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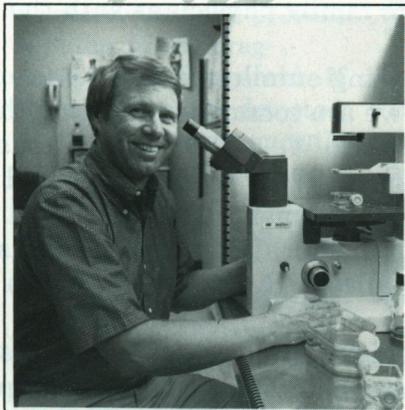
NEWSLETTER FOR THE SCHOOL OF MEDICINE AT THE UNIVERSITY OF MINNESOTA, DULUTH

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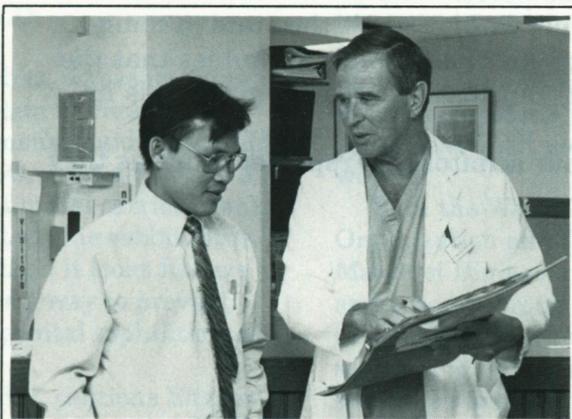
WINTER 1991



Cardiovascular researchers win Burroughs Wellcome Award.



Despite busy schedule as teacher and assistant dean for admissions, Ziegler continues progress in AIDS research.

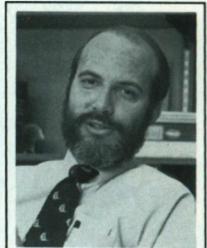


Former refugee Scott Pham spends clinic time with OB/GYN physician John E. Mathers.

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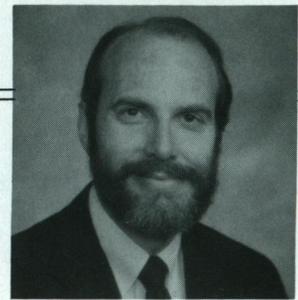
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DEAN'S MESSAGE



This session, your link to legislators, by letter or telephone, is more important than ever. The state's projected \$1.2 billion shortfall for 1991-93 is expected to have a significant impact on the funding of all state institutions, including the University of Minnesota.

University President Nils Hasselmo has mandated that all collegiate units justify current spending levels as the University seeks to preserve its legislative base funding at the 1989-91 level.

As part of the process of justifying current spending, the University is intensifying the process begun in 1988 of reallocating funds to high-priority programs. "Our primary goal is to preserve the base budget that we now have," says Hasselmo. "We believe that an expanded and intensified reallocation effort is the best way for us to make sure that it is understood how essential that base budget is to the service of the state."

The School of Medicine has used this imperative as an opportunity to critically review the different facets of our program. The University has approved the School's plan, which will require us to internally reallocate 10 percent of our state funding over the next three to five years.

An integral part of the School's plan requires strengthening our recruitment of students from rural communities throughout the state, as well as making changes in the curriculum to ensure that we continue to provide future family physicians with the best possible training into the year 2000 and beyond.

We are evaluating the feasibility of increasing enrollment by 10 percent to meet the demand for more family physicians. Further, we are committed to strengthening the Pathology Department and enhancing faculty development. We will focus additional efforts on seeking external financial support for the School, especially for scholarships and for endowed professorships. Finally, we will be increasing our involvement in several rural health care initiatives. This will include the development of new educational programs, as well as working closely with the recently established State Office of Rural Health, which is affiliated with the School of Medicine.

The projected shortfall will require the Legislature to re-evaluate the state's priorities, determine which programs best serve the needs of its people and subsequently fund those as best it can. Among the decisions the Legislature must reach is whether the University, including the School of Medicine, will be allowed to maintain its current level of funding.

As you may know, the health care industry is fast becoming the state's number one economic commodity. By continuing to invest in our various health sciences educational and research programs, such as those at the School of Medicine, we can assist the state in maintaining its preeminence in these fields. In addition, such an investment guarantees that the state's future health care needs will continue to be met. But to achieve these goals, it is imperative that our funding not be reduced.

I would encourage you to share your opinions with your senator and representative as they work on these vital issues.

Sincerely,

A handwritten signature in black ink, appearing to read "Ronald D. Franks". The signature is written in a cursive style with a large, sweeping flourish at the end.

Ronald D. Franks, M.D.
Dean

Fitzgerald develops syphilis vaccine

A vaccine to prevent syphilis has been developed by Thomas J. Fitzgerald, a researcher at the School of Medicine.

While penicillin is an effective cure for syphilis, the long-awaited vaccine would prevent the disease. "Such a vaccine, if it were safe and effective, would be a tremendous gain to the public health community," said William Kassler, a spokesman for the Center of Disease Control in Atlanta.

"What we have is a vaccine that protects adult

since the vaccine has not been used with adult humans. Fitzgerald anticipates that it will be another 4 to 5 years before the vaccine is ready to be tested on humans.

Such a vaccine would be particularly beneficial to people who do not have access to good health care and pregnant women who do not get early and regular prenatal care.

"The long rang goal of our research is to develop a vaccine that will prevent syphilis during pregnancy," said Fitzgerald. If the disease is not detected during early pregnancy the consequence can be the death of the fetus or extremely severe congenital birth defects.

As a result of early prenatal care in this country, for many years the incidence for congenital syphilis remained stable at about 300 cases each year. However, during the past two years the incidence has gone up at least three fold. In some third world countries, like Ethiopia, the disease affects nearly 20 percent of all pregnant women.

Both the World Health Organization and the March of Dimes have expressed a strong interest in Dr. Fitzgerald's research findings, which are scheduled to be published in the March 1991 issue of the *Journal of Vaccine*.



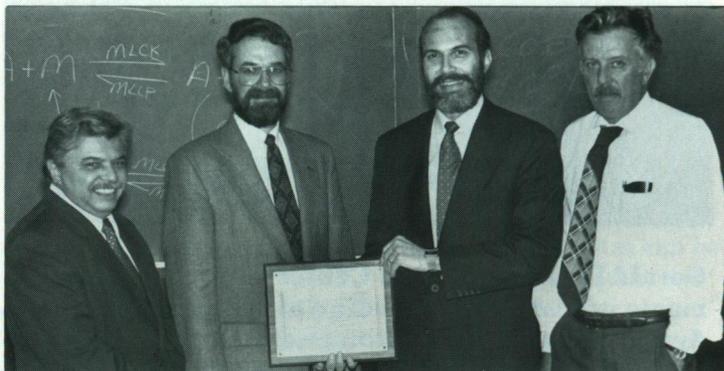
Thomas J. Fitzgerald, Ph.D.

rabbits, whose immune system mimics that of humans," said Fitzgerald. "Now, we want to see if that model carries over to protect the rabbit fetus. If so, then it looks like we have a way to prevent congenital syphilitic infection."

But, cautions Fitzgerald, the research is still in the preliminary stage

School wins Burroughs Wellcome Award

The School of Medicine has received the Burroughs Wellcome Award as a result of cardiovascular research being done in the Department of Physiology.



Dean Franks presents Burroughs Wellcome Award to visiting professor James T. Stull. Also on hand were (Left) physiology department head Professor Joseph Di Salvo and (Right) Associate Professor Lorentz E. Wittmers, Jr.

The prestigious award is given annually to institutions engaged in uniquely promising research.

The School was selected for the award as a result of the department's work in biochemical signaling systems that regulate the contraction of cardiac and smooth muscles.

Announcement of the award brings international scientific attention to research in physiology being done at the School.

As a result of the award, Dr. James T. Stull, chairman of the department of physiology at the University of Texas, Southwestern Medical Center in Dallas, visited the School in October. For four days, Stull, credited with making major advances in the understanding of heart and muscle physiology, conferred with

department members and other local scientists and medical doctors.

"We expect our meetings with Dr. Stull, who has made outstanding research contributions in mechanisms which control cardiovascular function, to further stimulate and extend research programs at the School," said physiology department chairman Joseph Di Salvo just prior to a news conference to announce the award.

Di Salvo, who holds the Edwin Eddy Professorship at UMD, was a Burroughs Wellcome Visiting Professor before being asked to come to the School in 1989 to head the department.

Stull presented the Burroughs Wellcome lecture while at the School and received an award and plaque to commemorate the occasion.

CAIMH continues to influence rural health care for American Indians



Gerald L. Hill, M.D., the Center's director, (Left) meets with American Indian students Lea Perkins, Arne Vainio, Lisa Yankton and Joycelyn Dorscher regularly. Hill says role models significantly influence students' self-image.

While rural Minnesota needs better health care, the need is critical on American Indian reservations, according to Dr. Gerald Hill, director of the Center for American Indian and Minority Health at the School of Medicine. "Rural populations are already underserved, but if you add the Indian rural population, what you have is a severely underserved population."

It is that assessment and a successful model for rural family practice training already available at the School that has prompted it to begin developing a plan to change the way health care is delivered in Indian communities.

Sixty percent of the School's students eventually practice in rural locations. The national average is 12 percent, according to the AMA.

Now, under the guid-

ance of Hill, who resigned last year as assistant chief and director of medical care in emergency services at San Francisco General Hospital to join the faculty, the School plans to use the same approach to medical education in the recruitment and training of students for Indian rural medicine.

Under the plan, the School expects to be able to significantly influence both the number of doctors practicing in Indian communities and the quality of care available there.

"Manpower is the number one issue in Indian health care today," says Hill. "Right now there is a 25 percent vacancy rate for physicians in these communities, and there is some real doubt about whether these positions can be filled using traditional methods." With the ending of the draft in 1973 and National Health Serv-

ice Scholarships in 1980, traditional incentives to attract doctors into rural Indian communities were largely removed.

But even if the vacancies could be filled today using traditional incentives, says Hill, who is an internist and a health policy expert, the pool of doctors available to Indian Health Services would remain transient.

Under that system, says Hill, comprehensive, primary care and community-based medicine are precluded because these doctors do not understand the culture nor do they have a personal, long-term commitment to their patients. Consequently, once their obligations are met, typically within two to four years, few doctors remain.

Today, there are less than 400 American Indian physicians available for 1.6 million people. That, says Hill, is the lowest per capita physician/patient ratio for any group in the country.

Noting American Indian physicians like Kathy Annette, who began her training at the School, Hill says the Center is going to have a major influence on Indian health care in Minnesota and beyond. Physicians like Annette have a fundamental understanding of Indian rural health care delivery and a long-term commitment to Indian patients, he says.

The Center would also like to see more physicians like Annette, now the area director of Indian Health Services for Minnesota, Wisconsin and Michigan, in leadership roles.

"What we are attempt-

ing to do is create stability by moving away from a model in which doctors continually rotate in and out of these communities." A model which creates community based, culturally sensitive health care systems, like the one developed at the School to train rural physicians, will also best serve the medical needs of American Indians, Hill says.

The School's plan calls for the implementation of a program that would admit between four and five American Indian students each year.

To ensure that these students receive the necessary training to prepare them to practice in American Indian communities, the School plans to develop an expanded curriculum that would allow students to complete some of their clinical training during the basic science years.

Students in the three-year program would do their clinical training in Indian health settings, like the Fond du Lac Clinic. Through early and continuous contact with Indian physician role models, students will be encouraged to develop an Indian physician identity.

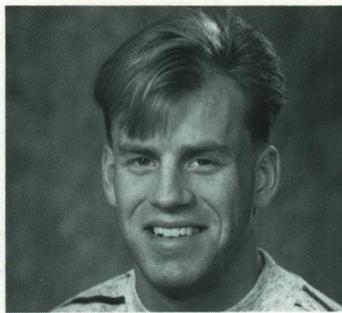
"Rural family practice is constantly talked about and stressed here," says Hill. The school also understands the importance of appropriate role models and peer influence. "What we plan to do is very similar, except the Center will emphasize American Indian rural health."

Rural homeless aided by medical student

This past summer, second-year medical student Brian Pauley put his special talents to work on rural homelessness, a problem no one had ever tackled before and few people even realize exists.

In the rural Wisconsin community where Pauley worked, there are an estimated 1,800 homeless persons.

To help create a solution to the lack of services available, the North Woods Community Health Center in Minong, Wisconsin, planned to form a coalition of service agencies. But it was not until Pauley joined the group that the



Brian Pauley

project got off the ground.

Pauley had been recruited through the American Medical Students Association, and under the leadership of the center's director, Susan Kaye, he immediately set about organizing a project that would give service

agencies immediate access to the local resource available.

For eight weeks, Pauley traveled throughout the six-county area visiting shelters, rehabilitation centers, clinics and social service agencies. During each visit he explained the project and gathered valuable information.

By the time Kaye, Pauley and the two other individuals working on the project had finished, they had a rural health services directory listing over 350 resources.

This past October, Kaye and Pauley were invited to the annual National

Homeless Health Care Conference in Arlington, Virginia, to talk about the project.

"We discovered that a lot of people there had similar ideas, but they just didn't know how to make those ideas work."

"We started a project that is worthwhile and does work," says Pauley. "This project will be beneficial in promoting the health and well-being of homeless rural people in that area, and I think it is an example of what can be done to alleviate many of the health-related problems of this underserved population."

Rural Minnesota makes a lasting impression

In 1981, rural Minnesota said yes to two refugee boys from South Vietnam. Now, Scott Pham has said yes to rural Minnesota. Two years ago, Pham enrolled in the rural family practice program at the School of Medicine in Duluth.

When 14-year-old Scott Pham and his brother arrived in Minnesota, they had no family to go to. Their sponsor had been unable to find a permanent home for them. After a week, word came that a farm family in Benson had agreed to accept the two boys.

During the next year and a half, the boys seemed to adjust well to their new home, but the family's size had grown too large to allow them to remain. This time, no family with space for both boys could be found. Another family in Benson had agreed to accept Pham,

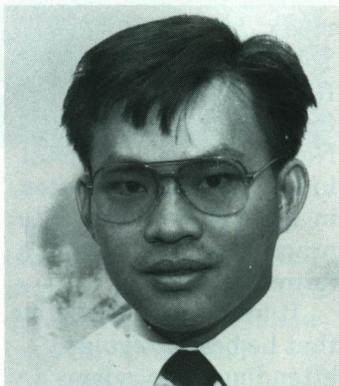
and his brother was to be taken in by a foster family in Willmar.

Although his brother would again have to relocate, life for Pham remained stable. In high school, he excelled in science and mathematics and continued to make steady progress in his other studies.

Although one of his native country's best and brightest, the new government had shown little interest in educating South Vietnamese children like Pham. After 1975, classroom time was taken up with learning mostly about communism.

A doctor herself, Pham's mother paid tutors to educate her children at home, after school. But the stigma of a dead father who had been a major in the South Vietnamese Airborne Division, had prevented Pham's older sister from being admitted

into medical school.



Scott Pham

Fearful that at sixteen her eldest son would be forced to fight along the Cambodian border, Pham's mother began to think about an escape. She and the other children would remain behind, but Pham must leave.

"When my mother called me in that evening, I didn't understand what she was talking about. Others in the village were planning an escape. I was to think about it for a few

days, she said. If I wanted to go, too, she would dig up a gold bar to pay for my boat passage."

Four times Pham tried to escape. Each time he was caught and imprisoned for several months.

Again, Pham's mother arranged for an escape. This time she dug up two of the gold bars she had buried the year of the invasion.

But time was running out. Now she agree to pay only after proof came that both sons were safely out of the country.

The journey would take five months and end in rural Minnesota.

"Some day," says the naturalized American citizen, "I'd like to practice in a small town like Benson. It's kind of an interesting place. The people there are very friendly, and small towns here need doctors."

MAFP

President: Jerry Rogers, M.D. '75

This past May, Jerry Rogers, M.D., became president of the Minnesota Academy of Family Physicians.

With some 2,000 members, MAFP is the largest specialty organization in the country. In addition to being responsible for the credentialing of family practice physicians and defining the scope of family practice, the organization plays an active role in promoting medical health legislation.

Under Rogers' leadership, the association has set reorganization of committee structure and the establishment of long-range planning as its annual goals.

As part of those long-range plans, Rogers has been actively recruiting medical students into family practice medicine. "One of the ways that all members can get involved," he says, "is by becoming ambassadors for the specialty through participation in the preceptorship program at the School of Medicine in Duluth and that portion of the family practice club that deals with medical school students."

Rogers is also encouraging more members to become involved with working through high schools to get students

interested in family practice.

"Those of us who went to the School of Medicine in Duluth have found their approach to teaching medicine to be unique and an important reason why we recruit," he says. That kind of inspiration usually does not come from other medical schools, adds Rogers.

Originally a secondary education science teacher, Dr. Rogers began his medical training at the School of Medicine in Duluth at age 28. After finishing residency at North Memorial Hospital in Robinsdale, Minnesota, in 1982, Rogers went into practice in Hawley with a former classmate.

It was during that time that he began regularly attending the academy's meetings. Rogers soon became involved in legislative and committee work and three years later was elected to the board of directors of the academy.

Since 1984, Rogers has been a family practice physician in Moorhead with the Dakota Clinic of Fargo, one of four satellite clinics in northwestern Minnesota and eastern North Dakota.

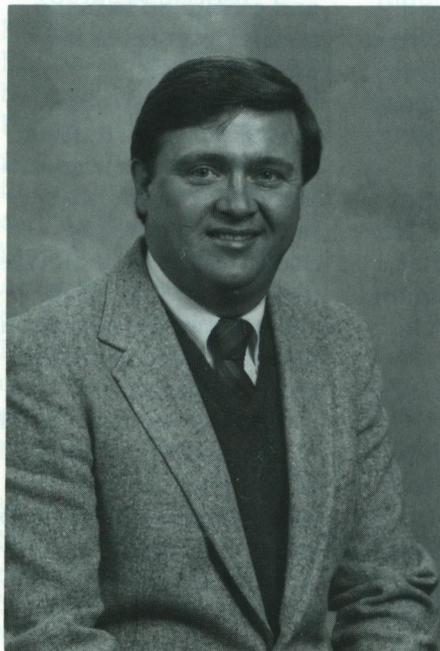
In addition to his strong interest in promoting family practice, Rogers says he also has a keen

interest in athletics and sports medicine. Since 1986 he has worked one day a week as a volunteer physician for health services at Moorhead State, where he devotes a good deal of time to the basketball and football teams during winter months.

For the past six years, Rogers has taught in the residency program at the University of North Dakota Medical School. Since 1983, he has also participated in the preceptorship program for second-year students at the School of Medicine in Duluth.

Tireless in his pursuit of community involvement, Rogers is also medical director of a nursing home for 66 residents in Ulen, where he says he has been taking care of patients since moving to Moorhead.

Although he says that he sometimes finds it hard to balance all of these demands on his time, he also finds it difficult not to get involved with community activities. Away from professional responsibilities and community involvement, Rogers enjoys time with his wife, Susan, their 13-year-old son and 10-year-old daughter.



Dr. Jerry Rogers' strong sense of community keeps him committed to rural health care.

Roots of the Giving Tree: Bruce W. and Florence J. Cooper



Mr. and Mrs. Cooper (Left) receive University of Minnesota Trustee Society plaque at luncheon in their honor. Presenting the plaque is MMF development representative Fred E. Wylie.

Help was what Bruce Cooper needed when he wanted to go to college. Even though Bruce had won a basketball scholarship to SMU, his family just did not have the financial resources to help pay for that kind of education for their son. So instead of going to college, Bruce left the Texas family farm to join the military and served as a flight engineer during World War II.

Mechanical engineering was also something Bruce had a special talent for, and when he wanted to go into business the kind of financial support he needed to buy tools and other equipment was

available. Talent, hard work and help when he needed it soon led to a true American success story and a fundamental belief in helping others to make success possible.

Florence grew up in northern Minnesota. She was one of seven children born to her Lake Superior band Chippewa Indian mother and Swedish father. During her early years, Florence attended schools in Duluth and Pipestone. After completing high school in Lawrence, Kansas, on the suggestion of a friend, she moved to St. Petersburg, Florida, to find work.

During that time, Bruce had been stationed in St.

Petersburg for his final tour of duty. It was there that the two met at a USO dance in 1944. The following year, Bruce and Florence married.

After the war, the Coopers continued to live in St. Petersburg where Bruce opened an outboard motor and auto repair shop. Throughout most of those years Florence continued to work in the food service industry and also helped out in the shop. In 1964, the Coopers "retired" and moved to their present home in Leesburg. Shortly after the move, they decided to open another shop, and for the next 12 years it was business as usual.

Throughout the years, one of the things that has remained constant for Bruce and Florence is a desire to help others pursue their goals. With the establishment of the Bruce W. and Florence J. Cooper Endowed Scholarship Fund in 1990, the Coopers have planted another giving tree at the Minnesota Medical Foundation.

The Fund will provide scholarships for Lake Superior band Chippewa Indians at the University of Minnesota, Duluth, to pursue medical or other health careers. The scholarships are intended to encourage students to enter health care professions, to return services to the American Indian community and to serve as examples to students who follow them.

Grants

Paul M. Anderson, Ph.D., professor of biochemistry and molecular biology, was awarded \$11,294 by the UM Graduate School for research in *Sequence of Shark Carbamoyl Phosphate Synthetase III cDNA*.

Arthur C. Aufderheide, M.D., professor of pathology and laboratory medicine, has received a \$14,250 grant from the UM Graduate School for research in *Tuberculosis: Was it a Disease of Ancient Peruvian and Chilean Cultures?*

David E. Battaglia, Ph.D., assistant professor of anatomy and cell biology, has been awarded a \$12,154 research grant from the UM Graduate School for *Influence of Protein Crosslinking on Sea Urchin Egg Development*.

Jean F. Regal, Ph.D., associate professor of pharmacology, has been awarded a \$15,779 grant from the UM Graduate School for research on the *Role of Basic Carboxypeptidase in Antigen-induced Bronchoconstriction*.



Wilmar L. Salo, Ph.D., associate professor of biochemistry and molecular biology, has been awarded a \$10,000 grant from the American Diabetes Association for research in *The cDNA Sequencing of the Glucose Transporters, GLUT1 and GLUT3, from Dog Brain*.



Richard J. Ziegler, Ph.D., professor of medical microbiology and immunology, has been awarded a \$129,034 grant from the National Institute of Neurological Disorders and Stroke for research in *HIV gp120 Effects on Neurotransmission*.

Open House 1990

More than 300 prospective students, teachers and area residents visited the School this past November for *Open House 1990*.

The event included medical research and technology exhibits provided by the School's departments and five area hospitals, lunch with medical students, and seminars on careers in medicine.

Visitors were also treated to a hilarious student production and had an opportunity to be in the audience for tapings of "Doctors on Call," the popular medical show produced by the School and WDSE-TV.



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