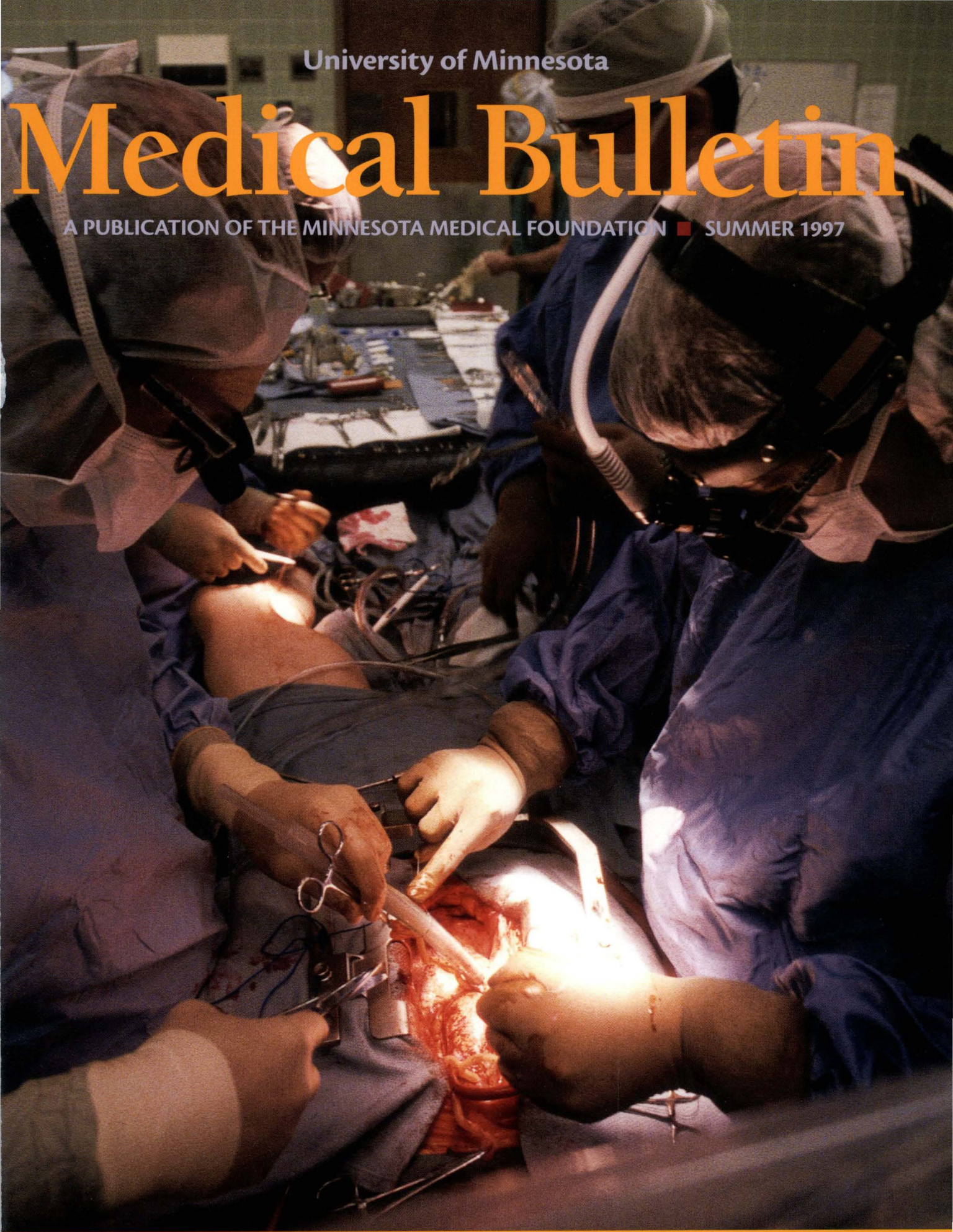

University of Minnesota

Medical Bulletin

A PUBLICATION OF THE MINNESOTA MEDICAL FOUNDATION ■ SUMMER 1997

The Department of Surgery: Putting Lives Back Together

MINNESOTA MEDICAL FOUNDATION

at the University of Minnesota

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Publishing Information:
The University of Minnesota Medical Bulletin is published by the Minnesota Medical Foundation on behalf of the University of Minnesota Medical Schools (Minneapolis and Duluth), the Medical Alumni Society, and the Minnesota Medical Foundation. Statements and opinions published herein are exclusively those of the authors themselves. There is no subscription fee. No advertising is accepted. Publication is made possible by contributions to the Minnesota Medical Foundation.

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Graphic design: Lilja Baehr Design
Printing: Sexton Printing, Inc.
Photography: Tim Rummelhoff

Change of Address:
Please enclose old and new address and mail to: Minnesota Medical Foundation, Box 193, 420 Delaware Street SE, Minneapolis, Minnesota 55455-0392. Phone 612-625-1440 or 1-800-922-1MMF.

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On the cover:

Surgeon Chip Bolman and his team perform an aortic valve replacement. Photo by Tim Rummelhoff.

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University of Minnesota

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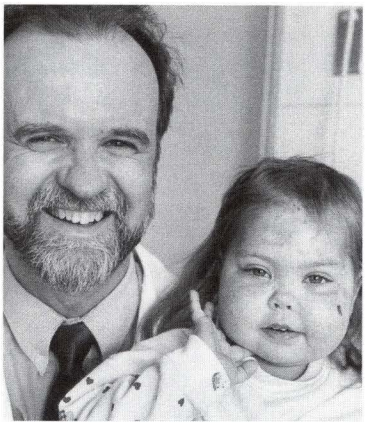
Summer 1997



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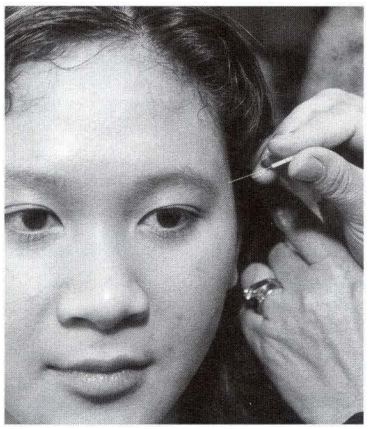

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Letters to the Editor

Welcome news

What welcome news! Your article in the 1997 Spring issue on deep brain stimulation must have had a great impact on many Parkinson's patients and their families. We are one of those families. My husband was diagnosed with Parkinson's disease in 1990.

Parkinson's disease is an unwanted intruder and has a devastating effect on one's quality of life. The exciting results of the recent research give us new hope in gaining control over the debilitating symptoms of this disease and returning to a life of normal activity.

We are very proud that our University has made such a giant step in Parkinson's research. We hope that through the University's continuing commitment to research they will find new ways to relieve symptoms while they are seeking a cure.

Ruth Reed
School of Nursing
Class of 1955

Editor's note: *Ruth Reed serves on the board of Supporters United for Parkinson's Education and Research (SUPER), an affiliate of the Minnesota Medical Foundation. She and her husband, Glen, are both active in the organization.*

Timely account

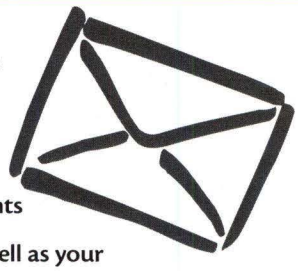
Your cover article on the Fairview-University Medical Center was a timely account of an affiliation that begins a new chapter in the rich history of the University of Minnesota Medical School.

While there are many voices of concern (and justifiably so), the affiliation provides incredible new opportunities to enhance the education and research programs of the Medical School. The new partnership also brings together distinctive medical expertise from both sides of the river to provide improved patient services ranging from illness and injury prevention to the management of patients with the most unusual and complex problems.

For decades, the Medical School has been criticized for its distance from the state's medical community. The new relationship with Fairview Health System provides access to a primary care network of physicians at seven hospitals and 33 clinics across the state, giving medical students and residents a broad patient base for learning. This will help bring the Medical School closer to the field of action and lead to improved relationships with the medical community.

Yes, it's a different way of doing things and changes can be difficult. But I believe that in the long-term this affiliation will be seen as a very successful model to foster patient care services and enhance educational and clinical research opportunities.

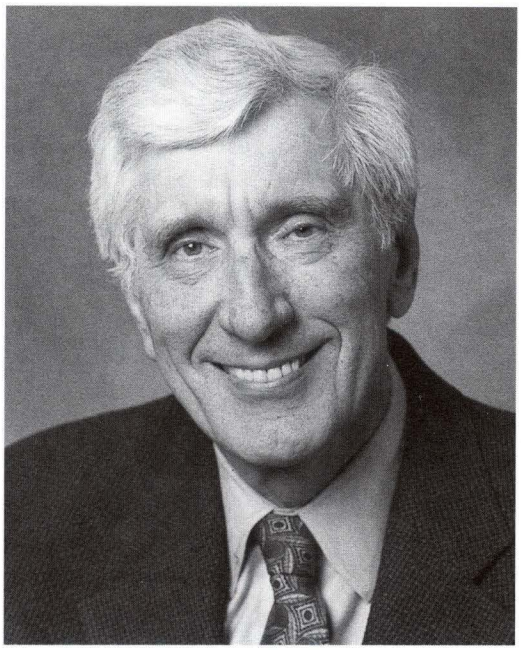
Theodore R. Thompson, M.D.
Professor of Pediatrics
Director, Medical Outreach
Medical Director,
University of Minnesota Clinical Associates



Letters to the Editor is a new Medical Bulletin feature. We welcome your ideas and comments on Bulletin articles as well as your suggestions for article topics. We value the opinions of our readers — the alumni, faculty, students, and friends of the University of Minnesota Medical Schools and the School of Public Health.

Please send your letters to: Medical Bulletin Editor, Minnesota Medical Foundation, Box 193, 420 Delaware Street SE, Minneapolis, MN 55455, or send an e-mail to: j.ohlsen-read@main.mmf.umn.edu. Thank you.

Dean's Report



I am honored to assume the position of dean of the University of Minnesota Medical School, and I am very optimistic about the future of this great Medical School.

Although there are many challenges ahead, this is an outstanding school and we should feel good about being here. I am a great believer in taking joy in what you do. The Medical School ought to be a source of great joy to all of us.

There are a number of priorities to focus on as we look ahead to the coming months and years. A top priority is to continue development of a strategic plan. Goals include boosting the Medical School's national ranking, finding new revenue sources and improving financial management, providing a more supportive environment for students, enhancing competitiveness in research and clinical practice by developing strong interdisciplinary programs, and promoting public awareness of the Medical School's contributions to the state.

I believe it is important to improve the relationship between the Medical School and the community, particularly with alumni. We have not done as good a job with community relations as we should, and I plan to find ways to get the Medical School more involved.

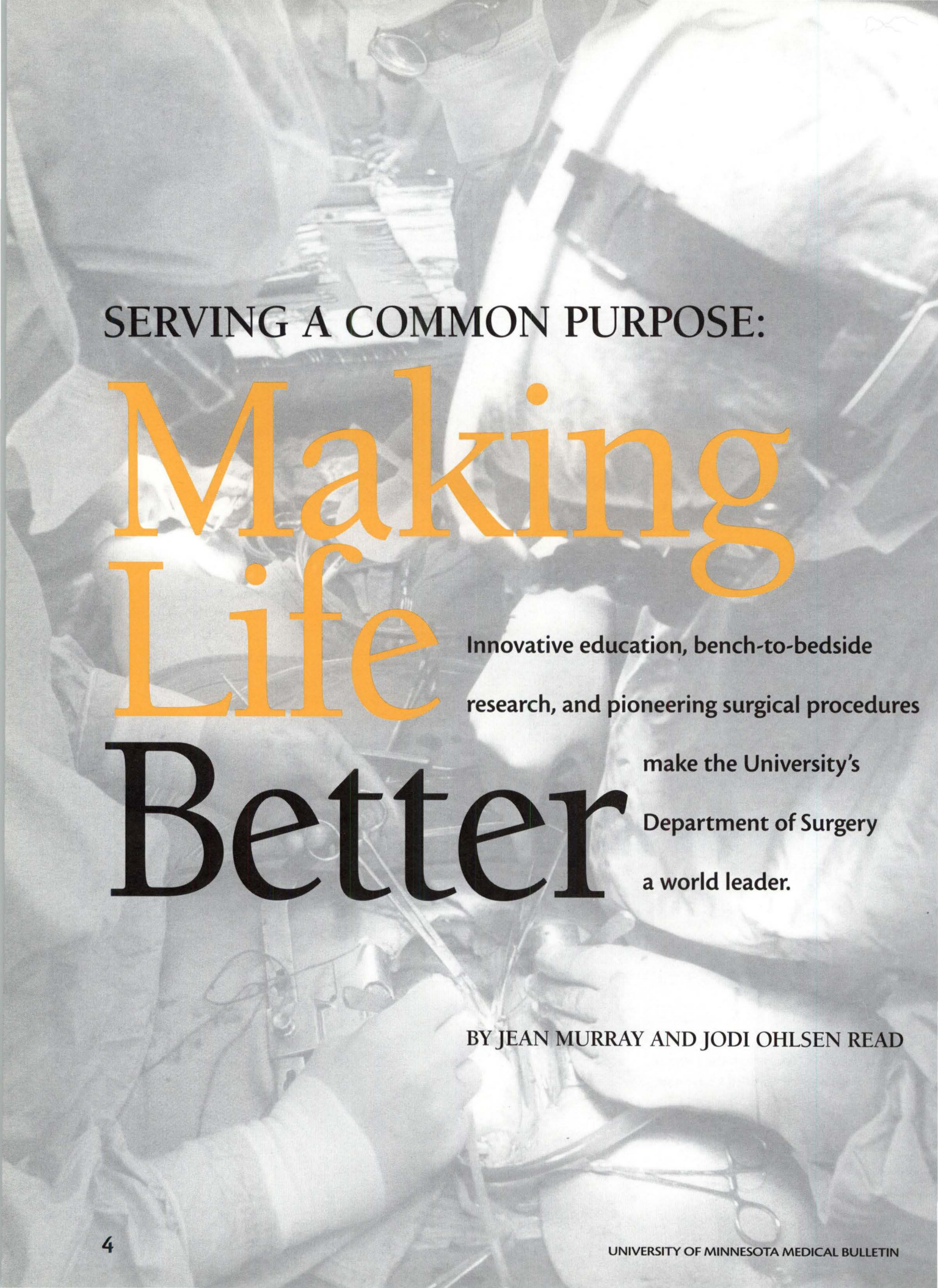
I recently met with the Medical Alumni Society board, and look forward to working closely with the alumni representatives. I hope to use the board as a way to provide feedback on strategic planning and suggest ways for the Medical School to interface with the community. The community sometimes sees us as a fortress. We need to change that image to a meeting house.

It is also very important to create a more supportive environment for medical students. The Medical School hasn't always been the type of home that it should be to students. We need to remember that we exist for medical students.

At the recent graduation ceremonies, it was rewarding to see the Class of 1997 fulfill their dreams of becoming physicians. But graduation is only the beginning, the commencement of a life-long career concerned with taking care of sick people and preventing disease. The remarkable advances in molecular medicine and biology will continue to change the tools of our profession — the drugs we prescribe, the procedures performed, and just what we do. However, the unchangeable bedrock of the profession is the compassion and commitment that physicians bring to the bedside.

We are proud of our students, and plan to continue our strong ties with them as they become alumni and begin their medical careers. There is no greater privilege than helping to relieve human suffering caused by disease.

Alfred F. Michael, M.D., Dean
University of Minnesota Medical School, Twin Cities



SERVING A COMMON PURPOSE:

Making Life Better

Innovative education, bench-to-bedside research, and pioneering surgical procedures make the University's Department of Surgery a world leader.

BY JEAN MURRAY AND JODI OHLSEN READ

"Hospital sets transplant record"
"David Dunn takes charge as department head"
"U surgeons perform rare bowel transplant"

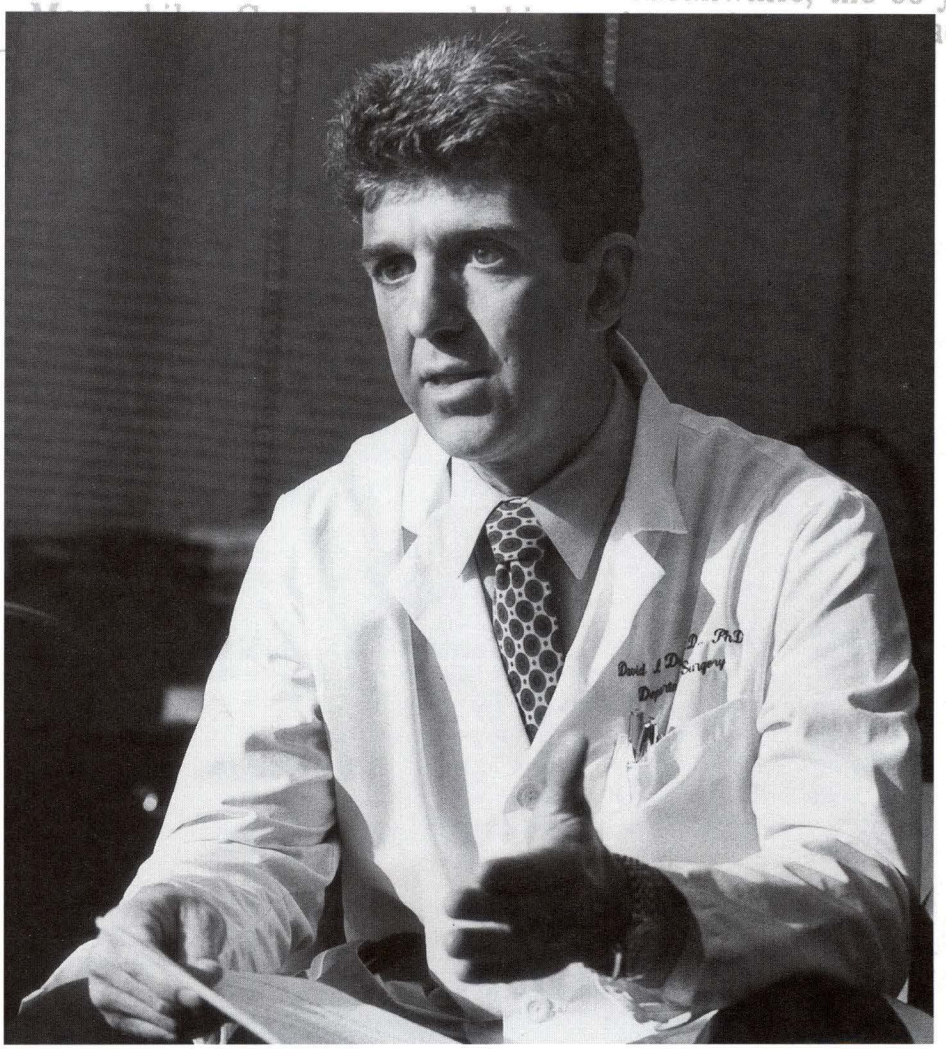
Built on a strong tradition of excellence, Department of Surgery faculty are making headlines worldwide for their innovative procedures, and are looking toward a future of continued growth and discovery under the new leadership of David L. Dunn, M.D., Ph.D. Optimism and excitement are evident throughout the Department of Surgery at the University of Minnesota.

Behind the headlines announcing the state-of-the-art procedures, the personal caring of the surgeons for their patients is also evident. The surgeon's job is not finished when he or she leaves the operating room.

On a follow-up visit, Dr. Rainer Gruessner plays high-fives with 3-year-old Courtney Macht, talks to her mother about the toddler's diet, gently touches Courtney's face and contacts a colleague in the Dermatology Department about a few small sores that have developed. Just a few months ago, Gruessner and his team performed a historic liver-bowel transplant on Courtney, the first of its kind in Minnesota and one of very few worldwide on children under five.

Gruessner and his colleagues in the Department of Surgery stress the critical importance of teamwork — within the department and with other Medical School departments — in bringing about the successes. The theme heard repeatedly is that it is many parts, many individuals, working together in a common purpose.

"It's so much a team approach," says Gruessner. "It's not just the surgeon whose name you read about in the paper. It's the researchers, the anesthesiologists, the nurses, the transplant coordinators, and many more all working together. We all have the same goal, which is making life better for each patient."

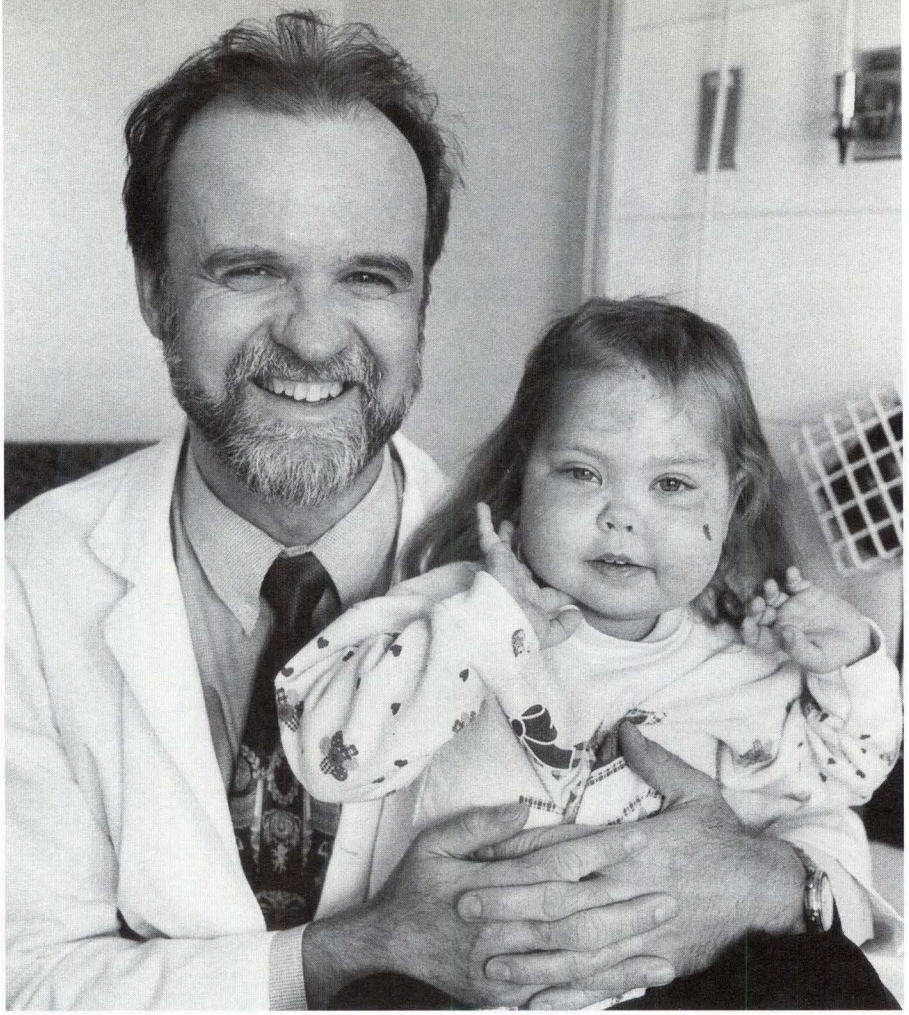


Dr. David Dunn became head of the Department of Surgery in January 1996.

Teamwork is essential in a department as large as surgery, which is made up of many divisions, including: Cardiovascular and Thoracic Surgery, Colon and Rectal Surgery, Critical Care, Minimally Invasive Surgery, Pediatric Surgery, Plastic and Reconstructive Surgery, Surgical Endoscopy, Surgical Infectious Disease, Surgical Oncology, and Transplantation.

Dr. R. Morton (Chip) Bolman, head of Cardiovascular and Thoracic Surgery, agrees. "Our success is not the work of any one person. It takes a team of people — nurses, cardiologists, pulmonologists — everyone who participates in the process. It takes a tremendous amount of work to select the patient, organize the caregivers, and take care of the patient."

Dr. Chip Bolman opens the doors to the operating room with his shoulder, holding his wet hands up in the air. The room is bustling with people busily carrying out their tasks. One surgeon, Dr. Cynthia Herrington, chief resident in Cardiac Surgery, has already begun working, preparing the patient for the delicate heart operation. A surgical technician stands at her shoulder, adeptly providing



Dr. Rainer Gruessner performed a historic liver-bowel transplant on 3-year-old Courtney Macht.

required tools and another doctor, Chris Sufka, surgical resident, is removing a vein from the patient's thigh to be used for bypassing a blocked coronary artery.

Bolman takes his place across from Herrington. Quiet concentration blankets the room. Under the bright light focused on the patient's open chest, Bolman and Herrington work quickly, skillfully. Near the patient's head, the anesthesiologist watches the monitors carefully.

Blood flows richly through a tube from the body through the heart-lung machine. The perfusionist monitors the readings intently, rapidly making adjustments with calm, swift motions. Off to the side, two medical students observe the process — one refers to an anatomy book while the other moves in for a closer look. The aortic valve replacement progresses smoothly as all members of this team move together in a practiced rhythm.

Grounded in research and education

Also behind the headlines at the Department of Surgery are exceptionally strong research, education, and residency programs. The department is unique, in that it is now in its 26th year of the only National Institutes of Health-sponsored program project grant in organ transplantation. The grant supports research in transplant immunology in animals and humans, with studies in xenotransplantation, pancreas and islet transplantation, basic transplant immunology, and comparison of various immunosuppressive regimens. The Department of Surgery ranks among the top in the nation in number and amount of research grants.

The residency program also involves substantial research. Department Chair David Dunn says, "Although the clinical training provided is superb, it is the unique research experience offered to all trainees here that distinguishes this program from many if not most others." More than 95 percent of trainees conduct independent, supervised research for one to four years. Close supervision by a faculty supervisor allows trainees to establish themselves as independent investigators. Residents routinely present at national meetings, win national awards for their work, and receive extramural grant support.

Dunn has also initiated a reorganization of the educational programs in the department. In July 1996 he organized a Surgical Education Task Force which resulted in the development of the Surgical Education Council. The Council, chaired by Michael A. Maddaus, M.D., analyzed the surgery rotation for medical students and subsequently developed a new core curriculum. Recent student evaluations reflect the outstanding educational experience they are receiving in the new program.

A proud tradition

Both Gruessner and Bolman emphasize the Department of Surgery's strong foundation — and the current supportive environment — which has enabled surgery faculty to build their programs. For more than 60 years the department was chaired by two surgical giants: Owen H. Wangensteen, 1930 to 1967, and John S. Najarian, 1967 to 1993.

During the Wangensteen-Najarian era major scientific advances were achieved. Under their guidance the department broke ground in the areas of organ transplants, implantable drug pumps, cancer detection, intracardiac surgery, nasogastric intubation, and bypass procedures for morbid obesity and hypercholesterolemia.

The department continues to be a leader in immunosuppression, biomedical engineering, surgical infectious disease control, wound healing, critical care and nutrition, and numerous areas of general, gastrointestinal, pediatric, colorectal, oncologic, and plastic surgery.

The Department of Surgery has one of the world's largest organ transplant programs, performing kidney, pancreas, islet, liver, heart, heart-lung, lung, and bowel transplants which total in the thousands since the program began at Minnesota in 1963. The transplant program currently performs more than 400 organ transplants each year, and is

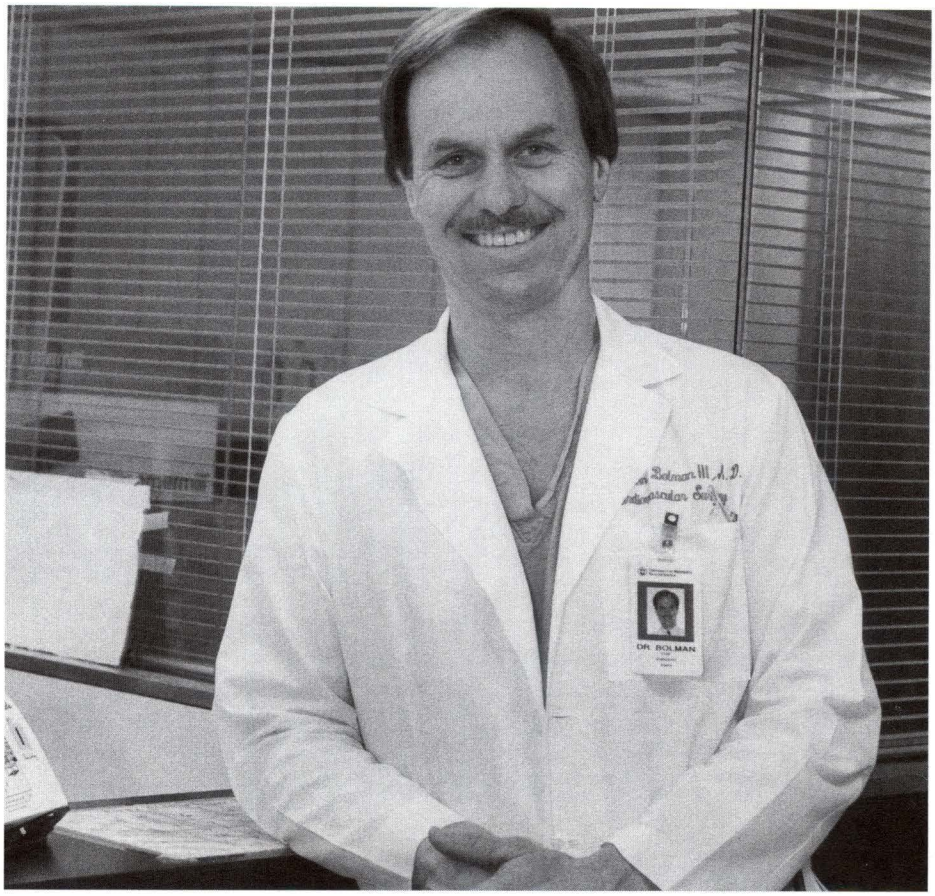
THE THEME HEARD REPEATEDLY IS THAT IT IS MANY PARTS, MANY INDIVIDUALS, WORKING TOGETHER IN A COMMON PURPOSE.

one of the largest kidney transplant centers anywhere, in the top five liver transplant programs in the country, and the largest pancreas transplant program. The successful heart, heart-lung, lung, and islet cell programs have made the Department of Surgery a world leader in multiorgan transplantation.

The Minnesota program has pioneered innovative and difficult types of transplants, achieved unequaled success with diabetic, pediatric, and older patients, and made significant advances in preservation techniques and the use of living donors.

"The reason our programs have been so successful here is because of Dr. Najarian and Dr. Dunn," says Chip Bolman. "Because Dr. Najarian was here for so long and transplantation was his interest, he attracted many people with similar interests. Over the years, the lifeblood of the institution has been transplantation. The support for transplantation here at the University is great — much better than you can find most anywhere else."

The recent procedures by Gruessner and his team have made University of Minnesota surgeons the first in the world to have successfully transplanted all intra-abdominal organs — kidney, pancreas, bowel, and liver — from living related donors. And Bolman's pioneering cardiac ventricular remodeling surgery is the first-ever for Minnesota.



Dr. Chip Bolman's cardiac ventricular remodeling surgery is the first-ever for Minnesota.

New leadership

The tradition of excellence and innovation is continuing under the chairmanship of Dr. David Dunn, who took over as permanent head of the Department of Surgery in January 1996. Dunn, who is holder of the Jay Phillips Chair in Surgery, is an internationally recognized authority on surgical infectious diseases, transplantation, general surgery, and surgical education. In addition to directing all aspects of the Department of Surgery, he is division chief of General Surgery, head of Surgical Infectious Diseases, director of Graduate Studies, and residency program director of the Department of Surgery.

Dunn received his M.D. from the University of Michigan in 1977, and came to the University of Minnesota for his general surgery residency. He also received a Ph.D. in microbiology from the University of Minnesota in 1985. He stayed on in the department as a fellow in transplantation, then joined the faculty, becoming a full professor in 1993. In addition to his duties at the University of Minnesota, he has served as president of the Society of University Surgeons, the Association for Academic Surgery, the Surgical Infection Society, and the Minnesota Chapter of the American College of Surgeons.

Faced with sweeping change that is occurring in academic health centers nationwide, Dunn says: "It is apparent to all of us that many things are changing rapidly in academia, in research, in clinical practice, and in the field of health care — not only at the University of Minnesota but throughout our state and nation. The magnitude of change is enormous and, as yet, largely unrealized.

"In such times of apparent adversity, incredible opportunities are open to those who are willing to seize them, who want to be part of the process instead of mere bystanders ... we can look at each and every change as a chance to improve and advance."

From bench to bedside

Dunn emphasizes a number of unique strengths in the department, which were grounded in the Wangensteen-Najarian era and are stronger than ever today. "One major objective of this department," he says, "is to translate basic science into clinical treatments

Dr. Chip Bolman and the surgical team perform an aortic valve replacement.

for disease. It's called the bench-to-bedside approach."

He cites the example of the small bowel transplant program, where the hospital, the Medical School, and the Department of Surgery all worked together to secure funding. "The department took its own funding, worked with the Minnesota Medical Foundation, and then secured outside funding for a very important program. Professor Gruessner was able to move the program very rapidly from bench — the laboratory — to the bedside."

Dunn's current research focuses on better treatments for multiple organ failure through the development and characterization of novel endotoxin antagonists using state-of-the-art molecular engineering techniques. "Our lab is a basic science lab," he says, "with the intention of really exploring the basic science path of the physiology of bacterial infections, but in addition, since bacterial infections are a very big problem in surgical patients, we're attempting to develop compounds that eventually could have clinical applications.

"This department has been and continues to be distinguished from most other academic departments of surgery because of the intensity with which we want to train surgeon-scientists," says Dunn, "and also, as part of that training process, because we have programs that move things from the laboratory into the clinical setting with clinical applicability. Surgery is a field where you can see immediate results in many ways — your patients get better after you operate on them, after you do a transplant. I think this is the same sort of mindset in the research arena — develop things that will make the patients better and have clinical application."

And, Dunn emphasizes, it is critically important to collaborate with and learn from colleagues both within the University and at other institutions — in the areas of teaching, research, and clinical care. In his presidential address to the Association for Academic Surgery he stressed, "There must be more and more teamwork: there is strength in numbers, synergy in collaborations."

Breaking new barriers

Like David Dunn, both Rainer Gruessner and Chip Bolman credit the University of Minnesota for a part of their training, and all share an intense loyalty to the institution. Bolman did a fellowship in cardiovascular surgery at the University, and Gruessner completed a fellowship in transplantation.

"I worked with David Sutherland in the area of pancreas transplantation during my fellowship," says Gruessner, who received his M.D. and Ph.D. from the School of Medicine, Johannes-Gutenberg-Universität, in Mainz, Germany. "I was very happy to return to Minnesota where so many innovative things are happening in transplantation. There is wonderful support here, from David Dunn and everyone involved in transplantation. John Najarian laid such a strong foundation for the transplant program, and we are building on that foundation."

Recent headline-makers for Gruessner, his partner William D. Payne, M.D., and their team include: the University's first "two-for-one" liver transplant, where a liver was split and transplanted into a 14-year-old boy and a 23-month-old boy; the state's first living-donor liver transplant, involving a father and his 22-month-old son; the state's first father-to-son bowel transplant; and the state's first liver-bowel transplant involving 3-year-old Courtney Macht. And, notes Gruessner, two patients who received rare bowel transplants from living related donors are doing well more than a year after their operations.

"The most rewarding thing about what we do," says Gruessner, "is that the quality of life gets so much better for the patients. Many of them would not have lived much longer without the operation, and now they can live normal lives. Here at the University we have a history of kidney and liver transplants going back 10, 20, even 30 years. We have an ongoing relationship with all our transplant patients, and it's so rewarding to see them doing well."

One new experimental heart operation, recently conducted by Chip Bolman, could reduce the need for transplants. Ventricular remodeling was developed to help heart disease patients who might otherwise need heart transplants.

"The idea is," explains Bolman, "if you can reduce the size of a dilated and failing heart, that heart will work better. Basically, the surgery involves removing

UNIVERSITY OF MINNESOTA SURGEONS ARE THE FIRST IN THE WORLD TO HAVE SUCCESSFULLY TRANSPLANTED ALL INTRA-ABDOMINAL ORGANS — KIDNEY, PANCREAS, BOWEL, AND LIVER — FROM LIVING RELATED DONORS.

a large wedge of heart muscle and sewing the heart back together. In addition, any leakage of the mitral valve, very common in these dilated hearts, is repaired at the same time. It's about that simple."

In February, David Olene of Big Lake, Minnesota, was the first patient to undergo this revolutionary surgery at the University of Minnesota. Bolman is encouraged by the results.

"He's done very well. Already his exercise capacity has increased significantly. He is able to breathe much more easily and to be much more active." Before the surgery, Olene's chances of surviving beyond a year or two were not good.

The role of ventricular remodeling is being carefully evaluated, but between 25 and 50 percent of patients on the University's heart-transplant waiting list could be candidates for the operation. "The critical issue is determining how to select patients for this procedure and then to determine the correct timing for the surgery," says Bolman. "Also, follow-up is short on the patients that have had this operation and its durability is unknown. Early results, as in our patient, however, are quite encouraging."

Bolman and other University surgeons stress how important the Surgical Critical Care Division is to their work, assisting in the care of transplant recipients and cardiac and general surgery patients.

Long term, if ventricular remodeling proves to be a viable alternative to transplants, it could also significantly cut the cost of caring for heart failure patients. With the shortage of available hearts for transplants, ventricular remodeling may be a welcome option.

"We've all been frustrated because people die while on the waiting list for a heart because there simply aren't enough hearts," says Bolman. "So we're looking for alternatives. That is how we became interested in this surgery. Although we've only performed this new procedure on one patient, we're very encouraged and are looking for more candidates."

The Diabetes Institute for Immunology and Transplantation, headed by internationally known transplant surgeon Dr. David E.R. Sutherland, is also looking for alternatives. Back in the 1960s, the University of Minnesota was one of the only institutions willing to try kidney transplants for diabetics, and young surgical resident Sutherland learned from pioneers Richard Lillehei and John Najarian. In 1966 Lillehei and Dr. William Kelly performed the world's first pancreas transplant, and now the Institute is focusing on islet transplants, a less invasive technique than organ transplants. "We hope to make transplantation (for diabetics) obsolete eventually," says Sutherland.

"We're moving ahead in so many areas," says David Dunn. "We're recruiting in vascular surgery, critical care, thoracic surgery, pediatric cardiovascular surgery. We're expanding our research programs, hiring new faculty, improving our educational initiative. There are so many exciting things on the horizon, such as teaching surgery through virtual reality. I think there are unbelievable opportunities. We plan on continuing to get the best and brightest students and residents and turning them out as surgeon-scientists who are able to go off on their own. That is what this department is really all about — training the next generation of academic surgeons.

"We have a golden opportunity to help vault the Department of Surgery into the 21st century," says Dunn, "preserving its academic preeminence and integrity and continuing to produce dedicated clinicians, educators, and scientists for our community, nation, and world." ■

Editor's note: Special thanks to Mary Knatterud, Department of Surgery editor, for her assistance in preparing this article.

RECENT SURGICAL SOCIETY PRESIDENCIES BY UNIVERSITY OF MINNESOTA SURGEONS

David L. Dunn, M.D., Ph.D.
Society of University Surgeons
Association for Academic Surgery
Surgical Infection Society
American College of Surgeons, Minnesota Chapter

John S. Najarian, M.D.
International Transplantation Society

David E.R. Sutherland, M.D., Ph.D.
International Pancreas and Islet Transplant Association

David A. Rothenberger, M.D.
American Society of Colon and Rectal Surgeons

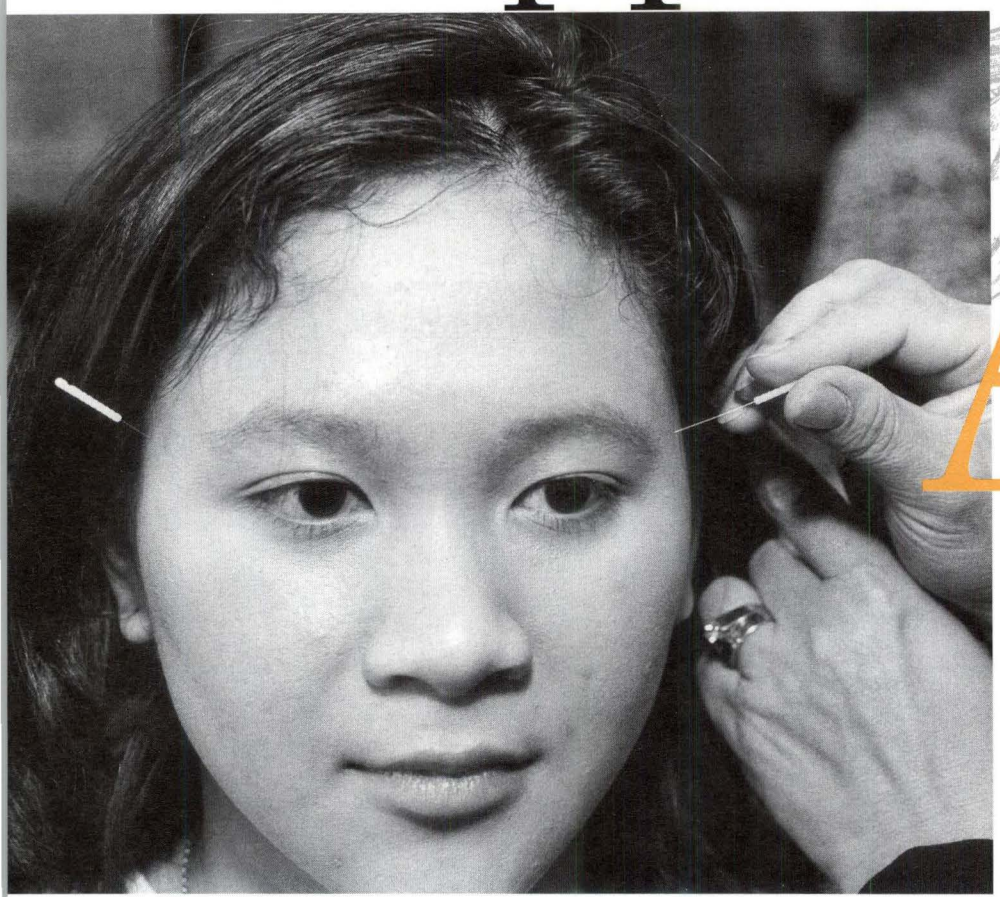
Henry Buchwald, M.D., Ph.D.
Central Surgical Association

James T. Lee, M.D., Ph.D.
Minneapolis Surgical Society

David H. Ahrenholz, M.D.
Minnesota Surgical Society

R. Morton Bolman III, M.D.
C. Walton and Richard C. Lillehei Surgical Society
Twin Cities Cardiovascular and Thoracic Surgery Society

Complementary Care: A Healing approach



At your annual checkup the nurse asks if you're currently taking any other medication. Do you mention the herbal supplements you take? Next the doctor asks whether you still have pain in your shoulder. Should you tell about the acupuncture therapy you had recently?

Many patients fear that their doctors will disapprove of any complementary or alternative therapies. "About 70 percent of patients don't tell their physicians when they're using alternative modalities," says Mary Jo Kreitzer, Ph.D., R.N., director of the University of Minnesota Center for Spirituality and Healing. "We need to educate health care professionals so that they create the kind of environment where

The University of Minnesota Academic Health Center is creating a model interdisciplinary complementary care program to conduct research, educate health professionals, and serve patients. by Jodi Ohlsen Read

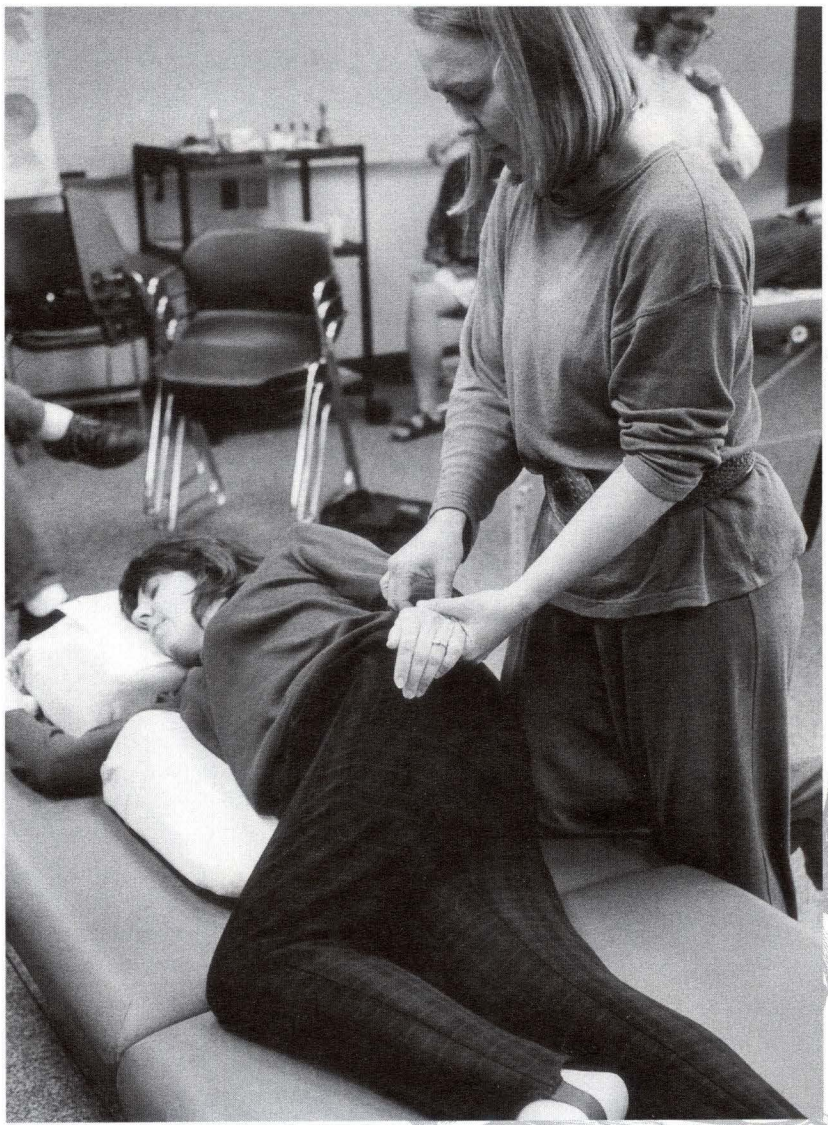
patients feel comfortable describing what they are using to aid their healing. Health care practitioners can then help patients evaluate whether there are contraindications with treatment that physicians have ordered."

Left, Mary Jo Kreitzer, Ph.D., R.N., is director of the Center for Spirituality and Healing. Below, a student is introduced to acupressure.

From sidelines to mainstream?

More and more people are turning to treatments that may be considered unconventional, such as homeopathy, meditation, or massage. Already, one out of three adults in the U.S. reports using a complementary treatment for a health problem, according to a study by Dr. David Eisenberg of Harvard Medical School. As patients become more knowledgeable about treatment options, health care providers and health care systems are beginning to consider how complementary care fits in with Western biomedicine. "There is a consciousness in our society that people are recognizing that we need to pay attention to broader aspects of healing," says Kreitzer.

Last fall, Kreitzer and Greg Plotnikoff, M.D., M.T.S., assistant professor of internal medicine and pediatrics, co-chaired the Academic Health Center task force appointed by Provost Frank Cerra to examine the trends and issues in complementary, spiritual, and cross-cultural care. The task force listened to consumers, health care providers, clinicians and administrators of major health care systems, third party payers, legislators, and representatives of diverse cultural communities and complementary/alternative care providers. They also reviewed numerous articles, books, and reports and, in sub-groups, focused in depth on research, cultural awareness and sensitivity, and the educational and socialization process of becoming a healer.



After four months of discussion and study, the 45-member panel recommended that the Academic Health Center become an interdisciplinary center of excellence in complementary care. The goal is to serve Minnesota and the nation through research and development of innovative, interdisciplinary models of education and patient care that reflect integration of conventional, complementary, spiritual, and culturally appropriate approaches to healing. The recommended changes will be phased in over the next two to three years.

Alternative Medical Practices

Following is a list of complementary/alternative medical practices developed by the ad hoc Advisory Panel to the Office of Alternative Medicine (OAM) of the National Institutes of Health for the grant review process. Many, but not all, of these practices will be addressed in the University of Minnesota's complementary care program.

Diet, Nutrition, Lifestyle Changes

Changes in lifestyle
Diet
Nutritional Supplements
Gerson Therapy
Macrobiotics
Megavitamin

Mind/Body Control

Art Therapy/Relaxation
Biofeedback
Counseling & Prayer
Dance Therapy
Guided Imagery
Humor Therapy
Hypnotherapy
Psychotherapy
Sound, Music Therapy
Support Groups
Yoga, Meditation

Alternative Systems of Medical Practice

Acupuncture
Anthroposophically Extended Medicine
Ayurveda
Community-based Health Care Practices
Environmental Medicine
Homeopathic Medicine
Latin American Rural Practices
Native American Practices
Natural Products
Naturopathic Medicine

Defining complementary care

Complementary care — what exactly is it? "We use the term 'complementary' not 'alternative' because we're looking at what other approaches to healing we can bring to patients that complement mainstream Western medicine — making it a both/and not an either/or. 'Alternative' suggests that you can either use biomedicine or you can use alternative methods," explains Kreitzer. "The approach we're taking is, for example with an oncology patient, let's not only look at chemotherapy and radiation and surgery, but if the patient has pain let's look at whether we should be using acupressure or acupuncture."

A detailed definition of complementary care is offered by the Office of Alternative Medicine (OAM), National Institutes of Health (created in 1992 by the U.S. Congress to facilitate formal evaluation of complementary/alternative care and help integrate effective treatments into mainstream care): "Complementary and alternative medicine (CAM) is a broad domain of healing resources that encompasses all health systems, modalities, and practices and their accompanying theories and beliefs, other than those intrinsic to the politically dominant health system of a particular society or culture in a given historical period."

Numerous treatments now considered alternative are actually ancient and often widely accepted in other cultures. For example, medicinal herbs have been used in virtually all indigenous, culturally based systems of healing, and practices such as massage and aromatherapy, therapeutic touch, and relaxation and imagery have often been used as nursing interventions.

Many would also be surprised to learn that alternative systems of care are not unfamiliar to the University campus. In the early 1900s a school of homeopathic medicine existed at the University of Minnesota. And, the University's School of Pharmacy was once internationally renowned for its expertise on the medicinal properties of herbs.

To address the issue nationally, a 1996 conference cosponsored by the OAM examined integration of complementary/alternative care information into medical and nursing school curricula. The conference panel recommended that complementary care content be integrated into the curricula and that national centers of excellence be developed to foster collaboration among complementary practitioners, nurses, and physicians and promote synergy among education, research, and clinical practice.

No other academic health center in this country has launched an interdisciplinary effort of the scope and magnitude proposed.

So far, only about 40 of 124 U.S. medical schools offer courses in complementary/alternative care. But, according to the University's task force report, there are no national models of interdisciplinary education in complementary care.

The AHC is the first in the country to launch such a wide-ranging program. According to the report, which was approved by the Deans Council in March, "There is no other academic health center in this country that has launched an interdisciplinary effort of the scope and magnitude proposed by this task force."

Reshaping perceptions

Creating an interdisciplinary complementary care program involves educating, training, and integrating professionals from all areas of health care. One step is fostering an understanding among the health care community of what complementary care entails. This spring, the course "Introduction to Complementary Healing Practices" provided health sciences students a chance to explore the theories, cultures, and research bases of biomedicine, complementary, and cultural healing practices. Students also had opportunities to experience hypnosis, biofeedback, meditation, prayer, traditional Asian medicine, chiropractic, massage, and other therapies.

"In this class, students get an overview of some of the major complementary therapies that are practiced in the Twin Cities.

During the Introduction to Complementary Healing Practices, students experience many different therapies. Below, instructor Pamela Weiss, Ph.D., R.N., demonstrates a healing practice.

The course describes the therapy, the philosophical and theoretical basis, and an appreciation for some of the mental discipline and level of training required to practice the therapy," says Pamela Weiss, Ph.D., R.N.

A diverse group of health science students and health professionals participated in the course, including health administration students from the School of Public Health, graduate and undergraduate nursing students, medical students, and faculty and staff from the University. The students worked in interdisciplinary groups discussing how complementary therapies may affect health professions, and envisioned an integrative health system for the 21st century to help them identify skills they may need in such a system.

During the course, students interacted with practitioners of the complementary practices, observed demonstrations of the therapies, received some therapies, and discussed with practitioners how the therapy can be appropriately and inappropriately used for patient health care. The practitioners were all given the same case study (a young man who had an acute back injury and continued to have related pain and disability) and were asked to describe their normal process of intake and treatment and

Alternative Medical Practices,

continued from page 12

Past Life Therapy
Shamanism
Tibetan Medicine
Traditional Oriental Medicine

Manual Healing
Acupressure
Alexander Technique
Aromatherapy
Biofield Therapeutics
Chiropractic Medicine
Feldenkrais Method
Massage Therapy
Osteopathy
Reflexology
Rolfing
Therapeutic Touch
Trager Method
Zone Therapy

Pharmocological & Biological Treatments
Anti-oxidizing Agents
Cell Treatment
Chelation Therapy
Metabolic Therapy
Oxidizing Agents

Bioelectromagnetic Applications
Blue Light Treatment and Artificial Lighting
Electroacupunture
Electromagnetic Fields
Electrostimulation & Neuromagnetic Stimulation
Magnetoresonance Spectroscopy

Herbal Medicine
Echinacea
Ginkgo Biloba extract
Ginger rhizome
Gineseng root
Wild chrysantemum flower
Witch Hazel
Yellowdock

whether their particular type of therapy would be appropriate.

Weiss addressed common misperceptions throughout the class. "We talked about quackery and fraud and I emphasized that how we talk about that, the language we use, is very important," she says. " 'Unproven therapies are simply that — they are unproven. And 150 years ago, all of what biomedicine does now was unproven,' to quote James Gordon, M.D. It is better for us to use new language terms to try to come to some kind of common ground where we can study and look at these issues together.

"People are getting information about these therapies on a regular basis," says Weiss. "It behooves us as health professionals to know what our patients are talking about and add to the conversation with a patient some skepticism that perhaps the promises made to them about a particular product may not be exactly the true outcome. If we're going to be their primary care person, we must have common ground with our patients. We need to help them make those decisions and explore their options."

The other complementary care course offered last spring, "Selected Natural Substances" taught by John Staba, Ph.D., professor emeritus, medicinal chemistry, College of Pharmacy, provided a look at the therapeutics of natural substances. "This course helped students learn about some of the natural substances people are taking. They looked at the sources, the chemical nature, the therapeutic uses, the dosages people should use, and the advantages and contraindications," says Kreitzer.

These courses are a part of the larger goal to produce graduates from the AHC health professions schools who demonstrate specific abilities related to complementary, spiritual, and cultural care. Some of these skills include the ability to assess how a patient's cultural background, race/ethnicity, spiritual, and religious beliefs contribute to proper diagnosis and treatment; understand the philosophy, therapeutic practices, and research base of selected complementary methods; evaluate research; and work within an interdisciplinary health care team that includes complementary practitioners.

Good science is open-minded inquiry

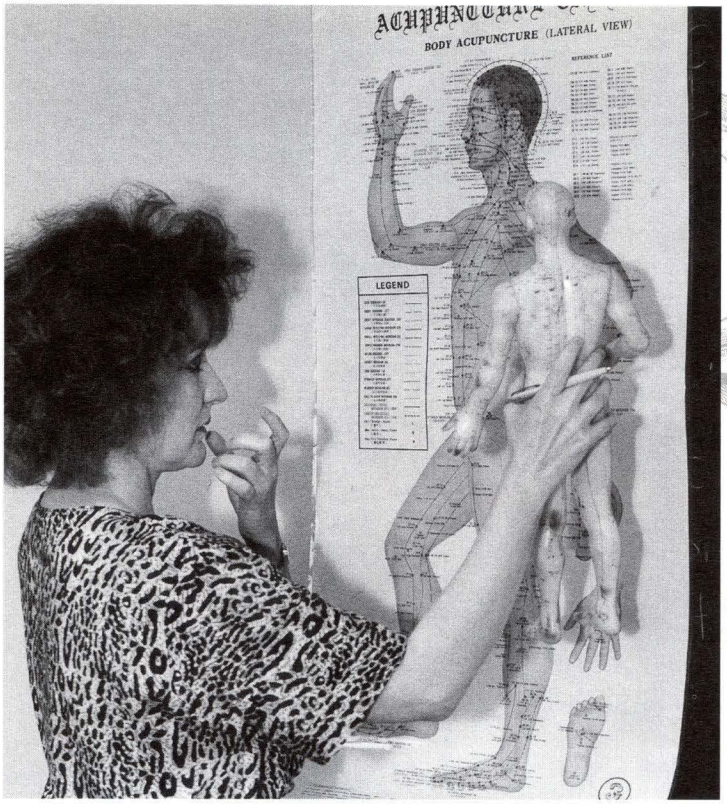
Weiss also hopes students gain an understanding of how important it is to keep an open mind while exploring the changes in health care. "While we can demand scientific scrutiny of all the complementary therapies, there are still no good scientific models to explain some of the therapies because the basis of those therapies have not yet been explored with scientific research or models," she says. "In this healing process, there are parts that are not measurable and not explicable in a Western scientific model because many of them come from other cultures which don't use the same kind of linear, quantitative thinking."

As patients become more knowledgeable about treatment options, health care providers and health care systems are beginning to consider how complementary care fits in with Western biomedicine.

"Good science is open-minded inquiry," Kreitzer says. "This is not about bringing in unproven or unscientific treatments. It's about taking a good hard look. We need to be open to whatever the evidence is. That is what good science is."

In developing the complementary care program, the AHC is taking a scholarly, evidence-based approach. "There is a growing accumulation of evidence that shows that many of these approaches have demonstrated safety and efficacy," Kreitzer says. "We have to use a rigorous process to evaluate complementary modalities of treatment just as we need to critically evaluate biomedical therapies."

Although research at the Academic Health Center is centered on a biomedical view of the human body and the universe, other methods of complementary care use



Acupuncture is only one of the complementary care practices being studied.

different ways of explaining the human body, human disease, and methods to facilitate the healing process. As detailed in the task force report, new methods of research will need to be established to accurately explore complementary/alternative care. Scholars and practitioners from diverse cultural perspectives will need to learn common languages, shared research methodologies, and respect for each world view to effectively conduct research in complementary practices.

Seeking knowledge

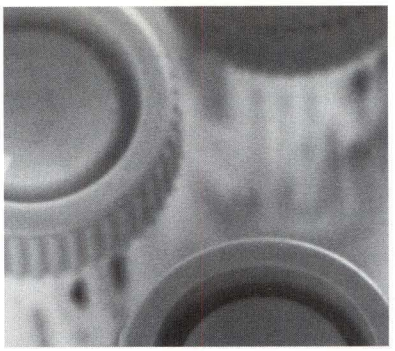
Physicians are already seeking more information about complementary care methods. Recently, a survey published in the *Journal of the American Board of Family Practice* showed that more than 70 percent of physicians surveyed were interested in more training in diet and exercise, behavioral medicine, biofeedback, acupuncture, acupressure, hypnotherapy, massage therapy, megavitamin therapy, vegetarianism, prayer, and herbal medicine. Seminars offered by the AHC have been well-attended, covering subjects including American Indian perspectives on healing, health issues related to the Hmong community, and spiritual and cultural assessment in adolescent chemical dependency. This fall more continuing education courses will also be available.

So far, response to the program has been positive. Feedback received by Cerra seems to indicate that "the community is very pleased and supportive of the AHC assuming a leadership role in complementary care." Involving a variety of consumers and representatives from diverse cultures and care providers in planning the complementary care program has been key to the promising response.

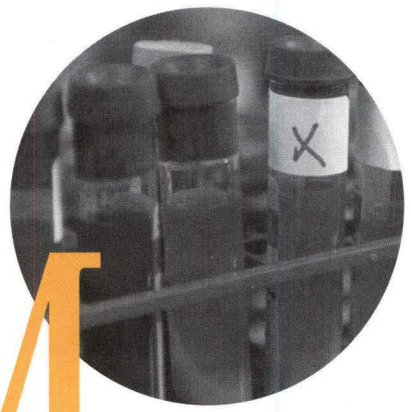
"This process has given us strong community connections," says Kreitzer. "I think the community feels invested in the program. They have helped us shape and form our vision and role in complementary care.

"We need to provide leadership," she says. "The Academic Health Center has not only an opportunity but also a responsibility to fill that role. We hope to create a center of excellence, to develop the research that needs to be conducted in this area. We plan to create a very innovative, interdisciplinary model of education and patient care that reflects the best of integrated complementary and allopathic care." ■

The AHC Task Force on Complementary Care report, "Transforming Health Care: Integrating Complementary, Spiritual, and Cross-Cultural Care," is available on-line at http://www.ahc.umn.edu/tf/cc.html.

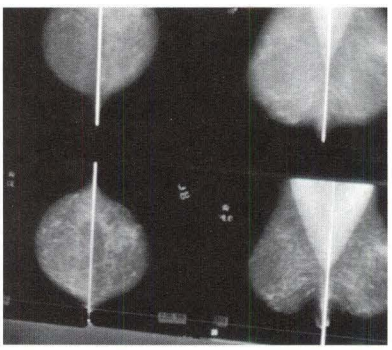


Building Bridges to Biomedical Research



The University of Minnesota, Duluth, School of Medicine is helping minority students enter the field of biomedical research.

by Jean Murray

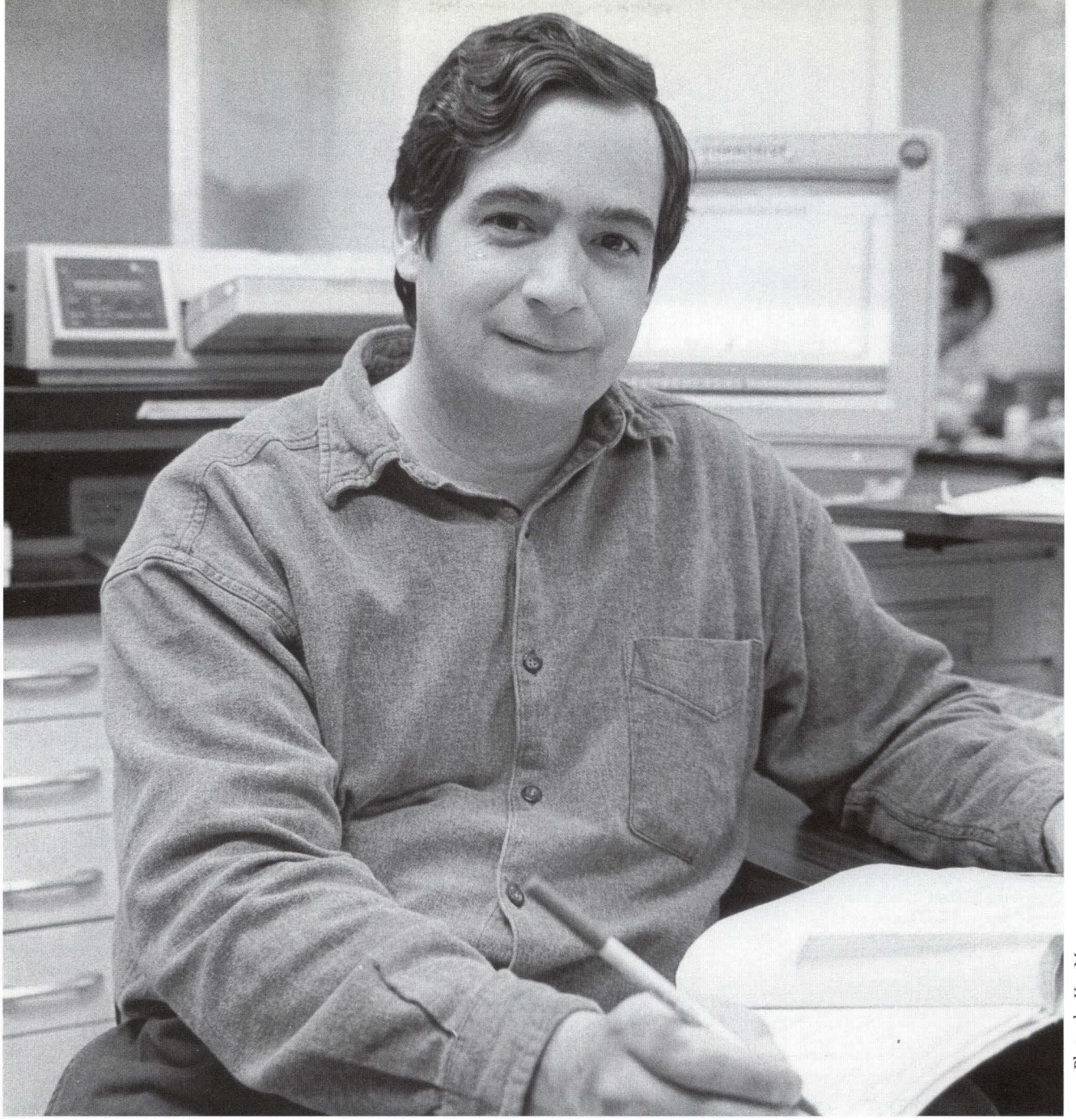


Mick Gillespie doesn't fit the typical portrait of a graduate student — he is 42, has four children, is American Indian, and, when he finishes his doctoral program, will be one of only a handful of American Indians nationwide with doctoral degrees in biomedical science.

His success is the result of two things: his own talent and determination, and the Doctoral Bridge Program at the University of Minnesota, Duluth (UMD), School of Medicine.

Funded by grants from the National Institutes of Health, the graduate Bridge Program was developed to increase the number of American Indian and Alaska Native scientists. The graduate program complements the Baccalaureate Bridge Program for undergraduates.

"American Indians are the most underrepresented in the sciences of all minority groups," says Benjamin Clarke, Ph.D., assistant professor in UMD's Department of Biochemistry and Molecular Biology and director of the Bridge Programs. A member of the Grand Portage Band of Chippewa, Clarke is the only American Indian holding a doctorate in biochemistry in the United States.



Photos by Ken Moran

A vital partnership

The Baccalaureate Bridge Program is a partnership — or a "bridge" — between UMD and four tribal community colleges: Fond du Lac Tribal & Community College, Lac Courte Oreilles Ojibway Community College, Lake Superior College, and Leech Lake Tribal College. A goal of the program is to develop a pathway to promote American Indian and Alaska Native science education by enriching the science curriculum at the tribal community college level. Students from the colleges gain research experience in the UMD laboratories. They also participate in educational opportunities

Mick Gillespie, doctoral candidate in cellular and molecular biology at the UMD School of Medicine.

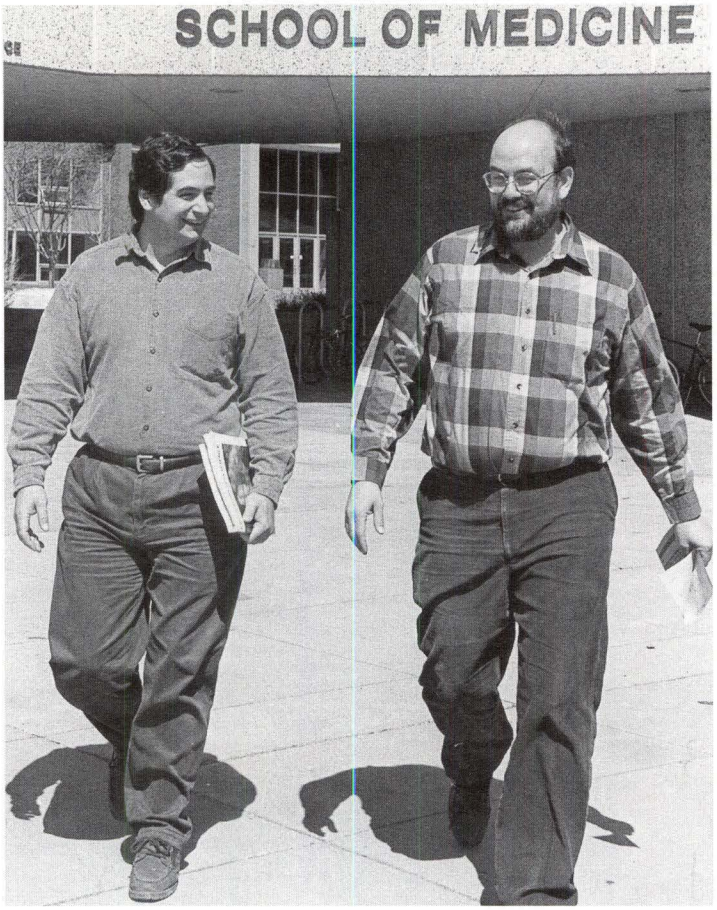
such as Seminars in Indian Health and Biomedical Research, Ethnobotany, and Extramural Learning Experiences.

Strong support systems for American Indians are already in place at UMD. The American Indian Learning Resource Center and active community programs help students make the transition to a university environment and provide support throughout their stay. "Our students are often from rural areas," says Clarke, "and they may have had fewer opportunities and less exposure to advanced education. There are also cultural differences and philosophies. The extended family plays a vital role in the life of an American Indian student. With such strong ties, the student faces difficult choices in leaving home for an education at a distant school."

Consequently, much of Clarke's job as director of the Bridge Programs involves recruiting. He spends a lot of time on the reservations and at the tribal schools, explaining the importance of medical research and serving as a role model.

UMD is a national leader in encouraging minority students — espe-

cially American Indians — to take an interest in medicine, both as physicians and as researchers. For 25 years, UMD has operated the Native Americans into Medicine program, which offers encouragement, counseling, tutoring, and a culturally relevant summer enrichment program for undergraduates. And the School's Center for American Indian and Minority Health is becoming a major influence on Indian health care in Minnesota and beyond. The Center addresses the critical need for improved health care within American Indian populations and provides all UMD medical students instruction in the health-related problems faced by minorities.



Mick Gillespie, left, and Ben Clarke, Ph.D., director of UMD's Bridge Programs.

Clarke emphasizes that the Bridge Programs try to promote and retain cultural identity. Students benefit from interaction with the more than 30 American Indian faculty and staff at UMD, and the more than 100 American Indian students at the School.

One function of the Doctoral Bridge Program is to work with students to make sure they are academically and emotionally ready to go to the Twin Cities, where they will complete their doctorate. The program provides graduate assistantships, financial assistance, and professional placement. Students also gain valuable experience by attending a national meeting in the biomedical science area. They can teach courses to American Indian students at local tribal colleges, and participate in industrial externships.

"I better try"

Mick Gillespie began the Doctoral Bridge Program in August 1996. He is specializing in cellular and molecular biology. He attended Bemidji State University for his first two years of college, and then came to UMD as part of Indians into Research Careers, another UMD program tailored for Indian students who are interested in biomedical research.

A seventh grade science teacher kindled his interest in science. Gillespie remembers: "He was a retired Air Force person who came to teach science. We didn't have much equipment, so he spent his own retirement money to buy science tables and equipment for the students to use. I was really impressed with that and with how important science was to him."

Gillespie grew up mostly in the Bemidji area, and is a member of the Pine Ridge, South Dakota, Lakota Tribe. He received his chemistry degree from UMD in 1981, then married and moved first to California and then to the Twin Cities, and returned to the Duluth area in 1991. His interest in science blended with his strong sense of community involvement, and he directed a program for sixth- to twelfth-grade minority students with an interest in math and science. He continues to be active in the community as he pursues his doctorate degree, working to interest minority students in math and science.

Gillespie is interested in both research and teaching. Both he and Ben Clarke have a special interest in ethnobotany, or natural products chemistry. "Native people such as the Aztecs and American Indians have made so many contributions to medicine," says Clarke. "We are interested in studying more about the medicinal properties of natural products, starting with students at the tribal schools. We are also interested in having students in the doctorate program research medical issues that are unique to American Indians — things like why is AIDS low in Indian populations but Type II diabetes is high? There is so little research on any of this."

Gillespie says, "I used to think having a four-year degree was enough. I saw the statistics on how very few American Indians there are in biomedical science, and I thought 'Why even try?' But then I talked to Ben Clarke and other UMD faculty and I was convinced I should continue my education. After talking to them I thought 'I better try!'

"The Bridge Program is very exciting," says Gillespie. "We have the opportunity to be in the labs with the faculty and to work and learn from them. They are very helpful. Ben Clarke and all the others in the program are very supportive, showing us what we need to do to succeed, guiding us, building a close relationship with us. Now I know the advanced degree is very important." ■

Dr. Al Michael named Medical School dean

Dr. Alfred F. Michael, who has served as interim dean of the Medical School since June 1996, was named permanent dean in April. He replaces Dr. Frank Cerra, who became provost of the Academic Health Center in April 1996.

Michael, a University Regents' professor who has worked at the University for more than 30 years, has headed the Pediatrics Department for the past 10 years. He is known internationally for his research and treatment in the area of kidney diseases. A fellow of the American Academy for the Advancement of Science, he has received the Guggenheim fellowship and an Alumni Achievement Award for Distinguished Achievement in the Clinical Sciences from Temple University School of Medicine. In 1995, he served as president of the American Society of Nephrology. He has written more than 350 publications as a result of his research on kidney disease, and has served on the editorial boards of five journals. He also helped found the Viking Children's Fund, which supports pediatric research at the University.

As dean, he oversees a Medical School with 23 departments, five research centers, and a faculty and staff of more than 900 employees. The Medical School instructs more than 1,100 undergraduate and graduate students.

Michael's priorities include developing a strategic plan, playing a role in the University-wide biological sciences reorganization, strengthening the relationship between the Medical School and the community, and creating a more supportive environment for students (see Dean's Report on page 3).

Dr. Cassius Ellis dies

Dr. Cassius Ellis, assistant dean and clinical professor of surgery at the University of Minnesota Medical School, died on May 15. Ellis was also on the surgical staff of North Memorial Medical Center and Abbott Northwestern Hospital, and was director of North Memorial's residency program.

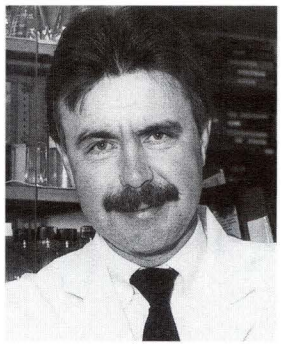
Dr. Cassius Ellis

Ellis earned his medical degree from Meharry Medical College in Nashville in 1962, served as a U.S. Army captain in West Germany from 1963 to 1965, and then came to the University of Minnesota for his residency. He was named chief of staff at Mount Sinai Hospital in Minneapolis in 1980. He served on numerous professional boards and organizations, and was named president of the Minnesota State Board of Medical Examiners in 1990.

Ellis was known for bringing many minority students into the medical profession, and was a mentor to minority students and physicians. Memorials honoring Cassius Ellis will go to the Minnesota Medical Foundation Fund for Minority Medical Students.

Dr. Vercellotti named senior associate dean of education

Dr. Greg Vercellotti has been named by Dean Al Michael to the new position of senior associate dean of education at the Medical School. He will oversee the offices of Student Affairs, Curriculum Affairs, and Admissions, and will be responsible for the development of innovative educational programs for the 21st century at the University of Minnesota Medical School.

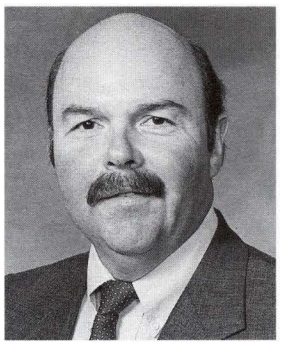


Dr. Greg Vercellotti

Vercellotti has been a faculty member in the Department of Medicine since 1982 and has served as vice chair for education for the department since 1996. He was a member of the Educational Policy Committee from 1989 to 1996 and is currently host of the Academic Health Center's health education television series "Health Talk and You." He currently serves on the Hematology 2 Study Section at the National Institutes of Health and is a member of the American Society for Clinical Investigation.

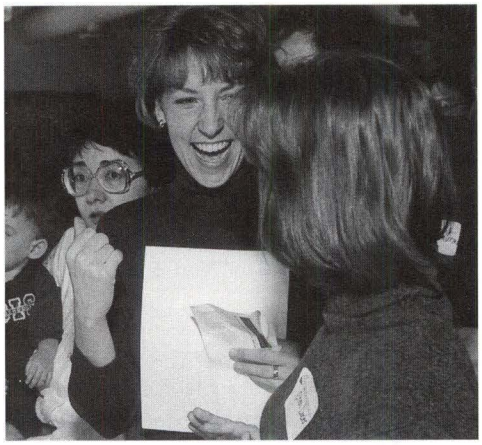
Dr. Jacott named to head Family Practice and Community Health

Dr. William Jacott has been named permanent head of the Department of Family Practice and Community Health. He served as interim head for 16 months.



Dr. William Jacott

Jacott has many years of experience both in private practice and academic medicine. He was formerly head of family practice and director of residency training at the University of Minnesota, Duluth, School of Medicine, and served as assistant vice president for health sciences at the University for eight years. He has been a member of the American Medical Association Board of Trustees since 1989, is vice chair for the Joint Commission on Accreditation of Health Care Organization Board of Commissioners, and is vice chair of the University of Minnesota Physicians Board of Directors.



Sixty-five percent of University of Minnesota medical students received their first choice of a residency at Match Day.

Match Day reveals residency sites

National Residency Match Day, held March 19, matches fourth-year medical students with medical residency programs. Students rank their choice of residencies, the institutions rank their candidate preferences, and a computer in Washington, D.C., completes the match.

Of the 223 University of Minnesota students who participated in Match Day this year, 62 percent chose residencies in primary care (family practice, pediatrics, medicine), with 35 percent of those choosing family practice.

Sixty-five percent of the Minnesota students received their first choice of a residency, and 10 percent received their second choice. More than half will remain in Minnesota, with 38 training at the Fairview-University Medical Center.

University researchers discover breast cancer link

University researchers have found that mammographic breast density, which is a measure of the concentration of mammary ducts, connective tissue, and fat within the breast, is influenced by genetics. Women with higher breast density have a six times greater risk of developing breast cancer, says ***Dr. Thomas Sellers***, lead investigator for the Breast Cancer Family Cohort study and associate director of the University of Minnesota Cancer Center.

If the breast density measurements of 1,000 women were charted, the average density would be about 30 percent, Sellers says. But approximately 12 percent of this group have an average breast density of about 55 percent. The higher breast density appears to have been caused by a dominant genetic trait. This means that women only have to inherit one copy of the gene to have a higher cancer risk due to increased breast density.

The discovery of the genetic link to breast density and cancer contributes to researchers' understanding of breast cancer, which will eventually result in ways to prevent the disease, according to Sellers.

AHC faculty bring in $160 million in funds

According to a report by the Office of Technology Transfer and Research, Academic Health Center (AHC) faculty attracted $160 million in sponsored funds during fiscal year 1996, 53 percent of the $304 million University total. Over the last year, AHC funding increased by $9 million. Medical School funding rose from $99 million to $103.2 million, and the School of Public Health amount increased from $31.9 million to $34.7 million. Dentistry brought in $5.2 million, Pharmacy $2.9 million, Nursing $2.2 million, Veterinary Medicine $6 million, and the Duluth School of Medicine brought in $3 million.

Mark Brenner, vice president for research and dean of the Graduate School, says that research funding increased in spite of the challenges presented by National Institutes of Health (NIH) grants management sections. Support from NIH to the University increased from $115.3 million to $121.8 million. There were 30 patents issued University-wide during the year, of which 17 were from the AHC. Seventy-four inventions were disclosed by AHC researchers — 23 more than any other unit.

Exercise after menopause helps prevent premature death

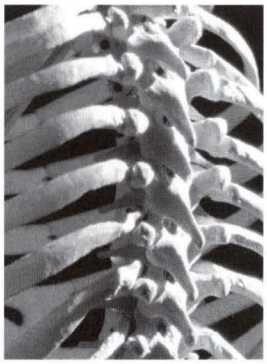
Postmenopausal women can reduce their risk of dying prematurely by as much as 43 percent with regular exercise, according to a study conducted by ***Dr. Lawrence Kushi***, associate professor of epidemiology in the School of Public Health. The study, published in the *Journal of the American Medical Association*, found that even infrequent moderate activity, such as

bowling or gardening, reduces the risk of premature death. Exercise mainly reduces the risk of dying of heart disease, although the risk of dying from other causes, such as cancer, is also reduced.

The seven-year study involved approximately 40,000 women, aged 55 to 69, who were divided into three groups: those who did nothing physical, those who engaged in moderate physical activity, and those who exercised vigorously. The study found that women who exercised moderately even as little as once a week were 24 percent less likely to die during the seven-year period than those who were completely sedentary. Women who engaged in moderate activities at least four times a week were 38 percent less likely to die prematurely, and those who exercised vigorously once a week were 11 percent less likely than the other two groups to die prematurely. If they exercised vigorously more than once a week, their risk was reduced by 26 percent. If they worked out more than four times a week, they were 43 percent less likely to die early.

Researchers regenerate spinal cord nerves

Medical School and School of Dentistry researchers have regenerated functional nerve cells from upper spinal cord tissue from rats, publishing the findings in a recent issue of *Science*. It is the first time anyone has demonstrated that nerve cells generated from a postnatal mammalian spinal cord can produce electrical impulses called action potentials, a hallmark of working neurons, according to dentistry research associate ***Dr. Lois Kehl***, lead study investigator.



The work was conducted in the laboratory of pharmacology professor ***Dr. George Wilcox***. The researchers note that while this is not a treatment for spinal cord injury, it is a step toward that goal. The work differs from other efforts in two ways: the team regenerated nerves from the cervical area, where most serious injuries occur, and they are the first to maintain existing nerve cells in the culture where new ones were generating.

Pioneering surgery repairs esophageal birth defect

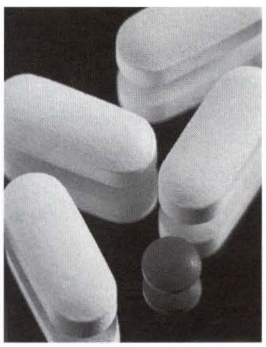
An eight-month-old Ohio girl received three successive operations in April to repair a rare birth defect known as esophageal atresia. Her parents brought her to the University of Minnesota to be treated by ***Dr. John Foker***, University surgeon who invented the novel repair technique.

Born with an esophagus that ended before it reached her stomach, Foker used a procedure on the infant that involves stretching the two ends of the esophagus for several days and then stitching them together. During the first operation he placed long sutures in both ends of her esophagus and threaded them through tiny holes in her abdominal wall. He put "traction buttons" on the ends of the sutures and, over a period of days, slid small sections of plastic tubing under the buttons to provide enough tension to gradually stretch the ends of the esophagus. Six days later, he stitched the two ends of her stretched esophagus together. The third part of the operation helped her to swallow normally.

Foker also developed a technique that enables him to repair the hearts of children born without a functioning left ventricle, the heart's main pumping chamber.

Drug combination for AIDS looks hopeful

University of Minnesota researchers have reported that taking a combination of three drugs for six months dramatically reduces the amount of HIV virus stored in the lymph tissue of AIDS patients. Within the six-month study period, the drugs reduced the reservoir of the virus in lymph tissue by 99.9 percent.



Dr. Ashley Haase, head of microbiology and developer of the technique used to count the virus particles in AIDS patients, said one of the next steps is to follow patients for longer periods.

Dr. Winston Cavert, University virologist who worked on the project, said the drugs succeeded in shutting down the production of virus in the lymph tissue. He said that the researchers believe that by greatly decreasing the amount of virus in the body, aggressive treatment will slow the rate of devastation to the immune system.

University researcher wins appointment to Hughes Institute

Dr. Michael O'Connor, molecular genetics expert, has become the first in the University's history to win a prestigious appointment to the Howard Hughes Medical Institute in Chevy Chase, Maryland. The financial support will fund O'Connor's work for six years.

For the past 15 years, O'Connor has been studying fruit flies in an attempt to understand how a single fertilized egg turns into specialized tissue in an adult. He notes that a lot of the genes in the flies have human counterparts that cause cancer and deformities in bones. ■

DEPARTMENTAL UPDATES

Biochemistry

Dr. Vivian Bardwell, assistant professor, received a $20,000 grant from the Leukemia Task Force for "Gene regulation by BCL-6." ***Dr. Stephen Ekker***, assistant professor, received a $21,000 research grant from the Graduate School for "Role of frizzled genes in embryogenesis." He also received a $36,364 March of Dimes grant. ***Dr. David LaPorte***, professor, received a $15,000 Graduate School grant for "Coordination of regulatory mechanisms in metabolism." ***Dr. John Lipscomb***, professor, received $15,000 from the Graduate School for an electron paramagnetic resonance spectrometer. ***Dr. Laxma Reddy***, research associate, received a $150,000 American Heart Association research grant. ***Dr. Paul Siliciano***, associate professor, received a $556,042 National Institutes of Health (NIH) grant for "The function of snRMP proteins in splicing." ***Dr. David Thomas***, professor, received a $14,100 National Science Foundation (NSF) grant and a $5,000 March of Dimes grant for "Molecular interactions of actin." He also received an NIH $7,500 equipment grant for "Insect cell culture for expression of mammalian proteins."

Cell Biology and Neuroanatomy

Dr. Mary Porter, associate professor, received a $174,000 NIH grant for "Assembly and targeting of dynein motors." ***Dr. Glenn Giesler***, professor, received a five-year grant from the National Institute of Neurological Diseases and Stroke for "The spinohypothalamic and spinotelencephalic tracts." ***Dr. Richard Linck***, professor, received a two-year grant from the March of Dimes Foundation for "The role of tektins in vertebrate development." He is also director of a five-year NSF training grant, "Interdisciplinary training in cytoskeletal biology." ***Dr. Virginia Seybold***, professor, received a two-year grant from the Graduate School to help establish a Center for Pain Research, which includes 12 neuroscientists representing six departments of the Medical School, Dental School, and Veterinary School. ***Dr. Paul Letourneau***, professor, received a four-year grant from the National Institute of Child Health and Human Development for "Mechanisms of nerve growth cone turning and branching." ***Dr. Ronald Shew***, research associate, was honored by the Medical School Class of 2000 for excellence in teaching Gross Anatomy. ***Dr. David Hamilton***, professor, was appointed co-editor in chief of the *Journal of Andrology*. ***Dr. Jon Pryor***, associate professor, urological surgery, is also co-editor in chief. ***Dr. Electra Coucouvanis*** will begin as assistant professor on September 1. She specializes in developmental biology.

Dermatology

Dr. Erin Warshaw is staffing a monthly formal patch test clinic. ***Dr. Maria Hordinsky*** is beginning several new treatment studies on androgenetic alopecia in men and women and a treatment study on hirsutism in women is in the approval process. ***Dr. Marna Ericson*** is studying the role of the peripheral nervous system in the human hair cycle. ***Dr. Won Soo Lee***, assistant professor from Yonsei University in Korea, is conducting research in hair biology at the Clinical Research Laboratory. ***Dr. Whitney Tope***, assistant professor, has been named director of the Cutaneous Surgery and Laser Center. Tope received a $10,000 American Society for Dermatologic Surgery/ Dermatology Foundation Research Grant to study "Oral delta-aminolevulinic acid for photodynamic therapy of basal cell carcinoma." ***Dr. Brian Zelickson***, clinical assistant professor and director of the Electron Microscopy Lab, was elected president of the Minneapolis Academy of Medicine. ***Dr. Sagarika Kanjilal***, clinical assistant professor, transferred her Dermatology Foundation Research Award for "Field cancerization of the skin due to environmental carcinogen exposure" from the University of Texas M.D. Anderson Cancer Center to the University of Minnesota. For more information, visit the Department of Dermatology online at http://www.derm.med.umn.edu.

Family Practice and Community Health

Dr. William Jacott was recently appointed department head (see p. 19). The Centers for Disease Control and Prevention has awarded two three-year grants to faculty members to evaluate the effectiveness of HIV/AIDS prevention programs. ***Dr. Beatrice Robinson***, psychologist, is principal investigator. The grant will fund evaluation of the Women's Initiative for Sexual Health, a collaboration of the Program in Human Sexuality and three other organizations. A grant has also been awarded to evaluate the Man-to-Man: Sexual Health Seminars program. ***Dr. Simon Rosser***, psychologist, is the principal investigator.

Dr. James Pacala, assistant professor, received funding from the Robert Wood Johnson Foundation to evaluate a model of managed health care designed to provide the elderly with efficient coordinated care without restricting access to providers and services. ***Dr. Joseph Keenan***, professor, was awarded funding from Quaker Oats to investigate the efficacy of oat fiber in cereal form on managing blood pressure in adults with mild to moderate hypertension. ***Dr. Carole Bland***, professor, has been appointed director of research. ***Dr. Brenda Abraham*** joined the department in February — she will be primarily involved in residency education. ***Dr. Jamie Feldman*** recently joined the department after completing her M.D. and her Ph.D. in anthropology at the University of Illinois-Champaign/Urbana. She recently published the book, *Plague Doctors: Responding to the AIDS Epidemic in France and America*. ***Dr. Carroll Galvin*** is the

new associate program director of the rural residency training program in Waseca and Mankato, Minnesota.

Medicine

New faculty include: ***Dr. Timothy Schaker***, assistant professor, Division of Infectious Diseases and ***Dr. Nicole Lurie***, director of General Internal Medicine and Preventive Care and director of the Medical School Primary Care Division of General Medicine. ***Dr. Robert Hebbel***, professor, was elected to the American Association of Physicians. ***Dr. Harry Jacob***, professor, was elected fellow of the American Association for the Advancement of Science, is president-elect of the American Society of Hematology, and was awarded the Fujita Medal of the Japan Society of Intensive Care Medicine. ***Dr. Catherine Verfaillie***, associate professor, was recently elected to the American Society for Clinical Investigation, and received the Investigator of the Year Award from the Central Society for Clinical Research. ***Dr. Jeffery Rank***, associate professor, is the site investigator for two trials of interferon therapy in hepatitis C patients. He is also working on the "Interdependence of hemodynamic, immunologic, and metabolic derangements of liver disease" with ***Dr. Alex Khoruts***, medical fellow specialist. ***Drs. Susan Fredstrom***, clinical nutritionist, and ***Daniel Gallaher***, associate professor, received a grant from the Graduate School to study the treatment of chronic pancreatitis by antioxidants and nitric oxide inhibitors. ***Dr. Daniel Mueller***, assistant professor, is researching "Characterization and manipulation of the immune response in heterotopically transplanted mouse airways."

Neurology

Dr. W.R. Kennedy's lab is currently conducting a skin biopsy and skin blister study to quantitate cutaneous nerves in peripheral nerve disease. The lab received a $432,000 grant from Toray Industries in Tokyo. Dr. Kennedy, professor, will represent the American Academy of Neurology in the American Medical Association House of Delegates. ***Dr. Eiji Tamura*** joined the department in September. He received neurology training in Japan, and has spent four years working under the guidance of ***Dr. Gareth Parry***, professor, studying the affects of diabetes on the sciatic nerve. ***Dr. Maria Nolano***, a neurologist from the University of Naples, spent 18 months as a research assistant in the laboratory. ***Dr. Karen Hsiao***, associate professor, spoke at the "Decade of the Brain Plenary Session" of the 49th Annual Meeting of the American Academy of Neurology. ***Dr. Gareth Parry*** has been appointed to the editorial board of *Muscle and Nerve*. ***Dr. Costantino Iadecola***, associate professor and associate head for research, has been appointed to the editorial boards of *Stroke* and *Journal of Cerebral Blood Flow and Metabolism*. ***Dr. Elizabeth Ross***, associate professor, has been invited to be a member of the Neurological Diseases Program Projects B Study Section of the National Institutes of Health.

Neurosurgery

Dr. William Ganz, assistant professor, was awarded a $25,000 Ramsey Foundation Research Grant for "Antioxidants and excitotoxic amino acid neurotransmitters in CSF from control and head injury patients." He is also involved in a clinical closed head injury study. ***Dr. Donald Erickson***, professor, is currently involved in the project "A cooperative study of laparoscopic lumbar fusion." ***Dr. Walter Hall***, associate professor, began Blood-Brain Barrier Disruption Chemotherapy for brain tumors in June 1996. He was awarded the Mahaley Clinical Research Award by the Joint Section on Tumors of the American Association of Neurological Surgeons and the Congress of Neurological Surgeons for excellence in clinical neurosurgical research for his presentation "Solitary Brain Metastases: Surgery, Radiosurgery, and/or Radiation Theory?" ***Dr. Walter Low***, professor, has received a grant from Immunex, Inc. to conduct a phase I/II clinical trial to determine the efficacy of a GM-CSF based vaccine for treating brain tumors.

Ophthalmology

The Vision Foundation selected the following 1997 Honors Award recipients: the late ***Dr. John P. Wendland*** received the Outstanding Achievement Award. Wendland was interim chair of the Department of Ophthalmology, chief of service at the VA Hospital, and a board member for the American Academy of Ophthalmology. He is being recognized for his premier work in external diseases of the eye. The Outstanding Service Award was given to the late ***Robert C. Slater*** for his role in establishing an efficient method for procuring donor eyes through a network of regional funeral directors for the Minnesota Lions Eye Bank. The Alumni Service Award was given to ***Dr. Richard L. Lindstrom*** for his outstanding service to the Department of Ophthalmology. He established the Richard L. Lindstrom Anterior Segment Research Fellowship which supports two postdoctoral fellows with academic potential in ophthalmology.

Orthopaedic Surgery

Drs. Jack Lewis, director of the Department of Orthopaedic Surgery Biomechanics Laboratory, and ***Ted Oegema***, director of the Department of Orthopaedic Surgery Biochemistry Laboratory, received a $40,000 grant from the SOTA-TEC fund to develop tissue grown from cartilage cells in culture for use in screening drugs for arthritis. Lewis also received $90,000 from the University of Minnesota Biomedical Engineering Institute for materials used to test mechanical properties of soft tissues and how these are altered in injury and disease. ***Drs. Timothy Garvey***, assistant professor, and ***Ensor Transfeldt***, associate professor, were presenters at the Cervical Spine Research Society. ***Dr. Robert LaPrade*** has been awarded an American Orthopaedic Society for Sports Medicine Pacific Rim Travelling Fellowship for Fall of 1997. ***Dr. Denis***

Clohisy, associate professor, received the American Academy of Orthopaedic Surgeons Young Investigator Award for "Cellular mechanisms of tumor osteolysis."

Pediatrics

Dr. Alfred Michael was named new dean of the Medical School (see p. 19). ***Dr. James Moller***, professor, has been named interim department head. ***Dr. David Cornfield*** was appointed director of the Pulmonary and Critical Care Medicine Division. ***Dr. Paul G. Quie***, Regents' Professor of pediatrics, Division of Infectious Diseases, was given the Immune Deficiency Foundation's Lifetime Achievement Award at the Annual Meeting of the Clinical Immunology Society in February. Quie was honored for his contributions to understanding the syndrome Chronic Granulomatous Disease and the role of neutrophils in host defense. ***Dr. Patricia Ferrieri***, professor of laboratory medicine and pathology and pediatrics, Division of Infectious Diseases, and director, clinical microbiology laboratory, has been elected to a five-year term on the council of the American Pediatric Society.

Pharmacology

Dr. George Wilcox, professor, received a grant renewal from NIH for his study "Nociception: neuropharmacology of drugs of abuse," totaling $450,000 in direct costs.

Physiology

Dr. Martha Flanders, associate professor, received an NIH grant for "Patterns of muscle activity in natural arm movements." ***Dr. Richard Poppele***, professor, received an NIH grant for "Neurophysiological study of dorsal spinocerebellar tract." ***Dr. Linda Boland***, assistant professor, was selected as one of the recipients of the McKnight Land-Grant Professorship. ***Dr. Robert Miller***, 3M Bert Cross professor and department head, received the "Distinguished Award Lecture in Neuroscience" from the Neuroscience Center of Excellence in New Orleans. ***Dr. Hon Cheung Lee*** received an honorary degree in Medicine and Surgery at an official ceremony in Genoa, Italy, on June 23. The Ministry of University and Scientific and Technological Research in Rome approved the award for the discovery of cyclic ADP-ribose and of NAADP+ as regulators of the intracellular calcium homeostasis.

Therapeutic Radiology-Radiation Oncology

Dr. Seymour H. Levitt, professor and department head, was honored for an endowed chair established in recognition of his 26 years of service to the University and radiation oncology. He was also awarded an Honorary Doctor of Science Degree from the University of Colorado School of Medicine, honoring his career, which has been instrumental in advancing radiation oncology. ■

Foundation approves grants

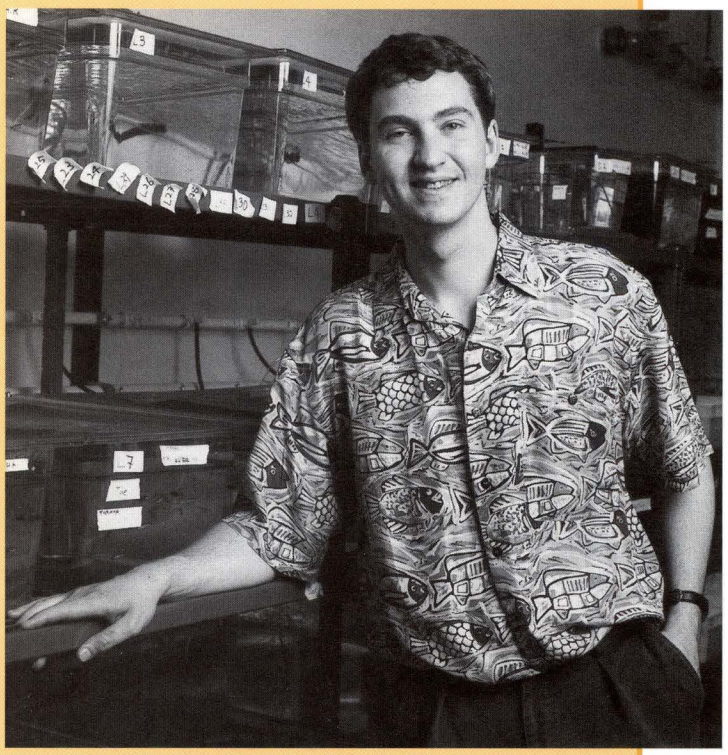
At its winter quarterly meeting, the Minnesota Medical Foundation board of trustees approved $233,645 in research and special grants. The amount includes $121,655 in research grants and $111,990 in special grants.

WINTER FACULTY RESEARCH GRANTS include: ***Lester R. Drewes, Ph.D.***, Biochemistry and Molecular Biology, $7,500, Localization of the lactate transporter MCT1 in brain and heart by electron microscopy; ***Dennis Dykstra, M.D., Ph.D.***, Physical Medicine and Rehabilitation, $5,000, Effects of clenbuterol on skeletal muscle function during a period of imposed inactivity; ***Roger L. Gebhard, M.D.***, Medicine, $6,100, characterization of serum immune reactivity to wheat protein; ***Joanne M. Hilden, M.D.***, Pediatrics, $6,500, Infant 11q23 Acute Leukemia; ***Allison Hubel, Ph.D.***, Laboratory Medicine and Pathology, $10,000, Development of a tissue engineered corneal prosthesis; ***Alex J. Lange, Ph.D.***, Biochemistry, $6,900, Magnetic resonance spectra studies of metabolic fluxes in transgenic mouse liver; ***Robert P. LaPrade, M.D.***, Orthopaedic Surgery, $5,000, Effect of posterolateral rotatory instability on force in an ACL graft in the knee; ***Arthur J. Matas, M.D.***, Surgery, $6,000, Establishment and characterization of the mouse to weanling rabbit model of xenotransplantation; ***William D. Payne, M.D.***, Surgery, $5,000, Induction of endothelial cell complement resistance in hamster-to-rat cardiac xenotransplant model; ***George M. Realmuto, M.D.***, Psychiatry, $4,000, Statistical consultant for the Minnesota competence enhancement data set project; ***Robert J. Roon, Ph.D.***, Biochemistry, $9,500, Calcium-dependent glutamate transporters in mammalian brain; ***Lisa M. Schulte, Ph.D.***, Orthopaedic Surgery, $3,680, Refining the estimation of femoral anteversion, a cadaver study; ***Elizabeth R. Seaquist, M.D., C.D.E.***, Medicine, $7,128, The use of the hypoglycemic clamp in the assessment of pituitary function; ***C. Gail Summers, M.D.***, Ophthalmology, $10,000, Genetic analysis of autosomal dominant congenital nystagmus; ***Karen R. Wasiluk, Ph.D.***, Surgery, $9,416, Peptide LPS antagonists in gram-negative bacterial sepsis; ***James G. White, M.D.***, Laboratory Medicine and Pathology, Pediatrics, $9,956, Structural physiology and pathology of blood platelets; and ***Lucille Wrenshall, M.D., Ph.D.***, Surgery, $9,975, Sequestration of interleukin-2 in the splenic red pulp via interaction with heparan sulfate.

WINTER SPECIAL GRANTS include: ***Nigel Key, M.D.***, Medicine, $5,595, Purchase of an Ultrawash PLUS 96-well ELISA plate washer; ***Stephen C. Ekker, Ph.D.***, Biochemistry, $20,000, Acquisition of a compound microscope for the observation of genetically altered organisms; ***James F. Koerner, Ph.D.***, Biochemistry, $17,301, Computerized acquisition of electrophysiological data; ***Duanqing Pei, Ph.D.***, Pharmacology, $20,000, Matrix metalloproteinases in tumor invasion and metastasis; ***John D. Lipscomb, Ph.D.***, Biochemistry, $30,000, Fluorescence instrumentation for research on oxygenases and muscle proteins; and ***Martin Wessendorf, Ph.D.***, Cell Biology and Neuroanatomy, $19,094, Digital imaging equipment for a shared facility.

(Grants, continued on page 26)

Minnesota Medical Foundation grant recipient: **Stephen C. Ekker, Ph.D.**



Stephen C. Ekker, Ph.D.

How do animals develop? Understanding such a complicated process requires complex research at many levels. Stephen C. Ekker, Ph.D., Department of Biochemistry, is exploring the molecular basis of cell pattern formation during development.

To learn more about development, researchers study many model systems, from yeast and flies to frogs and fish. In Ekker's lab, frogs and zebrafish are the focus of the research. "We take what we can learn from anything as simple as yeast and apply that basic data to further development. And we study vertebrates because we're ultimately interested in how humans develop," says Ekker.

The Xenopus (frogs) and zebrafish are both vertebrate egg layers and have basic features common to all vertebrates, including humans, such as two eyes, a backbone, four limbs, a nose, and a mouth. "Of course, fish are simple vertebrates. Frogs are a little more sophisticated. But for understanding early development, the systems of Xenopus and zebrafish are ideal because you have eggs that can be manipulated," says Ekker. Because Xenopus have larger eggs, a number of sophisticated physical manipulations can be performed — they can be dissected or altered by adding RNA, DNA, or proteins. Similar methods can also be applied to the zebrafish.

"A big advantage of using zebrafish is that they're small and relatively easy to care for. You can keep thousands of fish which will allow us to carry a reasonably large number of defined genetic lines for future research," says Ekker. "Another technical advantage of zebrafish is that the embryos are entirely clear which allows us to see a whole set of structures, using a compound microscope with special visual interference contrast optics, that we wouldn't ordinarily see."

Ekker was awarded a $20,000 Minnesota Medical Foundation research grant this past winter. The grant was used to purchase a compound microscope to observe such genetically altered organisms. It will also be used by several members of the developmental biology program in the Institute of Human Genetics. Such a microscope is highly valued because of the high quality optics and fluorescence that allow researchers to gather data otherwise not accessible.

In his research, Ekker is examining how specific genes may be involved in the development of the body axis in zebrafish. "What this means is how does an early set of essentially equivalent cells in the early embryo differentiate to generate the primary body axis," he explains. "That is, how do you tell the head from the feet, the back from the front, left from right? Because the body is asymmetrical on all three body axes, we are trying to understand which set of molecules is involved, how they function, and when they function.

"Ultimately, I would like to understand the molecular basis of development of people. I'm interested in understanding both normal development as well as how things can go awry," says Ekker. "Most of the research we're working on now is with genes in pathways that are known, when defective in humans, to cause birth defects and cancer. We hope to apply what we learn from a model system in order to understand both the molecular basis of normal human development and of human disease." ■

Grants, continued from page 24

At its spring quarterly meeting, the Minnesota Medical Foundation board of trustees approved $153,305 in research and special grants. The amount includes $107,541 in research grants and $45,764 in special grants.

SPRING FACULTY RESEARCH GRANTS include: ***David Brown, M.D.***, Laboratory Medicine and Pathology and Pediatrics, $9,690, Genetics of nephropathy in non-insulin-dependent diabetes; ***Anthony J. Faras, Ph.D.***, Institute of Human Genetics/Microbiology, $9,802, Human papillomaviruses and malignant disease; ***Sagarika Kanjilal, Ph.D.***, Dermatology, $9,975, Molecular, clinical, and epidemiologic correlates of nonmelanoma skin cancer; ***Virgil Mathiowetz, Ph.D., OTR***, Physical Medicine and Rehabilitation, $6,475, Effectiveness of an energy conservation course for individuals with multiple sclerosis; ***Daniel Mueller, M.D.***, Medicine, $10,000, Immunopathogenesis of chronic rejection; ***Sharon E. Murphy, Ph.D.***, Biochemistry, $8,595, Cotinine and coumarin metabolism by cytochrome P450 2A6; ***Soon John Park, M.D.***, Surgery, $9,778, The physiologic basis of respiratory sinus arrhythmia; ***Gundu H.R. Rao, Ph.D.***, Laboratory Medicine and Pathology, $10,000, Platelet and leukocyte activation during angioplasty; ***Warren E. Regelmann, M.D.***, Pediatrics, $9,448, Measurement of nasal potential difference in cystic fibrosis; ***Leslie A. Schiff, Ph.D.***, Microbiology, $10,000, Regulation of translation in reovirus-infected cells; ***Whitney D. Tope, M.Phil., M.D.***, Dermatology, $9,128, Photodynamic therapy of basal cell carcinoma using oral delta(5)-aminolevulinic acid; and ***Warren J. Warwick, M.D.***, Pediatrics, $4,650, Measurement of nasal electrical potential as an aid to the diagnosis of cystic fibrosis.

SPRING SPECIAL GRANTS include: ***Bruce E. Hammer, Ph.D.,*** Radiology, $15,000, Purchase of a 5.O T NMC Imaging/Spectroscopy System; ***Robert P. Hebbel, M.D.***, Medicine, $4,535, Purchase of a Digital Color Camera; ***David A. Largaespada, Ph.D.***, Laboratory Medicine and Pathology, $17,633, Sequence analysis software and microscopy equipment; and ***Michele R. Spoont, Ph.D.***, Psychiatry, $8,595, Neural correlates of anger and cognition in repetitive aggressive behavior. ■

AFFILIATE ORGANIZATIONS

Affiliate organizations of the Minnesota Medical Foundation support special programs within the Medical Schools including cancer research, women's health issues, children's health concerns, diabetes research, Parkinson's research, and more. Most affiliates have their own volunteer boards of directors which set the direction for each organization.The Minnesota Medical Foundation coordinates fund raising with affiliate organizations and minimizes administrative costs and duplication of effort by centralizing essential services.

In each issue of the *Bulletin* we feature a few activities or achievements of some of our affiliate organizations. For more information about each affiliate, please visit the Minnesota Medical Foundation website at http://www.med.umn.edu/mmf or call 1-800-922-1MMF.

Children's Cancer Research Fund

Funding the battle against cancer

Acute myeloid leukemia, AML, is the most common form of acute leukemia in adults and the second most frequent leukemia in children. The most successful treatments for AML use high doses of chemotherapy followed in some circumstances by bone marrow trans- plantation. But, high dose chemotherapy regimens are only able to cure about half of the patients with AML.

Through work funded by CCRF, pediatric oncologist Dr. John Perentesis is developing new ways to target anticancer drugs to AML cells and avoid damaging normal tissues. His work was initially funded by pilot grants from CCRF and the University Children's Foundation and the results have allowed Perentesis to obtain more than $750,000 in research funding from the National Institutes of Health and the Leukemia Society of America. These grants will allow him to refine the anticancer drug DT-GMCSF and prepare it for use in clinical trials in patients suffering from AML that does not respond to other therapies.

Funding from CCRF is also allowing Perentesis to further refine DT-CMCSF and develop a series of related new recombinant anticancer drugs for AML and other cancers that strike children and adults. CCRF provides funds for research and training in the cure, treatment, and prevention of childhood cancers and to support the bone marrow transplant program and Care Partners, a family assistance program.

For more information about the Children's Cancer Research Fund, call 612-893-9355.

Diabetes Institute for Immunology and Transplantation

Supporting diabetes research

DIABETES INSTITUTE FOR IMMUNOLOGY AND TRANSPLANTATION

Jodi Roehl was a mother of two and a friend to many. In 1994, she died from a diabetic seizure. In her memory, a softball tournament was founded to raise money for diabetes research. This year proceeds from the 3rd Annual Jodi Roehl Memorial Tournament were given to the Diabetes Institute for diabetes research.

In 1995, Robert Salmen received a pancreas and kidney transplant. To support the efforts of internationally known transplant surgeon Dr. David Sutherland, a Golf Classic "Fore" Diabetes Research was organized by friends and mem-

bers of the Salmen family. The event was held at the Midland Hills Country Club.

These two fund-raising events, established by individuals who believe in the work of the Institute and want to help find a cure for diabetes, generated nearly $200,000 in support of the Institute's activities.

The Diabetes Institute welcomes seven new members of the Institute Founders Circle who have made at least a $10,000 gift in support of the Institute's mission: Green Tree Financial Corporation, Pro Staff, B & H Partners, Max McGee, Kevin Daniel, Mrs. Frances McGiffert, and Julia O'Brien.

To find out more about the Diabetes Institute for Immunology and Transplantation, please call 612-626-2101 or 1-800-922-1MMF.

International Hearing Foundation

Improving education and care

At the Carreon School for the Deaf in Santiago, Chile, 45 severely hearing-impaired children are taught using materials generally created by the teachers. These children wear personal hearing aids, mostly donated, which frequently do not compensate for severe hearing losses.

After a trip to Chile, Dr. Robert Margolis, director of the University of Minnesota Audiology Clinic and an International Hearing Foundation board member, recommended that IHF fund a new program to update technology at the school and thus improve the teaching. This year IHF began funding a project to provide modern classroom amplification systems to enhance the education and development of the children. Those educated using this equipment make the best use of their residual hearing, develop intelligible speech, and achieve at higher levels.

One goal is to establish a teaching center that will be a model for state-of-the-art education of the hearing impaired. Teachers and audiologists trained at the center will spread the information throughout Chile, perhaps throughout South America, to raise the standard of care for deaf children.

For more information, contact the International Hearing Foundation, 612-339-2120.

University Children's Foundation

Kids helping kids

Maria Aliperto had been in and out of the hospital for many years. During her 12 years of life, she underwent 16 operations. Finally, she was diagnosed with Primary Immune Deficiency Disease and was treated with an experimental infusion.

She now lives a nearly normal life thanks to the efforts of pediatricians at the University of Minnesota Department of Pediatrics. Those health professionals are supported by the donors and volunteers who work with the University Children's Foundation, whose goal is to improve the lives of children and adolescents through research, prevention, and treatment of childhood disease.

Maria's classmates knew that she had been seen at the University many times. They took a city bus to the University and toured the research labs of some of the pediatricians. The sixth grade art students at Maplewood Middle School, under the direction of their teacher Kathy Picha, tapped their imaginations to support Maria. Of 146 drawings, 12 were selected and printed as cards. Proceeds from card sales benefit the University Children's Foundation, and hundreds of children like Maria.

Kids Helping Kids is a project to benefit the University Children's Foundation at the University of Minnesota Department of Pediatrics. For more information, call 612-625-1471 or 1-800-922-1MMF.

University of Minnesota Cancer Center

Community explores new research building

More than 375 people came to the University of Minnesota Masonic Cancer Research Building on April 6 to find out what scientists are doing to prevent, detect, and treat cancer more effectively. Cancer Center faculty hosted stations that showed, in non-scientific terms, the concepts behind their research. The open house also featured a hands-on lab, computerized health assessments, and an information fair where visitors could talk with physicians and nurses. For more information about the Cancer Center, call 612-626-1107 or 1-800-922-1MMF.

Vision Foundation

Creating hope

Jean Shannon has experienced eye disease and several eye procedures including cataract removal, a detached retina which could not be repaired and resulted in the removal of her right eye, multiple glaucoma surgeries, and cornea transplants on her left eye. She faced each challenge optimistically, always hoping that the next procedure would be the successful one.

Research has developed drugs and techniques that most likely would have saved her right eye today and only required one glaucoma surgery. Now that her optic nerve is dying and her vision is fading away, she still wants to make hope a reality for others. As Jean says, "My needs have been met by serving on the Vision Foundation Board of Directors and especially its special event committee. Our goal is healthy eyesight for everyone."

For more information, call 612-625-9613 or 1-800-922-1MMF. ■

Medical Alumni Society President's Report

At the April meeting of the Medical Alumni Society board, Dean Al Michael shared his vision for improving the lifelong relationship between the Medical School and the more than 15,000 M.D. and resident alumni who have helped develop the world-class reputation of the University of Minnesota Medical Schools.

The volunteer representatives of the board look forward to playing a pivotal role in strengthening this relationship and have already begun planning for even greater interaction, better alumni representation, and improved two-way communication. If you have any thoughts or ideas on this, or have any other questions or concerns, please contact one of the members of the Medical Alumni Society board, or call Dan Saftig at the Minnesota Medical Foundation at (612) 626-5378.

You will see other items of interest on these pages — information on the new Alumni Recognition Award, Fall Alumni Reunion Weekend, and the enhanced alumni website. I hope you will take advantage of these new programming initiatives.

End of May reports show alumni financial support is up more than 30 percent over a year ago! Thank you for your continued generosity toward the education and research missions of our Medical Schools.

Sincerely,

Wayne Liebhard

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

Medical Alumni Society Board

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James J. Tiede, M.D., '64

To contact a board member, call 612-626-5378.

Medical Alumni Society presents Diehl Awards

Thomas A. Stolee, M.D., and ***Joyce Lucille Funke, M.D.***, recently received the 1997 Harold S. Diehl Award in recognition of their outstanding professional contributions to the Medical Schools, the University of Minnesota, and the community.

Dr. Stolee, born and raised in Minneapolis, is a 1958 graduate of the University of Minnesota Medical School. He spent several years in clinical medicine as a resident in internal medicine and industrial and general medicine before completing his training in pathology at the Minneapolis VA Medical Center.

Dr. Thomas Stolee

From 1966 to 1971, he practiced pathology in St. Paul and Hastings. He then moved to Duluth, where he has since served as chief pathologist at the Miller-Dwan Medical Center. He is also director of laboratory at Miller-Dwan and president of Arrowhead Pathologists, P.A. Dr. Stolee serves hospitals in Aurora and Grand Marais, Minnesota, and is past chief of staff at Miller-Dwan Medical Center and North Shore Hospital in Grand Marais.

His commitment to medical education has been evident through his teaching as a clinical associate professor of pathology at the University of Minnesota, Duluth (UMD), School of Medicine and his efforts in establishing the UMD chapter of Phi Beta Pi medical fraternity. Dr. Stolee is known as an effective teacher, admired and respected by his students.

A 1996 recipient of the Minnesota Medical Association Distinguished Service Award, Dr. Stolee is respected for his leadership skills in medicine and for his knowledge of pathology. He has also been a leader in the formulation and implementation of high standards of quality assurance in laboratories nationwide. "I know of no one more dedicated to improving the quality of medicine as practiced by physicians and in strengthening the role of physicians in bringing about necessary reform in health care delivery," says Ronald D. Franks, M.D., dean, UMD School of Medicine.

Dr. Joyce Funke, Class of 1950, has been an active contributor to the welfare of society and a respected member and leader in her community. She graduated from Florida State College for Women (now Florida State University) in 1946 with a B.S. in chemistry. After attending Emory University Medical School in Atlanta, she transferred to the University of Minnesota Medical

School where she received her M.D. Dr. Funke was a member of the prestigious Alpha Omega Alpha national medical honor society.

She served her internship and residency in internal medicine at Minneapolis General Hospital with a fellowship at the University of Minnesota. She worked in private practice in internal medicine as a partner in Glendive, Montana, from 1954 to 1958. She then returned to Minneapolis to serve as staff physician at the University of Minnesota. Dr. Funke combined teaching and patient care in internal medicine at the University. In 1972 she was appointed assistant director for Boynton Health Service and was soon promoted to assistant professor at the University. One of her great strengths is her skill and dedication in patient care. She delivered health care to many faculty and students and was an appreciated practitioner among faculty.

Dr. Joyce Funke

She is also respected as an inspiring teacher of medical students, residents, and doctors. Her contributions to the science of internal medicine are numerous. She has served on several medical alumni committees and is currently an active member of the Medical Alumni Society board. In addition, Dr. Funke shares her great love of music with many and has devoted much time to the North Star Opera Company. ■

New Alumni Award Announced

The Medical Alumni Society board recently announced the creation of a new Medical School alumni award aimed at recognizing alumni for their outstanding accomplishments over the previous five years. The Alumni Recognition Award is a companion to the traditional Diehl Award, which honors alumni for lifetime achievement.

Selection for the award will be based on exemplary achievements in the community or field of medicine, or for outstanding service to the University of Minnesota Medical Schools.

Nominations will be accepted throughout the year, with award ceremonies at the spring and fall Medical School Reunion weekends. Written nominations should be mailed to: Medical Alumni Society, Minnesota Medical Foundation, Box 193, 420 Delaware Street SE, Minneapolis, MN 55455. Please call 612-626-5378 with questions. ■

CLASS NOTES

1948

Dr. John B. Sanford, Duluth, Minnesota, is the first recipient of the John B. Sanford Community Service Award, a new award given by the Lake Superior Medical Society and named in his honor. In addition to more than 40 years of service as a physician in the Duluth area, Sanford has been actively involved in community food shelves and homeless programs, the Duluth-Superior Symphony Association, and the Minnesota Medical Foundation board of trustees. He has also served the UMD School of Medicine as a clinical faculty member, a preceptor and mentor to students, and as a leader of scholarship fund-raising efforts.

Dr. Ralph Mallinger, San Bernardino, California, received the San Bernardino County Medical Society Outstanding Contribution to the Community Award. He has given over 37 years of service to patients, and has been the medical director of the San Bernardino Community Hospital's Cardiopulmonary Department for the last 15 years. He was instrumental in cardiac rehabilitation unit in 1975.

1962

Dr. Paul Engstrom, Ambler, Pennsylvania, was designated a "1996 Health Care Hero" by the *Philadelphia Business Journal*.

Dr. Leighton Siegel, St. Paul, received the Minnesota Hospital Association's 1992 Innovation of the Year Award for an OR tracking system for computer software.

Dr. Gordon Thurston, Avenal, California, was honored for his years of support and service in the Avenal community by having a street dedicated to him. The dedication of Thurston Avenue took place on August 22, 1996.

1967

Dr. Michael E. Carey, New Orleans, was awarded the Legion of Merit medal, the seventh highest U.S. Army decoration, by President Clinton. Carey, a Colonel in the U.S. Army Reserve, received the medal for exceptionally meritorious service. Carey retired from the Army after 28 years of service. He continues to teach, treat patients, and conduct brain trauma research as professor of neurosurgery at Louisiana State University Medical Center.

Dr. Ordean L. Torstenson, Madison, Wisconsin, was named the 1995 Wisconsin Physician of the Year and elected to the District VI Chair of the American Academy of Pediatrics.

1970

Dr. Barbara Schneidmon, Evanston, Illinois, was the recipient of the 1997 Dis-tinguished Service Award from the Federation of State Medical Boards which was presented at the annual meeting in April in San Diego.

1972

Dr. Lawrence Cairns, Saint Joseph, Michigan, was appointed the chief of staff elect at the Endometriosis

Institute of Michigan. He also became a charter fellow of the Accreditation Council of Gynecologic Endoscopy in 1996.

Dr. D. William Pfeffer, Edina, Minnesota, was appointed regional medical director for Fairview Clinics in 1996.

Dr. Joseph Sockalosky, Stillwater, Minnesota, received the 1996 Master Teacher Award from the University of Minnesota Department of Pediatrics.

1982

Dr. David Ashpole, Brookfield, Wisconsin, was elected chief of the Department of Cardiology, St. Luke's Medical Center, in Milwaukee. He also has a private practice with the Milwaukee Heart and Vascular Clinic.

Dr. Jon Cohen, Minneapolis, was board certified in April by the American Society of Anesthesiologists.

1987

Dr. Linda Ketover, Minnetonka, Minnesota, served as the chairperson for the Minneapolis Federation for Jewish Service, Young Women's 1997 Campaign. There was a 53 percent increase in giving over the 1996 campaign.

1993

Dr. Jennifer Smith, Bristol, Maine, recently joined the Miles Medical Group in Damariscotta, Maine. ■

MINNESOTA MEDICAL FOUNDATION

Golf Classic

7th Annual Golf Classic

Monday, August 25, 1997

Rolling Green Country Club, Medina, Minnesota

Double Shotgun Start/Scramble Format

7:45 a.m. & 1:00 p.m. starts

Entry Fee $200 ($50 tax-deductible)

The Minnesota Medical Foundation Golf Classic, now in its seventh year, has become one of the Twin Cities' premier golf events. Last year's event raised more than $70,000 for medical research and scholarships at the University of Minnesota Medical Schools.

For more information or to register call 612-625-6136 or 1-800-922-1663.

IN MEMORIAM

GEORGE N. AAGAARD, M.D., Class of 1936, Seattle, Washington, died May 7 at age 83. While serving as dean of the University of Washington School of Medicine, Aagaard helped establish the University of Washington Medical Center. He also formed the partnership Associated University Physicians to integrate clinical practice into an academic institution. He later founded the Division of Clinical Pharmacology at the School of Medicine and became the University of Washington's first distinguished professor of medicine. He is survived by his wife, Lorna, a daughter, and four sons.

ROBERT N. BOWERS, M.D., Class of 1939, family practice physician from Lake City, Minnesota, died March 2 at age 80. He is survived by his wife, Virginia, two sons and one daughter.

HARRIET S. GREGORY BRAGG, M.D., Class of 1940, Attleboro, Massachusetts, died April 19. Bragg specialized in pathology and is survived by her husband, Ernest Bragg, Jr., four daughters and one son.

SUN HWAN CHI, M.D., Class of 1969, St. Louis Park, Minnesota, died March 8 at age 60. Born in Seoul, Korea, he began a practice in Dubuque, Iowa, after completing his radiology residency at the University of Minnesota. Chi was in the Minnesota Air National Guard for 18 years, and retired from the United States Air Force Reserves as a Major. He is survived by his wife, Esther, and two children. Memorials can be sent to the University of Minnesota Medical School Scholarship Fund at the Minnesota Medical Foundation.

GARY A. COWAN, M.D., Class of 1962, Duluth, Minnesota, died September 4, 1996, at age 59. Cowan served as a Naval medical officer during the Vietnam War. After completing his residency at Minneapolis VA Medical Center, he joined his father's Duluth psychiatry practice, where he remained for more than 28 years.

DEAN S. FLEMING, M.D., Class of 1936, Santa Rosa, California, died January 1 at age 85. Fleming practiced for 35 years with the Minnesota State Health Department, serving as director of the Division of Disease Prevention and Control until retiring in 1974. He also practiced at the American Red Cross-Harvard Field Hospital Unit in England in 1941 before he entered World War II. He is survived by his wife, Betty, and two sons.

OLAF M. HEIBERG, M.D., Class of 1934, Peoria, Arizona, died March 3 at age 95. Heiberg completed his internship at the Minneapolis General Hospital in 1938. He then practiced internal medicine in Manhattan, Kansas,

until 1941, and in Worthington, Minnesota, until his retirement in 1978. He is survived by his daughter and son. Memorials are preferred to the Minnesota Medical Foundation.

MITCHELL J. JURDY, M.D., Class of 1940, Prior Lake, Minnesota, died May 12 at age 92. Jurdy was a prominent physician and surgeon who practiced in Minneapolis from 1941 to 1972. He received a commendation from President Harry Truman for volunteering medical services. He is survived by his wife, Esther, and two daughters.

ROGER E. KELLEY, M.D., Class of 1951, Bloomington, Minnesota, died January 15 at age 73. Kelley was a former family practice physician in Crosby, Minnesota. He is survived by his wife, Doris, and two daughters.

KENNETH R. KNUTSON, M.D., Class of 1955, Wausau, Wisconsin, died January 31 at age 70. Knutson served as a weather forecaster in Alaska and the Aleutian Islands while in the Air Force. After receiving his M.D., he practiced at the Mesaba Clinic in Hibbing, Minnesota. He then completed a residency in pediatrics at the University of Minnesota. In 1960 he founded the Wausau Clinic (now the Wausau Medical Center) with 11 other doctors. He founded the Wausau Medical Center Walk-In Department in 1985, and retired in 1994. He is survived by his wife, Barbara, one son and two daughters.

RUSSELL C. LINDGREN, M.D., Class of 1931, Edina, Minnesota, died January 16 at age 89. Lindgren specialized in internal medicine and cardiology, and practiced for more than 40 years. He served in the Army's 26th General Hospital Unit during World War II, and was an associate clinical professor at the Medical School. He is survived by his wife, Anne, one son, and two daughters. Memorials can be sent to the Medical Alumni Society Annual Fund at the Minnesota Medical Foundation.

THEODORE E. PALM, M.D., Class of 1945, Minneapolis, died on December 22, 1996, at age 74. He specialized in surgery. He is survived by his wife, Carol, two sons, and two daughters.

THOMAS G. PETRICK, M.D., Class of 1941, Derby, Vermont, died December 28 at age 80. Petrick served in the U.S. Army Medical Corps, and received the Silver Star for valor. In 1975 he became the director of pathology at North Country Hospital. After his retirement in 1981, he served the Office of Chief Medical Examiner for a number of years. He is survived by his wife, Jean, and one son.

KURT POLLAK, M.D., Class of 1951, Minneapolis, Minnesota, died April 29 at age 76. Born in Vienna, Austria, he served in the Army in the Pacific during World War II. He was an associate professor in otolaryngology at the University of Minnesota, served in private practice in Minneapolis, and was chief of ear-nose-throat care at the Minneapolis VA Medical Center. Pollak retired in 1990. He is survived by his wife, Martha, one son and one daughter. Memorials are preferred to the Minnesota Medical Foundation, Department of Otolaryngology.

DONALD E. ROACH, M.D., Class of 1952, St. Paul, died in late January at age 71. He was past president of the Ramsey County Medical Society, and was chief of staff for Midway Hospital. After being in private practice for 17 years, he became the associate medical director for 3M. He was also a clinical instructor at the Medical School. He is survived by his wife, Ruth, one son, and two daughters.

STEPHEN E. SILVIS, M.D., Class of 1955, St. Paul, died on February 2 at age 66. Silvis was instrumental in developing diagnostic and therapeutic pancreaticobiliary endoscopy in the United States. His work, which involved the use of small cameras for visual examination of digestive organs, made the Minneapolis VA Medical Center a world-renowned facility for gastrointestinal endoscopic research, development, and training. He became a professor of medicine at the Medical School in 1977. He is survived by his wife, Marilyn, two sons, and four daughters. Memorials can be sent to the Dr. Stephen E. Silvis Scholarship Fund at the Minnesota Medical Foundation.

DESMOND M. THYSELL, M.D., Class of 1936, Chisago City, Minnesota, died March 14 at age 85. He practiced in northeast Minneapolis for more than 50 years, and delivered about 2,500 babies. He served as a Marine battalion surgeon in Okinawa during World War II. He is survived by his daughter.

LAURENTIUS O. UNDERDAHL, M.D., Class of 1935, Rochester, Minnesota, died May 5 at age 89. A retired Mayo Clinic endocrinologist, he is survived by his wife, Harriet. ■

Web Update

Revised alumni section! Learn about classmates, write a letter to the *Medical Bulletin* editor, update your address, or learn about alumni awards. Check out new useful links to the Biomedical Library, CME listings, the University of Minnesota Alumni Association, and both medical schools. Visit the Foundation's home page at www.med.umn.edu/mmf and select Alumni Services.

Thanks for Asking

Susan C. Dunlop

Q: How can I be sure I have enough money for all my needs and also establish a scholarship or contribute to medical research?

Dr. and Mrs. William Burman, who are both 80, solved this dilemma. They established a $100,000 gift annuity with the Minnesota Medical Foundation. The 8.2 percent rate of return they now receive increased their income, and the charitable tax deduction reduced their income taxes. They appreciate the security of a guaranteed income for the rest of their lives, as well as not having to manage these assets. But most of all, they are content knowing that they have created a legacy, the Burman Parkinson's Research Endowment, which will, after their lives, provide permanent annual funding for Parkinson's research.

Fifty-seven-year-old Janet Martinson would like to supplement her income after retirement, when she will be in a lower tax bracket. She established a deferred gift annuity with the Minnesota Medical Foundation which will pay her 11.6 percent when she is 65. After her life, her deferred gift annuity will be used to establish the Janet Martinson Endowed Scholarship. She feels good that she can both take care of her needs and establish a scholarship.

A gift annuity can help you increase your income and leave a legacy. If you would like to consider the benefits of a gift annuity for your estate and gifting plans, please return the form below.

Dear Susan,
Please send me personalized information about a gift annuity based on the following data:

The income beneficiary's birthdays are: _____ myself, _____my spouse.

If funded with stock, the approximate percent of the cost basis of the stock is _____ percent.

_____ I'd like income to begin immediately.

_____ I'd like income to begin at age_____.

Name_____

Address_____

City/State/Zip_____

Phone_____

Return to: Susan C. Dunlop, Minnesota Medical Foundation, Box 193, 420 Delaware St. SE, Minneapolis, MN 55455-0392 or call 800-922-1663. MB-SU97

Dr. Malcolm A. McCannel

by Jean Murray

Dr. Malcolm A. McCannel

"About 80 percent of our knowledge comes through our eyes," says ophthalmologist Malcolm A. McCannel, M.D. For him, vision has been both an occupation and a means of appreciating the wonders of the world, and in particular, the wonders of art.

A pioneer in innovative techniques related to intraocular lens implantation and cataract surgery (the McCannel Suture bears his name), McCannel is just as well known for his comprehensive, sensitive, and compassionate approach to patient care which goes far beyond surgical techniques. "You have to understand and treat the whole person," he says. And his skills have not been restricted to the Twin Cities — he has traveled throughout the world providing eye treatment to those in need.

McCannel did his pre-med studies at the University of Minnesota, and received his M.D. from Temple University in Philadelphia. He completed an internship at St. Paul's Ancker Hospital, and a fellowship in ophthalmology under Dr. Frank E. Burch at the University of Minnesota. He also received a postgraduate medical degree, the Master of Science in Ophthalmology, from the University of Minnesota.

McCannel's mentors include Burch, who had a powerful influence on him, teaching him "the principles, ethics, and medical expertise that formed the foundation of my professional practice," and his father, an ophthalmologist who practiced in Minot, North Dakota. McCannel credits his father with providing a model of the caring, compassionate physician.

"I always knew I would go into ophthalmology," he says. "It provides the opportunity to treat all age groups, to treat both sexes, to experience cognitive and analytical medical decision making, and it allows for a very satisfactory surgical life. Vision also is interrelated to so many internal medicine disorders, such as diabetes, neurologic disorders, brain tumors, and many others."

McCannel left Minot in 1949 for Minneapolis, where he served the community for more than four decades as president of Ophthalmology, P.A., located in the Medical Arts Building, and as a clinical professor at the University of Minnesota.

In 1992 he received the Alumni Service Award from the University of Minnesota, which not only recognized his skills as a physician but stated, "Dr. McCannel has devoted countless hours to the instruction, advising, and mentoring of generations of medical students, residents, fellows, and colleagues in ophthalmology and medicine. A stalwart supporter of the Department of Ophthalmology, he has been instrumental in bridging the professional interests of the academic and practicing communities in Minnesota."

He is also a recipient of the prestigious Charles Bolles Bolles-Rogers Award presented by the Hennepin County Medical Society for outstanding achievement in medicine. And last fall at the Centennial Meeting of the American Academy of Ophthalmology, he won the annual Humanitarian Award.

McCannel has served the world community as well, participating in a number of international eye care projects including Project HOPE in Indonesia, Peru, Ceylon, Brazil, and West Africa. Other assignments have taken him to Algeria, Central America, and West Pakistan. He has treated thousands of people — from children to the elderly — for eye diseases, and in so doing, has helped to change their outlook on life.

McCannel's travels have bolstered his large and unique art collection, which fills his office and home. Paintings and sculptures come from throughout the world, and most of the artists are close friends. The world of sight, McCannel believes, is not to be taken for granted, and paintings are just as valuable to patients as eye charts. He has undergone eye surgery himself — cataract extraction with an intraocular lens insertion — using the technique he brought to this country from Europe in the 1970s.

Dr. McCannel and his wife, Louise, have contributed substantially to the research and education missions of the Department of Ophthalmology. Contributions by Dr. McCannel have enabled the Ophthalmology Department to refurbish the conference room, and on May 30 the Malcolm A. McCannel Conference Room was dedicated in his honor. He is one of the first to set up a Charitable Remainder Trust funded by his retirement plan assets. The Minnesota Medical Foundation and the Department of Ophthalmology are deeply grateful to Dr. McCannel for all he has given to the community. ■

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ADDRESS CORRECTION REQUESTED

Fall Alumni Reunion Weekend

September 26-27, 1997
Minneapolis, Minnesota
Classes of 1992, 1987, 1982, and 1977

Friday Evening
Reception & Dinner Dance

Saturday
Golf
Financial Planning for Younger Physicians
Tailgate/Football Game

All alumni are welcome to participate in Reunion Weekend Events.

Call 612-625-8676 or 1-800-922-1663 for more information about Alumni Reunion Weekend.