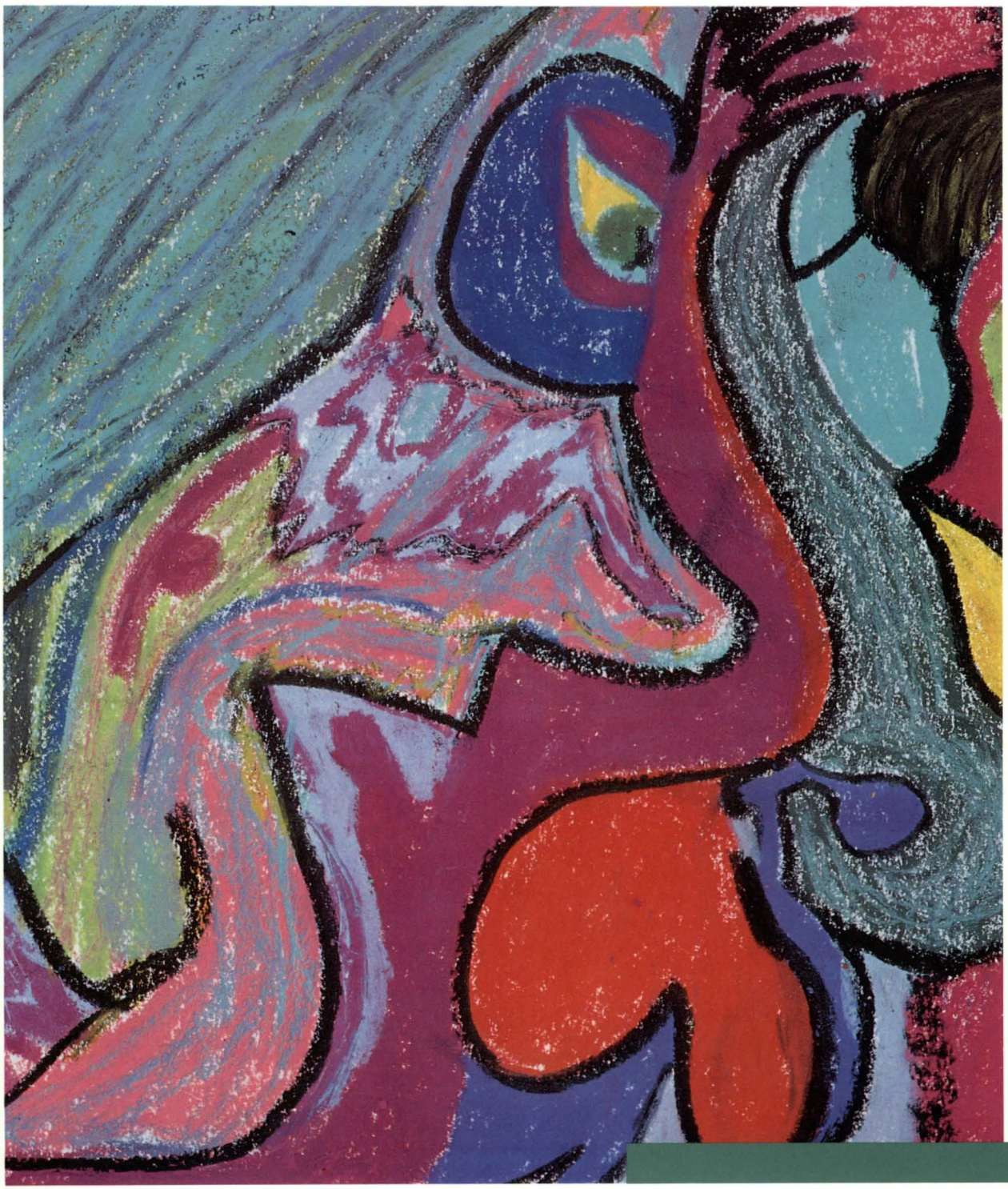
University of Minnesota

Medical Bulletin

A PUBLICATION OF THE MINNESOTA MEDICAL FOUNDATION



The faces of schizophrenia

Fall 1992

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ON THE COVER:

Pastel drawing by Matt Kaul. Other drawings by Matt Kaul are on pages 3-6.

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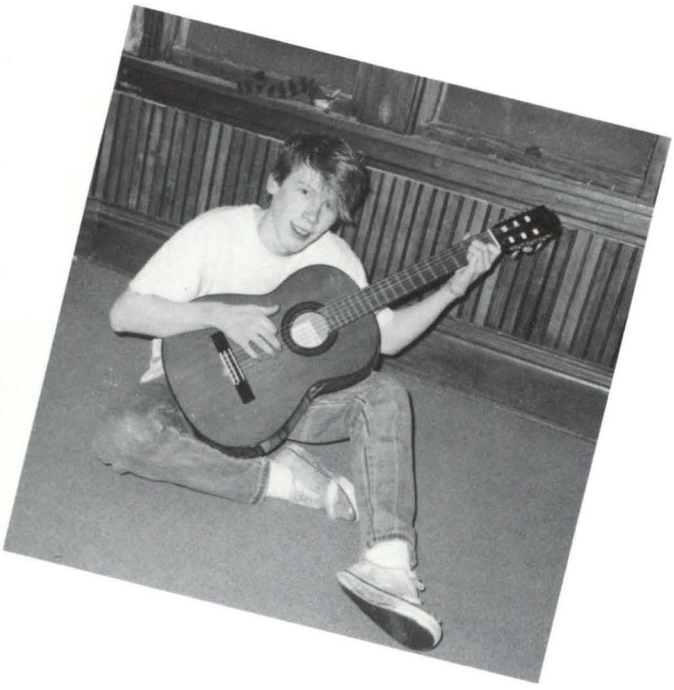
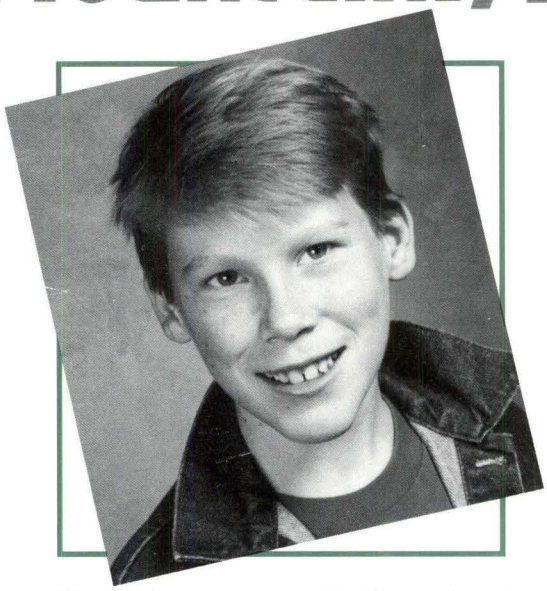


Brightest Mountains, Darkest Valleys . . .

MATT KAUL'S STORY



"I am a happy person who likes nature. I go to St. Paul Central High School and I am 15 years old. For the last three years during the summer I have been involved with Camp Widjiwagen in the Boundary Waters Canoe Area of northern Minnesota. I've been playing the guitar for over a year and plan to continue to play because of my love of music. I just started writing a journal this last school year and in my writings I seem to ask a lot of questions about life, and in my own way, answer them. I like to meet new people and usually have a positive outlook on things."

— Matt Kaul, 1988

For the first 15 years of his life, Matt Kaul was a normal, happy child. He had many friends, and found joy in music, writing, and art.

For the next three years, Matt and his family endured the living hell of schizophrenia, and when that hell became more than he could bear, Matt Kaul ended his life.

Schizophrenia tears its victims and their families apart. Its cause is unknown, so, unlike many diseases, there is no prevention. Diagnosis is very difficult — treatment equally so. Recently developed drugs used in controlling the disease work wonders for some, but not for others.

And the pain of seeing a loved one — often a young person — wrestle with the illness is heart-wrenching.

> *"Matt is a mess. He is deteriorating before our eyes. We have watched his personality slowly ebb a little bit each day."*
>
> *— John Kaul's journal, Winter, 1992*

Schizophrenia is not hopeless, however. Research is underway on all fronts of the disease — research to find the cause, to improve diagnosis so treatment can begin at the earliest possible stage, and to improve that treatment so more people can be helped.

The slippery slope

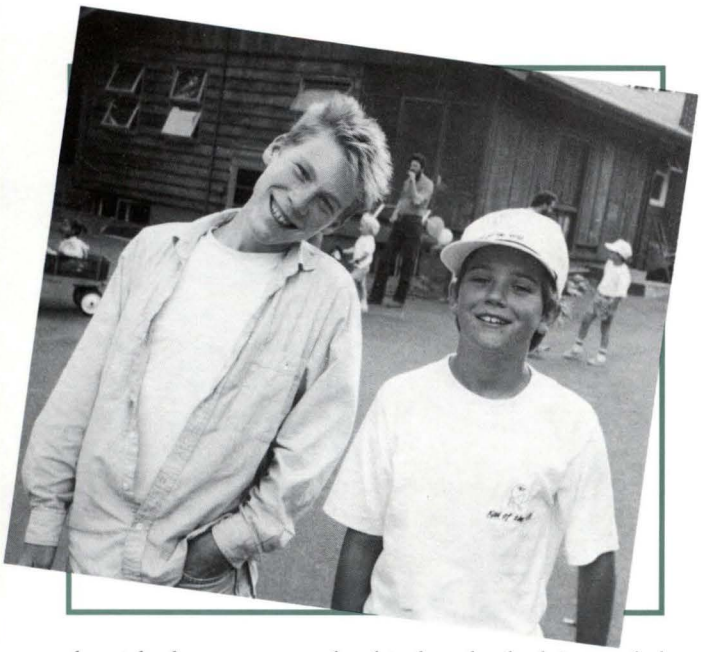
Matt's battle with schizophrenia began shortly before his sixteenth birthday. His behavior changes disturbed the family, although at first were attributed to the ups and downs of adolescence. New friends replaced old ones. Matt began thinking no one liked him, became sloppier, and developed an interest in the occult.

Then, in mid-April of 1989, Matt announced that he knew people could read his mind. Looking back, Matt's family considers this first overt symptom of schizophrenia the onset of his disease. The delusions continued — good days interspersed with bad — and Matt was placed on anti-psychotic medication, although it was some time before a diagnosis of schizophrenia was confirmed.

Matt continued to believe his thoughts were being transmitted or that people could read his mind, including television characters. He sometimes awoke his family during

BY JEAN MURRAY

ILLUSTRATIONS, POEMS, and JOURNAL EXCERPTS
BY MATT KAUL



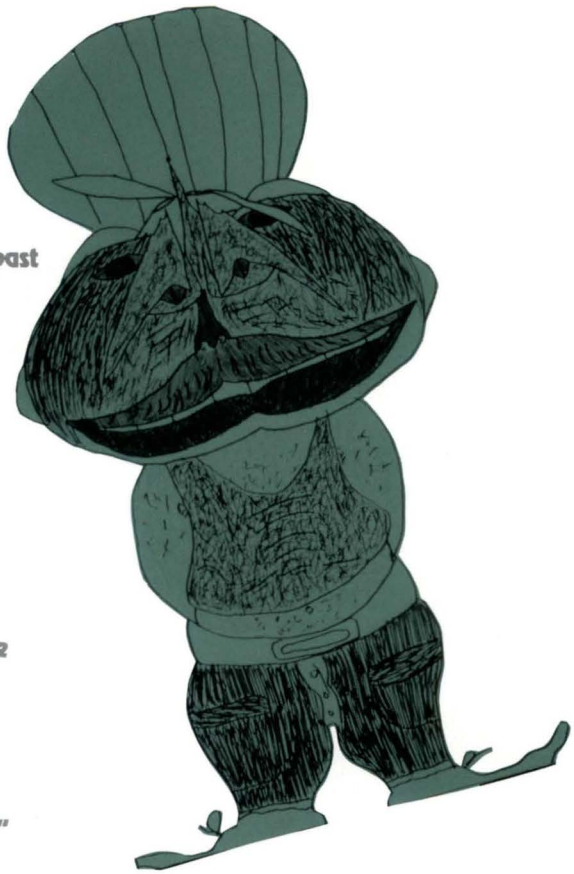
the night for reassurance that his thoughts hadn't traveled far and that no one would hurt him. He hated the medication because it dulled his senses.

> *"I'm still haunted by the summer of 1989 — the year of the onset. I still remember vividly how the whole family spent hours talking him back to sanity and finally convinced him that no one could read his mind (for the tenth time). When Matt awoke we went fishing. I thought things were better, even though Matt seemed to be in a bad mood. Then he said to me, 'Dad, what's going on inside me?' with an anguished and frightened tone. My heart sank. We have all been on a roller coaster since that time."*
>
> *— John Kaul's journal, Winter, 1992*

The intensity of Matt's illness increased from early 1992 until the end. He suffered terrifying hallucinations, heard voices, communicated with God and another, darker force. He suffered psychotic episodes where he alternately cried and laughed all night long, and spent time in locked wards at Anoka State Hospital and Abbott Northwestern Hospital.

In mid-March, Matt's family placed him in a residential treatment center called Wellspring. A few days later, he walked to a bridge over Highway 94 in an apparent suicide attempt, but was rescued by two women who spent hours talking to him. One of the women, soprano Karen Clift, would later sing at Matt's memorial service.

On May 6, Matt was placed in a group home in Lake Elmo. That same day he had attempted suicide again by running into a street full of traffic. Sometime that night, he walked away from the home. Eighteen days later he was found hanging from a poplar tree not far away.



"Lost pages of my past
A crawling baby
falling fast
to the ground
a baby gives
the mother sound.

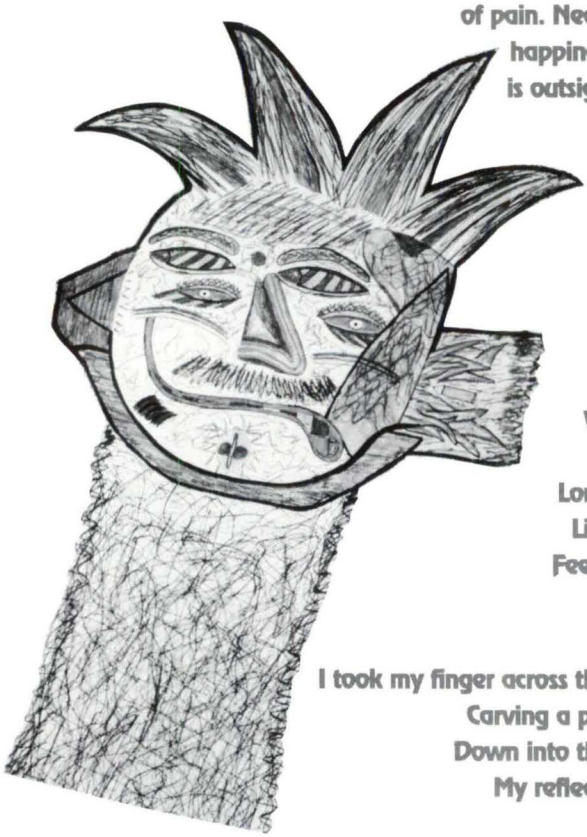
Folded creases
of broken lead
the bells of history
have gone to bed.

Sweet dreams to the
unspoken ones.
Pouring milk
Sleeping peace
A blink of an eye
the forgotten dead."

"I'm at the beginning of my life and at the end of my rope. Holding on to my endurance and ringing the bell of hope. Tainted, yes. Endured, no. Numbed by the temporary satisfaction of forgetting what has gone wrong. With no desire to make it better. Broken, lost yet found. Touching my toes and feeling the sky. The sky is crying. A baby is born and slapped in the face."

"For better or for worse. For a month I felt as if I was walking on the edge. I was hoping the wind was blowing the right way. Like a cartoon. The road runner to be exact. The wind has taken me the wrong way but I seem to have the strength to grab on to that branch. Yet if I had fallen below hopefully like the coyote I will always survive. For better or for worse. A bird without a home. The sky is the limit yet my wings are in raptures."

**"I look around to see where I stand.
I find myself low on the totem pole when
it comes to age. When it comes to struggle
I reached the top. Most everyone believes they
struggle the most. Some people have the insight
or the outer sense of themselves compared to the
people around. They can only see themselves as
if alone in a room. Searching for tranquility
and peace but walking in the dismay
of pain. Necessary to achieve
happiness. To me insight
is outsight. Like an artist.
To look outward
you must look
inward. To
understand
is another
question."**



**"Invisible blue.
Whispers of mind.
Living the lie.
Longing for latitude.
Living in longitude.
Feeling the ground."**

**"Invisibly white.
I took my finger across the invisible white.
Carving a picture of my face.
Down into the shallow water.
My reflection disappears."**

MATT KAUL'S STORY

"It has occurred to me that living with someone who has a deteriorating schizophrenic condition is like the death watch with a person suffering from AIDS or terminal cancer. The only difference is that the body can remain relatively healthy (save for the awful and debilitating effects of the drugs) as the mind and the soul slowly die before your eyes. The decline is not consistent — it seemed that Matt got better even as he got worse. In recent times his peaks were higher, albeit shorter and more erratic, but he plumbed the depths of darkness when he crashed. The preoccupation was with impending death, his own and perhaps that of loved ones and even an end of life on earth."

— John Kaul's journal, Spring, 1992

Schizophrenia is diagnosed in one person in 100 in the United States. About one in four schizophrenics attempts suicide; one in ten succeeds.

John Kaul, a lobbyist for the Minnesota State University System, has learned a lot about schizophrenia during his son's illness. He knows that the outlook is not hopeless for all schizophrenia patients, and he fervently believes an answer will eventually be found through research.

"One third of schizophrenia patients recover," says Kaul. "Another third are able to function on medication. The last third are on a slippery slope to hell."

An era of promise

Schizophrenia commonly appears between the ages of 15 and 30. A description of the early stages of the disease in a recent (July 6, 1992) *Time* magazine article closely parallels Matt Kaul's experience:

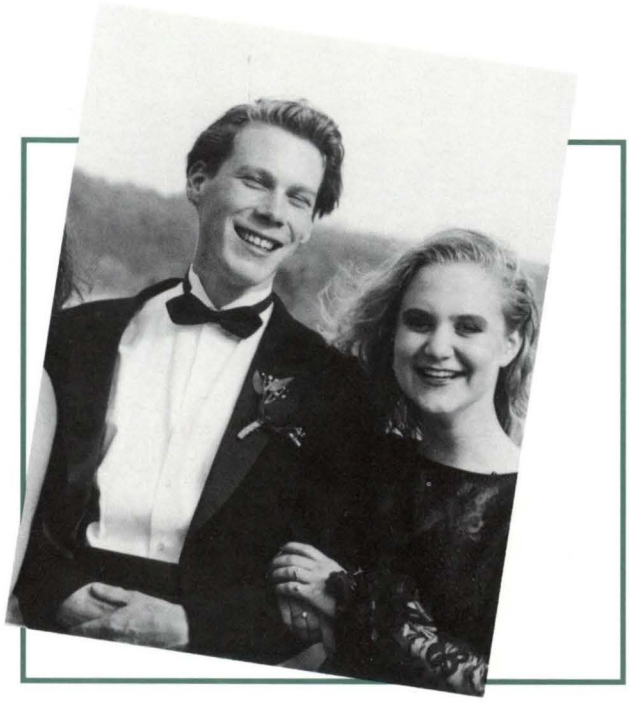
"The onset is insidious. Victims may begin dressing strangely, sleeping at odd hours, withdrawing from friends and family, whispering to invisible companions, or talking back to the television set. They become paralyzed by irrational fears or subject to suspicions that other people are monitoring their thoughts. Eventually the symptoms can no longer be dismissed as the moody vagaries of youth."

The causes of the bizarre behavior remain a mystery, although research indicates that the tendency to develop schizophrenia is hereditary. Environmental factors may also play a role.

"Matt had been in a decline, as puzzling as anything we had seen in three tragic years. The meds seemed to make him more rational than he had been in at least a year, but when he was bad he was much worse. He had become more and more morbid and preoccupied with his

death and the death of family members. He would call up sometimes just to make sure we were all right. He had indicated that somehow he felt he controlled our destiny and the destiny of the world... It is most difficult to think of the youthful Matt. I said to Gloria [John's wife] *yesterday that I felt I was lucky to have had 15 good years with Matt. He was a special person — so sweet and so vulnerable. Schizophrenia is the cruelest malady on earth."*

— John Kaul's journal, Spring, 1992



While some researchers probe the causes of a disease that costs the country $50 billion a year, according to a 1991 study by the National Institute of Mental Health, others concentrate on drug treatments to control the behavior of schizophrenic patients.

Drugs such as Thorazine, first widely used in the 1950s to decrease psychotic symptoms, can have a calming effect although patients may become listless and indifferent. A new drug called clozapine is showing great promise in some schizophrenic patients, and does not generally produce the side effects of the Thorazine family of drugs. It is very expensive, however — approximately $4,000 a year — and requires frequent blood monitoring.

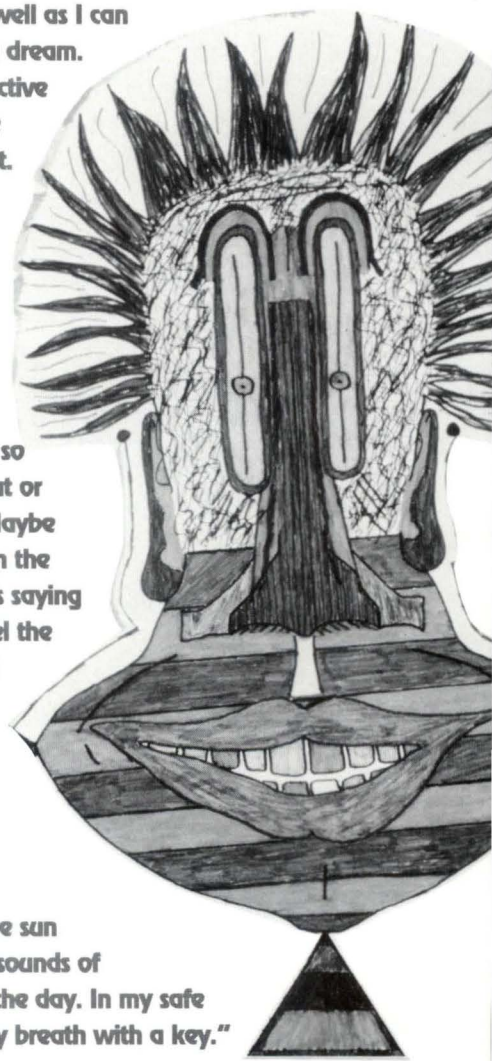
Research into other drug treatments is continuing at a rapid pace at large pharmaceutical firms, and, coupled with the great strides being made in the area of brain chemistry, is causing psychiatrists who deal with schizophrenia to be optimistic.

According to the *Time* article, "(There is) a growing consensus among scientists that dysfunctions like depression and schizophrenia — and indeed most mental disorders — are at their core disruptions of normal brain chemistry and can often be treated as such."

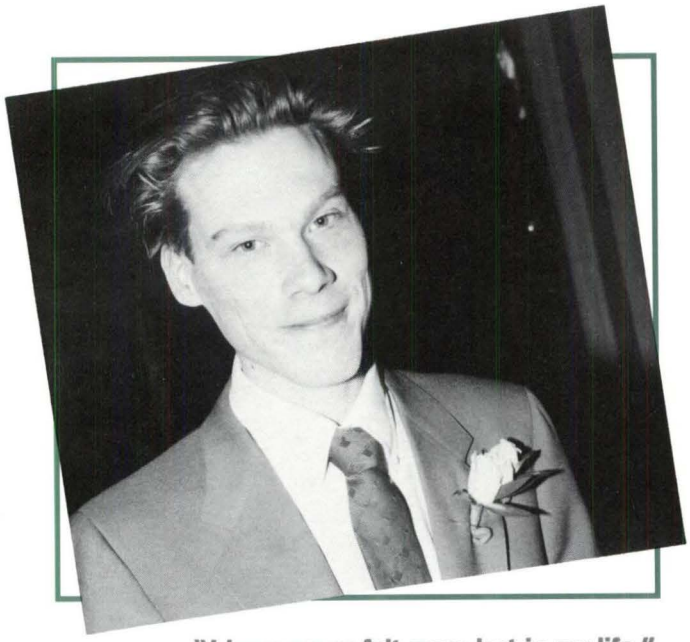
The article states that "advances are being made against virtually every affliction to which the human mind is prey... With computerized scanners, researchers are peering at the chemistry of the working mind. Meanwhile, molecular biologists are beginning to map abnormal behavior to specific strands of DNA. And by tracing the action of drugs like clozapine for schizophrenia, scientists can link moods and feelings to the action of certain chemicals in the brain. The result is a burst of new ideas about how the mind works — and what is going on when it does not — unequaled since the days of Freud and Jung."

"I'm sad tonight for a number of reasons. Mostly because I believe that this marks the end of an era — the Matt era. He was such a big part of my life for 19 years

"Is this a nightmare and soon I will be awakened. Not really realizing or understanding what has happened to me. Especially as well as I can understand in the middle of the dream. Negative reflections. Self-destructive alienation which contradicts the entire base of the entire concept. I hate this. I hate this the more sane I become whether or not I was or wasn't sane before. Just saying I always had at least one foot on the ground (I think). For me to know. To each their own. There are so many details. The brain itself is so complex. There's no saying what or how or when I was not sane. Maybe I am mentally ill. At this point in the duration I don't care. Like I was saying the more sane or complete I feel the more confused I feel the more I don't care to fight. I guess its just the struggle afterwards that hurts the most."



"As warm as the womb was, nothing makes me sweat more than a hot day in August. As the sun beats down upon my face, the sounds of life are muffled by the heat of the day. In my safe keeping I unlock the door of my breath with a key."



"I have never felt more lost in my life."

"At present I feel as if love is a sinking feeling. Yet it seems as if I'm either ahead of it or behind it. I must accept that feeling and move on. People have a tendency to go against the grain. At least I do. My goal is to flow like water."

The Matt Kaul Schizophrenia Research Fund

A fund has been established in memory of Matt Kaul at the Minnesota Medical Foundation. Called the Matt Kaul Schizophrenia Research Fund, it will support research into the causes, diagnosis, and treatment of schizophrenia and related psychoses at the University of Minnesota Medical School.

On November 15, a benefit in support of the Matt Kaul Schizophrenia Research Fund will be held at the World Theater in St. Paul. Many local celebrities will be involved in the event, including Karen Clift, Dale Connolly, Bill Holm, and Howard Moore.

For more information about the fund or the benefit, call or write the Minnesota Medical Foundation at Box 193 UMHC, University of Minnesota Medical School, Minneapolis, MN 55455, (612) 625-1440, or (612) 436-6033.

and henceforth I believe events will be divided into two categories — those which occurred before he died and those which occurred after. More and more I think of the sweet little lap dog that went everywhere with his parents — that teachers loved."

— John Kaul's journal, Spring, 1992

The University of Minnesota Medical School is an active participant in schizophrenia research. New projects include that of Dr. Julie Lesser, Fellow in the Department of Child and Adolescent Psychiatry, who plans to investigate cellular mechanisms underlying psychiatric disorders through the integration of basic and clinical research.

"We suspect," says Lesser, "that in conditions like schizophrenia, developmental changes or scar formation may be occurring in specific places in the brain. We are trying to develop techniques that will allow us to detect these kinds of processes, which may be very subtle.

"Recent reports from autopsies of patients with schizophrenia suggest that there is a disruption in the pattern of nerve cells in a specific region of the brain called the hippocampus," she says. "The hippocampus is a crucial area for memory and perception, which are two brain functions that are disturbed in schizophrenia. We are very interested in these findings and will use special staining techniques to try to further characterize changes in the hippocampus.

"This type of research," reports Lesser, "may help us to better understand how a disease like schizophrenia develops. Some day this type of understanding may lead to prevention and treatment strategies."

The prevention and treatment did not come in time for Matt Kaul, but with continued research it will come in time for other young people — young people who write beautiful poems, paint beautiful pictures, and hold the promise of beautiful lives. ■

"Last night Jenny [a good friend of Matt's] *told two funny little anecdotes about Matt. How he hooked her into coming in one late night and then convinced her to listen to the entire opera Don Giovanni. On another occasion he called in the middle of the night and asked her to come up to the house. She said, 'Matt, it's the middle of the night! What do you want to do now?' He said, 'Let's make mad passionate ... angel food cake.' "*

—John Kaul's journal, Spring, 1992

UMD School of Medicine: Twenty Years of Excellence

After just two decades, the School of Medicine in Duluth is a model for the nation of a successful family practice medical school.

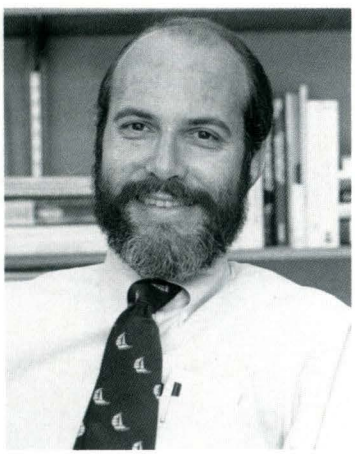
The first 20 years of the UMD School of Medicine's history have been extraordinary. We began with the commitment to train the highest quality rural family physicians and we quickly moved to become national leaders in achieving this critically important goal. To sustain that accomplishment, we remain focused in our dedication to that purpose.

There have been incredible advancements in the field of medicine since the early 1970s. The School has responded by giving its students a contemporary, scientific understanding of this new knowledge, which includes factors responsible for disease, from societal to molecular.

In addition, we have been careful to impart the enduring values that are integral to the professional identity of a skilled physician. Among these are a dedication to the relief of suffering, scientific curiosity, unyielding integrity, and sensitivity to the human condition. These same values also reflect the highest ideals of our faculty, both full-time and volunteer, and of our staff, who have together established and maintained our strong and innovative program.

Less recognized, but equally important, are the thousands of supporters who have been at our side for much longer than 20 years. They have contributed inexhaustibly on our behalf, assisting where needed, advising when appropriate.

The next 20 years will be no less exciting. We approach this period with great enthusiasm. We build on the knowledge and experience of those who have been such an important part of our heritage. We will continue the strong tradition of excellence that has come to characterize the UMD School of Medicine in education and research, as well as service to the people of Minnesota and the nation.



Ronald D. Franks
Dean

BY JANE BRISSETT

Jane Brissett is a free-lance writer from Duluth. She was formerly senior information representative at the University of Minnesota, Duluth, School of Medicine.
Photos by Ken Moran.

UMD SCHOOL OF MEDICINE HISTORY

A medical school for Duluth

The seeds of the School of Medicine were sown in the Great Depression of the 1930s, when poverty drove many doctors to rural Minnesota where they could raise their own food and live on very little money. They were welcomed by communities that had never had doctors to call their own. But only a few years later, Uncle Sam plucked them out of their practices to serve their country in World War II. After the war, many used the GI Bill to pursue specialized training in the Twin Cities, and there many of them stayed.

Their loss was felt acutely. Over the years, voters pressured local lawmakers to do something about the rural doctor shortage. The lack of physicians in Greater Minnesota was brought to the fore by a 1966 study by the Louis W. and Maud Hill Family Foundation, "Health Manpower in the Upper Midwest," and the issue became a hot political topic.

Just at that time, a chance meeting between Samuel Boyer, M.D., a local physician, and Robert Heller, Ph.D., vice provost of UMD, on a flight from Duluth to Minneapolis bred the idea of a Duluth medical school. Dr. Boyer assembled a group of leaders from the business community and a cadre of concerned physicians to form the Northern Minnesota Council on Medical Education to lobby for the school.

For the next six years the group amassed local support, raised money, and drafted a blueprint for a school that would train family practice physicians to practice in rural areas. Eventually, the two-year Duluth medical school was approved in the face of competing proposals from St. Paul and Rochester. In 1969, the Legislature appropriated $340,000 for planning.

By the end of 1970 the "medical program" had a dean, Robert Carter, M.D., and more than $500,000 had been donated through a grass-roots fund-raising campaign for buildings and equipment. The local medical school was such a popular idea that fund raisers actually exceeded their goal.

Dr. Carter, a Minnesotan, relocated from the School of Medicine at the University of Mississippi in Jackson to face the enormous task of putting together a medical school in just two years. During that period he oversaw remodeling of the Laboratory School on UMD's lower campus that would serve for seven years as the School's home; recruiting and hiring of 15 faculty members — most of them young Ph.D.s fresh out of school; developing of a curriculum; and fulfilling of accreditation requirements. In September 1972, the School's charter class of 24 students arrived to begin their first two years of medical training.

Dr. Robert Carter

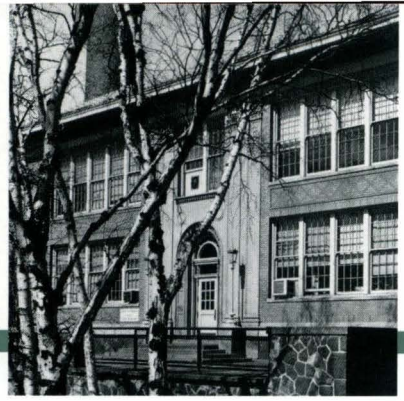
The original staff and faculty members recall those first few years as a time of great excitement and esprit de corps. Dr. Carter and his wife, Lota, promoted the feeling of family among the faculty and staff. They hosted weekly dinner parties at their home, helped with problems, and even made personal loans. The entire faculty worked together, be it developing curriculum, serving as the scholastic standing committee, or moving furniture.

For students, the School was a completely unknown quantity. They found an innovative curriculum, enthusiastic instructors, and an unusually warm, nurturing atmosphere. There were also unadvertised amenities: bears in the creek outside the classroom window and squirrels on the electric lines that competed with instructors for their attention.

School traditions were started then, too. To this day, every student has a key to the School building, students continue to "roast" their professors on skit night, and the admissions committee always looks favorably on the motivation of an applicant who drives through a blizzard for an interview — which several have done.

Dr. Carter's departure in 1974 was the end of an era marked by his strong personality and willingness to fight for the School's rightful place in the University system.

Yet the school was still on shaky ground. It was not funded as an integral part of the University's budget as it is today, and there was some sentiment in the Legislature to close the School. A proposal to erect an $8.2 million building on the upper campus became the focal point of the debate, but funding of 80 percent of the cost by the U.S. Department of Health, Education, and Welfare ended the controversy. The School's permanent home opened early in 1979.



UMD School of Medicine, 1974.

Educational program

During his first month in Duluth, Dean Carter assembled 25 experts from Minnesota and beyond to advise the School on curriculum development.

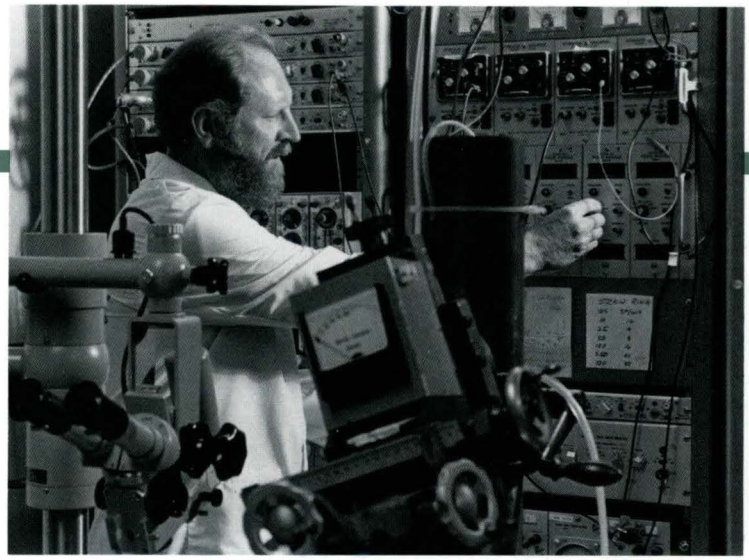
As it took shape, two unique aspects emerged: emphasis on behavioral sciences and early exposure to patient care. In the behavioral science classes, students learned about their future patients by studying topics such as the sociology of rural communities.

Understanding patients as people, not simply as organisms, was deemed important to becoming an effective family practitioner. Clinical rounds, as well as mini-rotations in internal medicine, obstetrics, surgery, pediatrics, and emergency medicine helped students get a flavor of the profession. A preceptorship program for both years was developed with guidance from James Boulger, Ph.D., then-associate dean, and William Jacott, M.D., a dedicated local family physician who later became assistant vice president for Health Sciences and American Medical Association trustee. Each student lived with and shadowed a rural family doctor several times a year and the program became a cornerstone of the curriculum.

The innovations were enormously successful, continue as part of the curriculum today, and have been recognized nationwide. In 1990, the School received the prestigious National Rural Health Association's Outstanding Rural Health Program Award as a result of the preceptorship program.

Dr. James Boulger

During the early years academic departments were less formal than they are now, and their names have since been changed slightly to better reflect their disciplines. Today they are known as the departments of Behavioral Sciences, Biochemistry & Molecular Biology, Anatomy & Cell Biology, Clinical Sciences, Medical Microbiology & Immunology, Pathology & Laboratory Medicine, Pharmacology, and Medical & Molecular Physiology.



Research labs at the UMD School of Medicine were designed with faculty input.

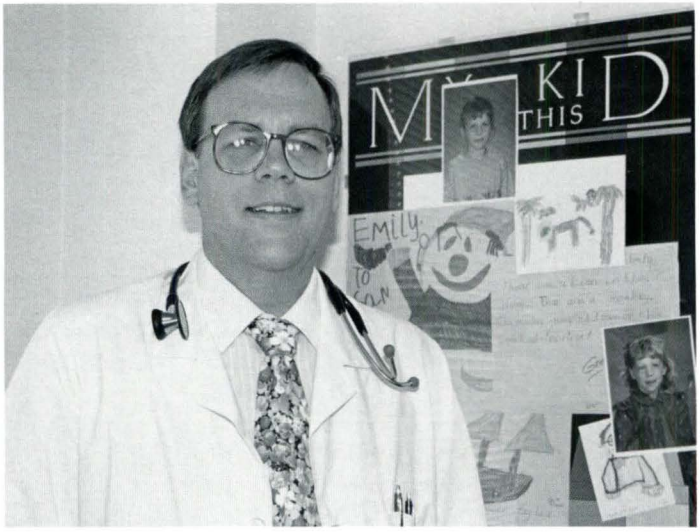
Alone, the School could not offer a complete education to its students. The School's teaching and research programs in the early years received assistance from partner departments on the Twin Cities campus. Students have also profited from strong associations with the Duluth Family Practice Center; The Duluth Clinic, Northland Medical Associates, and numerous other clinics and family practice groups throughout Minnesota; and St. Mary's, St. Luke's, and Miller-Dwan hospitals in Duluth. All have provided important training experiences that students could not receive on campus.

UMD medical students traditionally have had close relationships with their professors. Few programs in the country enjoy the School's ratio of two students to one faculty member; one of the results of careful nurturing is that the students have a record of performing well on National Board examinations.

However, the amount of information future physicians must know has increased exponentially during the past 20 years. Dean Ronald Franks, M.D., has encouraged renewed emphasis on teaching, which has resulted in adoption of a new curriculum. It includes problem-based learning aimed at encouraging students to teach each other, work together, and solve problems similar to those they will encounter in medical practice. Also, aspects of biochemistry, physiology, and micro-anatomy have been integrated into a course dealing with cellular and molecular perspectives of the body. The changes reflect the common foundation shared by all of the basic sciences.

Research

The School's first order of business in the early 1970s was to develop a curriculum. But a top-notch medical school should be expected to conduct research as well. Therefore, Dean Carter encouraged all faculty to initiate research



Roger Waage, M.D., *remembers clearly the first day of medical school at UMD in September 1972. Twenty-four students were lined up to pay their tuition but there was a problem. No one knew who to make the checks out to.*

Although members of the School of Medicine's charter class endured a few such glitches, they had a sense of being special. Most of them, including Dr. Waage, became family practitioners just like they were supposed to. An interview with admissions dean John Leppi had convinced him the new medical school would be to his liking, and it was.

Since finishing his residency at the Family Practice Center in 1979, Dr. Waage, 41, has practiced in Duluth with P.S. Rudie M.D. & Associates, a six-physician practice, and has served as medical staff chief of the Department of Family Practice at St. Mary's Medical Center. His greatest satisfaction comes, he says, from really knowing his patients and their families and being able to help them. He also enjoys spending time with current medical students as a preceptor.

projects, and he gave strong support and School funding to those who set up laboratories. He also encouraged researchers to find a niche — to do research that would take advantage of their location in northern Minnesota.

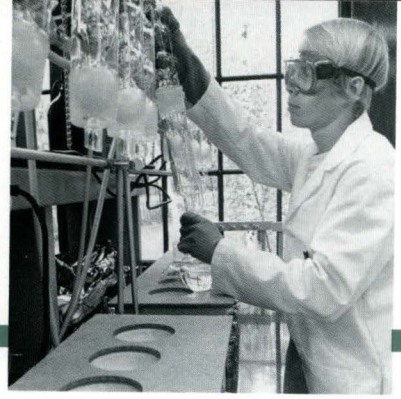
Perhaps the first foray in this area was the School's assistance to federal court hearings investigating the effects on human health of asbestos-like fibers in Lake Superior. The particles were in the Duluth drinking water because Reserve Mining Co. in Silver Bay dumped taconite tailings into the lake, creating one of the biggest news stories of the day.

Two of the first actual research grants were to Wilmar L. Salo, Ph.D., of the biochemistry department, from the National Institutes of Health for a study of the biochemistry of amino sugars, and to Robert Pozos, Ph.D., formerly of the physiology department, and Richard Ziegler, Ph.D., of the microbiology department, from the Sloan Foundation for a collaborative study on electrophysiological consequences of herpetic infections of the nervous system. The Sloan Foundation grant funded the School's first animal colony as well.

During the mid- to late 1970s, the efforts of John LaBree, M.D., who became dean in 1975, resulted in a $250,000 gift by the Paul Dwan family to the School for general faculty research. Those funds put faculty members on track to begin extensive scientific investigations.

Dr. John LaBree

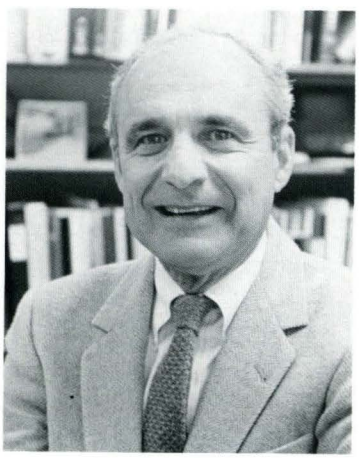
As research became a significant part of the School's character, a small number of students pursuing master's degrees and Ph.D.s, as well as post-doctoral fellows, gradually have come aboard in six departments. Their studies generally integrate work on both the UMD and Twin Cities campuses. In 1991, the School began a University-wide, four-year interdisciplinary doctorate training program in chemical toxicology. The graduate students' presence has enriched the educational atmosphere and their assistance in laboratories has enhanced the School's contributions to scientific discoveries.



A junior scientist works in the Chemical Toxicology Research Center at UMD.

The new building's opening in February 1979 gave research another important boost. Where the Laboratory School building offered cramped, inadequate research facilities, the new building's labs were designed with faculty input and provided more and better space.

The new building and the permanence it gave to the School resulted in cessation of special state funding. The School became incorporated into the University budget, which meant conforming to the institution's traditions and adopting a more traditional internal structure. That included making departments more formal and autonomous.



Dr. Paul Royce

State-ordered budget cuts of 7 to 8 percent throughout the University in the early 1980s may have been a blessing in disguise for the School's research program. Paul Royce, M.D., Ph.D., who succeeded Dr. LaBree in the dean's chair, strongly encouraged continued scientific inquiry — but only with outside funding. The faculty rose to the challenge; research productivity continued to rise and, as a result, more research grant money than ever flowed into the School. Research and training grants from federal and private sources in 1988-89 reached $2.8 million.

Minority programs

If training physicians to serve rural Minnesota was the School's mission, that task by definition had to include educating Indian physicians. American Indians are a rural population with a distressingly high number and wide variety of medical problems. Nationwide, there are only about 400 American Indian doctors and all of those practicing in Minnesota are School of Medicine alumni.

UMD is one of the few medical schools that actively recruits Indian applicants; it gives support to promising Indian college students, has altered the curriculum to give

Four-and-a-half years as an emergency

medical technician for a small-town ambulance service convinced Jeri Johnson Vergeldt, M.D., that she wanted to be a doctor. The job got her acquainted with local physicians who allowed her to hang around to observe what they did. Now Dr. Vergeldt is a second-year resident in Duluth, learning the specialty of family practice.

She'd always lived in small towns — Cloquet, Worthington, the Morris Campus of the University of Minnesota. Duluth was the largest town she'd lived in when she entered the School of Medicine in 1987. The School reinforced her desire to be a family practitioner, she says, especially during her second-year preceptorship in Big Fork, Minnesota. "I thought that was kind of the high point of each quarter," she recalls.

Dr. Vergeldt was happy to return to Duluth after completing her final two years of medical school in the Twin Cities. While many long days of training at the Family Practice Center lie ahead, Dr. Vergeldt, who is 28, is looking beyond completion of her three-year residency. She's decided she wants to practice in a town of at least 5,000 people with perhaps five or six other doctors.

UMD SCHOOL OF MEDICINE HISTORY

Ed Anderson spends most of his free time *in a boat or canoe, not that he has a lot to spare. Second-year medical students have a few other things to do.*

An avid hunter and fisherman, the nearby north woods lured him to the School of Medicine. Its mission of training primary care physicians to practice in rural areas sounded right up his alley.

He graduated from St. Olaf College as a biology major, spent a year working as a laboratory technician in the Twin Cities, and began medical school in the fall of 1991.

From the first day, he was impressed. He finds the atmosphere more supportive than competitive. Furthermore, just when he's growing tired of the classroom, he has a chance to spend time with a physician in the preceptorship program to see why he is in school. "I don't think (medical school) has been as bad as I thought it would be ... although you do have to put in your time," he says. He's also delighted to find he has some time to spend with his new bride.

Ed is leaning toward family practice and has no doubt that he will work in a small town in northern Minnesota, such as his native Hibbing.

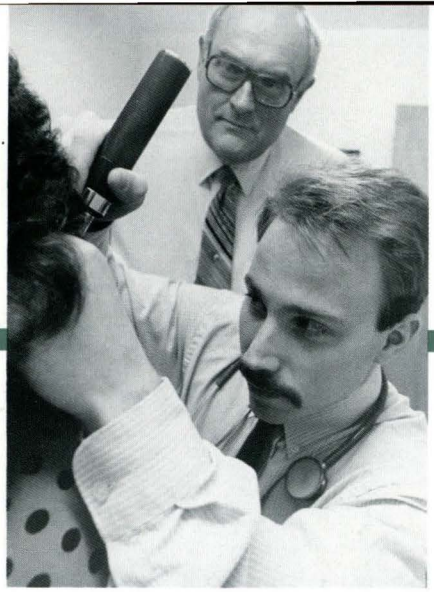
more time to Indian health, and is also conducting research in that field.

Some $4.5 million in grants have come to the School to help Indian students since 1973, when minority programs began. Twenty-nine minority medical students, 25 of whom are Indian, have attended the School of Medicine. Key to the School's efforts has been staff member Ruth Myers, a Grand Portage Chippewa, who has worked on minority student programs and provided much-needed personal support for those students since the early 1970s.

The Center of American Indian and Minority Health was established in 1987 to coordinate the conglomeration of Indian programs administered throughout the School. Gerald Hill, M.D., former president of the Association of American Indian Physicians, became the Center's director in 1990. Because the doctor's role in the Indian community is different than in the white community, the Center strives to put Indian medical students in closer touch with the Indian system — and to encourage them to return to the Indian community to practice medicine.

The Center has established a pipeline of support for students interested in medical careers that extends from high school through medical school. Ultimately, it will have a system of coordinated programs and procedures so as not to lose or discourage students who, because of their background, are not familiar with institutional customs, rules, and red tape.

Dr. Gerald Hill



A UMD medical student participates in the preceptorship program.

Current designation of the University by the U.S. Department of Health and Human Services as a Center of Excellence in American Indian Medical Education provides funds to step up recruiting and support. Early results are encouraging. Nearly half of the Indians from across the country who apply to medical school now apply to UMD. Thirty sought admission to the class entering in 1992, the largest number yet.

Students/Alumni

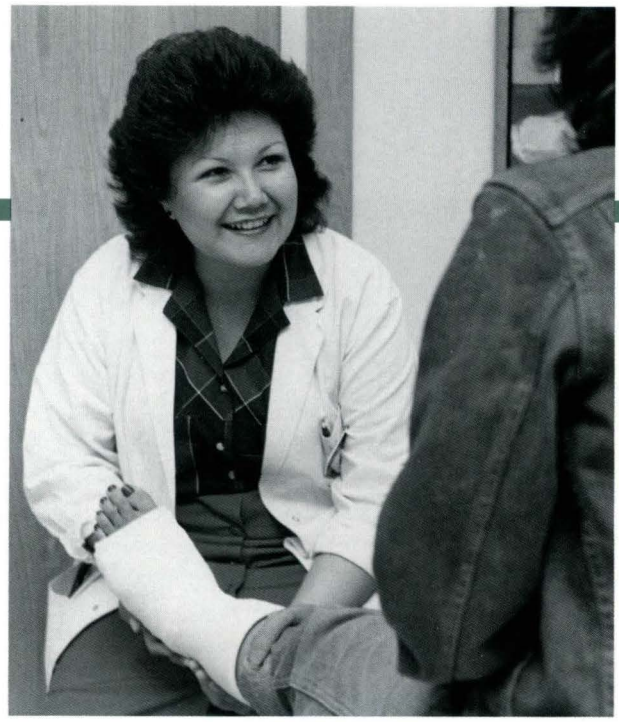
More than 900 men and women have attended the School of Medicine in the past 20 years. Given the competition (more than 1,000 applied for 48 seats in the 1992 entering class) and the mission of the institution to train family practitioners for rural areas, it's clear that these are truly special people.

Selection of these students takes into account their academic records, but also gives strong weight to their backgrounds. The admissions committee especially looks for students who grew up in small communities because research has shown that those raised in non-urban areas are more likely to return to such locations to practice medicine.

Fully 52 percent have entered family practice residencies, in contrast with the national average of 12 percent, making the School No. 1 in the nation. Fifty-four percent of those who attended the School practice in areas with populations of less than 50,000—again four to five times the national average.

The School itself has placed great importance on personal attention to students. Lois Heller, Ph.D., who served as the first dean of student affairs, Dr. Boulger, who served for 14 years, and Lillian Repesh, Ph.D., who currently serves in the position, have enjoyed an unusually warm rapport with the men and women who study at the School.

Students receive their first two years of basic sciences at the School of Medicine and transfer, as they always have, on a noncompetitive basis to the University of Minnesota Medical School in Minneapolis for their third and fourth years.



When she was 10 years old,

Kathleen Annette, M.D., accompanied her mother to have a cut sutured and announced that she wanted to be a doctor. The kindly attending physician took the child with him on hospital visits and her interest in medicine was sealed.

Today Dr. Annette, 37, is area director of the Bemidji Area Office of the Indian Health Service, which serves 29 American Indian tribes in Minnesota, Wisconsin, and Michigan with a $70 million dollar budget.

A White Earth Chippewa Tribe member, Dr. Annette became involved with the Native Americans into Medicine (NAM) program in Bemidji during high school in 1973. As a UMD undergraduate, she was tutored through NAM in subjects she was unable to take in high school, and she became a NAM instructor while a student at the School of Medicine from 1978-80.

After completing residency at the Family Practice Center in 1986, she worked at the Cass Lake Indian hospital, took positions of increasing responsibility, and assumed her present position in 1990.

"My full intent was to be a practicing family practitioner until the day I died," she says, but she saw the administrative role as an opportunity to serve Indian people in a larger way.

Students get hands-on experience with patients at the UMD School of Medicine.

But that is one of the few things that's stayed the same over the years. Costs, numbers of students, and makeup of the student body have all changed dramatically.

When the first class entered in 1972, tuition was $1,073 per year. For students attending during 1991-92, tuition was $10,479 per year, a 10-fold increase during a period when the cost of living has risen three- to four-fold. Today, most students cannot finance their medical educations without assistance and many spend their first few years as practicing physicians paying off an enormous debt.

More students attend the School, too. For the first two years, class size was limited to 24 students, for the following three years, 36, and since that time 48 students have been admitted each year. A plan to increase class size to 53 was recently endorsed by the University.

In the early days, women were in the minority and the fact that five of the first 24 students were female even made the newspaper. None at that time had husbands. Today, most classes have approximately equal numbers of male and female students. A growing number of both sexes are married, have families, and even previous careers. Many students are in their late 20s or 30s — some are in their 40s — whereas years ago almost everyone was younger than 25.

A large number of those who attended the School continue to be active in its affairs. Many contribute generously to scholarship funds. Dozens serve as preceptors to the current students and some teach classes.

A view to the future...

What will the School of Medicine be like as the 21st century begins? With the future of medical care in the United States in turmoil, its task will be to respond to the needs of an evolving system.

Constant, though, will be the School's continuing efforts to train family doctors for practice in rural communities, its primary mission from Day One. But the training will be done somewhat differently than in the past. Students will be expected to understand the human condition from a molecular level to the societal problems that lead to disease and affect the distribution of health care. Computers, video disks, interactive television, and other high-tech devices will become increasingly important teaching tools.

Faculty members will continue their equal commitment to teaching and research, maintaining an international reputation for creative and scholarly endeavors. But the research program may become more focused, with more interdisciplinary collaborative efforts. Scientific investigations will increasingly be concentrated at the cellular and molecular level, since that is where treatment of diseases will be aimed. The School may have a new Department of Family Medicine focusing on the most effective way of delivering health care. Research and teaching space may increase too, with the addition of 16,000 square feet to the School building, if funding is approved.

The School will also assume greater national prominence in the education of American Indians. The goal is to increase the number of minorities to 10 percent of the student body and improve special programs, mentoring, and integration of Indian culture into the curriculum through the Center of American Indian and Minority Health.

More external funding will support the School's teaching and research in the face of University retrenchments. There will be endowed research chairs in toxicology, paleopathology, and perhaps family medicine, in addition to the current Edwin Eddy Professorship in Neurocommunication Disorders.

The School will continue to work closely with the Minnesota Medical Foundation, its dedicated fund-raising arm, to raise research and scholarship monies. With the continued strong support of fund-raising programs, the School hopes to provide up to 85 percent of its students with full scholarships, leaving them debt-free and allowing them to return to rural areas where physicians' incomes are generally low. In the past two-and-a-half years, friends and alumni have donated more than $2.5 million for endowed chairs and scholarships.

Many things have changed in the past 20 years, yet the need for rural family physicians is as great today as it was then. The UMD School of Medicine will continue its national leadership in rural health care well into the next century, and in the process, improve the lives of countless people. ■

Building a Bridge to Cancer Prevention

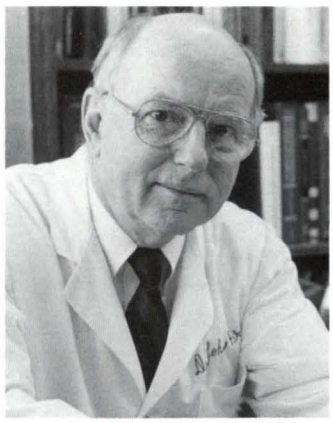
The Winston and Maxine Wallin Land Grant Chair in Cancer Prevention and Genetics will bring a leading researcher to the University to join an excellent team currently engaged in state-of-the-art research in this area.

During recent deliberations over funding for the National Institutes of Health, a House of Representatives appropriations committee noted that since 1971 more than $23 billion has been appropriated for cancer research at the National Cancer Institute (NCI). The committee then directed this message to NCI Director Samuel Broder:

"While the institute is to be congratulated on many breakthroughs in molecular biology and other basic cancer research areas, the committee must express its impatience with the lack of overall progress. In 1971, 336,000 Americans died of cancer and the age-adjusted death rate from cancer was 162 per 100,000. This year more than 500,000 Americans will die of cancer and the mortality rate will have increased by 8 percent. While there have been declines in deaths from certain cancers, particularly those affecting children, rates among the elderly and minorities continue to rise. The committee is encouraged by the openness of the Director to consider new approaches to research on cancer."

In other words, the committee feels that we've won some battles, but may be losing the war on cancer. It's time to adjust the battle plan.

Although the overall statistics support the perception that little progress is being made against cancer, advances in research, promising new therapies, and successful prevention campaigns such as that against smoking offer hope that both cancer incidence and mortality can be reduced for people of all ages. That hope can be brightened considerably, many experts believe, by applying our increasing knowledge of cancer genetics to identify individuals who are at high risk of certain types of cancer and targeting them for prevention and early diagnostic programs.



Dr. John H. Kersey, acting director of the University of Minnesota Cancer Center.

Pursuing that strategy is one of the major program focuses of the University of Minnesota Cancer Center, says acting director Dr. John H. Kersey, Jr. He cites two parallel developments that are making it possible to apply knowledge of cancer genetics in prevention efforts. First, it has long been known that some families or groups are at high risk for cancer, but it is now becoming possible to identify high-risk individuals with molecular genetic probes that are a product of our increasing understanding of the human genome. Second, more evidence is being discovered that certain dietary factors either increase or decrease the risk of certain types of cancer.

"It's exciting that we now can begin to identify individuals who are at high risk of certain

BY MICHAEL P. MOORE

Michael P. Moore is director of research communications and technology marketing for the Office of Research and Technology Transfer at the University of Minnesota. Photos by Nancy Mellgren.

Building a Bridge...

cancers — especially relatively common types like colon cancer and breast cancer — and apply our knowledge of preventative factors to help them avoid cancer," Kersey says.

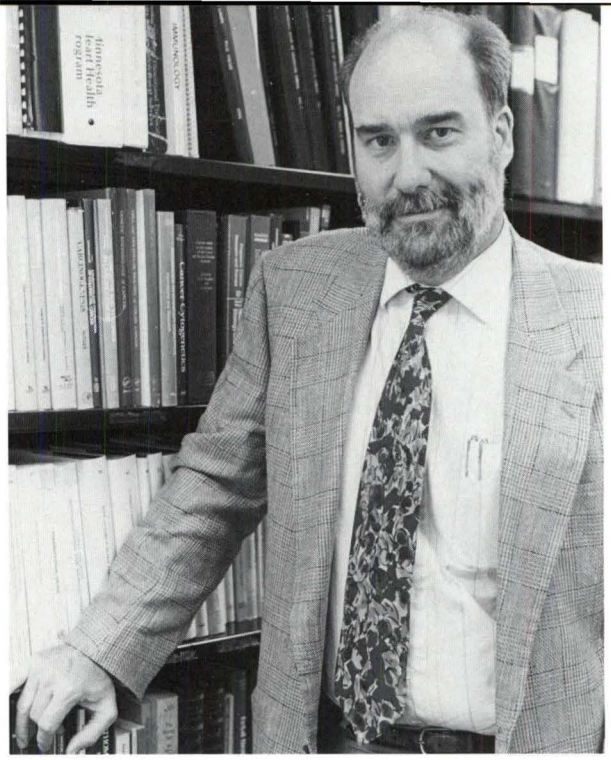
The Cancer Center is building on many of the University's existing strengths as it seeks to tie together the seemingly disparate fields of genetics and prevention. A long history of epidemiology, especially research into nutritional factors contributing to chronic diseases such as heart disease, provides the methodologies needed to identify nutritional factors in cancer and to teach people to make necessary changes in their lifestyles.

Family studies, such as a 40-year study of families affected by breast cancer, provide the individual and long-term data needed to analyze cancer risk factors. Animal studies that identified cancer-preventing chemicals present in some vegetables provide the basis for dietary recommendations and possibly pharmaceuticals to help high-risk individuals avoid cancer. And the newest addition to these strengths, human genetics, is revealing the molecular basis for inherited forms of cancer and for increased susceptibility in some individuals.

Leading the effort to tie these strengths together, and to expand on the cancer expertise in each area, is the combined responsibility of Dr. Tony Faras, director of the Institute of Human Genetics, and Dr. John Potter, director of the Cancer Prevention Research Unit in the Division of Epidemiology, School of Public Health. Their efforts were recently enhanced by a gift from Winston Wallin, general chair of the Fund for the University of Minnesota Cancer Center, and his wife Maxine. Their gift made possible the endowment of The Winston and Maxine Wallin Land Grant Chair in Cancer Prevention and Genetics. Kersey says that the Wallins' gift will enable the University to recruit a leading researcher interested in applying genetic information to the prevention of cancer.

Probing the genome

Perhaps in no other area of medical research is new information being discovered as fast as it now is in the field of human genetics. The ability to search chromosomes for genes and genetic material linked to diseases has resulted in an explosion of possibilities for therapeutic and preventive intervention. Especially exciting has been the discovery of oncogenes — sections of DNA that can trigger cancerous growth if activated by environmental factors — and their identification for about 15 percent of human cancers.



Dr. John Potter, director of the Cancer Prevention Research Unit in the Division of Epidemiology, School of Public Health.

Researchers at the University's Institute of Human Genetics are conducting several studies of genetic defects or mechanisms linked to types of cancer. Faras is leading molecular biological studies of bladder cancer and cervical cancer.

In the case of bladder cancer, Faras has found that mutations, possibly caused by diet or chemicals from cigarette smoke, can activate a bladder cancer oncogene. Such oncogenes are present in 25 percent of bladder cancer patients whose DNA has been studied at the Institute, he says. That opens the possibility of developing a diagnostic test for the oncogene and using it to screen for people who are at high risk of developing the disease, which is diagnosed in 50,000 Americans each year. Those identified could then be offered intensive help in stopping smoking, which is a major risk factor, and could be checked often for the disease. When diagnosed and treated early, 87 percent of patients with bladder cancer live at least five years.

In studies of cervical cancer, Faras and research associate Ron Ostrow have identified a wart-causing virus, papillomavirus, which can invade genes and trigger the disease. Working with colleagues in the Department of Obstetrics and Gynecology, they found that one type of papillomavirus causes only temporary, benign warts. Another type, however, causes warts to progress into a type of cervical cancer that may represent 75 percent or more of this type of cancer.

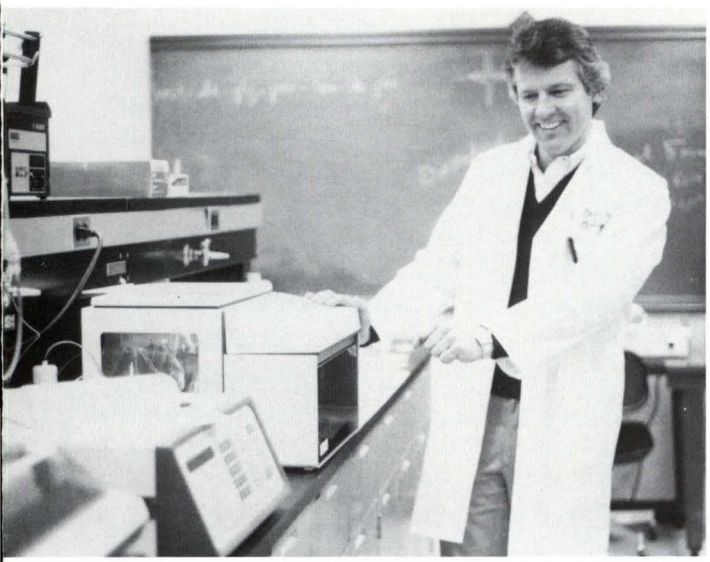
Faras and Ostrow have developed a genetic test with which they can predict the chance that cervical warts will progress to cancer. They are also involved in studies of an

antiviral drug, ribavirin, to treat papillomavirus warts. Again, by applying new knowledge of the genetic nature of a specific cancer, diagnostic and treatment methods can be stepped up to prevent it or treat it early.

Winston Wallin, chair of the Fund for the University of Minnesota Cancer Center.

Complicating this strategy is the fact that not all cancers have a genetic link, at least one that has been identified thus far. And even in cancers linked to oncogenes or other genetic factors, not all patients with that type of cancer have the genetic trait.

Sorting out these differences and assembling the pieces into potential therapeutic and preventive strategies is the job of the population geneticist. Associate professor of laboratory medicine and pathology Dr. Stephen Rich, who heads the Division of Population Genetics in the Institute of Human Genetics, points out that for most complex diseases like cancer, a genetic factor doesn't cause the disease, it just causes an individual to have a predisposition to develop the disease.



Dr. Tony Faras, director of the Institute of Human Genetics.

Rich's task is to compile data from people with genetically linked diseases and to apply computerized statistical analyses to determine the relative roles played by genetics and other factors such as behavior and environmental exposure. "These relationships have to be worked out so we can take the information to the public in the form of prevention recommendations," he says.

Some diseases, such as cystic fibrosis and Huntington's disease, have been linked to single genes, which makes them easier to analyze in terms of inheritance. For most cancers, however, several genes may be involved, and environmental factors also contribute. Rich helps to facilitate studies of these complex relationships, designing research projects to gather data that can be statistically analyzed to sort out the various disease factors.

The explosion of discoveries of oncogenes and DNA markers linked to diseases has provided plenty of work for Rich and other population geneticists. "Twenty years ago there were maybe 20 to 30 genetic disease markers known; now there are well over 2,000. So our studies are not limited by molecular material, they are limited by family data from patients with cancer and other diseases we are studying, including diabetes and epilepsy."

Rich says that the University's Minnesota Center for Twin & Adoption Research, directed by Dr. Thomas Bouchard, Jr., professor of psychology, is a major asset for researchers sorting out genetic versus environmental disease factors. In identical twins, for example, a fully genetic disease would occur in all of the twins carrying the affected gene. In fraternal twins, only half of the twins would be expected to develop such a fully genetic disease. "If we find clear differences among twins with a disease, that can tell us if the disease is highly or sparsely genetic. And by studying identical twins raised apart, we can look for clues to any environmental factors that might be involved."

In addition to the twin studies, the University also has several long-term studies of families affected by certain diseases. Rich and his colleague in epidemiology Dr. Thomas Sellers have recently been able to use family data gathered in a 40-year follow-up study of breast cancer patients. The study was initiated in 1950 by V. Elving Anderson, now retired from the Department of Genetics and Cell Biology. It was the first genetic/epidemiological study of breast cancer, and early on Anderson evaluated some of the major risk factors that are known today, Rich says.

In a pilot study for the follow-up research begun this past March, a team of researchers was able to find a descendant in 95 percent of their attempts. The team includes Drs. Richard King, Georgia Wiesner, Kit Cooney, and Lenore Everson. Funded by the National Cancer Institute, they are now obtaining blood samples and histories from the descendants. "We hope to come up with a true evaluation of the genetic and environmental factors contributing to breast cancer," he says.

Building a Bridge...

In another study that relied on long-term family data, Sellers, Rich, and Potter analyzed the interaction between genetic predisposition and smoking in the development of lung cancer. They studied three generations of 337 Louisiana families (4,357 persons) in which a member had died of lung cancer from 1976 to 1979. The results, published in April 1991 in the journal *Cancer Research*, strongly indicated that the influence of genetic factors in lung cancer has been underestimated. The researchers reported that "virtually all cases of lung cancer occur among genetically predisposed individuals [which] has tremendous public health implications: for the lung-cancer susceptible, smoking appears to be universally lethal."

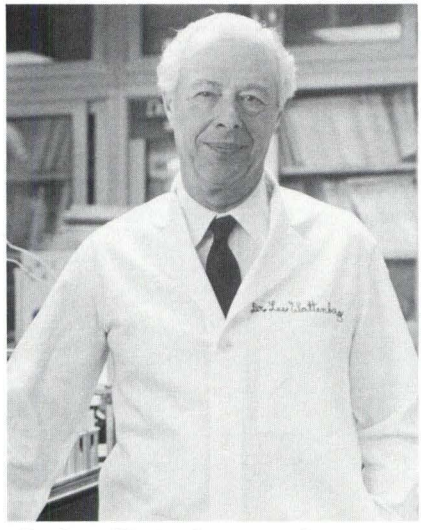
On the other hand, the authors reported that "the cumulative probability of lung cancer at age 80 for a non-carrier of the gene, at the average level of tobacco consumption, is close to zero, implying that virtually all lung cancer occurs among gene carriers. Identification of this putative genetic factor has profound implications for the detection and prevention of lung cancer."

The bridge to prevention

Building on those kinds of profound implications is exactly what Dr. John Potter had in mind when he came to the School of Public Health's Division of Epidemiology in 1986. "I came here because the model for cancer research that had been cooking in my head was already in existence here for heart disease — the model of epidemiology as a bridge between biology and public health action," Potter says. He too identifies the University's strengths in many of the disciplines connecting genetics and prevention, while stressing the need to add researchers with cancer expertise and a desire to work together with other types of researchers to tie the field together.

"We need people looking at genes for markers that will tell us which individuals are at high risk for specific cancers," Potter says. "Then we can stratify these individuals into risk groups based on their biology and involve them in studies that will tell us how risk factors work. For example, is there a general pattern that suggests that some are more susceptible to occupational exposure, while another risk group is more susceptible to the effects of a high-fat diet? If so, then we can classify people at high risk and undertake prevention studies focused on their particular susceptibility."

Potter is leading research that would make such focused efforts possible. In collaboration with Digestive Healthcare P.A. Associates, a private medical practice group in the Twin Cities, he is studying the role of various factors associated with either increased or decreased risk of colon cancer. When all subjects have been enrolled, the project will include 600 patients in whom colonoscopy has found polyps of the large bowel, which are precursors of colon cancer; 1,200 control patients in whom colonoscopy has found no polyps; and 600 people from the general population. Potter's study is comparing the subjects' diet, alcohol consumption, exercise, and other lifestyle factors. Two specific intervention trials are underway: one is studying the effect of calcium intake on the tissue lining the inner walls of the colon; the other is studying the effects of a diet high in fruit and vegetables.

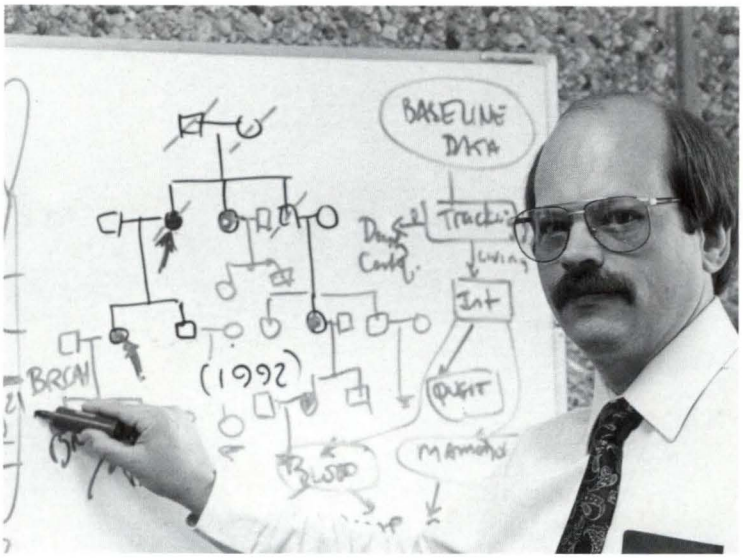


Dr. Lee Wattenberg, professor in the Department of Laboratory Medicine& Pathology.

One problem that has plagued epidemiologists, despite their expertise in teaching people to modify their diets to reduce risk factors, is the need to rely on self-reporting of nutrient intake. "Most people are very agreeable and they want to make the researcher happy, so when we ask them if they've been eating the amount of vegetables we've asked them to, they invariably say 'Of course,' " Potter says.

To improve the scientific validity of these studies, and the value of the information gleaned from them, researchers need to identify markers for consumption of various fruits, vegetables, and other nutrients — something in people's blood, sweat, tears, or excretions, for example, that correlates with the amount of the experimental nutrient they have consumed. "Unlike a clinical trial of a drug, nutrition researchers can't measure the blood level of the experimental substance to confirm that the subject is complying with the study," Potter points out. "So we are conducting studies in collaboration with the Department of Food Science and Nutrition in which we feed people exact doses of vegetables and fruit and then look for biological markers of consumption."

A key researcher involved in the search for such markers is Dr. Lee Wattenberg, professor of laboratory medicine and pathology. Since 1959 he has virtually defined the field of chemoprevention, the search for synthetic or natural compounds that prevent or inhibit cancer cells from proliferating. He discovered in the late 1960s that compounds called indols, which are prevalent in cruciferous vegetables, inhibit large bowel cancer by increasing the detoxification capacity of tissue lining the inside of the intestine. Since then he has identified other cancer-inhibiting compounds in cruciferous vegetables (cabbage, broccoli, Brussels sprouts), in green coffee beans and black tea, and in garlic.



Dr. Stephen Rich, head of the Division of Population Genetics, Institute of Human Genetics.

Wattenberg's research contributes in two important ways to cancer prevention efforts, Potter says. First, his knowledge of biochemical effects of various nutrients, gained from decades of animal studies, is key to the search for markers of consumption in humans. Second, Wattenberg's identification of compounds that inhibit cancer offers hope that a preventive pill may someday be added to the other risk reduction steps that can be taken against specific cancers in very high-risk groups.

Potter envisions the bridge he and others are building as ultimately being able to offer access to two general cancer prevention strategies: "Most importantly, we're going to be able to recommend certain preventive steps to the general public, based on what we learn from trying those strategies in high-risk groups. If you can't get people at high risk of cancer to change their behavior, then those things won't work for the general public. And secondarily, we may be able to identify some sort of cancer prevention pill or food additive. If such a substance can be proved safe and effective in high-risk groups identified by molecular and population geneticists, then it will add to our efforts to help those who are unwilling or unable to change behaviors or avoid exposure to environmental carcinogens."

Getting to those strategies will, Potter admits, require a great deal more communication among the full spectrum of cancer researchers. He is confident, however, that the bridge concept taking shape in the Cancer Center's prevention and genetics program is the kind of new approach called for by Congress, an approach that identifies where and how each type of cancer begins, and then mobilizes patients and the public to intervene well before it becomes deadly. ■

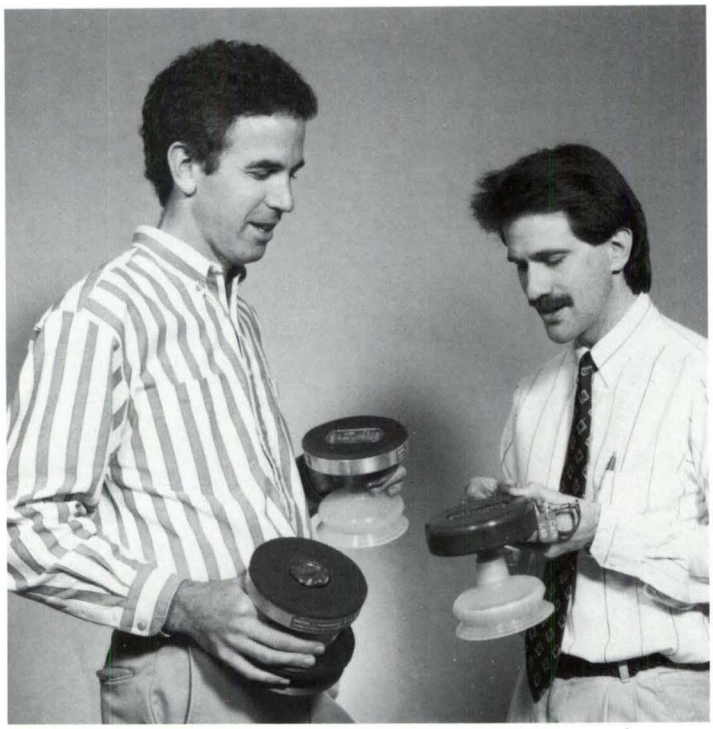
Cancer Center update

Pledges and gifts received as of August 1, 1992, for the Fund for the University of Minnesota Cancer Center have reached $26.6 million.

Proceeds from the $30 million campaign will be used to: build a 78,000-square-foot state-of-the-art research facility that will provide much-needed laboratory, seminar, and office space; establish at least eight endowed chairs to attract leading cancer experts who will supplement an already outstanding group of researchers; and provide funding for new research programs and expansion of existing programs. Construction planning for the new building is progressing on schedule, with groundbreaking targeted for spring of 1993.

The Margaret Harvey Schering Trust for Cancer Research recently confirmed a $750,000 pledge to enable the establishment of a $1 million land grant chair in cancer research. Other chairs either pledged or funded include: $3 million from the Children's Cancer Research Fund (CCRF) for pediatric cancer research; $1.5 million from a local foundation for advanced bone marrow transplantation research; a $1 million land grant chair devoted to breast cancer research made possible through the support of the Tickle family; and a $1 million land grant chair in cancer prevention and genetics established through the generosity of Winston and Maxine Wallin.

For more information on how you can help support the University of Minnesota Cancer Center, call Mark Zachary at (612) 625-4441. ■



The cardiopump, held by Drs. Keith Lurie and Jeff Schultz, adds suction power to resuscitation efforts.

Cardiopump aids heart attack victims

A device modeled on the bathroom plunger is being tested by St. Paul firefighters on heart attack victims, with the hope of saving lives by adding suction power to ordinary resuscitation.

Developed by University of Minnesota cardiologist ***Dr. Keith Lurie*** and other cardiologists at the University of California in San Francisco, the Ambu Cardiopump is said to greatly increase blood and oxygen flow in cardiac-arrest patients. The device's neoprene suction cup enables a rescuer to actively expand the chest of a heart attack victim with each resuscitation upstroke. In ordinary cardiopulmonary resuscitation, the victim's chest is compressed with hand pressure, then allowed to expand naturally.

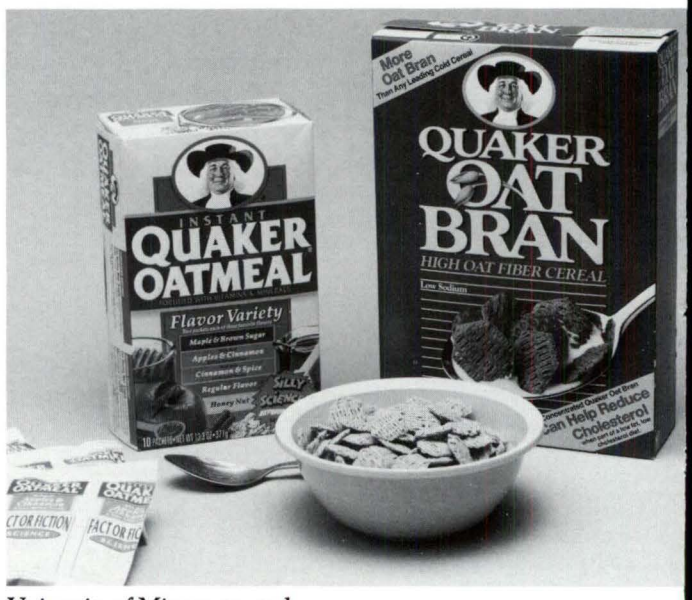
All St. Paul firefighters have been trained in applying the device. The St. Paul field test will be conducted simultaneously in San Francisco; Fresno, California; Bristol, England; and Ulm, Germany. ■

University research backs oat bran

Eating oat bran can reduce serum cholesterol levels, according to University of Minnesota researchers whose findings were published in a recent issue of the *Journal of the American Medical Association*. The benefits of oat bran have been widely debated in recent years.

In an analysis combining the results of 12 previous studies, ***Dr. Joseph Keenan***, professor of Family Practice and Community Health, and epidemiologist ***Dr. Cynthia Ripsin*** concluded that eating a large bowl of oat-bran cereal reduces cholesterol levels by an average of 2 to 3 percent. For people with high cholesterol levels, the reduction was 6 to 7 percent.

The conclusion of the study was that people who consume about three grams per day of soluble fiber, the amount of fiber in a bowl of ready-to-eat oat bran cereal or three packets of instant oatmeal, can lower the total cholesterol level between five milligrams and six milligrams per deciliter. According to Ripsin, the data also suggested that people who consumed larger amounts of soluble fiber each day and those with blood cholesterol levels of 240 or more would have greater reductions. ■



University of Minnesota study says oat bran is beneficial.

New brain-mapping technique successfully tested

Researchers at the University of Minnesota's Center for Magnetic Resonance Imaging Research have successfully tested a new brain-mapping technique that holds enormous potential for research and medicine.

Dr. Kamil Ugurbil, director of the Center, and other University scientists worked with researchers at the AT&T Bell Laboratories in New Jersey to develop the new technique, which provides the first noninvasive, nonradioactive way to take quick, good pictures of activity within the brain.

The pictures are based on increases and decreases in the level of oxygen-rich red blood cells in the brain. As cells in a stimulated area of the brain work, they light up on the magnetic resonance imaging (MRI) picture, showing which part of the brain processes thoughts, vision, and motor activities or performs other functions, according to Ugurbil.

Called blood oxygen level dependent imaging (BOLD), the technique is considered vastly superior to positive emission tomography (PET) by its developers. A Bell biophysicist, Dr. Seiji Ogawa, developed the idea of BOLD when he observed that the presence of oxygen-rich red blood cells caused a distortion in MRI pictures.

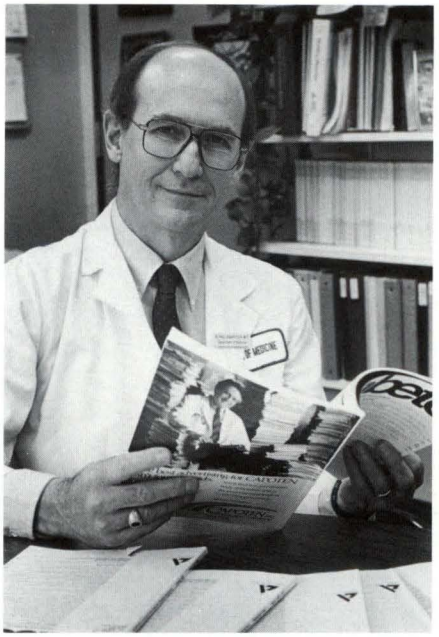
Ugurbil believes the technique will be in use in clinical medicine within a year, helping in treatment of epilepsy and other disorders and providing neurosurgeons with accurate images of the brain in planning for surgery. In addition, it is hoped it will help unlock one of medical sciences' greatest mysteries — how the human brain functions. ■

Injection of pancreatic cells may control blood sugar

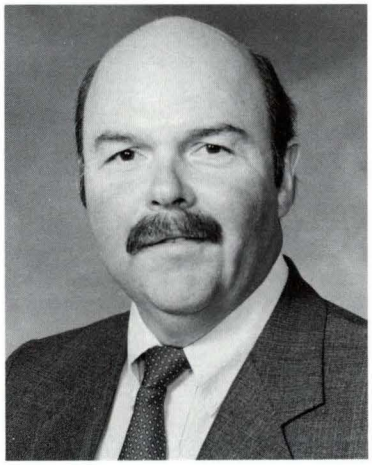
University of Minnesota researchers have discovered that a relatively small number of pancreatic cells injected into a patient's vein can produce enough insulin to keep blood sugar levels in proper balance for years.

The study, published in a July issue of the *New England Journal of Medicine*, is promising news for diabetics, many of whom must give themselves daily injections in insulin. Researchers are now searching for anti-rejection drugs that will protect injected pancreatic cells in diabetic patients, according to ***Dr. Paul Robertson***, head of the University's Diabetes Center.

Researchers studied five non-diabetic patients who needed their pancreases removed surgically because of chronic disease. The surgery was performed by the University's ***Dr. David Sutherland***. Non-diabetic patients were selected for the study because the insulin-producing cells in their pancreases were still functioning, so the cells could be reused by the same patients without requiring them to take anti-rejection drugs. ■



Dr. Paul Robertson



Dr. William E. Jacott

Dr. William Jacott re-elected to AMA board

Dr. William E. Jacott, assistant vice president for health sciences, has been re-elected to the American Medical Association board of trustees. He will serve as secretary/treasurer of the board.

As a member of the AMA board, Jacott helps carry out health-care policies developed by AMA and participates in making AMA policy decisions on national health-care issues.

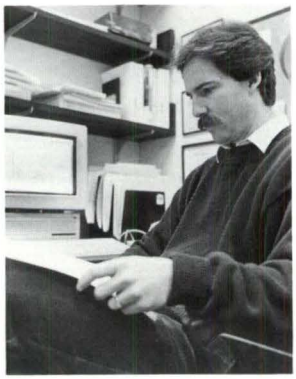
In addition to his administrative position at the University, Jacott is an associate professor in the Medical School's Department of Family Practice and Community Health. ■

Link between fat diet, breast cancer questioned

University of Minnesota researchers report that it's not clear that a high-fat diet substantially increases a woman's risk of developing breast cancer, but they also say that it's also not clear that it doesn't.

In a report published in a July issue of the *Journal of the National Cancer Institute*, the researchers report that the methods used to do analysis can influence whether a study shows a strong or weak link, or no link, between a high-fat diet and breast cancer.

The University researchers analyzed eating habits of 34,388 Iowa women between the ages of 55 and 69, then used several statistical methods to determine the effect of dietary fat on the risk of developing breast cancer. One method indicated a strong link between fat consumption and breast cancer; another method showed little relationship between the two.



Dr. Thomas Sellers

University epidemiologist ***Dr. Thomas Sellers*** says the new research doesn't refute the link between breast cancer and a high-fat diet, but that the risk may be moderate and may be a stronger factor for women past menopause. ■

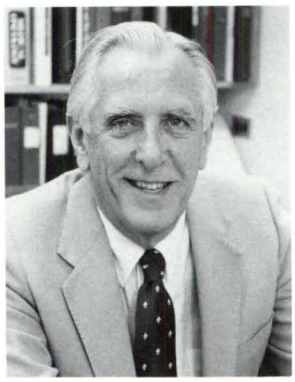
Dr. B.J. Kennedy honored for excellence

Dr. B.J. Kennedy, Emeritus Regents' Professor of Medicine and Emeritus Masonic Professor of Oncology at the University of Minnesota, has received the 1992 Scientific Achievement Award from the American Medical Association. The award is made only on special occasions and is given to a physician selected by the AMA board of trustees in recognition of outstanding work.

Kennedy is regarded as the founder of the sub-specialty of medical oncology. His work has directly led to increased cure rates in acute leukemia, breast cancer, and cancer of the testis, and was the foundation for current therapy in other diseases.

Author of over 800 publications, his major accomplishments include the demonstration of the effectiveness of estrogenic and androgenic hormones and tamoxifen in the treatment of widespread breast cancer, the discovery that male hormones could stimulate the production of red blood cells, and the first use of progestins in the treatment of advanced endometrial cancer.

Kennedy initiated the first randomized test to show the benefits of support counseling of cancer patients. The positive results were the foundation for the "I Can Cope" program used nationwide by the American Cancer Society.



Dr. B.J. Kennedy

For his contributions, Kennedy has been awarded national medals by the American Cancer Society, Association of Community Cancer Centers, American Society of Internal Medicine, and the American Association for Cancer Education. ■

DEPARTMENTAL UPDATES

Anesthesiology

Dr. Scott D. Augustine was selected by Gov. Arne Carlson as Minnesota's Entrepreneur of the Year for his development and promotion of medical technology. ***Dr. Richard J. Palahniuk*** is the invited visiting professor to Hirosaki University in Japan in October.

Biochemistry

Dr. Dennis M. Livingston received the 1992 Outstanding Teacher of the Year Award from the Minnesota Medical Foundation. He was selected from a group of educators nominated by faculty and other Medical School community members. ***Dr. Howard C. Towle*** received the 1992 Boezi Award from Michigan State University, honoring both the recipient and Professor John Boezi, who was Dr. Towle's former mentor.

Laboratory Medicine & Pathology

Dr. Franz Halberg received an honorary degree from the University of Ferrara, Italy, at ceremonies marking the university's 600th anniversary. ***Dr. Karen R. Karni***, director of the Division of Medical Technology, was named 1992 Member of the Year by the American Society for Medical Technology.

Medicine

Dr. Alvin L. Schultz, professor emeritus, received the Bolles Bolles-Rogers Award from the Hennepin County Medical Society for his outstanding leadership and contributions to medical research. ***Dr. Joseph R. Bloomer***, director of the Gastroenterology Division, was elected to the American Association of Physicians. ***Dr. Gordon D. Ginder***, director of the Medical Oncology Division, received an NIH Merit Award for his studies on Globin Gene Regulation During Erythroid Differentiation. ***Dr. Harry S. Jacob***, director of the Hematology Division, was appointed to the Clark Chair of Medicine.

Neurosurgery

Dr. Roberto Heros has been named chairman of the Decade of the Brain campaign, a major national lobbying effort for research to support the neurosciences. ***Dr. Edward Seljeskog*** has begun his tenure as secretary of the Board of Neurological Surgery while he continues in his position as regent of the American College of Surgeons. ***Dr. Robert Maxwell*** has been elected president of the Minnesota Neurosurgical Society and vice president of the Society of University Neurosurgeons. ***Dr. Stephen Haines*** is serving as president of the Minnesota Society for Neuroscience and continues to serve on the Executive Committee of the Congress of Neurological Surgeons.

Obstetrics & Gynecology

Dr. Leo Twiggs has been named head of the department as of June 16. He has also been named Director of Outreach for the University of Minnesota Cancer Center, and was installed as president elect of the American Society of Colposcopy and Cervical Pathology at the organization's annual meeting. ***Dr. Linda Carson*** will direct a project involving a $81,247 grant from the Minnesota Department of Health for a breast and cervical screening program for low-income women.

Ophthalmology

Dr. Jay H. Krachmer has been appointed professor and chairman of the Department of Ophthalmology, and has also been named holder of the Mackall-Scheie Research Chair in Ophthalmology. He has been a faculty member in the University of Iowa's Department of Ophthalmology since 1974, specializing in clinical teaching and research aspects of cornea and external diseases of the eye.

Dr. Jay H. Krachmer

Orthopaedic Surgery

The department has received a five-year renewal of its National Research Service Award from the NIH, which funds pre- and post-doctoral trainees in musculoskeletal/orthopaedic sciences.

Otolaryngology

Dr. Marcus Gapany has joined the department as assistant professor and chief of otolaryngology at the VA Medical Center. His main interests are head and neck oncologic and reconstructive surgery, microvascular free tissue transfer, and endoscopic sinus surgery. His chief research interest is the role of oncogene in prognosis of head and neck cancer.

Pharmacology

Drs. Louise Nutter and ***Y.F. Abulhajj*** have received a four-year, $510,000 grant from the NIH to study DNA damage, free radicals, ortho-quinones, and cancer.

Psychiatry

Dr. Gail Bernstein has received a five-year grant from the National Institute of Mental Health to study Imipramine Treatment of School Refusal. ***Dr. James Mitchell*** received the Third Annual Clinical Scholar Award from the University of Minnesota Medical School and Hospital and Clinic for outstanding accomplishments in patient-based scholarship, research, and patient care.

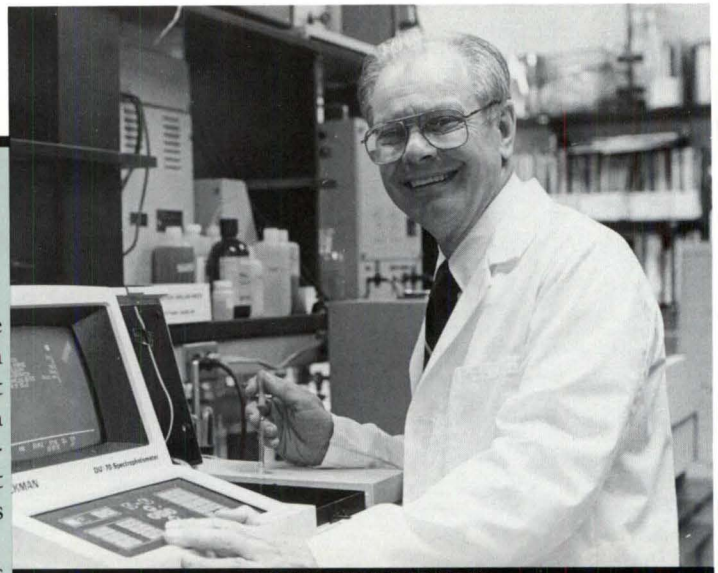
Radiology

Professor emeritus ***Dr. Eugene Gedgaudas*** was presented with an Honorary Doctor Degree from the Lithuanian Academy of Medicine during a recent lecture and seminar tour of the country. Dr. Gedgaudas and his wife Vilhelmina were both born in Lithuania. ***Dr. William Thompson*** has been made secretary-treasurer of the Society of Gastrointestinal Radiology, and has been appointed to the board of General Electric's Radiology Research Academic Fellowships. The Keck Foundation has awarded $975,000 to the Center for Magnetic Resonance Research, a joint program between the Medical School and Departments of Radiology and Biochemistry, with ***Dr. Kamil Ugurbil*** as principal investigator.

UMD School of Medicine

Scientists from around the world met in Duluth in July for Frontiers in Cerebral Vascular Biology, a symposium of researchers who presented findings that may lead to cures for diseases ranging from stroke to Alzheimer's. ***Dr. Lester Drewes*** from the School of Medicine coordinated the conference. ■

MMF Grant Recipient: Dr. William B. Rathbun



DR. WILLIAM RATHBUN

To some," says William B. Rathbun, Ph.D., "the word cataract brings memories of a clear mountain stream splashing over a precipice in bright sunlight with a rainbow hovering in the mist over a bubble-laden pool beneath the fall. To others the word means only semi-darkness, sometimes total loss of central vision, light scatter within the eye so severe that night driving is impossible, and dependency on others.

"To live blind from cataract," Rathbun explains, "is to suffer due to a factor in the environment: the unavailability of corrective surgery. Worldwide, 17 million people are curably blind from cataract but most live in underdeveloped regions where surgery is unavailable or difficult to deliver. Such blind persons are an economic drain upon their country and the world. The sheer numbers of these curably blind persons makes surgical correction an impossibility. Preventive therapeutic strategies may reach more individuals."

Rathbun, associate professor in the Department of Ophthalmology, was one of 23 faculty members to receive a grant at the Minnesota Medical Foundation's spring meeting of the board of trustees. In all, the MMF board approved $134,350 in faculty research grants, student research grants, and special grants (see adjacent article).

Rathbun received $4,900 from the Minnesota Medical Foundation in support of his project entitled "Factors causing glutathione loss in human cataractogenesis."

He describes the project by saying, "Human cataract formation is not only associated with aging, but with cumulative damage from ultraviolet light and diabetes. Therefore, increased ultraviolet light irradiation due to the increasing hole in the ozone layer creates concern. This project is aimed at discovering what portions of the synthesis of a protective compound (glutathione) in the lens are damaged by diabetes and ultraviolet light and whether the diabetic lens has extra sensitivity to ultraviolet light."

Rathbun says that ultraviolet light has been shown to be a major risk factor for cataract formation, especially at high altitudes and from increased exposure on water due to glare. "Interaction of long wavelength ultraviolet light with ascorbic acid in the aqueous humor of the eye forms hydrogen peroxide," he says, "which is freely diffusible into the ocular lens. A young healthy lens can keep the constant influx of hydrogen peroxide low by neutralization with the enzyme gluthathione peroxidase. This enzyme requires interaction with the tripeptide glutathione.

"Glutathione is a deceptively simple tripeptide consisting of three amino acids, glutamic acid, cysteine, and glycine. It provides the major defense of the lens against cumulative oxidative damage which incapacitates the active transport system of the membrane, thus allowing influx of water. These 'lakes' result in light scatters (opacities). Common to all human cataracts is the dramatic loss of the essential molecule glutathione prior to cataract formation. The causes of this loss in human cataract are presently unknown."

Rathbun received his Ph.D. in biochemistry from the University of Minnesota, where he also held a National Institutes of Health post-doctoral fellowship in ophthalmology. He has served on the faculty of the University of Minnesota since 1964. Rathbun has been an invited participant in a number of symposia related to his specialty in the United States and Europe, and was a member of the editorial board of Ophthalmic Research for 10 years ■

MMF approves $134,350 in research grants

The Minnesota Medical Foundation board of trustees approved $134,350 in research and special grants at its spring quarterly meeting. The amount includes $55,850 in faculty research grants, $9,000 in student research grants, and $69,500 in special grants for research equipment and salary support.

FACULTY GRANTS include: ***Linda F. Carson, M.D.***, OB/Gyn, $3,000, Incidence of human papillomavirus in amniotic fluid samples; ***Richard D. Estensen, M.D.***, Laboratory Medicine & Pathology, $4,000, A rapid assay for cancer preventive substances acting via glucocorticoid receptors; ***Bruce J. Gerbi, Ph.D.***, Therapeutic Radiology, $2,500, Response characteristics of parallel-plate; ***William B. Gleason***, Laboratory Medicine & Pathology, $5,000, X-ray crystal structure determination of peptide complexes with heparin models; ***Ranier W.G. Gruessner, M.D., Ph.D.***, Surgery, $4,950, Clonal deletion in a large animal model; ***Waclaw Jaszcz, M.D.,***

Ph.D., Laboratory Medicine & Pathology, $3,500, Role of molecular biologic techniques in predicting clinical biologic behavior of laryngeal squamous cell carcinoma; ***S.K. Juhn, M.D.***, Otolaryngology, $3,000, Pharmacokinetics of arachadonic acid metabolites in squamous cell carcinoma using indomethacin; ***Spencer H. Kubo, M.D.***, Medicine/Cardiology, $3,000, Vasoconstrictor mechanisms in clinical heart failure; ***Robert P. Milius, Ph.D.***, Laboratory Medicine & Pathology, $4,000, NMR and molecular modeling studies of the heterodimeric glycoprotein hormones; ***William B. Rathbun, Ph.D.***, Ophthalmology, $4,900, Factors causing glutathione loss in human cataractogenesis; ***Jeffrey B. Rubins, M.D.***, Medicine, $5,000, Characterization and purification of an endothelial cell cytotoxin from type 3 S. pneumonia; ***Ralph Shapiro, M.D.***, Pediatrics, $5,000, Mechanism of immunologic response to Epstein Barr virus (EBV); ***O. Douglas Wangensteen, Ph.D.***, Physiology, $5,000, Intracellular calcium changes in injured tracheal epithelial cells; and ***Walid G. Yasmineh, Ph.D.***, Laboratory Medicine & Pathology, $3,000, Effect of TNE on protein catabolism in rat skeletal muscle.

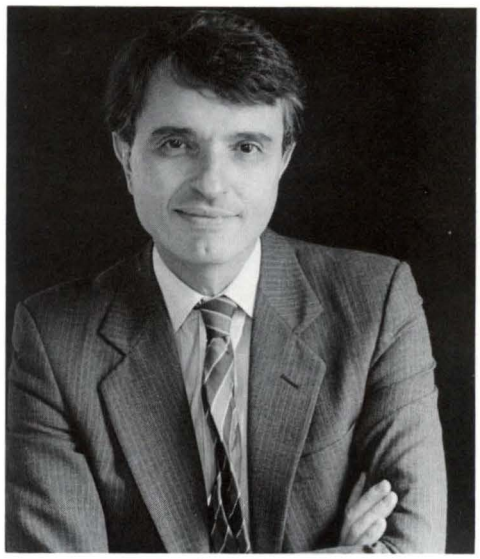
STUDENT GRANTS, at $1,800 each, include: ***Marie A. Casey***, Year 1, A study of polyribonucleotide induced resistance against herpes virus; ***Ken Dornfeld***, Year 3, Identification of recombination gene products from yeast; ***Todd A. Kellogg***, Year 3, Can monoclonal antibodies elicited against gram-negative bacterial endotoxin inhibit the production of TNG by host macrophages?; ***Rich Wehseler***, Year 1, Comparison of the effects of ACE-inhibition on cardiac hypertrophy induced by two different methods of elevating cardiac afterload in rats; and ***Janette Withers***, Year 4, Transfusion-associated murine CMV infection.

SPECIAL GRANTS include: ***John Mark Flack, M.D., Ph.D.***, Medicine, $7,500, Request to purchase two ambulatory blood pressure monitors; ***Gordon D. Ginder, M.D.***, Medicine, $15,000, Beckman L-70 Ultracentrifuge: Core equipment; ***Drs. James Koerner & Winfried Raabe***, Biochemistry, Neurology, $10,000, Epifluorescence microscopy to study modification of neuronal signals; ***Keith Lurie, M.D.***, Medicine/Cardiology, $5,000, Effects of aging on AV nodal conduction and structure; ***George M. Realmuto, M.D.***, Psychiatry, $5,000, Consortium for the electrophysiological study of the brain; ***Geza Simon, M.D., Ph.D.***, Medicine, $5,000, Subpressor angiotensin II administration: a new hypertension model; ***Amy P.N. Skubitz, Ph.D.***, Laboratory Medicine & Pathology, $12,000, Request for matching funds for the purchase of a scintillation counter; and ***Erica Stern, Ph.D. ORT,*** Physical Medicine & Rehabilitation, $10,000, Arm postures during traditional and alternative dental hygiene procedures. ■

Dr. Joseph Perpich to speak at MMF Annual Meeting

The Minnesota Medical Foundation's Annual Meeting, scheduled for October 28, will feature Dr. Joseph Perpich, a vice president of the Howard Hughes Medical Institute. The institute, with assets of more than $5 billion, is the country's principal private fund for biomedical research.

Perpich joined the Hughes Medical Institute in 1987 to direct the organization's first grant program for outsiders. As part of his position, he directs education programs beginning in the primary grades to enhance public understanding of science and prepare students for science careers.



Dr. Joseph Perpich

Perpich has a background in public policy and scientific research ethics. He has been vice president of planning and program development at Meloy Laboratories in Springfield, Virginia, developed an ethics program for the National Academy of Sciences, and was an associate director at the National Institutes of Health.

Raised in Hibbing, Minnesota, Perpich holds a medical degree from the University of Minnesota, a law degree from Georgetown University, and completed his residency in psychiatry at Massachusetts General Hospital in Boston. He is the younger brother of the former governor of Minnesota, Rudy Perpich. For more information about the Minnesota Medical Foundation Annual Meeting, call (612) 625-1440. ■

UMD awards presented

At the end of each school year, awards of excellence are presented to faculty and students at the University of Minnesota Duluth (UMD) School of Medicine.

Winner of the Year One Basic Science Teacher of the Year Award was ***Dr. Omelan Lukasewycz. Dr. Arthur Aufderheide*** received the Year Two Basic Science Teacher of the Year Award. ***Dr. Linda Van Etta*** received the Clinical Science Teacher of the Year Award. Honorable mentions included ***Drs. Stephen Downing*** (First Year Basic Science), ***Thomas Fitzgerald*** (Second Year Basic Science), and ***William Fleeson***, ***John Mathers***, ***Paul Severson***, and ***Timothy Zager*** (Clinical Science).

Three student awards were presented. Winner of the Herbert G. Lampson Memorial Award, given to the outstanding female sophomore medical student at UMD, was ***Stephanie Carlson***. The award is given 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. The Laird W. and Mary C. Lampson Award, given to the outstanding male sophomore medical student, was presented to ***Keith Wyche***. The award is given in memory of Laird and Mary Lampson. Keith Wyche was also winner of the Memorial Award, presented to the medical student who best exemplifies care and concern for others. ■

Herz Faculty Teaching Awards announced

Two Herz Faculty Teaching Development Awards have been given for 1992. Recipients are ***Drs. Kenneth Bloom*** and ***Mary Meighan*** in support of their program to develop computer-assisted dermatology teaching courseware, and ***Drs. Wesley Miller*** and ***Douglas Wangensteen*** to support study of problem-based learning associated with the first-year physiology course and the second-year blood pathophysiology course on the Minneapolis campus.

Established with an endowment fund donated by the late Malvin E. Herz and his wife, Josephine, the Herz Faculty Teaching Awards are presented to encourage the faculty of the University of Minnesota Medical Schools to pursue projects which will improve their methods and skills in teaching medical students.

The Honors and Awards Committee of the Minnesota Medical Foundation selected the recipients from a number of proposals submitted by the faculty. Preference is given to faculty members who have demonstrated interest in teaching, leadership, creativity, and innovation in education. ■

Centennial Scholarship Fund update

The first awards from the Chester and Charlotte Johanson Scholarship Fund have been presented to ***Allan Hunt*** and ***Steven Peckham***. Each received a $1,500 scholarship from the fund, which was created as part of the Centennial Scholarship Fund.

Many other students are also being helped to ease the burden of a medical education as more scholarships become available through the Centennial Scholarship Fund.

Created in 1988 as part of the Medical School's 100th anniversary celebration, the Fund was a three-year campaign with a $10 million goal. More than $10.5 million was raised, although much of it was in pledges and deferred gifts which do not show immediate results. This year, however, medical students are beginning to receive help as a direct result of the campaign.

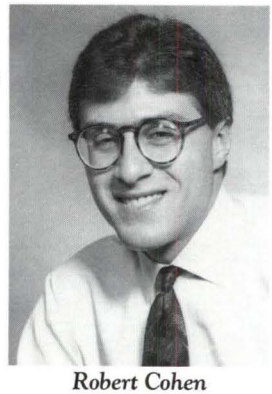
Because of growth over the past year, the Minnesota Medical Foundation projections show that approximately $75,000 in scholarships will be available this fall and an additional $45,000 in the winter and spring for a total of $120,000. This compares with a total of $90,000 in scholarships which were awarded during the past academic year.

Of the nearly $3.2 million in the current scholarship endowment, approximately $1.8 million or 56 percent can be directly attributed to the Centennial Scholarship Campaign, and this increase reflects only 20 percent of campaign pledges and deferred gifts realized. Another $8.6 million in deferred gifts remains outstanding.

Through the coming years, MMF's scholarship endowment will continue to grow because of the Centennial Scholarship Fund campaign, and more students like Allan Hunt and Steven Peckham will be able to afford medical school. ■

MMF names new staff member

Robert Cohen has joined the staff of the Minnesota Medical Foundation as Director of Development for the $3 million Children's Cancer Research Fund (CCRF) campaign to establish the Children's Cancer Research Fund Senior Endowed Chair in Pediatric Oncology — an integral part of the $30 million Fund for the University of Minnesota Cancer Center.



Robert Cohen

CCRF has pledged $3 million toward the establishment of the chair. Research will focus on the causes, diagnosis, treatment, prevention, and cure of children's cancers. When the Fund for the University of Minnesota Cancer Center was created, CCRF was one of the first to lend its support, and over the past 30 years has raised millions of dollars for the work of the Department of Pediatric Oncology.

Cohen comes to MMF from United Way of Minneapolis, where he was a campaign division director. He has a degree in marketing from the University of Minnesota, and has been active in the community through such organizations as Big Brother, Youth Basketball, and the Minnesota Super Bowl Task Force. ■

UNDER OUR UMBRELLA

University Children's Foundation

The University Children's Foundation (UCF) recently announced the winners of its three major research awards. ***Dr. Susan Berry*** received the first Jundt Research Award given to the pediatric faculty member proposing the most innovative research project likely to receive federal funding. She is studying the role of growth hormone in the development of the fetus. ***Dr. Manny Katsanis*** received the Irvine McQuarrie Research Scholar Award to support his research using recombinant DNA to fight neuroblastoma. The University Children's Foundation Scholar was awarded to ***Dr. Ralph Shapiro*** to study the interactions between the immune system, Epstein-Barr virus, and the development of B cell lymphoproliferative disorder (BLPD).

The third annual University Children's Foundation benefit, "Catch a Rising Star," was held on August 29. Over 400 people attended the event at Edinborough Park in Edina and at 20 host homes around the Twin Cities. More than $40,000 was raised to support the research of ***Dr. Ralph Shapiro***, this year's UCF Scholar.

LDB International Corporation will sponsor this year's Golden Gopher Challenge, donating $100 for every point scored by the University of Minnesota football team. Funds will support research into the causes of childhood diseases. ■

Vision Foundation

The Vision Foundation has awarded the Alumni Service Award to two ophthalmologists in recognition of their service to the University of Minnesota Department of Ophthalmology. Recipients of the award are ***Drs. Malcolm McCannel*** and ***George Tani***. The Vision Foundation presented the Outstanding Service Award to ***George Dugan*** in recognition of 30 years of volunteer service to the department and the Lions Eye Bank. The Vision Foundation Public Relations Committee has completed its Speakers Bureau video and accompanying brochure and has recruited ophthalmologists and lay persons to speak at service clubs and organizations around the Twin Cities about the opportunity to help persons with vision problems through eye research. ■

Children's Cancer Research Fund

The Children's Cancer Research Fund's (CCRF) annual fall benefit will be held on November 21 at the Minneapolis Marriott Hotel. Called "The Dream Ball," the dinner/dance will feature music by Rupert's orchestra, a cameo appearance by the Coasters, and a silent auction.

The second annual Children's Celebrity Day, a benefit for CCRF, was held July 16 at International Market Square in Minneapolis. Local sports celebrities Randy Breuer, Gene Larkin, Bobby Smith, and Darrin Nelson signed autographs and posed for pictures. The event also included a fashion show, lunch, and a sports-themed silent auction.

These and other fund-raising events throughout the year have raised millions of dollars for research in pediatric oncology. CCRF has provided financial support for studies in the Pediatric Oncology Division at the University of Minnesota Medical School for more than 30 years. ■

Department of Obstetrics & Gynecology

A special event, a Celebration of Life, was held last May at the Hyatt Regency Hotel in Minneapolis. Sponsored by the University's OB/GYN Department and the Women's Cancer Center, this event honored the many women who are five and 10 years (and plus!) cancer survivors.

Celebration honors cancer survivors.

About 160 patients, faculty, friends, and family attended a reception and dinner, followed by a program featuring speakers from the University of Minnesota Cancer Center and the Women's Cancer Research Program, and Maxine Jeffris, a local comedian. KARE-11 news anchor Joan Steffend hosted the evening's events.

A party was held in June sponsored by the OB/GYN Department and the Reproductive Health Program. This celebration is an annual event recognizing the families who have experienced success through the department's in vitro fertilization program. Almost 200 adults and children enjoyed an afternoon of indoor carnival activities, live entertainment, and a buffet lunch.

A Department of Obstetrics & Gynecology Alumni and Friends Society Reception will take place on October 22, 1992, from 5 to 7 p.m. at the Radisson Hotel Metrodome. ■

Variety Club Association

Variety Club will hold its annual Toyland Auction and Dinner on Saturday, November 7, at the Minneapolis Metrodome Hilton. The evening will feature a silent auction, a live auction, and special comic entertainment.

Funds raised will support the Variety Club Children's Hospital. For more information, call (612) 624-6900. ■

MAS NEWS

President's Report

I am pleased to join you as president of the University of Minnesota Medical Alumni Society (MAS) for the 1992-93 academic year. I have been actively involved in MAS as an officer and a committee member, and I am looking forward to an exciting year.

Thanks to all of you who joined the Medical Alumni Society through the University of Minnesota Alumni Association during the past year. If you are not currently a member of MAS, I encourage you to join us this fall. Membership cost is only $30, and will enable you to stay in touch with all that's happening at the University of Minnesota.

MAS is planning for increased supportive relationships with medical students in the coming year. We hope to strengthen our Residents Away From Home program, which aids residency searches by connecting medical students with volunteer alumni across the country. In addition, we will be asking Twin Cities and Duluth area alumni to increase their involvement with medical students.

Mark your calendars for this year's reunions the first weekend in June. The classes of 1933, 1938, 1943, 1948, 1953, 1958, 1963, 1968, 1973, and 1983 will celebrate during Reunion Weekend '93. This year we will be adding 35th and 55th reunion celebrations for the first time.

The Annual Alumni Phonathon will be underway very soon. I encourage you to support your Medical School when you are contacted. As you know, during a time of budget cuts and ever-increasing tuition, your support is needed more than ever.

I look forward to a great year with the Medical Alumni Society, and to working closely with as many of you as possible. If you have any questions about MAS or alumni activities, please contact me through the Minnesota Medical Foundation Alumni Office at (612) 625-8676.

Richard Simmons, M.D., '55
President
Medical Alumni Society

New board members elected

New officers and board members were elected at the Medical Alumni Society's Annual Meeting and Luncheon held during reunion weekend in June.

Members of the 1992-93 MAS board of directors are:

Executive Committee:

President: ***Richard K. Simmons, M.D.***, '55
Vice President: ***Wayne D. Liebhard, M.D.***, '83
Secretary/Treasurer: ***Dorothy J. Horns, M.D.***, '76
Past President: ***John F. O'Leary, M.D.***, 77
UMA National Board Representative:
Dale L. Anderson, M.D., '59

Members:

Joyce L. Funke, M.D., '50
Roy H. Good, M.D., '52
Frank G. Lushine, M.D., 71
Margaret A. MacRae, M.D., '74
Elmer C. Paulson, M.D., '37
J. Patrick Smith, M.D., '76
Neil A. Stein, M.D., '71
Richard E. Student, M.D., '54

AAMC reception planned for New Orleans

The Minnesota Medical Foundation, the University of Minnesota Hospital and Clinic, and the University of Minnesota Medical Schools will host a reception for alumni and friends of the Medical Schools in conjunction with the upcoming Association of American Medical Colleges Annual Meeting in New Orleans.

The event is scheduled for Sunday, November 8, 1992, from 6 to 8 p.m. at the New Orleans Hilton. All alumni and friends of the Medical Schools who live in the New Orleans area or who will be visiting there at the time are invited to attend.

For more information, contact the Medical Alumni Office at (612) 625-8676. ■

Dr. Hubert L. (Ande) and Beverly Anderson

Alumni Profile

Name: Dr. Hubert L. (Ande) Anderson
Class Year: 1938
Hometown: Carmel Valley, California
Family: Married for 50 years to Beverly; one daughter Sue Ellen; two grandchildren.
Medical Practice: Spent more than 20 years as a career Navy doctor, serving in both World War II and Korea. For five years he was a regimental surgeon with the Marines and was a medical officer with the Navy.
Favorite Medical School Memories:
Most memorable class was embryology ("What better place to start than at the beginning!").
Favorite professor was E.T. Bell, popular head of the Department of Pathology.
Favorite "leisure-time activity" was walking 20 miles round trip to class.
Hobbies: Painting watercolors which decorate his home; formerly playing the harp, and currently planting hundreds of trees and berries on the hillside near his home.
Advice: "I would heartily recommend the practice of medicine to anyone who has a genuine interest in the profession and the ability to understand other people and their needs." ■

CLASS NOTES

1930

Dr. Harold R. Hennessy, Lake Bluff, Illinois, has been appointed a Member of the 50th Anniversary Council for the Battle of Normandy. The Council will plan a celebration for the 50th anniversary of the Battle of Normandy to take place in 1994. Dr. Hennessy is a retired Army Medical Colonel who served in Europe in World War II.

1948

Dr. Harry W. Orme, Rancho Mirage, California, retired three years ago from his position as medical director and administrator at Miller Children's Hospital in Long Beach. He has just assumed a new position as editor-in-chief of Physician's Magazine in Palm Desert, and is an active volunteer at the Palm Springs Desert Museum, the Children's Museum of the Desert, and is a docent at the Living Desert.

1949

Dr. James M.A. Weiss, Columbia, Missouri, first professor of psychiatry at the University of Missouri and founding chairman of the Psychiatry Department there, has received a number of honors marking his recent retirement to part-time teaching and research. He was named Professor Emeritus of Psychiatry and of Family and Community Medicine, received the Distinguished Service Certificate from the Missouri Psychiatric Society, the Honorary Achievement Award from the University of Missouri Medical Alumni Organization, and the Outstanding Service Award from the Department of Veterans Affairs.

1950

Dr. Roger S. Johnson, Irving, Texas, has given 93 bicycles to the children of Polebrook, England, to repay a 48-year-old debt. Dr. Johnson was an Army lieutenant in 1944 when he borrowed a bicycle to return to his base at a nearby airfield, and because of the war was never able to return the bike. He has recently spent $18,000 on bikes for the children of Polebrook, 45 miles north of London.

1956

Dr. Stanley M. Goldberg, Minneapolis, was elected to Honorary Fellowship in both the Royal Australasian College of Surgeons and the Association of Surgeons of Great Britain and Ireland.

1968

Dr. John A. Seibel, Albuquerque, New Mexico, has helped start the American Association of Clinical Endocrinologists and is currently serving on the first board of directors of the Association.

1970

Dr. Noel K. Dysart, Jacksonville, Florida, has left his position at Groton Naval

Hospital where he was commanding officer and taken a new position as commander of Jacksonville Naval Hospital, a 138-bed family practice teaching hospital.

1975

Dr. Richard F. Borch, Rochester, New York, has been named interim director of the University of Rochester Cancer Center. A physician-scientist whose research focuses on the development of more effective cancer-fighting drugs, Dr. Borch is Dean's Professor of Oncology in Pharmacology, professor of chemistry, and head of the Cancer Pharmacology Program. He joined the University of Rochester in 1982 from the University of Minnesota, where he was professor and vice chair of the Department of Chemistry.

1979

Dr. Robert K. Nimlos, Glendale, Arizona, has been elected president of the Arizona Chapter of the American College of Emergency Physicians.

1980

Dr. Louis M. Binder, assistant dean for medical education at the Texas Tech University Regional Academic Health Center at El Paso, has been elected president-elect of the Society for Academic Emergency Medicine, a 2,300 member organization dedicated to improvement of care of acutely ill or injured patients. Dr. Binder is associate professor of Emergency Medicine at Texas Tech.

1982

Dr. Jeffrey M. Wempe, Albuquerque, New Mexico, attended the 10th World Congress of Anesthesiology in the Netherlands in June. He is stationed at Kirtland Air Force Base in Albuquerque.

1983

Dr. Nancy C. Elder, Portland, Oregon, has been named assistant professor and associate director of predoctoral education in the Department of Family and Community Medicine at the Oregon Health Sciences University. In June Dr. Elder completed a two-year Academic Family Medicine Fellowship at the University of Missouri and received a master's degree in public health.

1986

Dr. Allison K. Cabalka, Eagan, Minnesota, has completed training in pediatric cardiology at Baylor College of Medicine and Children's Hospital in Houston, Texas, and is now practicing at the Children's Heart Clinic in Minneapolis.

1989

Dr. Laurel E. Cederberg, Marknadsvagen, Sweden, has finished her residency in pediatrics at Children's Hospital in Oakland, California, and is now practicing at St. Gorans and Karolinska hospitals in Stockholm. ■

IN MEMORIAM

DAVID BLOOM, M.D.,
Class of 1955, director of the pediatric rheumatology clinic at St. Paul Children's Hospital, died July 16 at age 66. He also had served on the staffs of Abbott Northwestern, United, and University of Minnesota hospitals. He was a fellow in allergy and immunology at the University of Minnesota and a fellow in rheumatology at Los Angeles Children's Hospital, the Clinical Research Center at Northwest Park Hospital, and the Juvenile Rheumatism Clinic at the Canadian Red Cross Memorial Hospital, the latter two in England. Dr. Bloom was active in the American Academy of Pediatrics and had served on a committee to evaluate Head Start programs. He also was a volunteer at the Teen Age Medical Center, a walk-in clinic for young people in Minneapolis. He is survived by his wife, Arline, two sons, a daughter, and six grandchildren.

THOMAS P. GLYNN, M.D.,
Class of 1943, a radiologist from Oxford, Ohio, died April 21 at age 72. He served for 35 years as radiologist at Mercy Hospital in Hamilton, Ohio, during which time he established ultrasound and nuclear medicine departments and designed the new Radiology Department for Mercy Hospital South. Dr. Glynn was currently radiologist for Miami University Student Health Service and assisted in the Radiology Department at Reid Memorial Hospital, Richmond, Indiana. He is survived by his wife, Rita, seven children, and 13 grandchildren.

SEWELL S. GORDON, M.D.,
Class of 1942, a founder of the St. Louis Park (Minnesota) Medical Center and chief of radiology at the old Mount Sinai Hospital in Minneapolis, died July 26 at age 75. Dr. Gordon was one of 10 doctors who started the Center in 1952, and was chief of radiology at Mount Sinai when it became part of what is now Park-Nicollet Medical Center. He is survived by his wife, Nancy, and three children.

GEORGE W. JANDA, M.D.,
Class of 1947, an obstetrician and gynecologist who practiced in Minneapolis for 35 years, died June 22 at age 69. In 1954 Dr. Janda became a faculty member and later a clinical professor and resident supervisor in the Department of Obstetrics and Gynecology at the University of Minnesota. In 1959 he joined a private practice which became OB-Gyn West Professional Association. He was chief of OB-GYN services at Methodist and Abbott Northwestern hospitals and chief of gynecologic services at the Minneapolis VA Medical Center, and also worked for a program that provided care for patients in Africa. He retired in 1988. Dr. Janda was past president of the University of Minnesota Alumni Association and the

Twin Cities Obstetrics and Gynecologic Society and founder of the Minneapolis Council of Obstetrics and Gynecology. Memorials have been suggested to the Minnesota Medical Foundation. Dr. Janda is survived by his wife, Mary, and three children.

ROBERT F. MCGANDY, M.D.,
Class of 1922, a general physician and surgeon in Minneapolis for more than 50 years, died June 18 at age 93. Dr. McGandy had an office in the Medical Arts Building, and also was a physician for Northern States Power Co., where he was an authority on electrical burns. He was also a clinical professor of surgery at the University of Minnesota Medical School and former chief of staff at Northwestern Hospital. Dr. McGandy was past president of the Hennepin County Medical Society and the Minneapolis Surgical Society. He is survived by his three children, 12 grandchildren, and 10 great-grandchildren.

HAROLD O. PETERSON, M.D.,
Class of 1933, professor emeritus and former chairman of the Department of Radiology at the University of Minnesota Medical School, died July 22 at age 83. Dr. Peterson was a pioneer and an internationally recognized expert in neuroradiology, the diagnostic imaging of the central nervous system, the brain and spinal cord. In 1941, he was the first radiologist to inject contrast material such as dye into the spinal cord and then remove it, leading to the establishment of the X-ray technique called myelography.

Dr. Peterson was a partner in St. Paul Radiology at the old Miller Hospital in St. Paul for 20 years. He was head of the Radiology Department at St. Paul Children's Hospital from 1941 to 1957 and the first chief of staff at the University of Minnesota Hospital in 1966. He became a full-time professor and chairman of the Radiology Department in 1957.

Dr. Peterson was a trustee of the American Board of Radiology, a chancellor and past president of the American College of Radiologists, past president of the American Roentgen Ray Society, the Minnesota Academy of Medicine, and the American Radiological Society, and a founding member and past president of the American Society of Neuroradiology.

Margaret Ferris Peterson, Dr. Peterson's wife, died in March. The Margaret F. and Harold O. Peterson Chair in Neuroradiology has been established at the University of Minnesota through the Minnesota Medical Foundation to recognize Dr. Peterson's countless contributions to the field of neuroradiology as innovator and teacher. Memorials to the Chair have been suggested. Dr. Peterson is survived by three children and eight grandchildren.

Dr. Harold O. and Margaret Peterson

JOSEPH L. POSCH, M.D.,
Class of 1942, of Grosse Pointe Shores, Michigan, died July 30 at age 76. He was recognized as a world-renowned hand surgeon and was at the forefront in diagnostic and surgical innovations. As an educator, Dr. Posch taught in many areas of the world. He is survived by his wife, Gerri, three children, and nine grandchildren.

ROBERT R. REICK, M.D.,
Class of 1968, internal medicine specialist from New Hope, Minnesota, died in July at age 48. He is survived by a sister and a number of nieces, nephews, and cousins.

RONALD E. RISCH, M.D.,
Class of 1935, a general practice physician who served the Northeast Minneapolis community for many years, died in June at age 81. He is survived by his wife, Lillian, three children, seven grandchildren, and one great-grandchild.

JOHN M. WOLFF, M.D.,
Class of 1946, former internist who specialized in radiology and nuclear medicine at the Minneapolis Veterans Medical Center for 22 years, died July 23 at age 69. Dr. Wolff served in the Army's 110th General Hospital in Vienna, Austria, for two years. He began his medical practice in Duluth with the Duluth Clinic. While at the VA, Dr. Wolff helped train many medical students in radiology and nuclear medicine. He is survived by his wife, Virginia, four children, and two grandchildren. Memorials to the Dr. John M. Wolff Memorial Fund at the Minnesota Medical Foundation were suggested.

THOMAS D. WRIGHT, M.D.,
Class of 1944, staff physician at the Minneapolis VA Medical Center and private practice physician, died in July at age 73. He is survived by his wife, Jane, one son and two grandchildren. ■

THANKS FOR ASKING

Gary G. Hargroves

Question: How does it work to give appreciated real estate and receive an income from it?

Some of the primary reasons people make such gifts are:

- Eliminate capital gains tax
- Receive a lifetime income from the full market value
- Eliminate management responsibilities
- Reduce current income taxes
- Make a charitable gift

Making such a gift is relatively simple.

The real estate is gifted into a charitable trust. Our attorney prepares the trust document for the donor attorney's review. The Minnesota Medical Foundation usually serves as trustee.

The trust provides a lifetime income to one or more individual. The percentage of income is mutually determined.

The donor has the real estate appraised by a qualified appraiser. The charitable contribution deduction is based on this appraisal.

The charitable trust sells the real estate. There is no capital gains tax on the sale. The funds are reinvested and an income is paid to the donor and/or other(s).

If you have a question concerning charitable aspects of financial or estate planning, send your question to: Gary G. Hargroves, Minnesota Medical Foundation, Box 193 UMHC, Minneapolis, MN 55455 or phone (612) 625-5463.

Is the business side of being a doctor overwhelming you? Is your business planning, tax planning, investment planning, income deferring, income diverting, income converting, deductions timing, tax shelters, marital deductions, life insurance, estate liquidity, and charitable giving taking too much time and effort?

A new 31 page booklet published by R & R Newkirk outlines the issues in a simple, helpful, and understandable manner.

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RETURN TO: Gary Hargroves, Box 193 UMHC, Minneapolis, MN 55455 or phone (612) 625-5463.

Dr. Royal C. Gray

by Jean Murray

DR. ROYAL GRAY has a special concern for young people from rural areas who wish to become doctors. He believes they sometimes lack the financial and educational opportunities available to students in cities and larger communities, and he wants to help.

Dr. Gray has established the Royal C. and Mary H. Gray Scholarship Fund which will provide, each year, a full tuition scholarship for the first year of medical school for a young man and a young woman from rural Minnesota. He particularly wishes to help students from families with limited financial resources whose accomplishments, academic and personal, demonstrate their desire for self-advancement and forecast a productive career in medicine.

Both Dr. Gray and his wife Mary, who died in 1977, came from rural Minnesota towns — Dr. Gray from Taylors Falls and Mary from Vernon Center. When Dr. Gray was born in Taylors Falls in 1897, the community had only about 500 residents. He began his university career as a science student at the University of Chicago, then transferred to the University of Minnesota where he earned his M.D. degree in 1924.

A firm believer that doctors should have experience in family practice before choosing a specialty, Dr. Gray practiced for two years after graduation in Graceville, Minnesota, and then a year in Cook, also in Minnesota.

He continues to believe that all new physicians should have experience in family practice and be well-versed in internal medicine, and is concerned that the current high-tech medicine and high degree of specialization causes the doctor-patient relationship to suffer. "It's so important for a doctor to really know the patient and the family," Dr. Gray says.

After his rural family practice experience, he returned to the University of Minnesota Medical School on a teaching fellowship in nervous and mental diseases, earning a master's degree in 1930 and a Ph.D. in 1931. His principal research was in quantitative study of vibration sensation and in hereditary and familial diseases of the nervous system.

Many years later, Dr. Gray would learn that the anonymous scholarship which supported his teaching fellowship was given by then head of the department, Dr. Arthur Hamilton. It was Dr. Gray's high regard for Dr. Hamilton that led the young doctor into the field of neuropsychiatry.

Dr. Royal Gray, left, was recognized as a member of the University of Minnesota Trustees Society at the 1988 MMF Annual Meeting. With him are acting University President Richard Sauer and Dr. Paul Quie, then president of MMF.

Dr. Gray was certified in both neurology and psychiatry, and was a member of the Medical School faculty throughout his professional career, serving for much of the time as professor of neurology and chief of neurology at the Minneapolis Veterans Administration Hospital. He received the Regents' Certificate of Merit in 1965, and retired as Professor Emeritus of Neurology in 1967.

Mary Gray graduated from Goucher College in Baltimore in 1924, and was a medical social worker at the University of Minnesota Hospital for four years. She then served as a social worker for the Minneapolis Public Schools until her retirement in 1958. Dr. Gray attributes much of his motivation to create the scholarship to his wife, and to her belief in the ability of young men and women from rural areas to achieve if given the help they need.

The Royal C. and Mary H. Gray Scholarship will make a significant difference in the lives of young men and women from rural areas who wish to study medicine. Dr. Gray's generosity will have an impact far into the future. ■

Minnesota Medical Foundation
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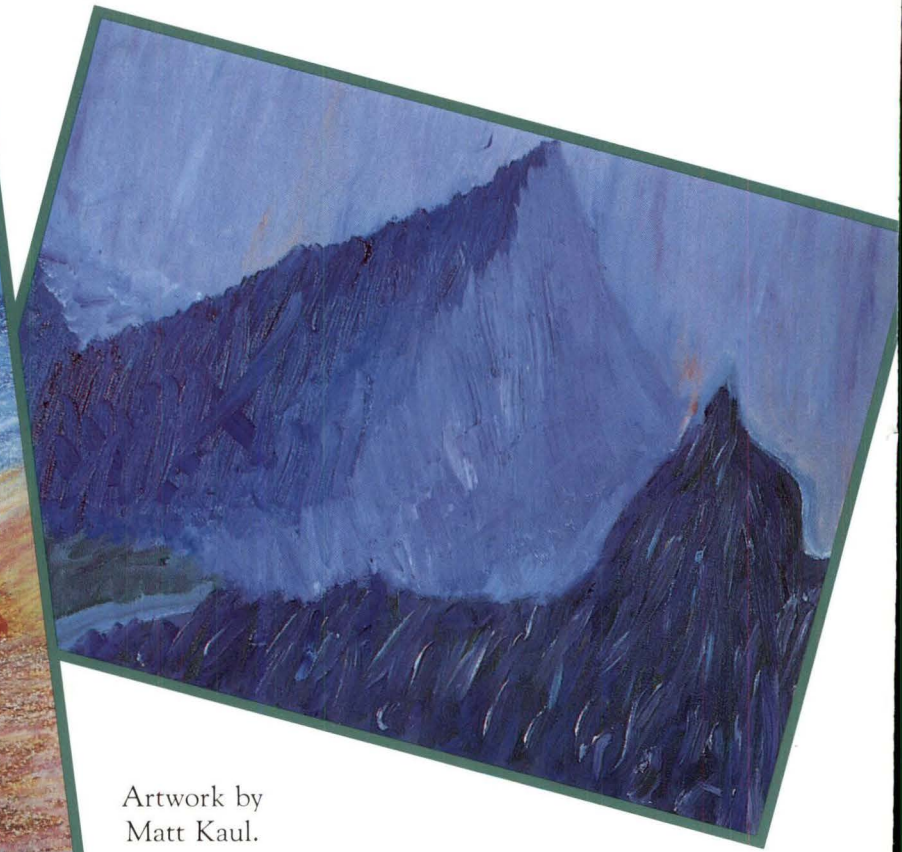

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Matt Kaul.