree he served his internship at Minneapolis General Hospital (now Hennepin County Medical Center) and his residencies in general surgery at the Veteran's Hospital in Minneapolis and in colon and rectal surgery at the University of Minnesota.



Dr. Stanley M. Goldberg

In 1962, he received special training as an American Cancer Society Fellow at St. Mark's Hospital, London. After completing residencies, Goldberg served as a consultant in colon and rectal surgery for the Department of Surgery at the VA Medical Center in Minneapolis. He was appointed head of the Division of Colon and Rectal Surgery at Hennepin County Medical Center in 1969 and served through 1975.

Throughout the years, Goldberg has traveled and taught extensively with visiting professorships that include the Royal College of Surgeons of England, University of Aachen, Germany; Harvard Medical School; Yong Dong Severance Hospital, Seoul National University Hospital, and Ewha Womans University Hospital, Korea; University of Siena, Italy; and many others. He has also served as clinical professor of surgery, Division of Colon and Rectal Surgery, Department of Surgery at the University of Minnesota (1972 to 1992). Since 1979, he has been medical director for enterostomal therapy education at Abbott Northwestern Hospital in Minneapolis.

"He derives his greatest pleasures in life from his work, the success of his trainees, and from his lovely family," says Nemer. "His biggest success is his focus, his extraordinary work ethic, and the high standards he holds for himself and for all those who affect the care of his patients." ■

Dr. Shelley Chou receives Cushing Medal

Dr. Shelley Chou has been named the 1996 recipient of the American Association of Neurological Surgeons' highest honor, the Cushing Medal. He was recognized for his many years of outstanding leadership and dedication to the field of neurological surgery.

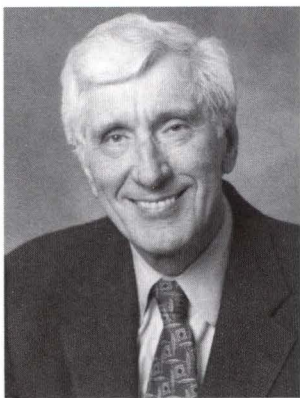
A world-renowned educator, Chou has traveled extensively with more than 40 visiting professorships. In the United States, he has held several academic appointments, most recently serving as the interim dean at the University of Minnesota Medical School. He is also professor emeritus of neurosurgery at the University. From 1974 through 1989 he served as head of the Department of Neurosurgery.

Born in Chekiang, China, Chou received his undergraduate degree in biology in 1946 from St. John's University in Shanghai, and his medical degree from the University of Utah Medical School, Salt Lake City. He received his M.S. degree and later his Ph.D. from the University of Minnesota Graduate School. He also served his residency at University of Minnesota Hospitals in Minneapolis. ■



Shelley Chou, M.D., Ph.D.

Dr. Alfred Michael appointed interim dean



Alfred Michael, M.D.

Dr. Alfred Michael, professor and pediatrics department chair, has been named interim dean of the University of Minnesota Medical School. He will hold the position during the search for a permanent replacement for Dr. Frank Cerra, who was recently named provost of the Academic Health Center.

Michael, a University Regents' professor who has

worked at the University for more than 30 years, has headed the pediatrics department for the past 10 years.

He will maintain his position as the head of pediatrics, a department he has helped to achieve national prominence. He is known internationally for his research on and treatment of kidney diseases.

As the interim dean, Michael will oversee a school with annual expenditures of nearly \$300 million and a faculty and staff of more than 900 employees. The Medical School has 23 departments and five research centers and instructs more than 1,100 undergraduate and graduate students. ■

Can diabetes be prevented?

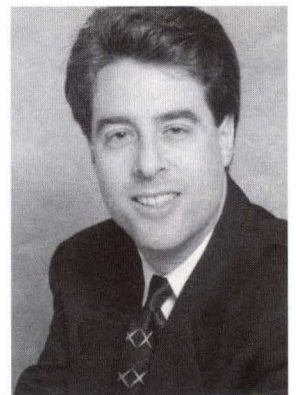
The University of Minnesota's Diabetes Center has screened 3,000 high-risk Minnesotans as part of a nationwide trial to determine if diabetes can be prevented. Screening involves a blood test to detect antibodies to insulin-producing islet cells. Presence of antibodies means islet cells are being attacked by the immune system, which leads to diabetes. Antibodies have been found in about 3.4 percent of all first- and second-degree relatives of type I diabetics. Principal investigator **Dr. Paul Robertson**, director of the Diabetes Center and holder of the Pennock Family Land Grant Chair in Diabetes Research, hopes the effort moves researchers closer to a vaccine against the immune response that causes diabetes. ■

Center for Biomedical Ethics welcomes new director

Dr. Jeffrey Kahn joined the University of Minnesota Center for Biomedical Ethics as its new director in August. Before joining Biomedical Ethics, he was assistant professor and director of the graduate program in bioethics, which he developed, at the Medical College of Wisconsin-Milwaukee.

Kahn's background combines philosophy with public health. He holds a doctorate in philosophy with a specialty in bioethics from Georgetown University, as well as a master's of public health from Johns Hopkins University.

Kahn recently spent 18 months serving as associate director for the White House Advisory Committee on Human Radiation Experiments. ■



Jeffrey Kahn, Ph.D., M.P.H.

New bulimia treatment studied

It may be possible to treat bulimia with a medication generally used to manage nausea, according to University of Minnesota researcher **Dr. Patricia Faris**. She has been conducting research that shows that a drug, ondansetron, can ease or eliminate the urge to binge and purge.

The drug eases the gastric branch of the vagus nerve, which links the brain to the stomach. Once the nerve is soothed, cravings appear to be reduced, making it easier for the patient to stop the cycle of bingeing and purging.

The research team originally began testing the drug on bulimic patients in 1994 and was impressed with the early results. To date, much of the work has been funded by grants from the Nugent Medical Research Foundation in St. Paul. Currently, volunteers are being recruited for further study. In support of her research, Faris has received a three-year, \$800,000 grant from the National Institutes of Health. ■

Antiviral drug draws attention

An antiviral drug, called 1592, may be effective in preventing the AIDS virus from reproducing. Originally produced by **Dr. Robert Vince**, professor of medicinal chemistry at the University of Minnesota, the drug drew national attention at the 11th International Conference on AIDS in Vancouver, British Columbia, this summer.

Similar to AZT, a drug often used in managing AIDS, 1592 blocks the virus's ability to produce DNA which carries the cell's genetic information. But 1592 also contains a sugar that is easily broken down in the body. Consequently, more of the drug can enter the patient's blood, possibly making it more effective.

Preliminary tests have shown 1592 to be more effective than AZT in attacking the virus in patient's blood and it can penetrate areas of the body that AZT cannot. Although the drug still needs FDA approval, it ranks among the most successful compounds developed at the University, according to Vince. ■

Anesthesiology

Dr. Paul Iaizzo was promoted to associate professor, and **Dr. Steven Swaim** became assistant professor.

A \$10,000 per year, two-year grant was awarded by the Interdisciplinary Research and Graduate Education Program to start the Center for Muscle Disorders. The Center is a multidisciplinary program including neurology, anesthesiology, biomechanical engineering, and veterinary medicine.

Biochemistry

Dr. Douglas Ohlendorf, professor, received a National Institutes of Health (NIH) grant of \$712,728 for "Structural studies of superantigens." Ohlendorf was recently promoted to professor. **Dr. Kenneth Adolph**, assistant professor, received a Graduate School grant of \$13,427 for "Human Thrombospondin 2 : Gene structure, organization and regulation." **Dr. Kevin Mayo**, associate professor, received an American Heart Association grant of \$128,000 for "Heparin binding to platelet factor-4." **Dr. Vivian Bardwell**, assistant professor, received a Graduate School grant of \$23,770 for "A screen for proteins with BCL-6, a putative oncogene." **Dr. Laura Mauro**, research associate and assistant professor, was awarded \$39,147 from the American Federation for Aging Research for "Parathyroid hormone regulation of a bone tryosine phosphatase." **Dr. Ewa Prochniewicz**, research associate and assistant professor, was awarded an American Heart Association-Minnesota Affiliate grant of \$48,000 for "The effects of structural perturbations on actomyosin dynamics." **Dr. Laxma Reddy**, research associate and assistant professor, received an American Heart Association-Minnesota Affiliate grant of \$48,000 for "Regulation of active calcium transport in cardiac muscle." **Leah Chase**, graduate student, was awarded a Louise T. Doslall Fellowship for 1996-97.

Community University Health Care Center/Variety Children's Clinic

The Community University Health Care Center/Variety Children's Clinic received a \$65,000 renewal grant from the Minnesota Department of Human Services/Refugee and Immigration Services to help new Southeast Asian refugees deal with relocation. The Clinic was also awarded a renewal grant from the United Way for \$85,270 to assist Southeast Asian children and families.

Laboratory Medicine & Pathology

Dr. Kristin Hogquist, assistant professor, was awarded an NIH grant for "Peptide induction of positive selection." **Drs. Effie Tsilibary**, associate professor, **Suman Setty**, student in pathobiology, **Michael Mauer**, professor of pediatrics, and **Aris Charonis**, associate professor, have filed a patent entitled "Mesangial integrin reversal as a predictor of diabetic nephropathy."

Dr. Michael Steffes, professor, received the Rumbough Award from the Juvenile Diabetes Foundation International, in recognition of research in diabetes. **Dr. Jeffrey McCullough**, professor, was elected a trustee-designate of the American Board of Pathology. **Dr. Michael Wilson**, associate professor, was named the Raine Visiting Professor at the Urologic Research Centre, University of Western Australia. **Dr. Patricia Ferrieri**, professor, was named chair of the Vaccines and Related Biological Products Advisory Committee of the FDA and will also serve on the University's Finance & Planning Committee.

Dr. Phuong Nguyen became assistant professor in the Division of Hematology. A former hematopathology fellow at the University of Minnesota, Nguyen is currently director of the hematology laboratory at the Massachusetts General Hospital (Harvard Medical Center).

The Medical Technology faculty participated in a book fair to collect used laboratory books at the International Association for Medical Laboratory Technology meeting in Oslo, Norway. The texts are donated to participants from developing nations.

Medicine

Dr. B.J. Kennedy, Regents' Professor Emeritus of Medicine and Masonic Professor Emeritus of Oncology, has been named a master in the American College of Physicians. **Dr. Catherine Verfaillie**, associate professor, has been elected to the American Society for Clinical Investigation.

Obstetrics & Gynecology

Teaching awards presented at the Annual Clinic Faculty Meeting included: Leonard A. Lang Award, **Dr. John Hachiya**; APGO Excellence in Teaching Award, **Dr. Virginia Lupo**; CREOG Excellence in Teaching Award, **Dr. Sue Moore**; Raymond J. Albrecht Award, **Dr. Rebecca Weprin**; AAGL Endoscopy Award, **Dr. Gregg Teigen**; Chairman's Award, **Dr. Winston Bliss**; Alex Barno Award, **Dr. Jacqueline Fossen**; Robert H. Kaplan Award, **Dr. Gregg Teigen**; Leon L. Adcock Award, **Dr. Kathryn Nelson**; Ortho McNeil

Pharmaceutical Corporation Award, **Dr. Christie Iverson**; Wyeth-Ayerst Laboratories Award, **Dr. Trudy Hartmann**; and the Ciba Geneva Award, **Dr. M. Dwight Chen**.

The 27th Annual OB-GYN Continuing Medical Education Seminar will be held October 17-18 at the Radisson Metrodome in Minneapolis.

Ophthalmology

A resident graduation reception and presentation was held June 21 for graduates **Drs. Jason C. Cheung**, **Jeffrey Ketcham**, and **David E. Puk**. Pediatric fellow **Dr. Bradley V. Davitt** and cornea fellows **Drs. Reza Mozayeni** and **Daryl R. Pfister** have completed their fellowships.

The 1996 Harry Plotke Award was presented to **Dr. Gaurav K. Shah**, the second-year ophthalmology resident who best exemplified the clinical skills, compassion, and concern for the patient demonstrated by Dr. Plotke. The 1996 Harry S. Friedman Resident Research Award was presented to **Drs. Elizabeth A. Brown** and **Gaurav K. Shah**. **Drs. Steven O. Anderson** and **Jeffrey Ketcham** received the 1996 Richard T. Olson Best Teaching Award.

Six new residents joined the department: **Drs. Amy Folk**, **Aaron Tsai**, **Lisa Feulner**, **Stephen Nagy**, **Karl Olsen**, and **Jennine Cabanellas**. **Drs. Tom Coweden** and **Christopher Croasdale** will be serving cornea fellowships, **Dr. Carlos Vasquez-Fermin** will be serving a neuro-ophthalmology fellowship, and **Dr. Aldo Fantin** will be serving a pediatric-ophthalmology fellowship.

Dr. Edward J. Holland, associate professor and holder of the Elias Potter Lyon Land Grant Chair for Neuroscience Research in Ophthalmology, has been promoted to full professor. This year's Knobloch Visiting Retinal Professor, **Dr. J. Donald Gass** from Vanderbilt University in Nashville, has been scheduled for December 13-14.

The University of Minnesota Eye Association invites alumni and friends to the annual reception, held during the American Academy of Ophthalmology Annual Meeting, October 29, 5:30 p.m. to 7:30 p.m. at the Chicago Hilton and Towers. The Annual Continuing Medical Education Course for Ophthalmology will be held April 11-12 at the Radisson Metrodome in conjunction with the Minnesota Academy of Ophthalmology.

Dr. C. Gail Summers, associate professor, has been elected to associate membership in the American Ophthalmological Society. **Dr. William B. Rathbun**, associate professor, and co-authors **Drs. A.M. Hollerschau**, scientist, and **H.T. Nagasawa**, professor, medicinal chemistry, recently published "An HPLC radiotracer

Departmental Updates, continued

method for assessing the ability of L-cysteine prodrugs to maintain glutathione levels in the cultured rat lens" in the May 1996 *Current Eye Research*.

Pediatrics

Dr. Smita Bhatia's research on the relationship between radiation treatment for childhood Hodgkin's disease and an increased risk of developing breast cancer was published in the *New England Journal of Medicine*.

Dr. Bruce Blazar, professor, has been elected to the American Society for Clinical Investigation.

Pharmacology

Dr. Ronald Sawchuck, professor, was honored by the Minnesota Society of Health-Systems Pharmacists, which selected him to receive the Hallie Bruce Award and to deliver the group's annual lecture. **Dr. Frank Burton**, assistant professor, received a Graduate School grant-in-aid of \$25,000 for "Mutational analysis of cAMP tumorigenesis" and a Milheim Foundation \$10,000 grant for "Genes induced and regressed in cAMP tumorigenesis."

Dr. Horace Loh, Frederick Stark Professor and department head, was appointed to the Advisory Council, National Health Research Institute, Republic of China.

Physical Therapy & Rehabilitation Program in Occupational Therapy

Dr. Erica Beth Stern, OTR, FAOTA, received a \$75,000 grant from the National Arthritis Foundation for "A randomized controlled study of 3, 6 and 12 month effects of hand- and forearm-based functional ulnar drift orthoses on patients with rheumatoid arthritis." She also received a \$15,500 grant from the Arthritis Foundation-Minnesota Chapter for "Functional effects of hand- and forearm-based ulnar drift orthoses on patients with rheumatoid arthritis: A controlled cross-over study."

This spring the Program in Occupational Therapy celebrated its 50th year with a reunion, banquet, and scholarship fund drive. Over 100 of its 1,300 alumni attended, including several members of the first class.

Dr. Judith Reisman, OTR, FAOTA, has been appointed director of the Program in Occupational Therapy. A program faculty member for 10 years, **Stern** was granted tenure and promoted to associate professor. **Dr. Virgil Mathiowetz, OTR, FAOTA**, joined the faculty as a tenured associate professor. He is best known for his seminal work on strength and dexterity assessments. **Patricia Schaber, MS, OTR**, joined the faculty as an assistant clinical specialist. Her areas of expertise are geriatrics and mental health.

Physiology

Dr. Hon Cheung Lee, professor, was awarded a Distinguished McKnight University Professorship which consists of a \$100,000 five-year grant for research, scholarly, or artistic activities. Lee has conducted research in intracellular calcium regulation.

Dr. Vincent Barnett, assistant professor, was awarded a \$5,000 per year four-year Minority Young Investigator grant from the Nathan Shock Center for Research on the Biology of Aging at the University of Michigan.

Radiology

Dr. William Thompson, holder of the Vilhelmina and Eugene Gedgaudas Chair in Radiology and department head, has been appointed to the board of directors of the Academy of Radiology, a newly founded organization. He is also the president-elect of the Society of Chairmen of Academic Radiology Departments. Thompson attended the Association of University Radiologists (AUR) meeting in Birmingham, Alabama, where he chaired a number of sessions.

Dr. Harry J. Griffiths, professor, also attended the AUR meeting and presented "Downsizing the Residency Programme." He also presented "The Effects of the Merger on Academic Radiology" to the 62 Club in Stamford, Lincolnshire, England. **Dr. Stephen H. Hite**, assistant professor, was appointed to the Society of Pediatric Radiology Committee on Medical Informatics. Hite received a certificate of merit for his poster on "Corrected Congenital Heart Disease: CT Findings," which was presented at the American Roentgen Ray Society meeting in San Diego in April. **Dr. James W. Walsh**, professor, presented a refresher course on "CT and MR of the Female Pelvis."

Dr. Charles L. Truwit, associate professor, presented papers on "Pediatric Neuroimaging" and "Sellar and Parasellar Neuroimaging" at the 26th Il Jornado Radiologica Paulista in Sao Paulo, Brazil. He also presented a talk on "Embryology of the corpus callosum" at the Roentgen Ray meeting and gave a Core Curriculum course on "Posterior fossa tumors in children" at the American Society of Neuroradiologists in Seattle. **Dr. Xiaoping Gu**, associate professor, presented two papers at the 19th International Congress of Radiology in June in Beijing, China. **Gu** and **Dr. Kurt Amplatz**, professor and holder of the Malcom B. Hansen Professorship in Radiology, are working on a number of research projects, including "Percutaneous stent repair of an abdominal aortic aneurysm in a canine model" and "Endovascular occlusion of carotid artery saccular aneurysms."

Dr. David A. Lee attended the American Society

of Emergency Radiology in Orlando, Florida, in April. **Dr. Xiaoping Hu**, associate professor, received an NIH grant to study the "Improvement and application of MRI." **Dr. Leonard O. Langer**, professor, attended a meeting on skeletal development and chondrodysplasias in Mainz, Germany. **Dr. Fatih Uckun**, professor of therapeutic radiology, pediatrics, and pharmacology, was elected to the American Society for Clinical Investigation.

School of Public Health

Dr. Nicole Lurie, associate professor, has been elected president of the Society for General Internal Medicine. **Dr. Jack Mandel**, professor and head of the Division of Environmental and Occupational Health, has been named to the Mayo Chair in Public Health.

Surgery

Dr. R. Morton Bolman III, holder of the C. Walton and Richard C. Lillehei Land Grant Chair in Thoracic and Cardiovascular Surgery, received a grant from Alexion to study xenograft transplantation. He was also appointed to the editorial board of the *Journal of Thoracic and Cardiovascular Surgery*.

Dr. Soon Park joined the department as assistant professor in July. He has research interests in lung transplantation and xenograft transplantation as well as lung preservation. He will be performing adult cardiothoracic surgery, will be in charge of the HeartMate left ventricular assist program, and will be codirector of the Lung Transplant Program.

Dr. David Rothenberger, clinical professor, was chosen by the United Hospital Foundation to receive the 1996 Service to Humanity Award. **Dr. C. Walton Lillehei**, clinical professor emeritus, was awarded the 1996 Harvey Prize in Science and Technology in recognition of his research in open heart surgery and development of the heart-lung machine and the pacemaker. The \$35,000 prize is awarded by the Technion-Israel Institute of Technology.

Dr. Arnold S. Leonard, clinical professor of general surgery, won this year's Wangenstein Award for Excellence in Teaching, which recognizes faculty members who excel in resident teaching on the ward and in the operating room. **Dr. Timothy D. Sielaff**, medical fellow, was voted Resident Teacher of the Year, awarded to those who have demonstrated exemplary educational skills and contributed the most to medical student teaching. **Dr. David C. Wahoff**, medical fellow, received this year's Gavisar Award for Outstanding Achievement in Surgical Research. **Dr. Richard J. Battafarano**, medical fellow, was granted the Earl G. Young fellowship. ■

MMF approves \$195,391 in grants

At its spring quarterly meeting, the Minnesota Medical Foundation board of trustees approved \$193,591 in research and special grants. The amount includes \$89,100 in faculty research grants, \$97,291 in special grants, and \$9,000 in student grants.

FACULTY RESEARCH GRANTS include: **Alice Adams, Ph.D.**, Medical Microbiology and Immunology, \$5,000, Are herpes virus infection and hypertension atherogenic cofactors?; **Stephen L. Archer, M.D.**, Medicine, \$4,500, Antisense oligonucleotides modulate expression of oxygen-sensitive K channels in pulmonary artery vascular smooth muscle; **Peter B. Bitterman, M.D.**, Medicine, \$4,000, Recovery of lung function as a predictor of long-term quality of life outcome in AIDS; **Linda M. Boland, Ph.D.**, Physiology, \$4,500, Molecular studies of ion channel protein-protein interactions; **Edward Y. Cheng, M.D.**, Orthopaedic Surgery, \$8,500, Osteonecrosis due to immunosuppression in organ transplantation: A possible role for calcium channel blockers? A new treatment to delay hip replacement in the collapsed femoral head?; **William B. Dobyms, M.D.**, Neurology, \$4,500, Clinical and molecular genetic studies of cortical development; **Timothy J. Ebner, M.D., Ph.D.**, Neurosurgery, \$4,500, Electrophysiologic characterization of the abnormalities in Purkinje cells of the SCA1 transgenic mouse; **Betsy Hirsch, Ph.D.**, Laboratory Medicine & Pathology, \$7,500, Investigation of the molecular genetic basis of bilateral periventricular nodular heterotopia; **Hollis E. Krug, M.D.**, Medicine, \$9,000, Phenotypic effects of the coexpression of the ank gene and the B27 transgene in mice; **Daniel Mueller, M.D.**, Medicine, \$8,000, Characterization and manipulation of the immune response in heterotopically transplanted mouse airways; **Frank L. Rimell, M.D.**, Otolaryngology, \$7,500, Biochemical mediators in pathogenesis of sinusitis; **Scott W. Sorensen, M.D.**, Medicine, \$7,500, Effects of neurotransmitters on cyclic nucleotide levels in *Toxoplasma gondii*; **Ann Van Heest, M.D.**, Orthopaedic Surgery, \$4,500, Biomechanics of forearm tendon transfer; and **Brian Van Ness, Ph.D.**, Institute of Human Genetics, \$9,600, A transgenic model of immunoglobulin gene enhancer regulation.

SPECIAL GRANTS include: **Gary M. Dummy, Ph.D.**, Microbiology, \$12,000, High pressure liquid chromatography unit for analysis of molecules which enhance bacterial virulence and antibiotic resistance transfer; **Stanley**

Erlandsen, Ph.D., Cell Biology & Neuroanatomy, \$25,941, Request for silicon graphics workstation for establishing quantitative stereon system on FESEM; **William B. Gleason, Ph.D.**, Laboratory Medicine & Pathology, \$15,000, HPLC system for characterization of biomaterials; **Christopher N. Honda, Ph.D.**, Cell Biology & Neuroanatomy, \$13,000, Fluorescence upgrade of 3D neuron reconstruction system; **Daniel L. Mooradian, Ph.D.**, Laboratory Medicine & Pathology, \$12,000, Sievers Model 290 chemiluminescent NO analyzer: Quantitation of NO production/decomposition in health and disease; **Terry D. Schneekloth, M.D.**, Psychiatry, \$9,500, Anxiety symptoms in alcoholics in early abstinence; and **Stanley A. Thayer, Ph.D.**, Pharmacology, \$9,850, Equipment for studying intracellular signalling pathways.

STUDENT GRANTS include: **Lori Bubash**, "Anti-sense inhibition of protein kinase CK2 in squamous cell carcinoma by liposomal delivery method," under the supervision of **Kahil Ahmed, Ph.D.**, and **Russell A. Faust, M.D.**; **Hamid R. Djalilian**, "Long-term survivors of metastatic cancer to the brain," conducted under the supervision of **Walter A. Hall, M.D.**; **Jay Shake**, "Large animal studies in xenotransplantation," conducted under the supervision of **R. Morton Bolman III, M.D.**; **Jason F. Soch**, "Is hypothalamic dysfunction responsible for the absence of hypoglycemia-induced glucagon secretion in subjects with long-standing insulin-dependent diabetes mellitus (IDDM)?" conducted under the supervision of **Elizabeth R. Seaquist, M.D.**; and **Marc L. Weber**, "Does cytomegalovirus infection inhibit apoptosis in human endothelial cells?" conducted under the supervision of **Gregory M. Vercellotti, M.D.** ■

Awards presented at UMD

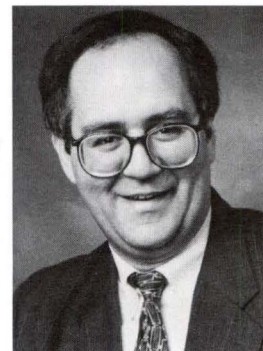
Awards of excellence are presented to faculty and students of the University of Minnesota, Duluth (UMD) School of Medicine at the end of each school year. This year, **Dr. David Mohrman** received the Year One Basic Science Teacher of the Year Award and **Dr. Arthur Aufderheide** was the winner of the Year Two Basic Science Teacher of the Year Award. **Dr. Jeff Adams** received the Clinical Science Teacher of the Year Award.

Jennifer Ahrendt was the winner of the Herbert G. Lampson Award, given to the outstanding female sophomore medical student. The award is presented in memory of Dr. Lampson, a former St. Louis County health officer who was one of the first physicians to effectively study

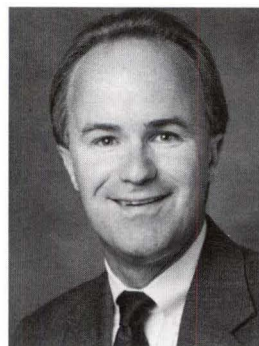
the incidence and epidemiology of tuberculosis in Minnesota. **David Jorde** received the Laird W. and Mary C. Lampson Award, given to the outstanding male sophomore medical student. The Memorial Award, given to the medical student who best exemplifies care and concern for others, was presented to **Jennifer Ahrendt**. The Civil Service Staff Person of the Year Award, an award which recognizes an individual that students hold in high regard, was given to **Leslie Peterson**. ■

New staff join MMF

Robert W. Groves has been named vice president of development for the Minnesota Medical Foundation. He was previously executive director of university development at Pennsylvania State University. During his years at Penn State, annual gifts increased from \$63 million to nearly \$83 million and the overall development program received the Council for Advancement and Support of Education (CASE) Circle of Excellence award in 1994 and 1995 for exemplary performance in fund raising. An Ohio native, Groves received his Bachelor of Science with distinction from The Ohio State University and did graduate work in agricultural education, also at Ohio State.



Robert W. Groves



Daniel P. Saftig

Daniel P. Saftig has been appointed vice president of marketing and communications for the Minnesota Medical Foundation. Prior to joining MMF, he served as director of annual giving and prospect development for Pennsylvania State University. He received the CASE "Heavy Hitter" distinction for eight CASE presentations and accepted the CASE AIMS Award on behalf of Penn State for the top annual giving program in 1991. Saftig received his Bachelor of Science from the University of Wisconsin and holds a Master of Nonprofit Administration degree from the University of San Francisco.

Jennifer Soderholm has been promoted to associate development officer for the Diabetes Institute for



Jennifer Soderholm

Immunology and Transplantation. She has served as development associate for the Institute and previously as a development assistant for the Department of Obstetrics and Gynecology at the University of Minnesota. Soderholm received her Bachelor of Arts from the University of Minnesota and is pursuing a Master of Arts. ■

MMF presents scholarships and awards

Throughout the year, the Minnesota Medical Foundation sponsors a number of awards to honor faculty and students of the University of Minnesota Medical Schools. MMF presented the following scholarships and awards last May:

Maxine Nelson-Alpha Epsilon Iota Foundation Awards

Jennifer M. Fisher

Sarah C. Maier

Kathryn A. Paulsen

Recognize senior women medical students who best exemplify excellence in clinical performance, community service, scholarship, and leadership.

Wallace D. Armstrong Award

Kellee K. Burmaster

Memorializes Dr. Armstrong, former chair of the Department of Biochemistry, by recognizing outstanding achievements in first-year biochemistry.

Bacaner Research Awards in Basic Medical Sciences

Barbara A. Bensing

Daniel D. Billadeau

Hung Ying Kao

Timothy A. Olson

Kathleen A. Schroeder

Cheryl Stucky

Toby J. Velte, Ph.D.

Memorialize Jacob and Minnie Bacaner through recognition of creative research in the basic sciences.

Cyrus T. Barnum Memorial Teaching Fellowships

Sherani Amarasinghe

Elaine Chamberlain

Amy Reese-Wagoner

Recognize outstanding teaching by graduate students in biochemistry.

Dr. Leonard P. Burke Memorial Award

Kristina McDermott, M.D.

Memorializes Dr. Burke by honoring an outstanding graduate resident in the

Department of Family Practice and Community Health.

Thomas P. Cook Scholarship

Bryan A. Nelson

Honors Thomas Cook, long-time executive director of the Hennepin County Medical

Association Foundation, and recognizes academic excellence, leadership, and financial need.

Daniel A. Coyle Memorial Award

Diana M. Saari

Honors an outstanding woman medical student in obstetrics and gynecology.

Dr. Luther Forest Davis Memorial Scholarship

Scott M. Koehler

Recognizes outstanding clinical skills by a senior medical student specializing in family practice and community health.

Roger Dell Memorial Scholarships

Bobbi Jo D. Adams

Jeffrey A. Lipke

Steven L. Manning

Julie M. Meyer

Janine E. Rose

Established by a gift from the Roger L. and Agnes C. Dell Charitable Trust.

N.L. Gault, M.D., Honorary Scholarship

Gregory P. Bisson

Established by bequest of Royal C. Gray, M.D., Class of 1923, in honor of N.L. Gault Jr., M.D., Class

of 1950 and former dean of the Medical School.

Allan Hemingway Endowed Scholarship

Christopher A. Buneo

Established in memory of Dr. Allan Hemingway, long-time member of the Department of Physiology.

Richard C. Horns Memorial Award

Mark D. Sprenkle

Memorializes Dr. Horns, former professor of ophthalmology, by recognizing a senior medical student who has shown outstanding clinical promise.

J. Jacob Kaplan Award

Bradley S. Karon

Established by Dr. Kaplan to recognize, on an annual rotating basis, the best research papers in the fields of cardiology, gastroenterology, and immunology in the diagnosis and treatment of cancer.

Lifson/Johnson Memorial Award

Jon H. Falkenberg

Memorializes Drs. Nathan Lifson and John A. Johnson by recognizing outstanding teaching or research by a graduate student in the Department of Physiology.

Medical Student Achievement Awards

Christine M. De Lisle

John A. Dvorak

Scott R. Gunn

Christopher B. Hirose

Sarah C. Maier

Daniel D. Maki

Janice M. Sinclair

Minnesota Medical Foundation-funded awards which recognize graduating seniors who have excelled in student leadership, community service, academics, and research.

Metropolitan-Mount Sinai Outstanding Medical Student Awards

*Linda T. Daghestani
Janice M. Sinclair*

Established by the medical staff of the former Metropolitan-Mount Sinai Hospital as a remembrance and recognition of the contributions of that organization and its predecessors, the second- and fourth-year awards recognize students who show promise of becoming superior physicians or clinicians.

Warren Moon/ Crescent Moon Foundation Scholarship

Marc R. Brandon

Given by the Warren Moon/ Crescent Moon Foundation.

James E. Rubin Memorial Medical Scholarship

Robert R. Kempainen

A designated endowment within the Jewish Community Foundation, the scholarship honors the memory of Dr. Rubin by recognizing a senior medical student who exhibits the highest degree of excellence in diagnostic skills and ethics.



Dr. Burtrum and Evelyn Schiele Scholarship. Dr. Robert Howe, Evelyn and Burt Schiele, Philip Kerr.



Warren Moon/Crescent Moon Foundation Scholarship. Dr. Robert Howe, Lisa McGregor of the Moon Foundation, Mark Brandon.



Undergraduate Research Awards. Dr. Robert Howe, Jacqueline Paul, Robert Zeleznikar.

Dr. Sharon Satterfield Medical Scholarship

Glenn W. Weidenbacher

Provided by an anonymous donor to honor the professional contributions of Sharon Satterfield, M.D.

Dr. Burtrum and Evelyn Schiele Scholarship

Philip E. Kerr

Established by Dr. Burtrum Schiele, professor emeritus of psychiatry, and his wife Evelyn.

Undergraduate Research Awards

Jacqueline A. Paul

Robert J. Zeleznikar

Minnesota Medical Foundation-funded awards which recognize the most meritorious research papers written by graduating seniors.

George E. Williams Scholarship

Andrea D. Fisk

Established in memory of Dr. Williams, former professor of psychiatry and assistant dean of student affairs.

Zagaria Research Award

Catherine M. Buley

Established to recognize original research in cardiology and oncology by an undergraduate. ■

MMF grant recipient: Edward Y. Cheng, M.D.

Osteonecrosis, also known as avascular necrosis, is defined as death of bone cells and can lead to the painful deterioration of the hip joint. Currently, there is not an adequate understanding of this disease nor a highly successful available treatment.

Dr. Edward Cheng, assistant professor, Department of Orthopaedic Surgery, recently received an \$8,500 MMF grant to study "Osteonecrosis Due to Immunosuppression in Organ Transplantation: A Possible Role for Calcium Channel Blockers? A New Treatment to Delay Hip Replacement in the Collapsed Femoral Head?"

"We don't know why osteonecrosis occurs, but it happens very frequently in patients who have had organ transplantation and it also happens in the general population. It is one of the unsolved problems in orthopaedics," says Cheng. "The disease can present with a broad range of severity and can also occur in many different bones. One common location is the femoral head, which is the ball of the hip socket joint. Over time, the round shape will collapse so that it doesn't rotate well in the hip socket. This can result in a stiff and painful joint and eventually the patient loses function of the joint as the arthritis progresses."

Transplant patients develop this condition more frequently than the general population. With the MMF funding, Cheng plans to evaluate some non-surgical methods of treating the disease and for more advanced cases, he intends to study some techniques currently used in bone tumor surgery. "In the earliest stage of the disease, one would like to prevent the disease from progressing to arthritis. So, when arthritis has not yet set in but the patient is having hip pain, we will look at trying to treat it medically, with a calcium channel blocker," explains Cheng. "In the more severe cases, where arthritis is already present, we are looking at surgical procedures that may preserve the hip joint and prevent total hip replacement."

Another aim of the study is to determine if non-specific bone pain in transplant patients is a signal that they may develop osteonecrosis. Cheng hopes to gather more information that will show whether this pain and the potential osteonecrosis are treatable with calcium channel blockers.

The information generated from this project



Dr. Edward Cheng

could help qualify a similar research project for further funding from the National Institutes of Health. "We came to MMF because we hope to participate in a program project grant with the general surgery department. Collaboration with Dr. Arthur Matas and the renal transplant team has already been useful in studying the longevity of hip replacements in transplant patients, and we hope to continue the combined research effort. Having this project underway could be very helpful in this process."

Cheng is originally from Philadelphia and received his B.S. and M.D. degrees from Northwestern University, Chicago. He served his general surgery internship and residency at Northwestern University, McGaw Medical Center, and his orthopaedic surgery residency at the Harvard Combined Orthopaedic Surgery Residency Program in Boston. He was chief resident at Beth Israel Hospital in Boston and was later assistant medical director at Massachusetts General Hospital Bone Bank and assistant in orthopaedic surgery at Harvard Medical School. He came to the University of Minnesota as assistant professor of orthopaedic surgery in 1990. ■

MMF AFFILIATES

Children's Cancer Research Fund

The fifth annual Fash Bash, presented by Dayton's, was held July 25 at the Historic State Theatre in Minneapolis. Fash Bash offered music and entertainment, including



singer Francine Roche, recording artist Cynthia Johnson, and Bob Skogins, a one-man band. Ballet of the Dolls, choreographed by Myron Johnson, supplied the artistic and dance elements of the show.

The Dayton's Challenge, held July 1 at the Minneapolis Golf Club, featured 12 Professional Golf Association tour professionals. Hornel, Timber Lodge Steak-

house, and the Luther Family of Automobile Dealerships cosponsored the event. Festivities included several clinics with the professionals, and a blues festival.

Ladies Professional Golf Association Tour professionals Helen Alfredsson, Pat Hurst, Michelle McGann, and Kris Tschetter participated in the grand opening of Rush Creek Golf Club in Maple Grove on June 10. The event included a player clinic and 18-hole match, and an opportunity to meet the players. All proceeds benefited CCRF, Children's Hospital-Children's Healthcare, Minneapolis Heart Institute, and Virginia Piper Cancer Institute.

CCRF's annual Benefactors Circle dinner was held May 30 at the Metropolitan in Golden Valley. On May 11, more than 400 riders gathered for the Trek 100 bicycle ride to benefit childhood cancer research. CCRF received \$50,000 from the event.

CCRF will again benefit from an event at the Mall of America, sponsored by *Country Home* magazine. A full-size Victorian showhouse will be constructed and decorated for the holidays in the mall's rotunda. CCRF will receive all proceeds from the prize drawing donations to win the home and its furnishings. For more information, call 612-929-5535 or 1-800-922-1MMF. ■

Diabetes Institute for Immunology and Transplantation

An endowed fund to honor Mary Ellen Baran White has been established. The endowment was created through a gift from the estate of Baran White, who hoped other diabetics would have the opportunity to enjoy a "new life" free of diabetes, as she did from 1978 until her death, by accident, in December



1995. She had the longest surviving graft function of any cadaver pancreas transplant recipient in the world — over 15 years. The Mary Ellen Baran White Fund for Diabetes Research will provide income in perpetuity to support the research priorities of the Institute.

More than 130 people attended the Cartier Challenge for Diabetes July 1 in Duluth. The Cartier Agency, Inc. sponsored the Challenge, which included a charter boat fishing contest and a golf tournament, followed by a reception, dinner, and program. This was the first year for the planned annual event. Proceeds raised will benefit the Diabetes Institute.

James Davis, Master of Joppa Lodge #300 of St. Louis Park, and Bill Papas, Past Master of Joppa Lodge #300, presented a \$2,000 check from the Grand Lodge Ancient Free and Accepted Masons of Minnesota to Dr. David E.R. Sutherland for the Diabetes Institute for Immunology and Transplantation Fund. For more information about creating an endowment or the Institute, call 612-626-2101 or 1-800-922-1MMF. ■

International Hearing Foundation

IHF activities continue in service, research, and education. Through its staff and physicians, IHF provides charitable service for ear disease, including diagnostic, therapeutic, and surgical services and hearing aids, in cooperation with Riverside Medical Center, St. Mary's Clinics, and local hearing aid manufacturers. Meniere's disease and tinnitus support groups learn from speakers such as Dr. Steve Juhn, who recently spoke about basic research in Meniere's disease.



Research into otological problems, especially otitis media and Meniere's disease, is often coordinated with NIH-sponsored research at the University and continues in exciting new directions. Lectures and research presentations are held regularly in the United States and other countries. The Eivind Hoff Research Scholarship Award was presented to medical student Payan Tristani-Firouzi, for superior work in the field of otology.

IHF fellows observe clinical activities and participate in research at the University of Minnesota in or through the otopathology laboratory. Current IHF post-graduate fellows include Drs. Zhang Quana-an, China; Cemil Mutlu, Turkey; and Michihiko Sone and Hirokazu Kawano, Japan. Current clinical fellows include Drs. Matt Patterson and Jay Raisen. For more information about IHF, call 612-339-2120. ■

Minnesota Mortuary Science Foundation

The National Funeral Directors Association presented the Occupational Safety and Health Association Compliance Committee of the Minnesota Funeral Directors Association (MFDA) with an award to recognize Minnesota's OSHA trainers network and training materials.

Drs. John Kroshus and Michael Mathews of the Program of Mortuary Science developed a "Train the Trainers" manual for the initial phase of the project and delivered six training sessions statewide. The 75 participants were certified by MFDA to deliver annual OSHA training updates to their colleagues. Those annual sessions are being delivered during Fall District Meetings, in each of the MFDA's 11 state districts, supplemented by site-specific training offered by employers. For more information, call 612-624-6464. ■

University Children's Foundation

The seventh annual Catch a Rising Star benefit, the WineFest and Auction, was held May 16 and 17. The event was a huge success, raising over \$130,000 for pediatric research and the UCF Scholar Award. A \$50,000 grant was given to Dr. Antionette Moran, assistant professor of endocrinology, for her research into pancreatic dysfunction in cystic fibrosis. Plans are underway for next year's WineFest, scheduled for the third weekend in May.

Dr. Alfred Fish, professor of pediatric nephrology, is the new director of the University Children's Foundation. Fish is one of the founders of UCF and has been a leading recruiter since UCF's inception in 1989. Volunteer Terri Cole brings valuable development experience from Targeted Media, and has been involved with plans for next year's UCF WineFest and Auction.

Recent events benefiting UCF include Dark Star's Charity Golf Classic, held July 10 at Bristol Ridge Golf Course in Somerset, Wisconsin. The tournament was sponsored and funded by UCF supporters Tim, Judy, and Angie Dove, owners of Action Battery Wholesalers, Inc. For more information about UCF, call 612-625-1471. ■



University of Minnesota Physical Therapy Program

The Program in Physical Therapy has recently been approved by the Board of Regents to change to a master's degree program which will be implemented in the summer of 1997. The new curriculum will be expanded from two years to 2-1/2. The conversion to a graduate program is a national trend in physical therapy education and is consistent with the growing body of knowledge and the expanding clinical responsibilities in the field.

In addition, the program is celebrating its 50th anniversary. An all-class reunion is scheduled for homecoming weekend, October 18-19. All alumni are encouraged to attend this special celebration. More information is available at 612-626-5303 or on the World Wide Web, <http://physther.med.umn.edu>.

A new doctoral program in Rehabilitation Science will also be implemented in fall 1996. This program will be open to all individuals with a background in physical rehabilitation. Interested individuals may contact 612-626-5303 for more information. ■

Variety Children's Association

Variety Children's Association will support the newly established Biotherapy Institute at the University of Minnesota through fund-raising campaigns and other efforts of its donors and volunteers. According to George Reilly, Variety's board president, the Biotherapy Institute is an innovative and effective program designed to treat the most devastating childhood diseases, such as leukemia and other forms of cancer, diseases of the immune system, and heart disease. "This represents a major opportunity for Variety to help in providing care for critically and chronically ill children in the most effective way," says Reilly.

Knott's Camp Snoopy donated more than \$12,000 to Variety Children's Association to help build the KDWB Family Home, where a patient's family can stay close to their hospitalized child during ongoing treatments or recovery.

Golfers teed off at the Minnetonka Country Club June 24 for the fifth annual Variety Children's Association-Snyder's Golf Tournament, with more than \$50,000 raised. Funds raised will support the Snyder's Van Program. For more information, call 612-624-6900 or 1-800-922-1MME. ■



Vision Foundation

The first annual "Visions From the Past — Hope for the Future" event will be held April 26, 1997, at the James J. Hill Mansion in St. Paul. The theme is "An Evening of Victorian Romance" and activities will include recognition of new giving club members, house tours, concerts, dinner, and more. Funds raised will support the Department of Ophthalmology's Research and Education programs.



The Annual Dinner Meeting for the Vision Foundation was held August 8 at the Woman's Club of Minneapolis. The event honored retiring board members Drs. Peter Army, W. Bruce Clark, Harry Friedman, Ronald Frauenschuh, Karl Sandt, George Tani, and Betty Walen.

The 10th annual Thanksgiving For Vision celebration will be held October 12 at the Bloomington Airport Marriott. The event is sponsored by the Minnesota Lions Eye Bank to honor Lions Clubs and individuals making significant contributions to eye research and education.

The next Gift of Sight Tours will be conducted in November. Friends of the Vision Foundation are invited to see the Department of Ophthalmology's research laboratories and education facilities, including the Lions Children's Eye Clinic and Lions Research Building. For more information, call 612-625-9613 or 1-800-922-1MMF. ■

Medical Alumni Society President's Report

I am pleased to join you as president of the Medical Alumni Society for a second time. I welcome the opportunity to help lead this organization for another term. The University of Minnesota Medical Schools are at a crossroads and I believe we as alumni have an opportunity and an obligation to support this great University and these medical schools.

We will be working closely with the administrators of the Academic Health Center and the Medical Schools. We will also be asking many of you to serve in a variety of roles, whether helping students in a Medical Alumni Society project or more directly in some aspect of the educational process. Many of you already do that and we thank you!

The Medical Alumni Society and the Minnesota Medical Foundation are looking for ways to serve you better. One way this is happening is by the creation of the Minnesota Medical Foundation's World Wide Web homepage, which will include many alumni related services and information. We will look forward to your input on this.

I hope you will use the Medical Alumni Society as a way to communicate with our medical schools. As we move into a new year, let's take this opportunity to get involved!

Sincerely,

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

The Medical Alumni Society announces

Spring Alumni Reunion Weekend 1997

June 5-7, 1997

All alumni welcome.

Honoring the classes of 1947, 1952, 1957, 1962, 1967, 1972 and the Half Century Club.

Contact the Medical Alumni office for more information, 1-800-922-1MMF or 612-625-8676.

CLASS NOTES

1960

Dr. Arnold P. Kaplan, Minneapolis, was recently awarded the Distinguished Clinician Award by the American Gastroenterological Association. Kaplan is the only Minnesota gastroenterologist to receive the award. For the past 30 years, he has practiced medicine in the Twin Cities area. Kaplan

developed the first community hospital based endoscopy center at the former Mt. Sinai Hospital in Minneapolis. In 1973, he helped found Digestive Healthcare P.A., now a division of Minnesota Gastroenterology. Kaplan is also a clinical professor of medicine at the University of Minnesota.

1961

Dr. Joseph J. Westermeyer, St. Paul, presented a talk on "Posttraumatic Stress Disorder Among Refugees" at the French Federation of Psychiatry in Paris in May. He also conducted a one-week seminar in July on "Alcoholism and Addictions" in Cambodia.

1982

Dr. Ronald M. Ferguson, Columbus, Ohio, was named the 1996 Surgical Alumnus of the Year.

1989

Dr. Michael T. Schueppert has relocated to the Twin Cities. In July, he joined the Park Nicollet Clinic after spending two years at the University of Iowa completing a vascular surgery fellowship.

Dr. Julio A. Solla recently left his position in colon and rectal surgery at Walter Reed Army Medical Center in Washington D.C. He is now an assistant professor of surgery at the University of Tennessee Medical Center in Knoxville and has a

practice limited to colon and rectal surgery.

1990

Dr. Kristi M. Schoeld, Ganado, Arizona, and her husband, Dr. Neil Jorgensen (University of Washington, 1990) are working for the Navajo Nation at the only Navajo/private owned and operated hospital on the Arizona reservation. They work in inpatient, outpatient, obstetrics, and the emergency room.

Dr. Gene Y. Sung, Laurel, Maryland, finished a fellowship in neuro-critical care and will be staying on the faculty at Johns Hopkins Hospital.

1993

Dr. Christine M. Seroogy, Redwood Shores, California, will begin her fellowship in allergy/immunology at the University of California, San Francisco.

1995

Dr. Michael D. Heaney, Ann Arbor, Michigan, has completed the first year of his radiology residency at the University of Michigan. ■

LLOYD I. GILLIN, M.D., Class of 1943, Bakersfield, California, died April 18 at age 78. Dr. Gillin was the director of the Florence Wheeler Cancer Center at Mercy Hospital in Bakersfield. He was a fellow of the American College of Radiology and a member of the Kern County Medical Society and the American Society of Therapeutic Radiology Oncology. He served as Destroyer Squadron Medical Officer in the Pacific during World War II. For 48 years, Dr. Gillin was a self-employed health care physician. He is survived by his wife, Lee, one daughter, and one son.

HAROLD N. GORDON, M.D., Class of 1946, Avila Beach, California, died April 11, 1994. He is survived by his brother, Milton.

SIDNEY H. MEDOF, M.D., Class of 1935, Glendale, California, died April 21, 1994, at age 84. After completing his internship at Minneapolis General Hospital, he moved to Glendale, where he started an HMO and ran a walk-in clinic where he practiced family medicine. He retired from practice in the early 1980s. While practicing medicine, Dr. Medof also built several small apartment units in the Los Angeles area. In the 1960s he developed four convalescent hospitals. He is survived by his wife, Rose, and two children.

DONALD R. NAVRATIL, M.D., Class of 1942, died February 2 at age 84. Formerly of Glencoe, Minnesota, Dr. Navratil resided in Harlingen, Texas. He attended Macalester College in St. Paul before entering the University of Minnesota Medical School. Upon graduation, Navratil served in the U.S. Army medical corps during World War II. He began practicing medicine in Montgomery, Minnesota, in 1946. In the mid 1950s, Dr. Navratil studied surgery at Johns Hopkins University. In 1957, Dr. and Mrs. Navratil moved to Glencoe, where he practiced medicine until his retirement in 1977.

CORRECTIONS

WILLIAM H. FLEESON, M.D., West Hartford, Connecticut, died on November 13, 1995, at age 80. He was formerly an assistant dean and associate professor of psychiatry at the University of Minnesota Medical School. He is survived by five children. His son, William P. Fleeson, M.D., M.P.H., of Duluth, Minnesota, Medical School Class of 1969, continues to practice occupational medicine and disability evaluation in Duluth.

J.C. "CONNIE" MILLER, M.D., Class of 1931, St. Louis Park, Minnesota, died February 1 at age 89. Dr. Miller practiced internal medicine for over 45 years. He was former chief of staff at Abbott-Northwestern Hospital in Minneapolis and clinical professor at the University of Minnesota. For more than 25 years he served as company physician for Northwestern Bell Telephone Company. He is survived by a daughter and a son. ■

IN MEMORIAM

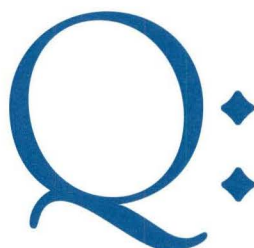
DEAN H. AFFLECK, M.D., Class of 1931, Sun City, Arizona, died October 27 at age 90. He practiced medicine in Twin Falls, Idaho, for 45 years. He is survived by two children.

PHILIP A. ANDERSON, M.D., Class of 1928, Palm Desert, California, died January 14 at age 92. Dr. Anderson served as a proctologist for 45 years, practicing in Pasadena for 10 years. He is survived by two sons and a daughter.

THANKS FOR ASKING



Gary G. Hargroves



I see the phrase *charitable tax planning*. Do I really need to know anything about this?

If you have an interest in reducing taxes, thoughtful planning of your estate and/or finances, or making charitable gifts, it is important to know at least the basics of charitable tax planning.

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- If you are making charitable gifts out of your estate, it makes a big difference what assets you use to fund your gifts to charity and your gifts to individuals. For example, if you gift stock to individuals, they receive a stepped-up cost basis. **That's good.** On the other hand, a gift of pension assets to individuals is subject to both income and estate taxes. **That's bad.** But if pension assets are given to charity (using a beneficiary statement) both of these taxes are eliminated. **That's good.**

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MB-F96

THANKS FOR GIVING

Dr. Russell and Pat Lucas

by Jean Murray

“**T**his is a great University and it's going to get even better,” says Dr. Russell V. Lucas, Jr. “And this is a great Medical School and it's going to get even better.”

In honor of his long-time association with the Medical School, and in appreciation for the work of the Variety Children's Association, Dr. Lucas and his wife Pat have established the Variety Medical Student Scholarship Fund.

The Lucases place a very high value on education, and they know about the financial strains placed on young people trying to complete their medical educations. “Medical school was a difficult time financially for us,” says Dr. Lucas, “and that was back in the '50s. Today the costs are incredible.”

Dr. Lucas decided to be a doctor during his college days at Macalester in St. Paul. “I liked biology, I liked people, and it seemed to be the right fit,” he says. He attended Washington University Medical School in St. Louis, and was interested in cardiology.

A residency in pediatrics at the University of Minnesota coincided with the excitement of the world's first open-heart surgery — performed on a child by Dr. C. Walton Lillehei and his team in 1954 — convincing Lucas that pediatric cardiology was “the way to go. And the best in the world in this field were at Minnesota.”

Dr. Lucas and his family spent five years in West Virginia where he headed the pediatric cardiology program at West Virginia University. In 1966, he was asked to come back to Minnesota to help develop the program in pediatric cardiology. “There was no curriculum, it was all very new,” he says.

“I've seen so many changes in the field of pediatric cardiology. Back when I first started, nearly all the children with congenital heart disease died. Now almost all live. It's exciting to have had a career that covers the whole history of pediatric cardiology.”

Dr. Lucas has been a professor in the Department of Pediatrics since 1969, and was also the Paul F. and Faith S. Dwan Professor of Pediatric Cardiology. He was director of the University's Cardiovascular Research Center from 1979 to 1986, and he received the prestigious Founders



Dr. Russell and Pat Lucas with their two granddaughters, Rachel (left) and Angela Lucas.

Award from the Section of Cardiology, American Academy of Pediatrics in 1993 for his contributions to the field of pediatric cardiology.

The Variety Club has been an important part of pediatrics and cardiology at the University of Minnesota for many years. Variety support helped build the Variety Club Heart Hospital in 1951 and the Variety Club Children's Hospital, which opened in 1986.

Russ and Pat Lucas have contributed years of service to Variety, now called the Variety Children's Association. Dr. Lucas was president of the Variety Club Heart Hospital Association from 1980 to 1985, and was president of the Variety Club of Minnesota from 1986 to 1988. They have both served on the board of directors and are very supportive of the work done by Variety.

Children are a very important part of Russ and Pat Lucas's life as well. Their own four children were born during Dr. Lucas's internship and residency days, and in 1975 the family welcomed five Vietnamese children — ages 2 to 19 — into their home. “I had agreed to be the doctor that would screen 100 newly arrived Vietnamese children. There was a family of five that wanted to stay together — no one else had room for them all so we took them.”

The Lucases stressed the importance of education to all their children, and helped them through their advanced studies. “Education is such a crucial issue,” says Dr. Lucas. “Any country that wants to be great has to educate its children.”

Both Pat and Russ Lucas wanted to establish a scholarship that would provide financial support for medical students from diverse backgrounds. They wanted to honor the Variety Children's Association, an organization that has done so much for children. The Variety Medical Student Scholarship Fund will help meet these goals. ■

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