

UNIVERSITY OF MINNESOTA MEDICAL SCHOOLS

MEDICAL BULLETIN

A PUBLICATION OF THE MINNESOTA MEDICAL FOUNDATION • SUMMER 2001



**Women's Health Care at
the University of Minnesota**

*Enhancing, empowering, and
extending women's lives*

ALSO IN THIS ISSUE:

- Dean Al Michael on the Health of the Medical School
- Campaign Minnesota: Gifts in Action

MINNESOTA
MEDICAL
FOUNDATION

at the University of Minnesota

THE MISSION OF THE MINNESOTA MEDICAL FOUNDATION IS TO IMPROVE THE QUALITY OF LIFE FOR THE PEOPLE OF MINNESOTA, THE NATION, AND THE WORLD BY SUPPORTING THE ADVANCEMENT OF HEALTH-RELATED EDUCATION, RESEARCH, AND SERVICE AT THE UNIVERSITY OF MINNESOTA.



DEAR FRIENDS,

To take a position of optimism regarding the future of our Medical School in these days of change and uncertainty might seem foolish – but I am extremely optimistic about our Medical School and its ability to serve the people of Minnesota with the highest degree of excellence.

I am optimistic for many reasons.

During the recent legislative session and the anticipated reduction in critical funding for the Medical School, we received a groundswell of support from the people of Minnesota – people who know well the value of the Medical School to the state, who understand the importance of groundbreaking research in their own backyard, and who place high value on their community doctor who was trained at the University.

I am optimistic because of the extraordinary talent, enthusiasm, and compassion shown by our medical students – students who will soon take their places in the clinics and research labs and who will make a significant difference in the health care of our children and our grandchildren.

I am optimistic because of our incredible faculty – researchers who are at the forefront of promising new fields such as stem cell biology, gene therapy, immunotherapy for cancer, islet cell transplants for diabetes, neuroscience research, and much more.

I am optimistic because of the tremendous support of donors through Campaign Minnesota – generous benefactors who have given more than \$327 million thus far to the Medical Schools and the School of Public Health to advance research and educate students.

We are moving forward from a position of strength, and we are well-prepared for the challenges to come.

A handwritten signature in black ink, reading "Alfred F. Michael". The signature is fluid and cursive.

Alfred F. Michael, M.D.

Dean, University of Minnesota Medical School, Twin Cities

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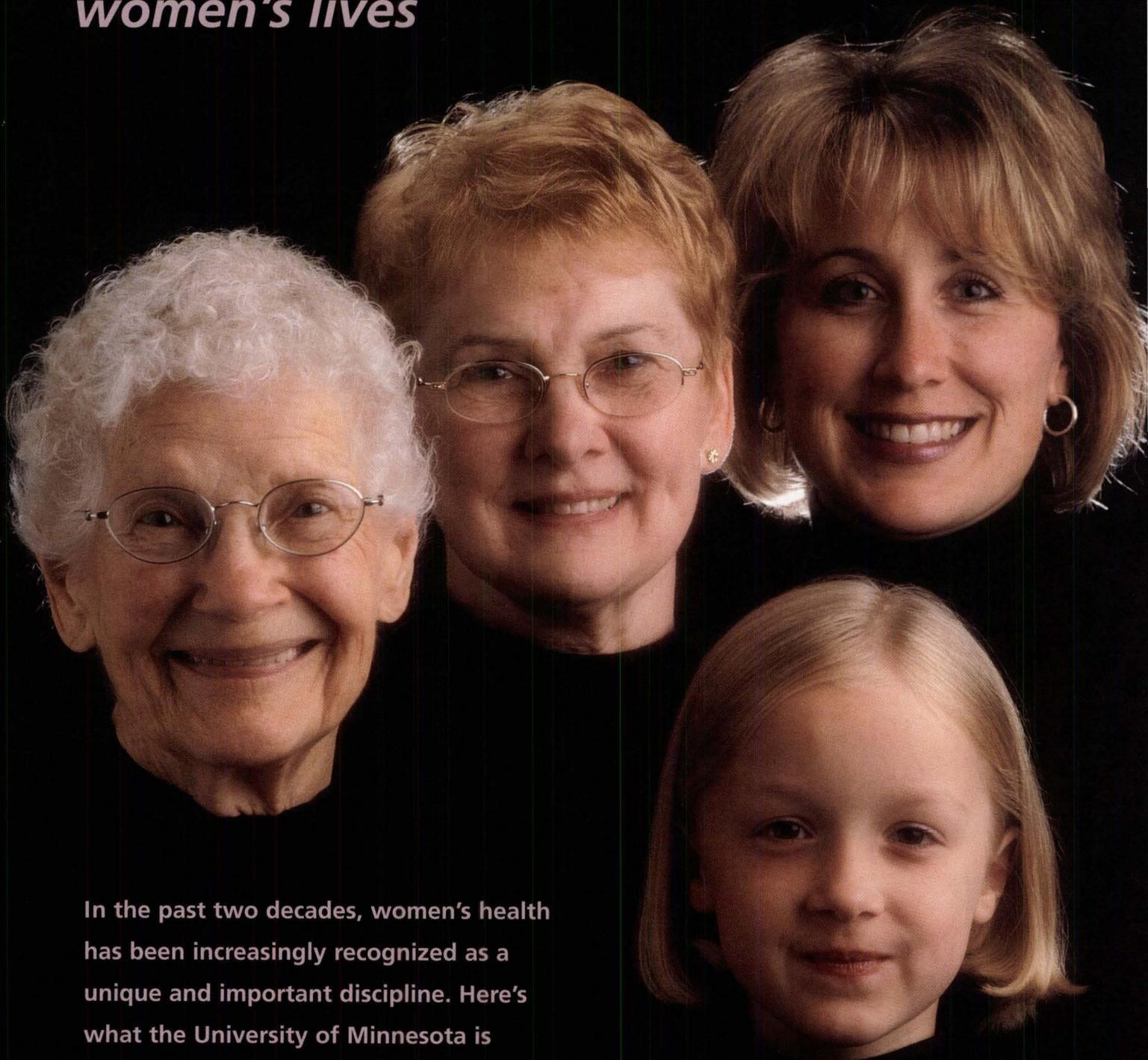
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On the cover: Good health and longevity are evident in four generations of the Caye family of the Twin Cities. Pictured are Olga, 96; Marjorie, 68; Jennifer, 34; and Margaret, 6. Jennifer Soderholm is director of development for the Department of Ophthalmology. Photo by Tim Rummelhoff.

Women's Health Care at the

*Enhancing, empowering, and extending
women's lives*



In the past two decades, women's health has been increasingly recognized as a unique and important discipline. Here's what the University of Minnesota is doing to lead the way to better health for women of all ages and stages of life.

University of Minnesota

A BETTER WAY

As a physician's assistant in the 1980s, June LaValleur, M.D., saw firsthand how profoundly different women's health care needs were from those of men. She also saw a health care system that, rather than acknowledging and accommodating their unique needs, too often treated women like undersized men with a few spare parts needing special attention. So at age 41 she entered medical school, determined to help set things straight.

Today LaValleur is director of the Mature Women's Center and a major contributor to the University of Minnesota's growing emphasis on health care for women. She not only practices medicine, but also works to motivate and empower her patients to actively participate in their own health care. She is also training tomorrow's health care providers to understand and meet the unique needs of women.

"My passion really is to educate both physicians and consumers about women's health," she says.

LaValleur couldn't be pursuing that passion at a better time or place. In addition to women becoming more interested in understanding their own health care, the U.S. health care research infrastructure has increasingly come to recognize the unique needs of women, and has responded with expanded funding aimed at characterizing and addressing those needs. At the same time, the University of Minnesota has expanded its long and noteworthy focus on excellence in women's reproductive health to include increased emphasis on whole-body health for women of all ages.

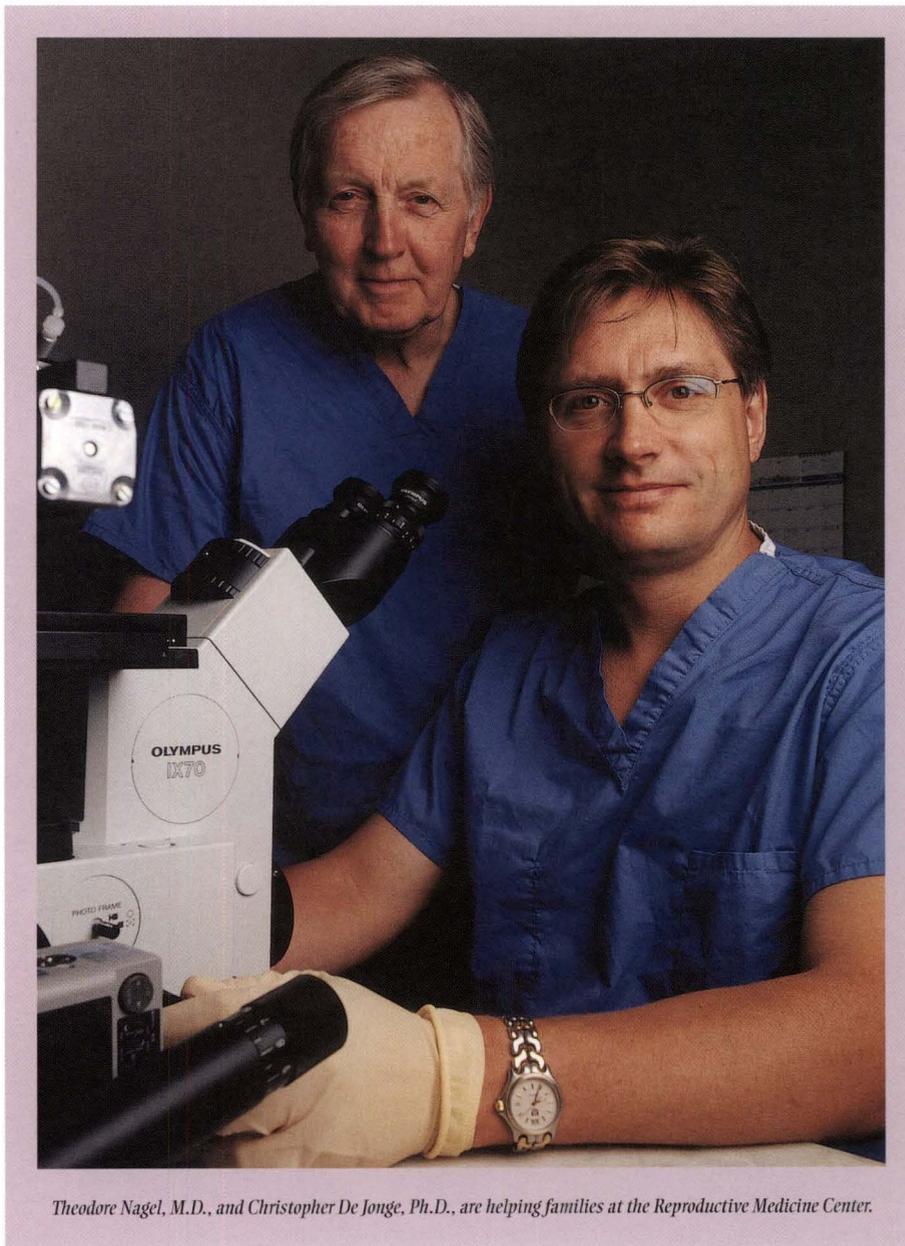
FERTILE GROUND

Unless you've been there, it's hard to understand the intensity of emotion that comes with hoping and dreaming

of conceiving a child, then finding those hopes and dreams repeatedly dashed. Yet with a society-wide delay in the age at which women begin trying to conceive a child, that scene is becoming more and more familiar.

Helping couples overcome the tragedy of infertility has been a key goal for the Reproductive Medicine Center (RMC) at the University of Min-

nesota since its inception in 1999. The center is built on an exceptional track record in reproductive medicine. Its director, Theodore Nagel, M.D., co-founded the first in vitro fertilization program in Minnesota in 1983. Today, the RMC is recognized for its high in vitro fertilization success rate and for its low rate of multiple births, which can create both financial and health



Theodore Nagel, M.D., and Christopher De Jonge, Ph.D., are helping families at the Reproductive Medicine Center.

A major miracle

When Jennifer and Matt Sanford were married in October 1996, they knew two things. First, they wanted to have children. Second, if they did it would take a major miracle. Paraplegic since a car accident at age 13, Matt had been told he would never be a father.

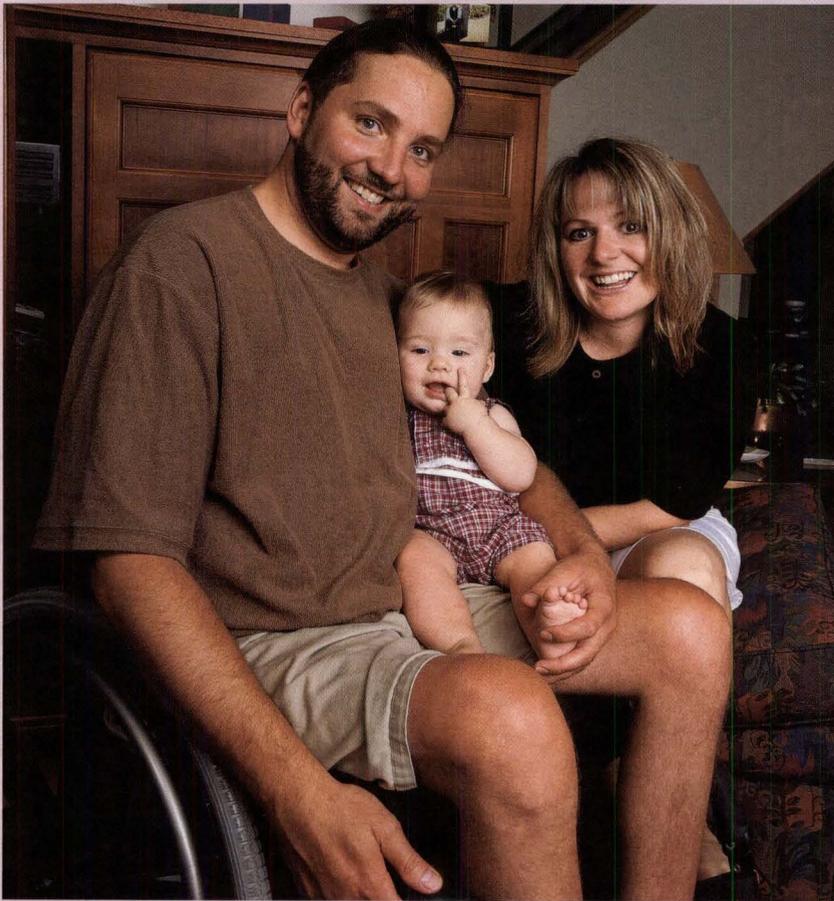
Fortunately, the Sanfords knew of a place where major miracles happen. The University of Minnesota Reproductive Medicine Center, established in 1999, is a rich source of innovation related to infertility treatment. Research at the center is helping improve evaluation of fertility in men, reduce chances of unwanted multiple births after in vitro fertilization, and improve understanding of various causes of infertility.

With the center's guidance, the Sanfords began working to conceive a child. In June 1999, when they were ready to give up hope, Jennifer discovered she was pregnant with twins.

In an ideal world, the story would continue on to "happily ever after." Sadly, it did not. Thirty-four weeks into the pregnancy, Jennifer and Matt learned one of the babies had died. With a heart-wrenching mixture of grief and anticipation, they waited out the last weeks of the pregnancy.

On February 6, 2000, William and Paul Sanford were born. Today, even as the Sanfords mourn their loss of William, Paul is filling their days with adventure and excitement beyond what they could have imagined.

"Having a son has given me a guaranteed purpose in my life," says Matt.



Jennifer and Matt Sanford worked with the University's Reproductive Medicine Center to conceive baby Paul.

problems for families.

Nagel says, "Reducing the incidence of multiples is extremely important for us."

In its brief existence the center has helped nearly 1,000 patients overcome barriers to conceiving a child or cope with other reproductive problems. It also has been the focal point for research to improve infertility treatment.

Nagel, for example, is initiating efforts to develop techniques for removing and freeze-storing eggs from women undergoing infertility-inducing cancer treatment. By perfecting these techniques, he hopes to help them retain the option of bearing a child later in life. Nagel is also working to understand the genetic and hormonal basis of some types of infertility and to reduce infertility caused by previous abdominal surgery. He also hopes to begin a study of the role of alternative therapies such as the use of acupuncture in overcoming infertility.

In work aimed at improving a woman's ability to successfully carry a pregnancy to term, Christopher De Jonge, Ph.D., is helping evaluate a sperm test, known as the sperm chromatin structure assay, or SCSA, that is aimed at improving the ability to diagnose infertility.

De Jonge is an internationally known andrologist (a specialist in male reproduction) who is also laboratory director for the RMC. He and his colleagues have found that the test can help identify sperm abnormalities that dramatically increase the likelihood of miscarriage. This information can then be used to identify couples for whom there is a low chance of success for infertility treatments so they can avoid protracted or expensive therapies as well as the heartbreak of repeated failure in their attempts to have a child.

"SCSA provides data on the quality of the DNA that cannot be obtained by any other practical method," says De Jonge.

A colleague, Ken Trofatter, M.D.,

Ph.D., is looking at a variety of ways to improve the outcomes of pregnancies, from identifying techniques to prevent premature labor to exploring the unique prenatal care needs of women from various ethnic groups and cultural backgrounds. He is particularly excited about efforts to create an electronic network through which physicians around the Twin Cities can share ultrasound results and other data. Such a network would dramatically improve their ability to consult on challenging cases as well as to carry out maternal health research to benefit future generations.

Nagel expects the RMC's efforts to enhance fertility to become even more prolific when William Burns, M.D., an in vitro fertilization specialist from the University of West Virginia, joins the team later this year. Addition of a new faculty member will not only add a new dimension of expertise, but also allow current faculty to devote more time to fertility-enhancing research.

CANCER CARE

Breast, ovarian, and other reproductive cancers are the leading cause of death in the United States for women ages 35 to 54. Preventing the occurrence of such cancers and providing the best possible treatment when they do occur is a second key focus for the University's women's health program. The University ranks among the top five centers in the nation for survival rates for gynecologic cancer patients.

The Gynecologic Oncology Division is a key player in national efforts to improve prevention and treatment of women's cancers. A member of the national Gynecologic Oncology Group since 1976, the division is an active participant in national trials of innovative treatments.

Improving understanding of tumors' ability to promote blood vessel growth – a process known as angiogenesis – is one area showing much promise for advancement in female reproductive

continued

A better bicycle

Among the most exciting frontiers in cancer research today is finding ways to interfere with the ability of tumors to stimulate angiogenesis – the development of blood vessels to feed their voracious appetites and support their deadly growth. And among the most exciting advances in this specific arena is development of a new, highly potent anti-angiogenesis drug by Sundaram Ramakrishnan, Ph.D., holder of the Shirley Ann Sparboe Endowed Chair in Women's Cancer Research.

Robert Sparboe decided to actively join the fight against ovarian cancer when his wife, Shirley, died of the disease in 1989. He is president and CEO of Sparboe Companies in Litchfield, Minnesota, and a former Minnesota Medical Foundation board member.

Sparboe wanted to show his gratitude to the University of Minnesota for the care his wife received while a patient in the Department of Obstetrics, Gynecology, and Women's Health, and committed a gift of \$500,000 that, together with \$800,000 in gifts from others, was used to create the chair.

"Conventional chemotherapeutic drugs and surgery and radiation are used to eliminate the tumor," Ramakrishnan explains. "What we're trying to do is to reduce the blood supply to the tumor to complement existing therapy."

Ramakrishnan has been working to improve the effectiveness of endostatin, a protein molecule known to have anti-angiogenic characteristics, by "editing" it in a way that allows it to specifically target tumor-stimulated blood vessels, thus reducing the dose needed and also potential side effects.

"What we are doing in the laboratory is to modify this protein, to make structural changes in the molecule so it works better – like making a bicycle out of a wheel by adding handlebars and chains" to make it more functional, he says.

Last year the University filed for a patent on Ramakrishnan's "bicycle" – a modification of endostatin known as ER. The compound has already been shown in cell culture to reduce tumor-stimulated blood vessel growth 10 times better than its parent molecule.

Ramakrishnan hopes to begin clinical trials on the drug by early next year. Eventually, he anticipates, this research will dramatically enhance our ability to treat ovarian, breast, and cervical cancer as well as other solid tumors.



Sundaram Ramakrishnan, Ph.D., a nationally renowned cancer researcher, has developed a therapeutic method to block the blood supply to tumors. Here he is testing whether tumor vascular endothelial cells are killed by angiostatic proteins, genetically engineered proteins that inhibit the growth of blood vessels.



Linda Carson, M.D., center, is division head of Gynecologic Oncology and interim head of the Department of Obstetrics, Gynecology, and Women's Health.

cancer prevention and care.

"Cancer cells induce new blood vessels to grow, like new branches coming from a tree. The more branches (blood vessels), the faster the cancer cells grow," says Sundaram Ramakrishnan, Ph.D., professor of pharmacology and holder of the Shirley Ann Sparboe Endowed Chair in Women's Cancer Research.

Ramakrishnan and Linda Carson, M.D., interim head of the Department of Obstetrics, Gynecology, and Women's Health, recently developed a protein that shows substantial promise for inhibiting the development of tumor-nourishing "branches" with less severe side effects than conventional approaches. The novel protein, which can be mass-produced by yeast cells, is expected to be available for clinical trials for treating ovarian cancers as early as next year.

Other cancer-related research includes efforts to increase early detection of ovarian cancer, enhance quality

of life after cancer surgery and in later stages of cancer, and improve the success of radiation and chemotherapy in treating endometrial and other female reproductive cancers.

LIFELONG HEALTH

Women's medicine traditionally has focused on individuals in their child-bearing years. With the rise in median age of Americans, increased lifespan, and enhanced focus on lifelong health, the well-being of women in their later years is receiving greater attention.

"The Baby Boom generation is changing the way health care is delivered," says June LaValleur.

LaValleur's response to changing needs was to initiate the creation of the Mature Women's Center at the University. The center is a focal point for empowering women in the second half of life to take the initiative in managing their own health.

"It allows us to deliver a little different health care to women – listening, patient participation, and decision making," LaValleur says. "And we're training residents in what I think is the best way to promote menopausal health: a good deal of preventive medicine."

Even as women find themselves more in charge of their own health than ever before, they also find themselves facing a wide range of options of which many of their mothers – and certainly their grandmothers – could only have dreamed. Where once things like increasing frailty, loss of mental acuity, and thinning skin were seen as unfortunate but inevitable accompaniments to aging, today more and more women are finding that with proactive health care, an active, agile, exuberant life need not be checked at the door at 50, 65, or even 80.

Sharon Norling, M.D., is helping to expand options available to mature women even further through the Mind

continued

Building bridges

Sharon Norling, M.D., is building bridges – though not the conventional kind. Two years ago, Norling led the way in establishing the Mind Body Spirit Clinic, a partnership between the Academic Health Center and Fairview Health Services that's working to close the gap between conventional medicine and complementary therapies such as massage, acupuncture, herbal therapy, and clinical hypnosis.

"The goal is really to integrate both," she says. "We are blending forms of medicine."

Norling, who is also medical director of the Women's Health Center, first became interested in other healing therapies in the 1980s. While consulting in Europe, she discovered that insurers there consider trips to spas a normal, reimbursable part of health care.

"Being very conventionally trained, I was a little surprised," she says. "But the more I saw and read, the more I appreciated it as an important part of healing." Things took a more personal turn six years ago, as she helped her sister-in-law, who had breast cancer, search for therapies to complement conventional radiation, chemotherapy, and surgery.

"Sometimes the ways the physicians responded to her questions were actually appalling to me," Norling says. "When she died, I vowed to do whatever I could to change that."

The result was the Mind Body Spirit Clinic, where conventional physicians and complementary therapists come together to enhance health and well-being by meshing their knowledge and skills.

"It's an integrated approach, working with the conventional physician," Norling says. "It's not an either/or."

In addition to treating patients, Norling also conducts research. She and Patricia Judson, M.D., a gynecological

oncologist and assistant professor in the Department of Obstetrics, Gynecology, and Women's Health, are beginning a study aimed at testing the effect of complementary therapies in women with ovarian cancer. The two are comparing outcomes for women receiving only con-

ventional care for ovarian cancer with others whose care regimen also includes massage, healing touch, and hypnosis.

"It's real exciting," Norling says. "Each one of those areas has been shown to enhance the immune system, and that's what cancer patients need."



Sharon Norling, M.D., conceived the idea of the Mind Body Spirit Clinic, and is also medical director of the Women's Health Center.

Body Spirit Clinic. A partnership between the Academic Health Center and Fairview Health Services, the clinic links conventional and complementary medicine to create an integrated approach to lifelong health. Women who come to the Mind Body Spirit Clinic in search of help managing menopause or maintaining bone health find options not only for conventional hormone therapy, but for nutritional counseling, therapeutic massage, and other holistic or complementary therapies.

Research is an important part of the picture as well. At the Mature Women's Center, LaValleur not only guides patients through the maze of options available to them as health care consumers, she also works to advance those options through clinical studies in such diverse areas as age-related skin changes, osteoporosis, cancer, and hormone replacement therapies.

One recently completed national study is the Heart and Estrogen Replacement (HER) study, which explored the relationship between a hormone replacement therapy regimen and heart-related health problems in 2,700 women with coronary artery disease. That effort illustrates the impossibility of creating "one-size-fits-all" prescriptions for managing mature women's health. Early in the study, participants on hormone therapy were more likely to experience blood clots, heart attacks, and death than women who were

"Research is key to treating the patients we see every day in the clinic. Without research, we cannot move forward in our efforts of prevention, healing, and enhancing the quality of life of women."

not taking hormone supplements; later on, the reverse was true. "It probably asks more questions than it answered," LaValleur says.

A major focus now is the Women's Health Initiative, a massive, 12-year National Institutes of Health study looking at the relationship between diet, exercise, and hormone replacement therapy and the incidence of heart disease and several types of cancer. As gynecologic investigator for the University of Minnesota site (one of 16 sites across the country), LaValleur has played a significant role in the study, which involves 66,000 women nationwide.

When it is completed in 2005, the initiative is expected to provide a clearer picture of how she and her colleagues can best work with aging women to help them maximize their health. However, LaValleur points out that because the study involves only one treatment regimen, it still will not provide a "final answer" on risks and benefits of hormone replacement therapy.

LaValleur is also involved in the Study of Tamoxifen and Raloxifene (STAR), a national study of the effectiveness of the two drugs in preventing breast cancer. Other work includes evaluating therapies for uterine bleeding in women who have undergone bone marrow transplants, studying the effects of estrogen replacement on skin problems, and evaluating diagnosis and treatments for osteoporosis.



June LaValleur, M.D., is director of the University's Mature Women's Center.



Josie Johnson was recruited by her physician, June LaValleur, M.D., to serve on the Women's Health Fund board.

"Research is key to treating the patients we see every day in the clinic," LaValleur says. "Without research, we cannot move forward in our efforts of prevention, healing, and enhancing the quality of life of women."

Josie R. Johnson, Ph.D., a former University Regent and former president of the Women's Health Fund board, and one of LaValleur's patients, can't say enough about the value of the Mature Women's Center.

"I think it is very important that the Department of Obstetrics, Gynecology, and Women's Health has a center specifically devoted to studying and treating the problems of mature women," Johnson says. "As women are living longer, there is a growing emphasis on the need for better health care for maturing and elderly women, and for better education on how to prevent health problems such as osteoporosis and heart disease. With increased funding for research in these areas, I hope we can provide the necessary answers."

by Mary Hoff



WOMEN'S HEALTH FUND University of Minnesota

In 1992, the Women's Health Fund was established as an affiliate of the Minnesota Medical Foundation to help raise funds for research, education, and faculty support in the Department of Obstetrics, Gynecology, and Women's Health. Since then, more than \$3 million in gifts has been received. An enthusiastic board of community volunteers – who share a common interest in providing philanthropic support for the department's research and education programs in women's health – guides the organization.

Thomas Carrier, M.D., chair of the Women's Health Fund Campaign Minnesota committee, says, "It has been a privilege for me, as a retired faculty member, to remain involved with the Department of Obstetrics, Gynecology, and Women's Health

through the Women's Health Fund board. I believe deeply in the tremendous work being done in the department on behalf of all women in our state and beyond."

The Women's Health Fund is involved in a number of educational and outreach efforts. Two Women's Health Research Showcase events held this past spring attracted more than 200 people to hear about research being conducted at the University of Minnesota – in areas such as infertility, ovarian cancer, complementary healing therapies, and more.

The Women's Health Fund is also supporting an effort to establish a Women's Health Research Center. The center would bring health care professionals from across the University into a synergistic environment where they can work together to address pressing issues such as cancer prevention and treatment, age-related health care, and reproductive medicine.

Women's Health Fund Advisory Board

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Patricia Rotondi
Nancy Skaar
Susan Viking



Women's Health Fund board officers include: (from left, standing) Karen O'Toole, treasurer; Leslie Turner, president; Thomas Carrier, M.D., chair of the Campaign Minnesota committee; (from left, seated) Catherine Brennan, past president; Beverly Gazda, president-elect.

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Checking the Health of th



In an era of reduced state support, mounting tuition, ongoing changes brought on by managed care, an anticipated shortage of doctors, and more, we asked Dean Al Michael to assess the vital signs of the University of Minnesota Medical School.

e Medical School

How is the Medical School responding to reduced funding from the state of Minnesota?

One of the most important things to make clear right at the beginning is that we are not suddenly thrown into a crisis mode based on changes in funding from the state. We have been involved in an extensive planning process for more than four years – dealing with a number of factors that affect the overall health of the Medical School.

Medical education for many years has been supported by revenues from clinical practice and hospitals – a mechanism that has had major limitations during the past decade because of the changing finances of health care and managed care. Since 1992 the cost of medical education has exceeded revenues, making it necessary

to utilize our reserves – which are now depleted.

Because the Medical School currently receives only 9 percent of its budget from the state, we have requested additional resources from the Legislature as a high University priority, and are optimistic about the response of the citizens of the state and the Legislature. While funding from the Legislature is, of course, very important in meeting our educational mission, it is only one part of the formula that ensures the future financial strength of the Medical School.

As President Mark Yudof has said, we have to look at the whole picture of how medical schools are funded, especially in this era of changing health care delivery. We can't depend on the state as in the past. We may have to function more like a private institution in the future. We have other essential sources of funding: research grants, clinical revenue, philanthropy, tuition, and possibly increased support from industry.

What changes have been made to keep the Medical School strong and growing?

We have completed a multi-layered strategic planning process, undertaken to assess the current

Facts about the Medical Schools

Year founded,
Twin Cities: 1888

Year founded, Duluth:
1972

Twin Cities enrollment:
813

Duluth enrollment:
104

Percent of budget from
state: 9%

Minnesota resident
tuition: \$21,618

Minnesota resident
annual cost: \$40,911

Non-resident tuition:
\$40,164

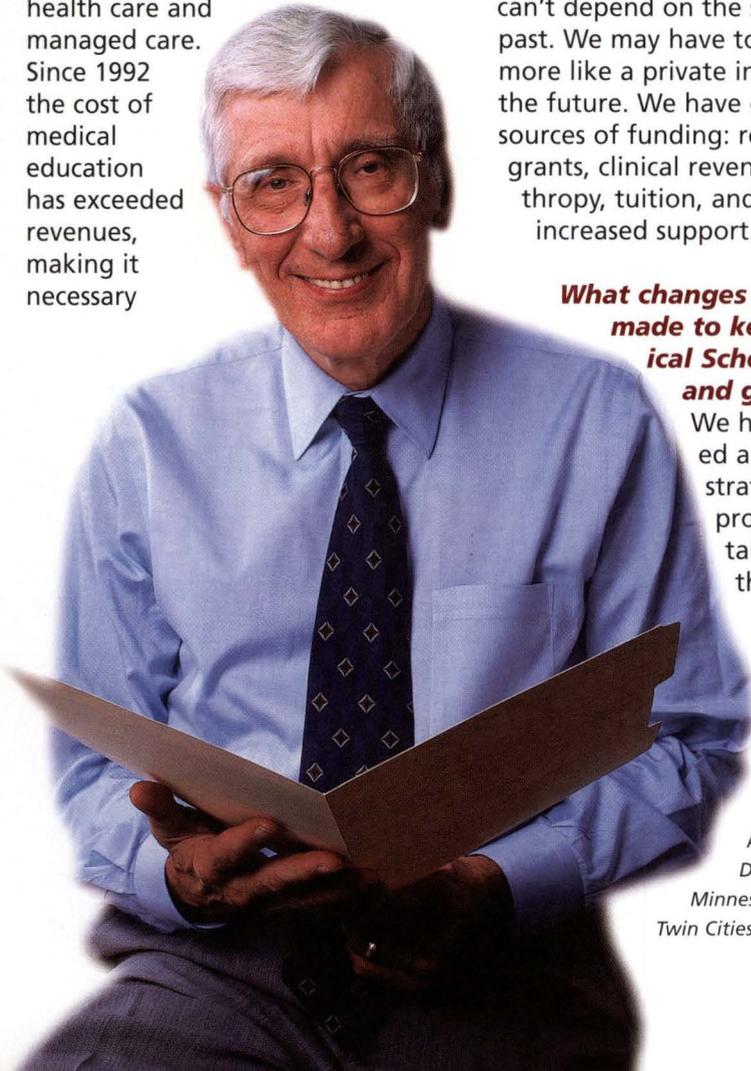
Non-resident annual
cost: \$59,457

Size of 2001 graduating
class: 231

Percentage into primary
care: 58.5%

health of the Medical School and its mission of serving the state of Minnesota in this new century. We have addressed changing medical education needs, departmental restructuring, clinical and academic priorities, the need for expanded facilities, and much more.

continued



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

Major changes in the past few years include:

- The sale of University Hospital to the Fairview System, creating Fairview-University Medical Center (FUMC), which continues to be the primary site for clinical practice and clinical investigation by University physician faculty members, offering students a broad patient base for learning and clinical studies, and providing patients with state-of-the-art treatment.
- The formation of University of Minnesota Physicians (UMP), a multi-specialty clinical practice group of more than 450 physician faculty members at the University of Minnesota – replacing more than 30 separate clinical practice groups.
- A complete redesign of the administrative and financial structure of the Medical School, resulting in more streamlined operations well-suited to the demands of a 21st century medical school.
- A thorough restructuring of our medical student educational programs with the development of mission-based budgeting, a mentorship program involving community physicians, interdisciplinary courses in complementary/alternative care, an enhanced admissions process, an increase in the MD/PhD program, new dual degrees (MD/MPH and MD/MBA), and major curriculum revisions. In addition, an office of International Education and Research was established, and the Graduate Medical Education program was redesigned and expanded.
- The development of a coordinated, interdisciplinary research program which brings faculty researchers together across clinical and basic science departmental boundaries in eight major initiatives, which will be the focus of new support in the future: aging, cancer, cardiovascular/pulmonary, developmental biology/children's/adolescent health, genetics and genomics, immunology and infectious diseases, neurosciences, and stem cell biology.

Fairview-University Medical Center: A Success Story

The 1997 affiliation between the University's Academic Health Center and Fairview Health Services has benefited both organizations, according to a recent external review report released in March, but there is still significant work to be done to fully realize the potential of the partnership.

The three-member panel included William Loveday, chief executive of Clarian Health Partners in Indianapolis; William Peck, head of the Washington University School of Medicine in St. Louis; and Win Wallin, former chair of Medtronic.

Key findings from the report include:

- If the state wants a premier Medical School, the University and the state of Minnesota should provide significant additional financial support to the Academic Health Center and the Medical School.
- The leaders of Fairview and the AHC need to jointly reformulate a clear vision for the relationship, a clear role for Fairview-University Medical Center as a teaching hospital serving in a regional referral role, an effective process for alignment of priorities between Fairview and UMPPhysicians, and effective bridge-building between UMPPhysicians and other key Fairview-affiliated physician groups.
- A three-to-five-year budget for recruiting new academic clinical leadership should be jointly developed. The panel recommends that agreement on funding levels be reached and that a significant amount be allocated by Fairview as quickly as possible.
- Fairview and the AHC should create meaningful cross-participation and policy "cabinets" of each organization, in order to build a broader base of understanding

and ownership of each organization's cultures, resource allocations, and priorities.

As part of the effort to better integrate the two organizations, the reviewers suggested that the president of the University serve on the Fairview-University Medical Center Board of Directors and that Fairview-University Medical Center take an active role in recruiting to fill several open clinical chief positions in the AHC.

According to Frank Cerra, M.D., senior vice president for health sciences, "I think this is a success story. We've achieved most of the major goals. I agree that it's time to refresh the vision, move ahead, and realize even more potential."

Fairview-University Medical Center was named one of the top 50 teaching hospitals in five categories in *U.S. News and World Report's* July 23 issue, "America's Best Hospitals."

- The reorganization of the biological sciences by the Medical School and the College of Biological Sciences (CBS) to meet the challenges of the genomic era, which led to the formation of two combined (CBS and Medical School) departments – Genetics, Cell Biology/Development and Biochemistry, Molecular Biology, and Biophysics and a new Department of Neuroscience (Medical School). The new Molecular and Cellular Biology Building will be the home for many of the faculty members from these departments.
- The decision to move forward with a number of new facilities designed to greatly enhance

research capabilities, including the Basic Science and Biomedical Engineering Building, the Molecular and Cellular Biology Building, and the anticipated Translational Research Facility.

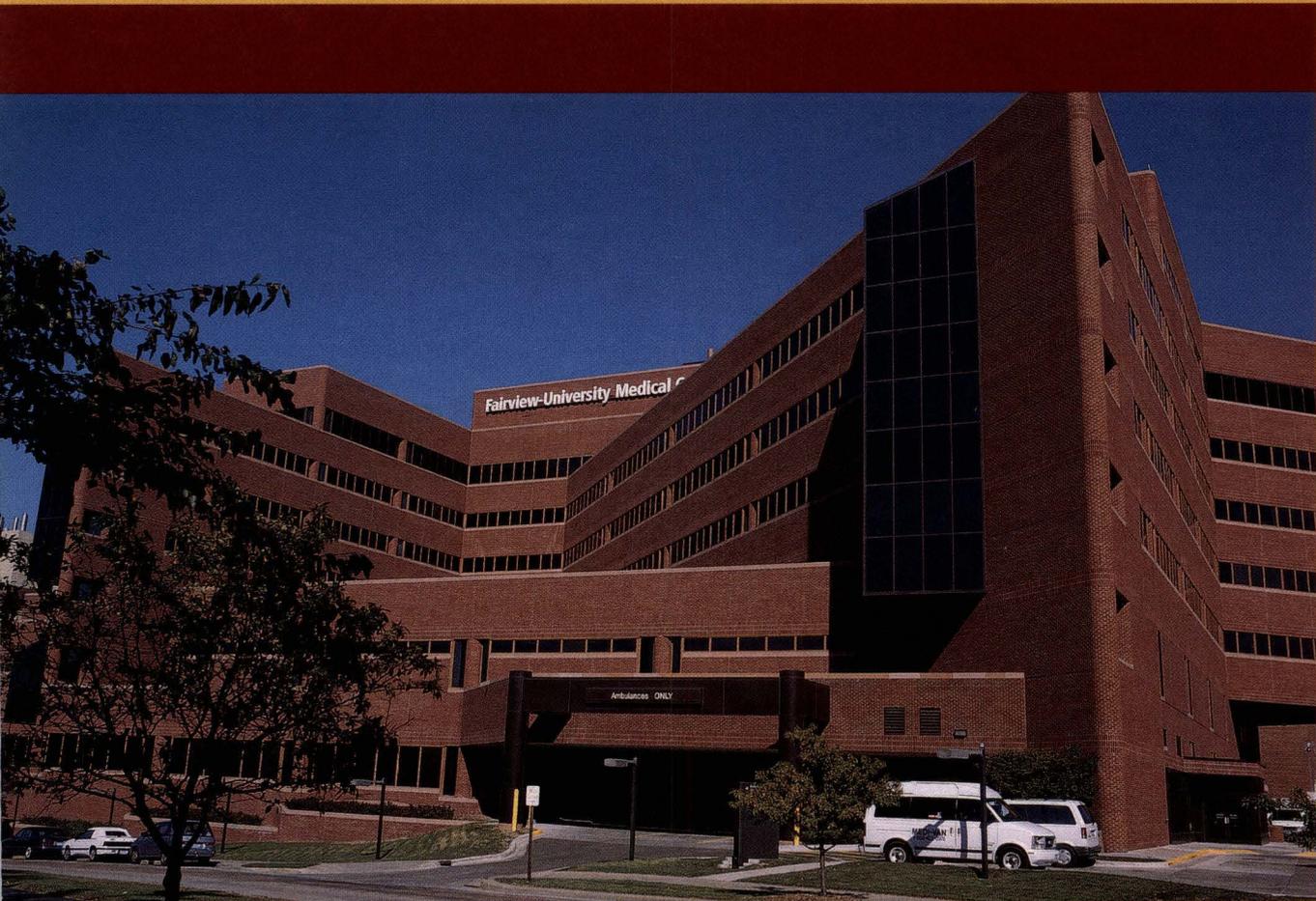
These and other measures have not only served to enhance and improve our education and research missions, but have united our faculty as they play a critical role in the decisions affecting their Medical School.

What issues are on the horizon that the Medical School must prepare for?

There are a number of things facing our Medical School and,

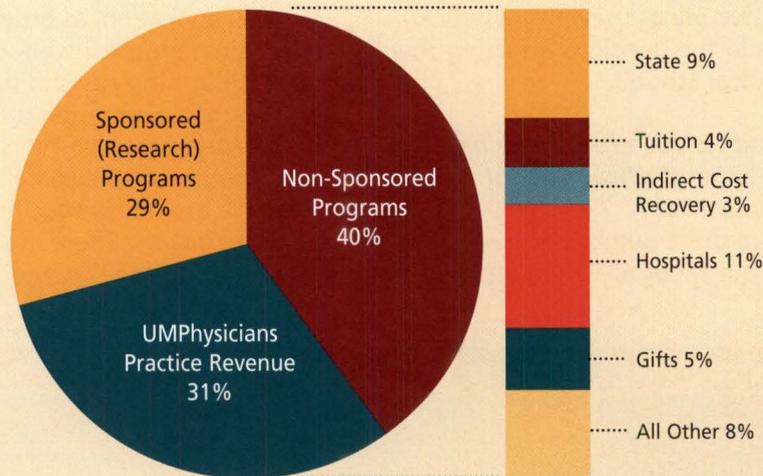
indeed, medical schools across the country. Increasing tuition (we are now the 12th highest among the nation's 73 public medical schools) may deter some promising students from choosing a medical career, and will further increase debt levels of those graduating from medical school and beginning their residencies. We are in a nationwide crisis in funding for medical education. In order to maintain high-quality education, double-digit increases in tuition are being implemented during each of the next two years.

Despite what we sometimes read, we are not producing enough doctors. There are major physician shortages in the metro-



MEDICAL SCHOOL FUNDING FISCAL YEAR 2000

BUDGET = \$368.7 MILLION



Investment for the future

The 2001 Minnesota Legislature made a strong investment in the health professional programs of the Academic Health Center by funding a new endowment, which comes from two remaining tobacco settlement payments. When fully funded in 2003, it is estimated the state-managed endowment will be nearly \$374 million, with projected revenue of nearly \$17 million each year after 2004.

The designation of the endowment reflects the success of the AHC in communicating to the Legislature the critical need for an ongoing source of funding to prepare an adequate number of new health professionals – to improve the health of our communities, discover and deliver new treatments and cures, and strengthen the economic vitality of our health industries.

politan and rural areas in primary care and other specialties. And as the number of older people increases, we have not yet resolved how we will care for this expanded aging population. Certainly we will need more doctors as well as other health professionals, but also a redesign of Minnesota's health care system.

The effects of managed care on this system will continue to evolve. It's possible the care paradigm will substantially change over the next decade – with increased care being delivered by nurses and other care providers. We must continue to be prepared for changes that may occur – to be pro-active and to anticipate changes.

We are also an increasingly diverse culture, and must address the health care needs of people from around the world with sensitivity and compassion.

In addition, in this age of incredible discovery and mind-boggling research breakthroughs, we must constantly adjust with the changing technology – offering our faculty and students the very best in learning opportunities.

And as exciting as these new opportunities for research advancement are, they mean we must work extra hard to keep our talented faculty and provide them with the support they need to conduct their pace-setting studies.

Are you optimistic about the future?

I am very optimistic about the future of our Medical School. We've been through a lot – our Medical School is already emerging from some of the most significant issues affecting our medical colleagues around the nation, since we were among the first to be

challenged by the changing economics of health care. We are well-positioned for future success because of our strong faculty. Our work in developing a strategic plan, and the financial discipline already demonstrated, are creating the momentum needed to move us through the next few years.

We are appreciative of the efforts the Governor and Legislature have made on behalf of the Medical School. The tremendous support from the community and from our faculty and students has reaffirmed our mission of serving the people of Minnesota with the best possible health care.

We are in a strong position, better than most other institutions, to focus on our education, research, and clinical mission, and to move into the top 20 medical schools in the country.



Campaign Minnesota: Gifts in Action

Traveling to advance cancer research

Chuck and Dotty Dietz and their family are helping make it possible for cancer research faculty to travel to conferences and other sites to further cancer research, present new ideas and findings, and learn from other cancer researchers. The Dietz family made a commitment to the University of Minnesota Cancer Center through the Masonic Cancer

Center Fund to **support educational travel** for faculty and staff. Initiated in the summer of 2000, the travel award has provided funds for five cancer research faculty, staff, and fellows to attend conferences such as the Oncology Nursing Society Congress to present a paper on the quality of life of women undergoing breast reconstruction surgery, the Endocrine Society meeting to learn about insulin growth factors, and the American Society of Clinical Oncology

conference to present abstracts on the treatment of pediatric patients with solid tumors treated with protocols developed at the University of Minnesota.

“Brainstorming” for answers

Longtime friend of the University of Minnesota **Claire Hemingway** from Kernville, California, has established an endowment fund which supports the Cancer Center’s “Brainstorm

As part of the University of Minnesota’s \$1.3 billion campaign – to provide the highest level of support for research, faculty, and students – the Medical Schools and the School of Public Health seek to generate \$500 million in cash and pledges through the Minnesota Medical Foundation.

More than \$327 million has been raised thus far. Where does it come from, and how is it making a difference?



It comes from individuals, from communities, from school fundraisers, from corporations, from patients, and from families. And it goes to support numerous programs advancing medical research and education – programs as diverse as the donors themselves. Here are just a few ways gifts to Campaign Minnesota are having an impact.

Campaign Minnesota: Gifts in Action

Awards." Each year, the Cancer Center supports new and novel research programs. Prior to submitting research ideas for funding from government agencies and national foundations, research teams must have a strong hypothesis and a preliminary body of data to support the request.

The Brainstorm Awards require collaborations across scientific and medical disciplines and further require that the research leaders have not worked together previously. Recipients of the awards are given \$25,000 to initiate their research and produce results within a 12-month timeframe.

Brainstorm Award winners for the year 2000, Drs. Christopher Pennell, Matthew Mescher, and Angela Panoskaltis-Mortari, investigated the development of **vaccines for cancer therapy**. Their research proved productive and they have now submitted a grant for federal funding to continue their research on vaccines which teach and activate immune killer cells to attack and destroy cancer cells.



Cooking for a cure

Jane Braun, an alumna of the School of Public Health, and her family host an annual cookie swap and fund-raiser at her sister's home in Boston. The event commemorates the life of their mother, Ellen Keefe Braun, who died of breast cancer. Ellen was an excellent baker who won many ribbons at the State Fair. Family members and friends trade cookies and have the option of making a donation for **breast cancer research** at the University of Minnesota Cancer Center. Cookie recipes are being compiled into a cookbook, which will be sold to raise money for breast cancer research.



A commitment to conquering Parkinson's

The late **Dr. Ray Cornford and his widow, Velmabelle**, of Rapid City, South Dakota, have committed \$1.5 million to the University of Minnesota for **Parkinson's disease research**. Shortly after retirement, Dr. Cornford experienced the early symptoms of the disease he had helped diagnose in his patients. The Cornfords researched the exciting work being done in Parkinson's disease at the University of Minnesota, and decided to do what they could to eliminate the disease. In addition to the financial commitment, Dr. Cornford made the decision to donate his body to the University for Parkinson's research.

Scholarships reach \$1 million

For the first time in Minnesota Medical Foundation history, the annual budget for scholarships awarded to medical students at the Twin Cities Medical School and the Duluth School of Medicine has reached \$1 million. Approximately 450 students, representing almost half of all medical students enrolled at both medical schools, received scholarships during the 2000-2001 academic year. **The following are examples of the more than 40 scholarships created** since the beginning of Campaign Minnesota:

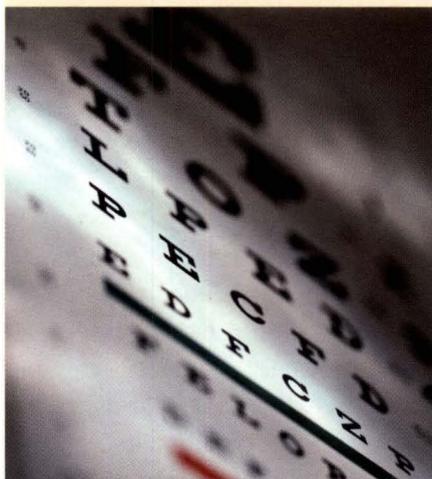
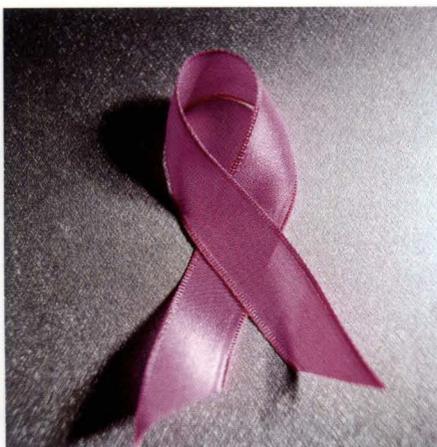
Dr. Terence D. and Jacqueline J. Capistrant have established a scholarship in appreciation of the financial support he received while at the University of Minnesota Medical School, Class of 1963. **Richard F. and Ruth S. Cole** established a scholarship in memory of their son, Dr. Richard S. Cole, Class of 1974, which serves as a lasting tribute to the value he placed on medical education. **Dr. Frank E. Johnson, Jr.**, Class of 1967, established a scholarship in memory of his father, Dr. Frank E. Johnson, Sr., and in honor of his mother, Beryl M. Johnson.

Gift funds ophthalmoscope

Thanks to two gifts totaling \$90,000 from an **anonymous donor**, the Department of Ophthalmology was able to purchase a state-of-the-art scanning laser ophthalmoscope. This instrument will be used for an experimental new treatment known as "feeder vessel therapy" for retinal patients seen in the **macular degeneration center**. Faculty are also using the device to assist them in research on ocular blood flow for improved drug delivery devices.

Stamping out cancer

The **Longville Area Women of Today** consists of 22 members who are actively involved in volunteering and fund raising in the Longville community (1 hour north of Brainerd, Minnesota; population 220). The money raised for **breast cancer research** comes from the proceeds of hand-made cards, sold under the slogan, "Hand-stamped cards help stamp out cancer." The group chose to support breast cancer research at the University of Minnesota Cancer Center after three women were diagnosed with breast cancer within a short period of time.



Governors join the fight

In the year 2000, two former governors of Minnesota joined forces with the Department of Ophthalmology to help fight a well-known and prevalent eye disease – macular degeneration.

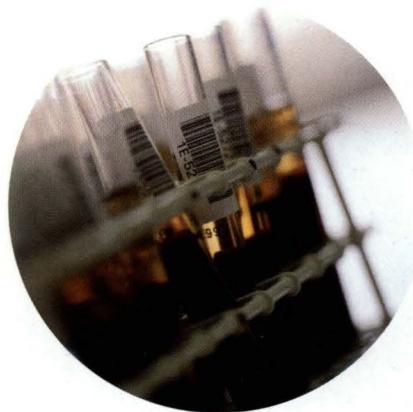
Governors Elmer L. Andersen and Arne Carlson signed their names to a fund-raising letter in support of the Minnesota Lions Macular Degeneration Research and Rehabilitation Center. The appeal raised more than \$55,000 for **macular degeneration and retinal research**.

Support for residents

Medical School alumnus and clinical professor of the Department of Ophthalmology, **Harry Friedman, M.D.**, has established the Harry Friedman Residents Fund through his estate plan. The fund will provide a permanent source of income to bestow an award to a **resident for outstanding research**, support resident basic science and clinical research activities, and provide income for resident educational activities, including the purchase of library books.

Auxiliary fights aplastic anemia

Over the past 12 years, the **Ladies Auxiliary of the Veterans of Foreign Wars** of the United States has raised more than \$36 million for its Cancer Aid and Research Fund. In August 2000, the organization presented a \$5,000 gift to Wei Chen, M.D., of the Immunology and Transplant Biology and Therapy Programs at the University of Minnesota Cancer Center. The gift has been designated for **research in aplastic anemia**, a rare and aggressive disorder in which the bone marrow fails to produce blood products.



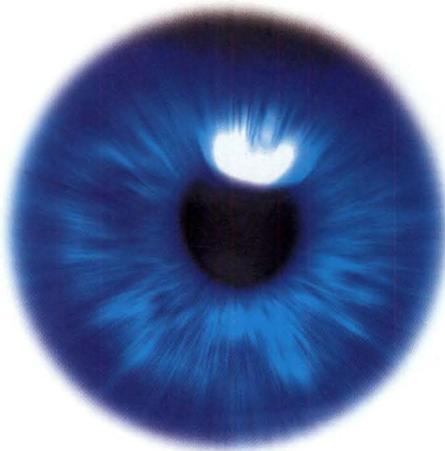
Wings for islets

Donor pancreases are transported for the Diabetes Institute for Immunology and Transplantation's groundbreaking **clinical islet transplant trials**, thanks to a \$100,000 gift from the **Bemis Company Foundation**. This gift allowed for the start-up of the Wings for Islets fund, which permits researchers to travel on an emergency basis to obtain pancreases for islet transplantation.

Campaign Minnesota: Gifts in Action

Lions advance ophthalmology research

With a generous pledge of \$1.5 million, the **Minnesota Lions** helped launch and continue to support the Minnesota Lions Macular Degeneration Research and Rehabilitation Center. Because of the Lions, the Department of Ophthalmology has been able to hire **three outstanding vitreoretinal surgeons**, two of whom are also conducting basic science research. Current retinal research and clinical activities include: studying the biochemistry of aging, developing new forms of genetic testing for retinal mutations, performing stem cell transplantations, and studying a new ocular drug delivery device.



From Tennessee to Minnesota

The Diabetes Institute has been blessed with the time, talent, and treasures of **Wanda Bailey** of Lexington, Tennessee, a type 1 diabetic. Her personal gifts and tireless efforts have yielded a local fund-raising event sponsored in part by Walmart, local news articles, and communication with many diabetics and physicians in the area.

Neuroscience breakthroughs

Using an ultra-high field 7 Tesla magnet – an acquisition made possible with a \$1.75 million grant from the **W.M. Keck Foundation** – scientists at the University's Center for Magnetic Resonance Research have conducted **neuroscience research which has yielded extraordinary results**. Included are a greatly enhanced ability to map brain function; a greater resolution and detection of neuro-chemicals and individual molecules, which is crucial for understanding the role of chemicals in the brain and developing treatments for brain disorders; and imaging for the first time neuronal activity that activates only for facial recognition, adding to the theory that there are unique cells that recognize only faces.

Pizza for cancer prevention

The **V Foundation for Cancer Research** seeks out promising young researchers from medical centers across the country who need early developmental, **critical-stage grant support**. Since its inception in 1993, the foundation has raised more than \$18 million for cancer research. In spring 2000, the V Foundation and Papa John's Pizza worked together in a national cancer research fund-raising promotion, with more than \$4,000 raised locally through the sale of "The Works" pizzas. The money was awarded to Leslie Robison, Ph.D., University of Minnesota Cancer Center, for research in cancer prevention and etiology.



Supporting Ob/Gyn residents

During the past two years, the **Corrigan Family Fund** of the Minneapolis Foundation has provided support to **Ob/Gyn residents** for use in funding their resident research projects. Through the Corrigan Family Fund, Leslie Corrigan Turner and her siblings, Fredric Corrigan and Nancy Corrigan Woodrow, donated a total of \$150,000 to establish the Corrigan Endowed Fund to support resident research at the Women's Health Fund. Raising \$1 million in endowment support for resident research is one of the Women's Health Fund's top goals in Campaign Minnesota.

Gratitude for excellent care

Teddy Wong, owner of the House of Wong restaurant in St. Paul, knows that community support is critical to assure that the best medical care is available to the people of Minnesota. More than 30 years ago, his son's life was saved by pediatric doctors at the University of Minnesota. Currently, Wong is grateful for the vision care he receives through the Department of Ophthalmology. In appreciation, he has contributed annually to both the **Departments of Pediatrics and Ophthalmology** since

1989 – helping ensure that critical research and patient care will continue not only for his family, but for future generations.

Fighting cystic fibrosis

Chelsea Votel has successfully battled cystic fibrosis throughout her 13 years of life. Her parents, Barb and Tom, have been inspired by Chelsea's determination and have volunteered for 10 years to support **research in cystic fibrosis**. For the last decade, the Votels have hosted the Mid-Winter Gala for the benefit of the Department of Pediatrics. The January 2001 event raised \$40,000, bringing total event proceeds to more than \$100,000.

Looking for answers to AIDS and infectious diseases

Nancy Mills Boyce supports the International Center for Antiviral Research and the Epidemiology Endowment Fund for **research in AIDS and infectious diseases** which affect young children. Her gifts are in memory of her father, Walter Mills, a former vice president with General Mills.



Women's Health Research Center

The Women's Health Fund received a generous \$100,000 gift from an **anonymous donor** in 2000 which will be used toward the department's \$3 million dollar campaign goal of establishing an interdisciplinary Women's Health Research Center in the Department of Obstetrics, Gynecology, and Women's Health.

This gift will help the department with its goals of renovating laboratory space, hiring research staff, and hiring a research director to attract large research grants from national funding sources, such as the National Institutes of Health.

Establishing a Women's Health Research Center to pursue health issues in cancer, osteoporosis, women's heart disease, and other health problems will help promote **greater collaboration on women's health issues** among health care professionals in all departments of the Medical School.

Answers for autism

St. Paul residents **Brian and Peggy Reagan** have been blessed with five children. Jimmy, their seven-year-old son, has autism. Unfortunately, no one knows what causes autism and there is no known cure. But the Reagans would like to change this. They have made a personal financial commitment to support the **Autistic Spectrum Disorders program within the Department of Pediatrics**. In addition, they have worked tirelessly for

the last year to raise public awareness of autism and have helped raise more than \$100,000 to support this multidisciplinary program.

Sibley students get involved

Henry Sibley High School in St. Paul has a strong tradition of fund raising. In 2000, the student body, school staff, and the community

raised more than \$20,000 with school dances, bowling, a carnival, dress-up days, and many other events. The University of Minnesota Cancer Center was chosen as one of three organizations to receive

gifts on behalf of everyone who participated. The highly motivated students and staff at Sibley make it possible for Cancer Center researchers to continue their **ground-breaking work** in the prevention, detection, and treatment of cancer.

Giving of her time

Betty Walen's contributions to visual health cover a spectrum that includes work with the Vision Foundation, the Department of Ophthalmology, and the Minnesota Lions Eye Bank. Since 1983, Walen has been a loyal donor to the Vision Foundation, supporting both **cornea research and recently also macular degeneration research**. At age 82, Walen volunteers her time to call and thank other donors for their support, and also works at the Minnesota Lions Eye Bank, keeping track of cornea transplant patients. ■



Improving the Lives of Thousands

During fiscal year 2000, the Minnesota Medical Foundation grants program awarded a record \$1.1 million for 85 start-up research projects and equipment purchases. Research funded with Foundation “seed money” is often used to leverage additional support from the National Institutes of Health and other sources.



Imagine not being able to walk, tie your shoes, or use the toilet by yourself.

For those suffering from severe arthritis, this is a daily reality. Joint replacement, or arthroplasty, has proven to be the most effective solution with the best results, restoring patients to virtually their former range of motion and function.

The problem with joint replacement, however, is that the parts have a fixed lifespan of about 20 years. With the aging of the baby boomer population, revisions – replacements of original replacements – are on the rise. These surgeries are expensive, costing \$15,000 on average, making this a public health issue. Several studies have reported the complexity of these procedures and the need to have centers that specialize in this area of hip and knee surgery. The question becomes one of providing these more complex and necessary surgeries more cost-effectively.

Khaled J. Saleh, M.D., M.Sc., assistant professor of orthopaedic surgery, is the principal investigator of a multi-center study researching the problem of revision joint surgery. He received a grant from the Minnesota Medical Foundation to purchase computer equipment, which then in turn allowed him to procure another grant from the Orthopaedic Research and Education Foundation (OREF), stipulating that the University prove it has the infrastructure and equipment to support the proposed research plan. The OREF grant provided the funds to do a pilot study, now near completion, which allows Saleh to compete for an

nds, One Step at a Time

even larger grant from the National Institutes of Health (NIH).

While working on his master of science degree, Saleh found there was increasing demand for revision joint surgery while the long-term outcome of the surgical procedures was still in question. Examination of the literature revealed that the numbers available were too small to be conclusive, prompting him to conceive of a project involving multiple centers to get the quantity of data that could provide meaningful results.

Saleh brought the idea of the project, titled "Effectiveness and Efficiency of Revision Knee Arthroplasty," with him when he came to Minnesota to work with Marc F. Swiontkowski, M.D., professor and chair of the Department of Orthopaedic Surgery, Robert Kane, M.D., professor in the School of Public Health and holder of the Minnesota Chair in Long Term Care and Aging, and Roby C. Thompson, M.D., professor of orthopaedic surgery and associate dean of clinical affairs in the Academic Health Center.

Saleh has developed his project through the University's Clinical Outcomes Research Center (CORC) which helps coordinate multi-center projects under the leadership of Swiontkowski and Kane, co-directors of CORC. Saleh's project is one of the largest multi-center studies of hip and knee surgery, involving 14 centers, including Massachusetts General at Harvard University, Columbia University, Cornell Hospital for Special Surgery, and Tulane University. The project is part of the larger goal to create the infrastructure for a national and international center for joint replacement at the University, based

upon the three pillars of clinical practice, research, and education.

On the clinical side, each year more than 170,000 total hip arthroplasties and 270,000 total knee arthroplasties are performed in the United States. According to the Centers for Disease Control, the fastest growing disease in the country over the next 20 years will be arthritis, which is creating a significant cost in health care. Currently in the United States, 14.1 percent of the gross national product is spent on health care. Of that, 3.5 percent is spent on musculoskeletal disease, of which the treatment of arthritis is a significant share.

At this point, it is not entirely clear what all the variables are that determine a good outcome or a bad outcome. According to Saleh, "We don't know what the ideal features of a prosthesis are that would provide maximal longevity. And that's what brings us to the research."

The research looks at the clinical side, addressing the questions of how well the patients function and what measures a surgeon can take that will improve outcome. According to Saleh, "Outcomes research has only taken off in orthopaedics in the last seven years, although the outcome movement started in the mid-eighties. Dr. Swiontkowski has been a clinical leader in helping outcomes research gain momentum in orthopaedics.

"All of this has to be put into perspective," continues Saleh. "In orthopaedics, we don't just save lives. We save quality of life as well. Because of modern medical care, we can extend people's lives, but what good is it if the quality also doesn't match the length? Orthopaedics deals with restoring function so people can enjoy their extended lives."

The final component of the joint replacement center is education of the patient, the student of orthopaedics, and also the surgeon who wants to develop this area of expertise. As part of this effort, a fellowship program in joint replacement was started last summer with Saleh, Thompson, Kane, and Harry J. Robinson, Jr., M.D., assistant professor of orthopaedics, as co-directors. The program has received applications from China, India, and Singapore, along with the United States and Canada, and the positions are booked through 2004.

Another part of the education component is the Department of Orthopaedic Surgery Adult Reconstruction website, which feeds into all three areas of clinical practice, research, and education. Residents and patients can go online to get updated information and expand their knowledge. Patients do not have access to a doctor 24 hours a day, but they can get an answer to a simple question any time online. For anyone wishing detailed information, Saleh has distilled thousands of articles down to approximately 100 "classics" dealing with arthroplasty.

The website is located at www.walkon.umn.edu, and takes its title from a song by the band U2. Saleh had been listening to their recent album while working on the website last summer, and when he heard the song, "Walk On," he knew that was the perfect name for the site: "To maintain people's ability to continue walking on – that's what I enjoy doing," he states. "Walking provides the self-pride and independence that's critical to all of us."

by Andrea J. Peterson

SEARCHING FOR BALANCE: Otolaryngology

The Minnesota Medical Foundation recently awarded Wayne Berryhill, M.D., the Cecil J. Watson Award for the most outstanding research accomplishment by a resident in any clinical department of the Medical School.

Berryhill's paper, "Mapping the Eighth Cranial Nerve by Electrical Stimulation: Methods for Differentiating Auditory from Vestibular Responses," lays the foundation for possible new ways of evaluating the function and integrity of the vestibular (balance) function.

Berryhill, a fourth-year resident in otolaryngology at the University of Minnesota, has accomplished significant gains in understanding the workings of the inner ear even before his graduation this spring.

The Cecil J. Watson Award, given once annually, is particularly special because it was given to a resident in the sometimes low-profile field of otolaryngology. Usually, the winner is selected from one of the more visible fields of internal medicine, especially as the award's namesake, Cecil Watson, was for many years the head of the Department of Medicine. The last time an otolaryngologist was selected for this award was in 1992, when Frank Rimell, M.D., was chosen. Rimell is now a pediatric otolaryngologist at the University of Minnesota.

"This is truly outstanding science," says David Johnson, Ph.D., vice president of programs at the Minnesota Medical Foundation. "Berryhill's paper told us that this person is destined for a great research career."

The Minnesota Medical Foundation is not the only organization to sit up and take notice of this fourth-year resident. In May of 2000, Berryhill was selected for the Trainee Award for the best clinical or basic science paper in neurotology submitted by a resident or fellow to the American Neurotology Society, an award of national scope, for the same project.

"I've always liked people, which sounds kind of simplistic, but true. I wanted to have a direct affect on people's lives, changing them for the better," says Berryhill of his inspiration for embarking on the long medical school odyssey

that he has just completed. Peers, advisers, and mentors describe him as "busy, intense, extremely reliable, driven, and outstanding," the recipe for success he's been honing for some 32 years now.

Berryhill, currently a Shoreview, Minnesota, resident, grew up in Broken Arrow, Oklahoma. He is Native American and hopes to use his skills to benefit Native Americans, who suffer inordinately from otitis media and other possibly congenital ear pathologies. In his third year of medical school at the University of Minnesota, Berryhill became interested in the mechanism of hearing and anatomy of the ear.

"Watching Dr. George Adams and others in the department performing microscopic surgery was so fascinating to me," he says.

The requisite year of general surgery and four years as an otolaryngology resident at the University have been unusually busy even by resident standards, with many hours at Hennepin County Medical Center, the VA Medical Center, Regions Hospital, and Fairview-University Medical Center, in addition to research and precious time with his family.

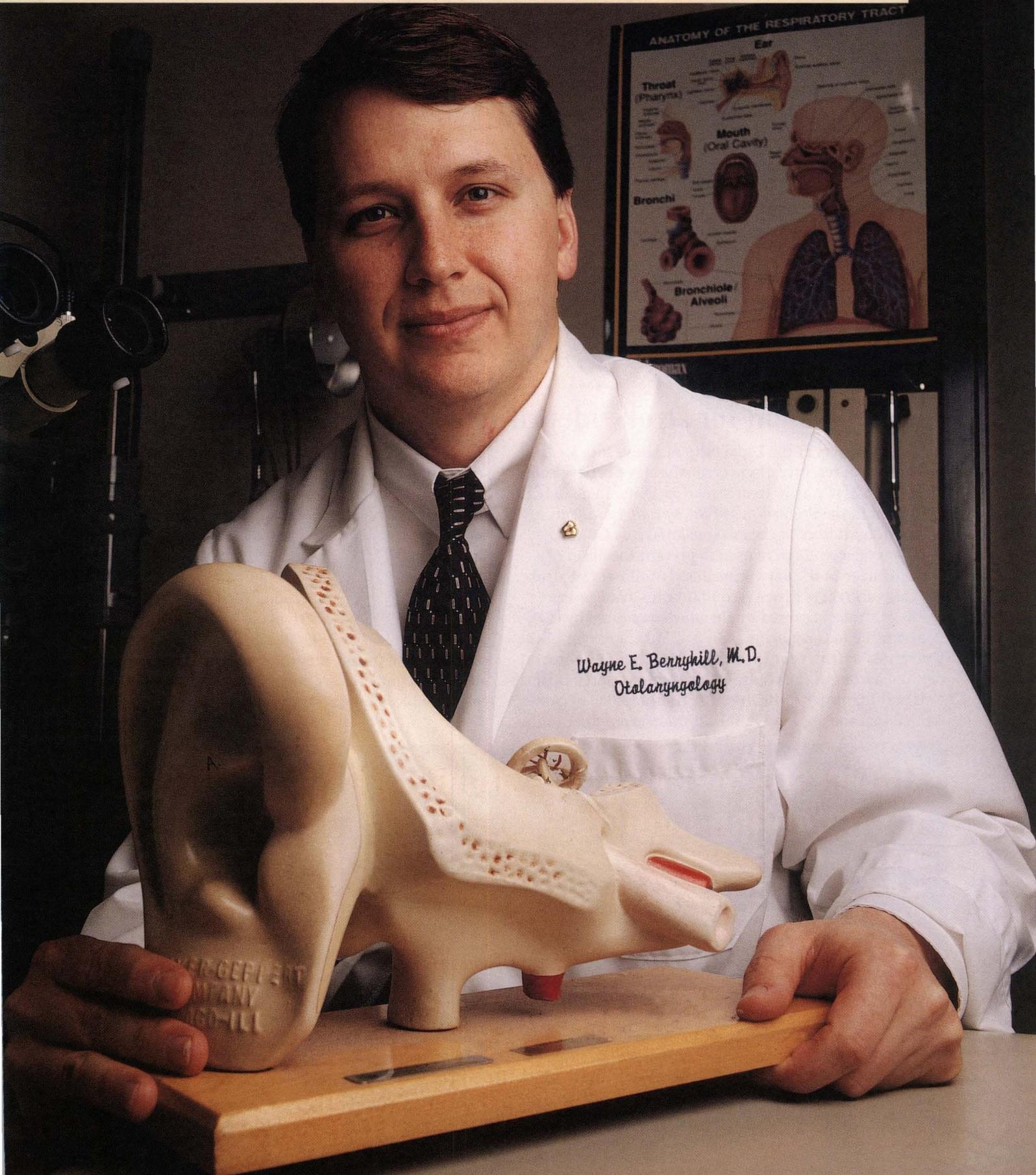
His awarded paper has implications for the diagnosis and treatment of "dizzy" patients. Past methods of evaluating vestibular function have been passive, unlike the active, electrically stimulated mapping Berryhill discusses. This method will make it easier to discern and differentiate responses of the hearing (cochlear) and balance (vestibular) nerves which lie right next to each other in a bony canal leading to the brain. What precipitates is more precise and effective treatment of patients.

Balance is the watchword in all phases of Berryhill's life. He and his wife, Stephanie, are expecting their fourth child as they pack to move to Ann Arbor, Michigan, where he has accepted a fellowship in neurotology at the University of Michigan.

"I used to like to fish, but I haven't had time to fish in about 10 years," says Berryhill. "I really like to do things with my family now. I spend a lot of time at playgrounds and I mountain bike." In his spare time, he reads. He is currently recommending *In the Heart of the Sea*, a tale of survival against fantastic odds. Perhaps it has some parallels with medical school.

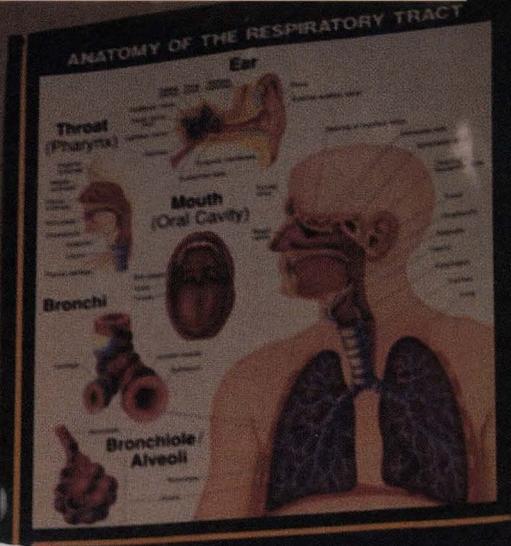
by Sarah Barker, Department of Otolaryngology

resident Berryhill maps eighth cranial nerve



Wayne E. Berryhill, M.D.
Otolaryngology

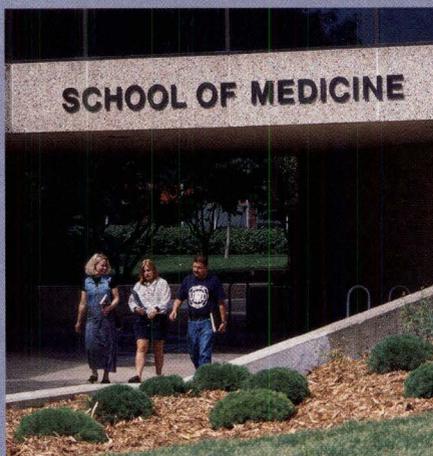
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UMD tops for graduates entering primary care

The University of Minnesota, Duluth, School of Medicine is number one in the United States for graduates entering primary care fields, according to the American Medical Student Association (AMSA) Foundation's sixth annual Primary Care Scorecard. UMD has a 71.2 percent rate of students entering family practice, internal medicine, or pediatrics. UMD students complete their first two years in Duluth, and then are automatically accepted at the Twin Cities Medical School for their third and fourth years.

According to the AMSA report, "UMD students are exposed to an exceptional array of primary care opportunities, the most effective arguably being the family practice preceptorship, a clinical mentorship program required of all students during both years of the



curriculum. This program moves medical education out of the classroom and into the community."

In the preceptorship program, first-year students spend almost 50 hours a year shadowing a practicing family physician close to campus. Second-year students are assigned a family physician in more remote communities in Minnesota, North Dakota, and Wisconsin. The experience, according to program director James Boulger, Ph.D., "maximizes the students' exposure to the everyday working environment and lifestyle of the small community family physician."

The AMSA report says that the one-on-one clinical teaching experiences that preceptors offer have been the peak medical school experience for more than 70 percent of UMD students. Preceptors also have reported great satisfaction and gratification in being mentors to medical students.

New treatment for stroke identified by University researchers

Researchers at the University of Minnesota Medical School recently discovered what they believe could be a new way to treat stroke patients. In a study published in the *Proceedings of the National Academy of Sciences*, inhibitors of the enzyme known as COX-2 (cyclooxygenase-2) were used to prevent the onset of brain damage in the days immediately following a stroke.

The researchers discovered that brain damage as a result of stroke is caused by chemicals produced by COX-2, according to Costantino Iadecola, M.D., director of the University's Center for Clinical and Molecular Neurobiology and author of the study, which was sponsored by the National Institutes of Health. The findings also demonstrated that the use of COX-2 inhibitors can reduce brain



damage even if taken several hours after a stroke occurs.

"Stroke, or brain attack, is a leading cause of death and disability in the United States and is most often caused by a sudden interruption of blood supply to the brain," says Iadecola. "Blood carries oxygen and nutrients to brain cells, which have a high demand for energy but no 'fuel' reserves. As a result, they die rapidly when their blood supply is interrupted. This study identifies a safe and effective way to reduce that damage."

University study shows promise for gambling addicts

University of Minnesota research shows the drug Naltrexone can successfully reduce the symptoms of pathological gambling. The details of the research, led by psychiatrists Suck Won Kim, M.D., and Jon E. Grant, M.D., were published in June in *Biological Psychiatry*.

"This is perhaps one of the biggest breakthroughs we have seen in the treatment of gambling addiction," says Grant.

Patients with a clinical diagnosis for pathological gambling were chosen for

the double-blind study. Seventy-five percent of those receiving Naltrexone were much or very much improved in terms of their addiction urges and symptoms. Only 24 percent of those taking the placebo saw similar improvement.

Gambling addiction afflicts 1.6 percent of adults, 3.9 percent of youth, and 4.7 percent of college students in the United States. In addition, uncontrolled pathological gambling often leads to bankruptcies, divorces, illegal acts, and psychiatric illnesses, including suicide. Total net social costs have been estimated from \$2 billion to \$3 billion.

University researchers testing new cancer vaccine

In March, researchers at the University of Minnesota Medical School began the second phase of testing for a promising new cancer therapy that uses a patient's own cancer cells to create a vaccine. The study, which is being funded by a grant from the National Institutes of Health, is testing the safety of the vaccine on humans who have been diagnosed with melanoma or renal cell carcinoma.

"This is a unique approach to cancer treatment that could ultimately uncover

Match Day shows primary care preference

Of the 216 University of Minnesota medical students who participated in Match Day this year, 58.5 percent chose residencies in primary care (family practice, internal medicine, pediatrics, and medicine/pediatrics).

National Residency Match Day, held March 21, matches fourth-year medical students with medical residency programs. Students rank their choice of residencies, the institutions rank their candidate preferences, and computers in Washington, D.C., complete the match.

Sixty-four percent of the University of Minnesota students received their first choice of a residency, and 16 percent received their second choice. More than half will remain in Minnesota, with 45 training at the University of Minnesota Medical School and its associated clinics and hospitals.



Medical students celebrate at Match Day 2001

University part of national conference to address tobacco harm

The National Cancer Institute, the National Institute on Drug Abuse, the Centers for Disease Control and Prevention, the Robert Wood Johnson Foundation, the American Legacy Foundation, and the University of Minnesota's Transdisciplinary Tobacco Use Research Center hosted a conference on "Reducing Tobacco Harm" in May in Arlington, Virginia.

National experts from academia, along with leaders from the public and private sector, sought to clarify key scientific questions for public health, including discussion of legislation calling for Food and Drug Administration (FDA) regulation of tobacco products and implications for public health.

"FDA regulation of tobacco products may be particularly important due to products that are already developed or are cur-

rently being developed by tobacco companies and promoted as 'safer' than conventional tobacco products," says Dorothy Hatsukami, M.D., professor of psychiatry at the University of Minnesota. "At this time, absolutely no oversight exists over these tobacco products, which still contain hazardous chemicals that cause death and disease, yet claim a reduction in exposure or imply improved safety."

The conference explored what is known about harm reduction approaches, including concerns and risks as well as potential benefits. In addition, the conference focused on ways to reduce illness and death from tobacco with conventional approaches and determine the kinds of systematic research needed to inform policies and build a regulatory structure that ensures the protection of public health.

Medical School graduate receives prestigious family practice award

Kathleen Woo, M.D., a May graduate of the University of Minnesota Medical School, was one of six scholars nationwide to be awarded a 2000-2001 Pisacano Scholarship – given to outstanding third- and fourth-year students demonstrating a strong commitment to family practice. Woo will receive up to \$10,000 a year for the next four years – an amount intended to reduce the level of medical school-related debt – and will also receive leadership training each year.

The American Board of Family Practice established the Nicholas J. Pisacano, M.D., Memorial Foundation in 1991 in tribute to its founder and first executive director. Pisacano is recognized as one of the leaders in the effort to have family practice accepted as a major specialty.

Woo graduated magna cum laude from the University of Minnesota with a degree in international relations. Prior to entering medical school, she worked for five years as a coordinator for two HMO programs serving public program recipients and the uninsured.

As a medical student, she excelled academically and was involved in numerous extracurricular and volunteer activities, including the Cedar Riverside People's Center Volunteer Clinic. She worked for a year as a graduate assistant in the Department of Neurology, developing an Alzheimer's drug-trial data base and performing a statistical analysis of a multi-center Alzheimer's disease data base to correlate cognitive function and outcomes. She was also primary investigator on a research project looking at correlations between adolescent self-concept and high-risk behaviors.

Kathleen Woo will be serving her residency at the University of Minnesota Medical School and Smiley's Clinic, a community-based family practice residency program located in the Seward neighborhood of Minneapolis.

new information about how cancers grow and how to stop or even prevent them," says Ian Okazaki, M.D., lead researcher on the study, which involves 60 patients in a randomized trial.

"Our goal is to stimulate the immune system enough to induce remissions in some types of cancer and potentially prevent them in the future," says Okazaki. "We believe we can do this by creating a vaccine from the existing cancer cells within a patient's body."

If successful, the study will proceed to the final stage of testing, which measures the success of the vaccine in treating and preventing certain types of cancer.

Alumni Making a Difference

As I reflect upon the past year, it becomes readily apparent that this has been an eventful and productive time for the Medical Alumni Society. The great working relationship we have established with the Medical School is the foundation for that success. Dean Al Michael and Senior Associate Dean Greg Vercellotti are active and cordial participants at our meetings. Likewise, we have had the great privilege of outstanding student representation on the board. I would like to recognize two students in particular, Joel Oberstar and Jim Suel, who served this board for three years each. On behalf of the alumni of this board and of this Medical School, I congratulate them on their graduation and thank them for their exceptional service.

I have been honored in the past year to participate as a speaker at both the Medical School graduation ceremony and the White Coat ceremony. The latter, which is held each January, celebrates the conferral of white clinical coats upon first-year students and is a very touching and important event. Through all these encounters, one thing I have witnessed firsthand is that medical students at the U of M have a wonderful experience, whether it is the academic pursuit of knowledge, social interaction with their teachers and mentors, or just plain fun with their classmates. I am struck by the much greater conviviality enjoyed by the current generation of students compared to what my class experienced.

I am also struck by the different role the Medical Alumni Society plays in the current age. We have always done things for students – indeed that is one of our primary roles. But now we have a much more involved and younger board, one that is vocal and not hesitant to speak up when helping students and the Medical School. I cannot say enough about the students on our

board, for they are truly committed to helping their classmates and their school.

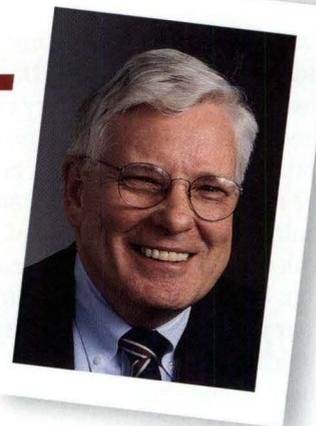
Another significant role is that of the Hennepin and Ramsey Medical Societies. When we needed more community mentors than the Medical Alumni Society call provided, we asked for and received nearly 300 community physicians wishing to help and participate.

All in all, this has been a most satisfying year for me, helping to enhance and expand the community mentor program, helping to connect the medical societies with the Medical Alumni Society, and helping the University of Minnesota Medical School be everything that it could possibly be to both medical students and to patients everywhere, who will ultimately be helped by those future physicians. There are a lot of issues yet to be faced by all of us in our current economic health care climate. But, I sincerely feel that with hard work, involvement by each of us in activities that make a difference to others, a little donation occasionally, and a large dose of optimism, we will not only survive, but continue to be a strong Medical Alumni Society helping a superb University of Minnesota Medical School.

Sincerely,



Gene Ollila, M.D. '70
President, Medical Alumni Society



Minnesota Medical Foundation Golf Classic coming in August



August 27 marks the 11th Minnesota Medical Foundation Golf Classic. This year's event will take place at the popular Minneapolis Golf Club, home to the Twin Cities' *Dayton's Challenge*. With more than 200 golfers, last year's Golf Classic was a big success, and the steady flow of registrations thus far indicates a probable sellout for 2001. John Gordon, the "voice of the Minnesota Twins" on WCCO Radio, is the honorary chair and will address participants at the evening dinner program.

The Minnesota Medical Foundation Golf Classic has become an important tradition in the Twin Cities community over the past 10 years and has contributed substantially to education and research efforts at the University of Minnesota Medical Schools. Since its inception in 1991, the event has contributed more than \$432,000 to the Medical Schools. These funds were realized through a combination of corporate sponsors and the loyal participation of hundreds of golfers from throughout the state.

The event is structured as a double shotgun start played in a scramble format, followed by a dinner and program. A limited number of spaces are also available during the morning round for players with a handicap of 20 or better to play the course individually in lieu of the scramble format.

The Golf Classic's impact on today's medical students, coupled with the opportunity for a day of friendly competition and camaraderie, is an unbeatable combination. Limited space remains, so be sure to register soon. For more information or to register, call 612-626-0619 or 1-800-922-1663.

2001 Minnesota Medical Foundation Golf Classic Executive Committee

William E. Jacott, M.D., Chair
Elizabeth A. Arendt, M.D.
Alan J. Bank, M.D.
Robert J. Beck, M.D.
Glen J. Giesler, Jr., Ph.D.
James F. Hart, M.D.
Thomas B. Mackenzie, M.D.
Robert K. Meiches, M.D.
Ben P. Owens, M.D.
S. Charles Schulz, M.D.
Gregory M. Vercellotti, M.D.
Timothy F. Walseth, Ph.D.

DR. BENJAMIN RECEIVES ALUMNI RECOGNITION AWARD

Dr. Charles I. Benjamin, Class of 1965, has been named the recipient of the fourth annual Alumni Recognition Award, given by the Medical Alumni Society in recognition of exemplary achievements in the community or field of medicine, or for outstanding service to the University of Minnesota Medical School, in the past five years.

Benjamin had practiced general surgery in Park Rapids, Minnesota, for nearly 20 years when he decided to resume his education as a fellow in plastic and reconstructive surgery in Akron, Ohio. He practices today at Regions Hospital in St. Paul and is on the University of Minnesota staff facilitating the training of residents and fellows in both the surgery and dental surgery programs.

Early in his career, Benjamin became committed to providing care to underserved patients. He served as a physician to Vietnam civilians during the Vietnam War. The passion to help others seemed fueled by that trip, according to his daughter, Dr. Linda Benjamin Albrecht, Class of 1991.

Benjamin continues to serve in many areas throughout Minnesota and the world. He goes on sabbatical 20 or more weeks per year to deliver care as well as educate local surgeons in places such as New Guinea, Ecuador, Honduras, Iraq, Kazystan, the Dominican Republic, Guatemala, the Ukraine, and Vietnam.

Benjamin's enthusiasm and dedication to medicine has had an impact on a large number of young people who eventually became physicians, including his daughter. He has also been an outstanding teacher of clinical medicine, working closely with medical students through the Rural Physician Associate Program (RPAP) and at Regions Hospital, teaching surgery residents and plastic surgery fellows.

Benjamin's unique contribution to medicine has been his long-standing dedication to international medical mission work. In addition, he is an outstanding physician and teacher, who has had a positive impact on trainees, colleagues, and patients throughout his career.



Dr. Charles I. Benjamin, Class of 1965, celebrates with his family after receiving the Alumni Recognition Award at the 2001 reunions. From left: Dr. Linda Benjamin Albrecht, Class of 1991, and her husband Dr. Jeff Albrecht; Dr. Benjamin; Jonathan and Beth Benjamin-Alvarado; and Leann Benjamin, wife of Dr. Benjamin.

DIEHL AWARD WINNERS ANNOUNCED

Dr. Arthur C. Aufderheide, Class of 1946 (March), and Dr. Mildred S. Hanson, Class of 1951, have been named recipients of the 2001 Harold S. Diehl Award, given by the University of Minnesota Medical Alumni Society in honor of the Medical School's fifth dean, Dr. Harold Sheely Diehl. These prestigious lifetime awards are granted to individuals who have made outstanding professional contributions to the Medical School, the University, and the community. They were presented June 1 during Reunion Weekend.

Dr. Arthur C. Aufderheide, an international authority on mummies, is professor of medicine and anthropology at the University of Minnesota, Duluth, School of Medicine. When the school opened in 1972, he joined the staff as a clinical professor, which also allowed him time to do research.

Aufderheide is considered one of the founders of the field of paleopathology and is highly respected for his work. He has traveled all over the world, including Egypt, the Andes, and China, studying ancient human remains. In 1998 he published, along with Professor Conrado Rodriguez-Martin, *The Cambridge Encyclopaedia of Human Paleopathology*.

Aufderheide investigates possible correlations between disease patterns in ancient populations and cultural variables, such as diet. He has contributed significant findings to the field of paleopathology, and his studies have relevance to present-day medicine. For example, he found that pneumonia was rare in early Chilean fishing cultures where people lived in well-ventilated huts, but was more prevalent when people focused on agriculture and lived in crowded houses with less ventilation.

Aufderheide loves to teach, and his enthusiasm for his field is shared by his students. "There's nothing like being around a group of medical students who are looking for knowledge and asking you to deliver it," he says. "It's equally satisfying when having delivered it, to watch them go on and use it and apply it."



Dr. Arthur C. Aufderheide and his wife, Mary



Drs. Mildred S. Hanson and Gene Ollila

Awidely respected obstetrician and gynecologist, **Dr. Mildred S. Hanson** is known as a tireless advocate for women's reproductive rights. A 1951 honors graduate of the Medical School, she was awarded the American Medical Association Regional Reproductive Health Award in 1995 for her contributions to the field of reproductive health care.

Throughout her career, Hanson has been a pioneering advocate for women. She served as the medical director of Planned Parenthood of Minnesota for more than 30 years and has been the principal investigator for many research projects on matters of concern to Planned Parenthood from 1970 to the present. Hanson was a guest of the World Population Council held in Cairo in 1994, and has contributed numerous publications to the medical literature and been involved in many clinical studies.

Hanson is extremely generous with her time and her profession, offering her services free of charge to those who need them but cannot afford them. She has been untiring in her efforts to educate people around the world regarding reproductive rights and contraceptive methods, and has recently funded the establishment of a women's studies course at her high school in Clayton, Wisconsin.

Hanson's philosophy toward life is "to work hard, play hard, study hard, and to always be honorable." Her father always encouraged her to be honorable and her mother stressed the importance of education. She says, "Education at the University of Minnesota Medical School is the key to my life and I am grateful." This sense of appreciation has led her to establish the Mildred S. Hanson, M.D., Endowed Scholarship which will provide scholarships for women medical students at the University of Minnesota Medical Schools.

CLASS NOTES

The following classes celebrated reunions in June:

1941

Dr. Alfred M. Freedman, New York City, remains active in his retirement years. In 1996 he was vice president of the International Foundation for Mental Health and Neurosciences. He received a special presidential commendation from the American Psychiatric Association (APA) in 1999 and as a past president, serves in perpetuity on the APA's board of trustees. Along with A.L. Halpern, he published "The Psychiatrist's Dilemma" in the *Australian and New Zealand Journal of Psychiatry* in 1999, and was co-editor of *Highlights of Modern Psychiatry*, published in Finland in 2000.

Dr. Bennett W. Kantola, Malibu, California, is very active with the Finnish people in Los Angeles. He is a founding member of the Finlandia Foundation which is now a national cultural organization, and has recently received an award as "Man of the Year" for his work.

1946

Dr. Francis J. Haddy, Rochester, Minnesota, works part time for NASA Peer Review, serving as a consultant on equipment for the international space station. He performs peer reviews of grant applications for research aboard the station.

Dr. Theresa B. Haddy, Rochester, Minnesota, has written "Psychosocial Status of Lymphoma Survivors," to be published in the *International Journal of Pediatric Hematologic Oncology*. In 1998 she published "Late Effects in Survivors of Lymphoma," in the *Journal of Clinical Oncology*.

Dr. Harold O. Perry, Rochester, Minnesota, was honored by the Mayo Foundation and the Mayo Clinic Department of Dermatology with the establishment of the Harold O. Perry Endowed Lectureship in 1999. He was also honored in 1987 with the establishment of the Harold O. Perry Library at Wright State University. In 1998 he was awarded the Gold Medal from the American Academy of Dermatology and received the Distinguished Alumni Award from the Mayo Foundation in 1995. He has also had several journal articles published in recent years.

Dr. John J. Sullivan, Bullhead City, Arizona, reports that he has "tried to draw a little" now that he is losing his sight. His pencil and charcoal sketches are represented by a gallery in Carmel, California. "I am amazed!" he writes.

Dr. Harold A. Wentz, Rochester, Minnesota, founded the Olmsted Medical Center in Rochester in 1949 and reports that there are now 100 physicians, 800 employees, and 14 satellite clinics in towns surrounding Rochester. The center has 450,000 patient visits a year, with approximately 3,000 major surgical operations and 900 babies delivered last year. For more information on the center, visit the website at www.olmmed.org.

1951

Dr. Shirley E.A. Howard, Coarsegold, California, received the first Woman Physician Recognition Award from the Women in Medicine Society in 1997. She retired in 1994 and enjoys gardening, painting pictures, and reading medical literature.

1961

Dr. Ronald D. Guttman, Montreal, is an emeritus professor at McGill University and received the Lifetime Achievement Award from the Canadian Transplant Society earlier this year. In 1996 he received the Distinguished Achievement Award from the American Society of Transplantation Physicians. Guttman is founder and director of the Institute for Policy Research in Medicine and Emerging Technologies (website: www.iprime.org). He is also co-founder of BioMosaics, Inc. in Burlington, Vermont, and of Sapia Therapeutics, Ltd. in Montreal.

Dr. John J. Salchert, Cold Spring, Minnesota, retired from medicine in 1999 and now works as an ordained deacon at St. Boniface Parish in Cold Spring. His work for the parish includes marriages, baptisms, and preaching. He also works on the diocesan marriage tribunal and the personnel boards. Salchert is a regional coordinator for the Association of Christian Therapists, and recently had a review published in the *Journal of the Association of Christian Therapists*.

1966

Dr. Nancy J. Beecher, Signal Mountain, Tennessee, is a vice president at Unum Provident Corporation in Chattanooga, which offers insurance solutions to protect income and lifestyle. Beecher has been in the field of insurance medicine for 22 years and was recently promoted to senior medical director.

Dr. Bernard E. Statland, Minneapolis, returned to the University of Minnesota as a law student in 1999.

Dr. Kent S. Wilson, St. Paul, served as president of the Minnesota Medical Association from 1997-98. He co-authored the article, "The Snoring Spectrum: Acoustic Assessment of Snoring Sound Intensity in 1,139 Individuals Undergoing Polysomnography," which appeared in the March 1999 issue of *Chest*. Wilson is also the founding chairman of the Vaclav Havel Civil Society Symposium, which is sponsored by the consortium of House of Hope Presbyterian Church, Macalester College, and the University of St. Thomas.

1976

Dr. James C. Agre, Eagle River, Wisconsin, presented a lecture on "Exercise in Post-Polio Patients," at the Karolinska Institute in Stockholm in March of this year, after participating in the 77th Vasaloppet ski race in Mora, Sweden. He has co-authored several recent articles relating to post-polio syndrome, including "Characteristics and Management of the Post-polio Syndrome," which appeared in *JAMA*, and "Specialized Neuropathy," which was published in the *Archives of Physical Medical Rehabilitation*.

Dr. Desmond K. Runyan, Chapel Hill, North Carolina, is the chairman of the Department of Social Medicine and professor of both social medicine and pediatrics at the University of North Carolina (UNC). He is the principal investigator for LONGSCAN, a 20-year study of child abuse. Runyan is also medical director of the joint UNC and Duke University child abuse center.

1991

Dr. Christopher A. Carlson, Fridley, Minnesota, is a member of the clinical faculty in the Department of Family Practice and Community Health at the University of Minnesota. He also works as a volunteer physician for St. Mary's Health Clinics.

Dr. Gregory J. Mohs, Durham, North Carolina, has been a clinical assistant professor in the Department of Obstetrics and Gynecology at the University of North Carolina at Chapel Hill since 1998.

Continued on next page



The Class of 1951 celebrated its 50th reunion in June.

1991 continued

Dr. Grant Y. Nakamura, Savage, Minnesota, is involved extensively in the ski and snowboard industry as an educator, trainer, and consultant. He was selected to the Professional Ski Instructors of America (PSIA) Junior Education Team in 1996 and continues to serve on the PSIA National Children's Committee.

Dr. Patricia Void Pepper, San Diego, co-authored "Cost-Effectiveness of the Pneumococcal Vaccine in the U.S. Navy and Marine Corps," which appeared in *Clinical Infectious Diseases* last year, and "Post-operative Complications in Parkinson's Disease," which was published in the *American Journal of Geriatrics* in 1999.

Dr. Michael J. Rensch, San Antonio, recently published "The Prevalence of Celiac Disease in Patients with Systemic Lupus Erythematosus," in the April 2001 issue of the *American Journal of Gastroenterology*. He is director of the Gastroenterology Fellowship Education Program at Brooke Army Medical Center in San Antonio.

Dr. Natalie S. Roholt, Bemidji, Minnesota, co-authored "Molluscum Contagiosum in a Patient with the Acquired Immunodeficiency Syndrome," in the *New England Journal of Medicine*.

Dr. Charles R. Sandhofer, Owatonna, Minnesota, is chief of staff at the Owatonna Hospital, specializing in internal medicine with a sub-specialty in endocrinology.

Dr. Mary Jo Trepka, Hollywood, Florida, co-authored "The effect of a community intervention trial on parental knowledge and awareness of antibiotic resistance and appropriate antibiotic use in children," which appeared in *Pediatrics*. Trepka is employed by the Miami-Dade County Health Department and is a voluntary assistant professor of epidemiology and public health at the University of Miami.

IN MEMORIAM

DR. DAVID M. ANDERSON, Class of 1943, Sun City, Arizona, died March 17 at age 83. During World War II he served in the U.S. Army with the 101st infantry as a battalion surgeon in a MASH unit. He completed his internship in San Francisco and then moved to the VA Hospital in Fargo, North Dakota, where he became head of the Urology Department. He returned to Minnesota, and was one of 11 founding physicians of the St. Louis Park Medical Center, now Park Nicollet Clinic, where he worked from 1950 until he retired in 1987. He was an adjunct professor of surgery at the University and also taught at the VA Hospital. He is survived by his wife, Bernyce, and six children.

DR. HAROLD J. ANDERSON, Class of 1943, Minneapolis, died October 7, 2000, at age 80. Anderson practiced surgery for 35 years with the Austin Clinic before his retirement. He is survived by his wife, Hazel, and five children.

DR. CLINTON C. BERG, Class of 1946, Excelsior, Minnesota, died June 30, 1998, at age 74. A longtime physician and resident of Excelsior, Berg was preceded in death by his wife, Rosemary, and is survived by his four children.

DR. LAVONNE B. BERGSTROM, Class of 1957, Los Angeles, died January 10 at age 72. Bergstrom worked in New Mexico and Colorado before joining the medical staff at the University of California, Los Angeles in 1975. She was appointed professor in 1979 in the Head and Neck Division of the Department of Surgery, and Professor Emerita in 1989. She traveled to China twice, through the People to People International program, and received awards and recognition from various medical societies. She is survived by her two sisters.

DR. JACK C. BOOREN, Class of 1943, Denver, died March 10 at age 81. Booren served as a medic in the Army during World War I. He practiced medicine in Duluth, Minnesota, and was on staff at Swedish Medical Center and Porter Hospital. He co-founded the Schlessman YMCA and served on the board of directors. He is survived by his wife, Helen, and four children.

DR. RAYMOND A. BOYCE, Class of 1947, Rapid City, died December 15, 1999, at age 80.

DR. BARBARA BURDAN GYSELS (ROSINE), Class of 1958, Las Vegas, died January 15 at age 67. In addition to her work as a psychiatrist, Burdan Gysels also worked in substance abuse treatment, community mental health, and with the federal government in several different capacities. She is survived by her two daughters.

DR. DAVID E. BUSHMAN, Class of 1955, Grand Marais, Minnesota, died August 8, 2000, at age 70. Bushman interned at St. Vincent Hospital in Portland, Oregon, and then enlisted in the U.S. Navy in 1956. In 1958 he completed his residency at a hospital in California, and began his family practice career which spanned 30 years in Watsonville, California. He retired and returned to Minnesota in 1990. During his years in Watsonville, he served two terms as chief of staff at Watsonville Community Hospital. He is survived by his wife, Jean, and six children.

DR. JAMES H. CHALMERS, Class of 1941, Sioux Falls, South Dakota, died November 3, 2000, at age 85. Shortly after receiving his medical degree, Chalmers was inducted into the U.S. Medical Corps of the Army and was stationed in New Guinea and Australia for three and a half years, where he reached the rank of lieutenant colonel. After returning home he completed his residency at the University of Minnesota and later moved to Sioux Falls. There he joined the staff at the Veterans Affairs Medical Center and became chief of staff in the early 1970s. He was instrumental in bringing about the affiliation of the VA with the University of South Dakota School of Medicine where he also served as a faculty member. After retiring in 1978 he served as a medical consultant for the South Dakota Disability Determination Services. He is survived by his wife, Marie.

DR. MADELINE S. CONNELLY, Class of 1946, St. Paul, died November 28, 1999, at age 76.

DR. JOHN G. DAVIDSON, Class of 1941, Butte, Montana, died February 21 at age 87.

DR. JEROME J. DeCOSSE, Class of 1952, Manhattan, New York, died April 25 at age 73. DeCosse received his doctorate degree in anatomy from the SUNY Upstate Medical University in Syracuse. He served as the chairman of the Division of Surgery at the Medical College of Wisconsin in Milwaukee from 1971-78, and as chairman of the Department of Surgery at Sloan Kettering Cancer Center from 1978-85. He also served as professor of surgery and vice chairman of the Surgery Department at the New York Weill Cornell Center from 1978 until his death. He gained national attention in 1989 when he published a study showing that a fiber-rich diet helped ward off a precursor to colorectal cancer. The study was one of the earliest clinical trials testing theories of how diet affects cancer. He is survived by his wife, Sheila, and five children.

DR. GARY R. FEIGAL, Class of 1964, Lake City, Minnesota, died March 29 at age 61. In 1965 Feigal was drafted into the U.S. Air Force and served as captain at the El Centro Naval Air Facility in California. After completing his tour of duty in 1967 he returned to Lake City, Minnesota, as a family medicine practitioner. He served as medical director, setting up a volunteer ambulance service and prenatal classes which he taught for 20 years. In 1989, he helped organize the Hospice Program in Lake City, and served as medical director until his death. During his years of practice in Lake City, he delivered more than 1,000 babies. Feigal is survived by his wife, Gloria, and four children.

DR. BETTY J. HALL-TAYLOR, Class of 1940, Delmar, New York, died February 1 at age 86.

DR. HOWARD L. HORNS, Class of 1943, Minneapolis, died January 10 at age 88. Horns was a faculty member and for a short period, associate dean of the University of Minnesota Medical School. He was also one of the first doctors to work at the Nicollet Clinic. In 1989 he was honored with the Harold S. Diehl Award for long and distinguished service. He is survived by his three children.

DR. S. SVERRE HOUKOM, Class of 1932, Duluth, Minnesota, died December 5, 2000, at age 95. Houkom practiced at the Duluth Clinic from 1942-72. For a period during World War II, he handled the entire orthopaedic practice for the city of Duluth. He served on the Duluth Clinic Board of Directors for 16 years and was chairman for several terms. In 1959 he served as

chief of staff at St. Mary's Hospital. He was a member of the American Academy of Orthopaedic Surgeons and the Lake Superior Medical Society. He was preceded in death by his wife, Vivian. He is survived by his three children.

DR. PAUL F. JAROSCH, Class of 1974, Minneapolis, died April 13 at age 52. He is survived by his wife, Jane, and three children.

DR. FREDERICK W. JENSEN, JR., Class of 1957, Phoenix, died October 10, 2000, at age 69. Jensen served in the Air National Guard during the Korean conflict. He practiced medicine in Phoenix for 35 years. He was a Fellow of the American College of Obstetricians and Gynecologists. He is survived by his wife, Alice, and two sons.

DR. DAVID A. JOHNSRUD, Class of 1972, Hibbing, Minnesota, died December 26, 2000, at age 54. Johnsrud worked as a family practice physician for over 25 years at the Mesaba Clinic in Hibbing. He is survived by his wife, Molly.

DR. WILBUR B. LIGHT, Class of 1931, Sanibel, Florida, died November 7, 2000, at age 95.

DR. ESTEN O. LINDSETH, Class of 1949, San Diego, died July 22, 1999, at age 82. Lindseth received his medical degree from the University of Oslo in 1949 and received a masters degree in surgical pathology and a Ph.D. in surgical physiology from the University of Minnesota in 1956 and 1958 respectively. He served as associate professor of surgery at the University and VA hospitals. He is survived by his wife, Hanna, and one daughter.

DR. CLARK M. MARSHALL, Class of 1944, Crosby, Minnesota, died March 6 at age 80. He is survived by his four children.

DR. FABIAN J. McCaffrey, Class of 1940, Edina, Minnesota, died February 11 at age 85. McCaffrey was a flight surgeon in the Army Air Corps during World War II. After the war he returned to Minnesota and practiced obstetrics and gynecology at St. Mary's Hospital where he was chief of staff. He also served at Abbott Northwestern Hospital and North Memorial Medical Center. He is survived by his wife, Judy, and six children.

Continued on next page

IN MEMORIAM

DR. M. DONALD McGEARY, Class of 1948, Medford, Oregon, died February 1 at age 77. During World War II, McGeary served as a regimental surgeon with the fleet Marine Corps, commanding a medical company near the front lines, and received special commendation for his outstanding surgical skills. He moved his practice to Medford in 1980, co-founding the Family Practice Group, and delivered the first baby at Rogue Valley Medical Center. He served one term as chief of staff of Providence Hospital and two terms at Rogue Valley Memorial. In 1982, McCreary was named the Family Physician of the Year by the Oregon Academy of Family Physicians. He was subsequently selected by Good Housekeeping Magazine as one of the Top 10 Family Doctors. He is survived by his wife, Margaret, and four children.

DR. BRYSON R. McHARDY, Class of 1952, Aurora, South Dakota, died July 19, 1999, at age 75. He is survived by his wife, Hazel, and two children.

DR. SAMUEL T. NERENBERG, Class of 1945, Irvine, California, died February 15 at age 82. A native of St. Paul, he specialized in pathology and became a member of the faculty in that department. He later took a position in San Francisco as head of pathology at Children's Hospital and Adult Medical Center (now California Pacific Medical Center) where he remained for 14 years. He accepted a position as professor of pathology at the University of Illinois where he also served as head of the department. Upon retirement from the University of Illinois, he moved back to California as professor of pathology at University of California Irvine, where he headed the clinical laboratories at the Long Beach Veterans Hospital, a UC Irvine affiliate. He is survived by his wife, Rene, and three children.

DR. CHARLES A. NORDIN, Class of 1946, Sun City, Arizona, died October 2, 2000, at age 87. He is survived by his wife, Charlotte, and four children.

DR. RALPH PAPERMASTER, Class of 1940, Shorewood, Minnesota, died April 2 at age 83. Papermaster practiced medicine in Minnesota for 42 years before retiring. He is survived by his wife, Marjorie, and four children.

DR. ROBERT T. PETERSEN, Class of 1940, Granbury, Texas, died February 25 at age 83. Petersen served as a flight surgeon in the U.S. Army Air Force during World War II. He reached the rank of major. He was physician and surgeon with St. Cloud Medical Group, and a staff member at St. Cloud Hospital for 37 years, where he was chief of staff twice. He moved to Texas in 1982. He is survived by his wife, Mary.

DR. DAVID W. PFEFFER, Class of 1972, Edina, Minnesota, died January 11 at age 54. Pfeffer was a physician at Fairview Southwest Clinic in Edina. He is survived by his wife, Margaret, and three children.

DR. YOSHIO SAKO, Class of 1946, St. Paul, died February 28 at age 83. After completing his surgical residency, Sako entered the Army and was assigned to a surgical research team attached to the 46th MASH during the Korean conflict. Working on the front lines, the team studied and developed better methods to care for severely wounded soldiers. He returned to Minneapolis after the war and was a heart surgeon at the Minneapolis Veterans Affairs Hospital for 34 years. He established the vascular research program at the hospital where he was head of vascular surgery. He became a surgery professor at the University of Minnesota after retiring from the VA. The Department of Surgery established the Dr. Yoshio Sako Fellowship in Cardiovascular and Vascular Surgery after his retirement in 1989. He taught more than 400 surgical trainees in vascular and cardiovascular procedures. He is survived by his wife, Akiko, and two sons.

DR. KARL E. SANDT, Class of 1934, Edina, Minnesota, died February 25 at age 92. He is survived by his wife, Ruth, and two children.

DR. ALVIN L. SCHULTZ, Class of 1946, Minneapolis, died January 19 at age 79. Schultz was Professor Emeritus of Medicine at the University of Minnesota, and from 1965-98 was chief of medicine at the Hennepin County Medical Center. More than 300 students completed their residency requirements at HCMC under his leadership. In 1992 he received the Charles Bolles Bolles-Rogers and Shotwell Awards, given for outstanding contributions and achievements in the medical field. He is survived by his wife, Martha, and four children.

DR. JAMES R. SHANKS, Class of 1966, Bloomington, Minnesota, died April 25 at age 60. Shanks was a retired endocrinologist who practiced at Abbott Northwestern Hospital for many years. He is survived by his wife, Karen, and two children.

DR. SARAH L. STONE, Class of 1982, Natick, Massachusetts, died February 5 at age 44. Stone was professor of medicine at the University of Massachusetts Medical School and a general internist at the University of Massachusetts Memorial Health Center. She served as director of the Division of Primary Care, General Medicine, and Geriatrics in the Department of Medicine and as associate chair of the Department of Medicine. She was also director of the Center for Community Faculty Development, and a member of the Medical School's Robert Wood Johnson Generalist Physician Initiative. The University of Massachusetts Medical School has established the Sarah L. Stone, M.D. Professorship in Medical Education to establish an endowed professorship for the advancement of medical education. She is survived by her husband, Dr. David Giansiracusa, and four children.

DR. IAN M. SWATEZ, Class of 1986, Minnetonka, Minnesota, died March 6 at age 53. Swatez was chief of radiology at Regions Hospital and a partner of St. Paul Radiology. He is survived by his wife, Harriet, and four children.

DR. JAMES E. TROW, Class of 1939, Edina, Minnesota, died March 20 at age 88. Trow served in Alaska during World War II as a senior medical officer. He was a family physician in Minneapolis and Richfield until his retirement in 1990. During his career he delivered over 4,000 babies. He is survived by his four children.

DR. JUN-CHUAN WANG, Class of 1946, Menlo Park, California, died December 1, 2000, at age 89. Wang is survived by his wife, Mabel Chen.

The Minnesota Medical Foundation is a non-profit organization which provides support for health-related research and education at the University of Minnesota Medical Schools in the Twin Cities and Duluth and the School of Public Health.

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