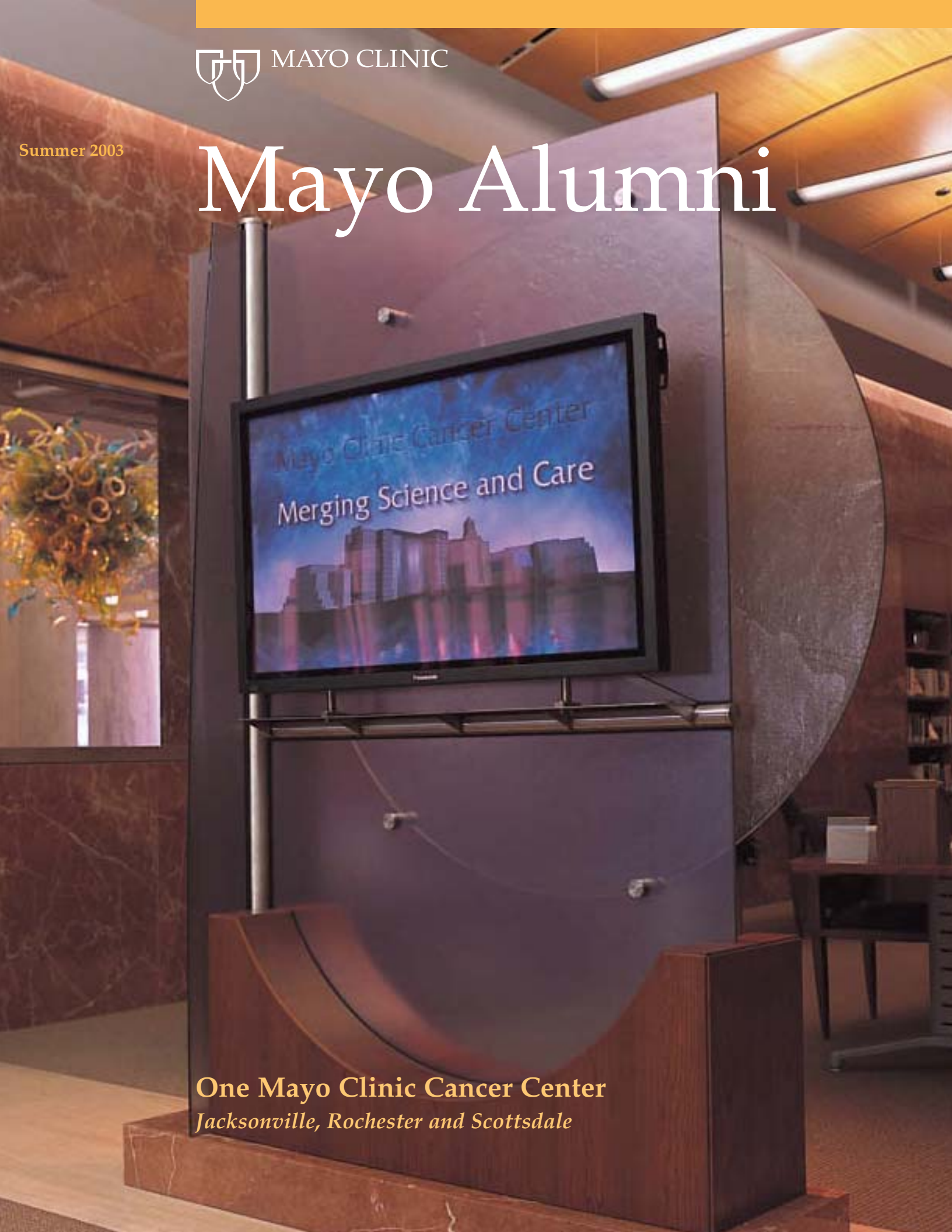
MAYO CLINIC

Summer 2003

Mayo Alumni



One Mayo Clinic Cancer Center

Jacksonville, Rochester and Scottsdale

Mayo Alumni

Summer 2003 Volume 39 Number 3

Features

Mayo Update

Letter from the President

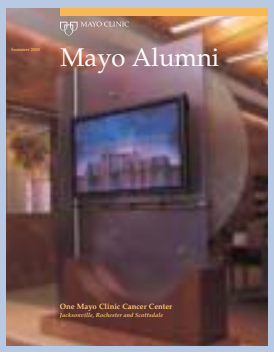
"Time looking forward takes forever, but only moments looking back."

— Joseph L. Baier, Jr.

Those words were never more true as I write this letter trying to meet the deadline for the summer issue of *Mayo Alumni* magazine. How time flies. It seems like only yesterday that I was a fellow at Mayo trying to reach Rochester Methodist Hospital at 5 a.m., in 30-below-zero weather to make rounds before I met with Dr. Oliver Beahrs. As I get older, I realize that "time flies" because our lives are filled with more activity, too many possessions, unnecessary obligations and stress. Also, as I get older, the things that really matter to me can be counted on the fingers of one hand. In my life, it is my husband and family (including my dog, Daisy), health, true friends and my Mayo Clinic training. The first four things helped make me the person I am today, while the Mayo experience has made me, and all of us as alumni, the doctors we are today. As we age, it is personal and comforting to simplify our lives to contract our sphere of influence and support only those things of true value in our lives. These valuables deserve our support and loyalty.

By the time you read this letter, you will be thinking "I can't believe it is already summer 2003." Before you know it, it will be October 2-4, 2003, and time for the next International Meeting of the Mayo Clinic Alumni Association. Make plans now to attend this meeting and revisit one of the most formative experiences in your life, your time at Mayo Clinic. This year, the meeting will be at Mayo Clinic in Scottsdale and will have a new, universally interesting, shorter format for all participants, not just the immediate alumni. Bring your families, relive and share those Mayo memories. See you in October.

Sincerely,
Christine Mroz Baier, M.D. *(General Surgery '78)*
President
Mayo Clinic Alumni Association



Cover
Mayo Clinic's establishment of a national comprehensive cancer center across its major locations is expected to provide a greater scope of care to patients and increase education and research efforts.

Jeanne Greenfield

One Mayo Clinic Cancer Center

Thirteen years ago, Jeanne Greenfield was diagnosed with stage IVb cervical cancer after metastases were discovered in lymph nodes in her neck. She was not expected to survive the cancer.

"Not only have I seen all three of my sons graduate," says Greenfield. "I also danced with my oldest son at his wedding and now have two grandchildren."

Greenfield, of Illinois, was treated in a clinical trial at Mayo Clinic Cancer Center in Rochester, which she now credits with saving her life.

In the intervening years, Mayo's commitment to cancer research has led to many more innovative therapies. The goal of the center, designated a comprehensive cancer center by the National Cancer Institute (NCI), is to expand availability of the kind of first-rate, protocol-driven care that Greenfield was able to access, to all Mayo Clinic patients in Jacksonville, Rochester or Scottsdale.

One Mayo Clinic Cancer Center

Fulfilling the Mayo mission

Each year in the United States, cancer is newly diagnosed in more than one million people. The prevalence of cancer and Mayo's dedication to providing quality care through integrated clinical practice, education and research, led the Mayo Foundation Executive Committee to prioritize the establishment of a comprehensive cancer center at all three Mayo Clinic sites. This year, the cancer center expects to see 13,000 new cancer patients. The majority will be seen in Rochester, but one-third will register for treatment in Jacksonville or Scottsdale.

In 2002, the NCI endorsed Mayo Clinic's request to become a national comprehensive cancer center. Mayo Clinic's expectation is for a seamless cancer center to be fully functioning in three to five years.

"The establishment of a national comprehensive cancer center is a natural extension of our mission," says Denis Cortese, M.D., president and chief executive officer of Mayo Clinic. "Collectively, we will be able to provide a broader scope of care for more patients, to increase the diversity of our patient base and to increase our education and research efforts."

NCI agreement

The National Cancer Institute is the federal government's principal agency for research on cancer prevention, diagnosis, treatment, rehabilitation and control. It is also the government's main outlet for disseminating cancer information to health-care professionals and the public.

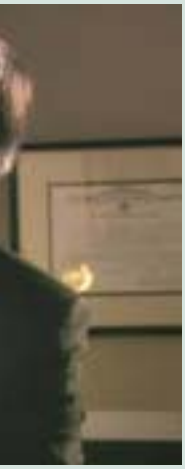
Mayo Clinic is the first multicenter health-care institution in the United States to establish a cancer center across all of its major locations. Last year, the NCI agreed to the request for the Jacksonville and Scottsdale sites to be included under the same rubric as Rochester. That opened the door to the comprehensive designation that encompasses all three sites.

"We fully agree with the reorganization of the Mayo Clinic Cancer Center that encompasses the Jacksonville and Scottsdale sites," says Brian Kimes, Ph.D., director of the National Cancer Institute's Office of Centers, Training and Resources. "We believe that the benefits that will accrue to cancer research and cancer patients will be substantial."

What does it mean?

"With the establishment of the Mayo Clinic Cancer Center across our three sites, our intent is to demonstrate superb integration in a way few other institutions will be able to replicate," says Franklyn Prendergast, M.D., Ph.D., director of the center. "And that will give our patients a broader set of options for their diagnosis and treatment."

The willingness of the NCI, the U.S. Department of Defense, the American Cancer Society, pharmaceutical and biotech



Mayo Clinic Cancer Center provides education and support for families, while focusing on research and the care of patients.

companies, foundations, organizations and individual benefactors to fund cancer research at Mayo Clinic indicates a great deal of confidence in the cancer center's research and education programs. In 2002, Mayo Clinic Cancer Center received approximately $46.1 million in NCI funding, ranking 10th of all institutions receiving NCI funding that year.

All NCI-designated cancer centers undergo rigorous peer review every three to five years. To maintain the "comprehensive" designation, cancer centers must participate in:

- Basic, clinical and population-based research
- Research in cancer prevention and control
- Research that bridges each of the above-named areas
- Outreach, education, and information provision activities that are directed toward and accessible to both health-care professionals and the lay community

A budding cancer program mirrors the Mayo Clinic Cancer Center vision

As one of the first Mayo study groups to integrate all three sites, the Melanoma Study Group has already experienced many of the benefits anticipated by the Mayo Clinic Cancer Center. The group formed in 1999 out of a perceived need to coalesce efforts to fight this devastating disease.

"I have been involved in melanoma treatment here for 16 years," says William Maples, M.D., an oncologist who leads the Melanoma Study Group at Mayo Clinic in Jacksonville. "The integration efforts have already had a remarkable impact on my practice."

The Melanoma Study Group is moving ahead with integration efforts. The core members meet via videoconference four times each year. They have developed unified practice guidelines that they revise every year. These are posted on Mayo Clinic's Web site (www.mayoclinic.org), so any physician can obtain information about the most effective methods for preventing and treating melanoma.

"We now have 90 clinicians and scientists from 15 disciplines collaborating on the prevention, diagnosis and treatment of melanoma," says Mark Pittelkow, M.D., who chairs the Melanoma Study Group.

"With the establishment of the Mayo Clinic Cancer Center across our three sites, our intent is to demonstrate superb integration in a way few other institutions will be able to replicate."

—Franklyn Prendergast, M.D., Ph.D.

The Mayo Clinic Cancer Education Center in Rochester provides a vast array of materials and support programs, making it one of the most comprehensive cancer resource centers in the world.

Mayo Clinic Cancer Center and education programs

Mayo Clinic Cancer Center physicians and scientists are also educators in the five Mayo Clinic schools.

"A recent epidemiological analysis clearly showed that patients expect Mayo physicians, especially those caring for patients with cancer, to be on the cutting edge of knowledge and understanding about disease," says Dr. Prendergast. "The comprehensive cancer center will increase the opportunity to further integrate our educational activities."

Again, by way of example, the Melanoma Study Group has developed a comprehensive Web site that includes malignant melanoma staging systems, practice guidelines, prognosis parameters and a clinical trials triage diagram. The site also lists available melanoma publications and upcoming lectures and events.

Clinical trials: where research meets practice

For a patient diagnosed with late-stage cancer such as Jeanne Greenfield, the last hope is often a novel therapy — the product of cutting-edge research available only as an experimental treatment in a clinical trial. The Mayo Clinic Cancer Center offers more than 230 clinical trials. In the next few years, the center will enhance systemwide communications regarding ongoing and planned clinical trials to enable all interested clinicians to participate in phase II and phase III studies.

The Melanoma Study Group has all 16 of its clinical trials posted on Mayo Clinic's research Web site (www.mayo.edu), and credits its clinical trials program with doubling the practice in three years.

"Melanoma is the archetype of chemo-resistant cancer so our focus is on modulating the immune system and developing therapeutic vaccines to treat melanoma," says Svetomir Markovic, M.D., Ph.D., the principal investigator of the majority of the Melanoma Study Group clinical trials. "We are committed to developing scientifically based, safe, specific, nontoxic and effective therapies that help the body's immune system target and destroy melanoma cells."

Each location reaps rewards from integrating

The greater racial and ethnic diversity of patients in the regions around Mayo Clinic in Jacksonville and Scottsdale is an important piece of the Mayo Clinic Cancer Center.

"One-third of Mayo's 13,000 new cancer patients will register for treatment at Mayo Clinic in Jacksonville and Mayo Clinic Scottsdale," says Dr. Prendergast. "The center must actively contribute to the substantive reduction in health-care disparities."

Current outreach programs include a Rochester-based cancer screening and education program for Alaska Natives and American Indians **(see Dr. Kaur profile, page 16)**, a similar program for American Indians in Arizona, and a breast cancer screening program for African-American women in the Jacksonville area. Efforts such as these will be markedly expanded in the future.

Advantages for research

Twenty new researchers are currently being recruited to fulfill the goals of the comprehensive cancer center — 12 in Rochester, three in Scottsdale and five in Jacksonville.

In Rochester, the recently constructed Gonda Building has expanded cancer research laboratory space by 35,000 square feet.

"Scottsdale will benefit from plans to build additional research facilities and a radiation oncology and clinical oncology space at a new building on the Mayo Clinic Hospital site," says Laurence Miller, M.D., deputy director for Mayo Clinic Cancer Center in Scottsdale.

In Jacksonville, the new Griffin Cancer Research Building provides 40,000 square feet of new laboratory space for cancer researchers. The C.V. and Elsie R. Griffin Cancer Research Building was named after the Griffins, longtime Mayo Clinic patients and benefactors, whose gift along with a host of others contributed to the construction of the $22 million building.

"We look forward to enhanced access to clinical trials for our patients, and to expanded opportunities for our staff to engage in translational research with colleagues in Rochester and Scottsdale," says Robert Smallridge, M.D., director of research in Jacksonville and acting deputy director of Mayo Clinic Cancer Center in Jacksonville. "And we will all benefit from the increased understanding of cancer that the expanded commitment to cancer research will bring."

Mayo Clinic leadership anticipates using the cancer center's model as a prototype for providing comprehensive services in other specialties in the future.

"Ultimately, our goal is to develop a single, seamless Mayo Clinic organization so that we can offer our patients access to the broad and deep range of expertise in all areas of medicine offered by Mayo Clinic," says Dr. Cortese.

For his part, Dr. Markovic looks forward to the day when the first study is published under the name of Mayo Clinic Cancer Center Melanoma Study Group — when use of the collaborative name provides concrete evidence of one Mayo Clinic Cancer Center.

– Yvonne Hubmayr

TERRORISM & RESEARCH

Threat of terrorism raises prominence of research work at Mayo Clinic

ach day, hundreds of researchers and scientists at Mayo Clinic advance knowledge in their specialties in the painstaking process of research and discovery.

Every medical study has a purpose and value; however, a change in world events can suddenly elevate the importance of a study to much greater prominence or boost a research group's efforts in the public's eye.

The September 11, 2001, terrorist attacks and the focus on preventing terrorism domestically has focused attention on several studies at Mayo Clinic.

These include exploring advances in detection methods for viruses, testing vaccines for anthrax and smallpox and developing a new type of lie detector.

Each development fits into the pyramid of research, and gives the public a better sense of how a new idea or new technique can have far-reaching benefits to people around the world.

Rapid DNA tests for anthrax, smallpox

The sense of waiting and not knowing is one of the biggest concerns when the potential of an anthrax or smallpox contamination might exist.

In Rochester, researchers have found a way to speed up the detection of anthrax or smallpox with equipment that is available to many more laboratories, meaning that the tests are quicker and there are more sites across the world that can conduct the tests and give emergency officials and physicians an answer that can save many more lives.

Mayo Clinic has developed a new DNA test to rapidly identify anthrax. Roche Diagnostics, the manufacturer of the Roche LightCycler® equipment, has made the test widely available to public health agencies, hospital laboratories and reference laboratories in the United States and other countries. The new test can identify the presence of anthrax in less than one hour instead of days. For smallpox, the processing and testing takes two hours.

Franklin Cockerill, III, M.D.

Coming closely on the heels of the attacks on New York and Washington, D.C., the threat of anthrax contamination became a reality as several envelopes with the bacteria were mailed along the East Coast.

"The first thing people want to know in a case of suspected exposure is whether the agent was in fact anthrax," says Franklin Cockerill, III, M.D., a Mayo Clinic microbiologist who led the development team. "Until our discovery, local labs were only able to quickly determine the presence of a bacterium, but they couldn't tell whether it was anthrax or not. The process to identify the presence of anthrax, prior to our work, would take several days.

"This rapid identification will enable doctors to begin more timely treatment of patients who have been exposed to anthrax, and it will more quickly alleviate undue anxiety for people who haven't been exposed," says Dr. Cockerill.

The Mayo Clinic team led by Dr. Cockerill developed the test using Roche's LightCycler® instrument for polymerase chain reaction (PCR)-based assays. To make the test widely available, Roche significantly accelerated production of the reagents needed to run the assay.

The test materials were made available to about two dozen geographically dispersed LightCycler®-equipped laboratories. Mayo Clinic worked with the federal government to make the test formula available to federal agencies that requested it, and lent its expertise to state and federal health officials in the wake of the reported cases of anthrax exposure. Roche worked with the Food and Drug Administration to determine requirements for expedited regulatory approval. Initially, tests were offered to laboratories at no charge.

Everyone involved with the anthrax testing worked round-the-clock for several weeks when the terrorist attacks happened and potential new attacks were predicted.

With the smallpox virus, Mayo Clinic found in a study that the test detects as few as 5 to 10 copies of the variola virus (smallpox) DNA in a sample and is able to distinguish smallpox from among relatively benign related viruses. Only two U.S. labs can safely support testing of a potential smallpox outbreak using currently available methods; the new molecular test

could be performed in the future at many other qualified labs.

Recommendations for smallpox vaccinations were rescinded in the 1970s, and the World Health Assembly in 1980 certified that the world was free of naturally occurring smallpox. It had been one of the world's most deadly contagious diseases, with a 30 percent mortality rate.

"The stockpiling of smallpox virus for military and terrorist use has been recognized as a significant threat by the Centers for Disease Control and the U.S. military," says Thomas F. Smith, Ph.D., a Mayo Clinic microbiologist and director of the team that developed the smallpox test. "Furthermore, the partial immunity some people have due to previous vaccinations means smallpox cases that would arise from a future terrorist attack may not look exactly like those of three decades ago. This makes early and rapid laboratory diagnosis important, to help public health officials prevent the spread of this highly contagious disease."

The test uses the Roche LightCycler®, following a Mayo Clinic-developed protocol, to rapidly multiply copies of Orthopoxvirus DNA through PCR. Further analysis distinguishes smallpox from the related cowpox, monkeypox and vaccinia viruses. Varicella-zoster (chickenpox) and herpes simplex viruses are not targeted or detected in this test.

Analytical time for the test is less than one hour. For safe processing of specimens, including autoclave steam sterilization, the total time required for the test is about two hours.

"Transporting highly infective samples to specialized government laboratories delays results and increases the risk of the disease spreading," says Dr. Smith. "With the new test, however, samples can be immediately sterilized with an autoclave to destroy their infectivity without affecting viral DNA as a target for the LightCycler PCR. Widespread LightCycler availability, combined with standard autoclave sterilization in almost every medical facility, may make local laboratory diagnosis possible for bioterrorism events involving smallpox virus."

Thomas Smith, Ph.D.

Vaccine testing: smallpox, anthrax

Mayo Clinic has been involved in a research study comparing the safety and effectiveness of two different vaccines for the prevention of the smallpox disease.

Gregory Poland, M.D., director of the Mayo Vaccine Research Group, conducted a study comparing three dose levels of a new vaccine with the current, approved smallpox vaccine that was provided to all U.S. residents during the period of routine smallpox vaccination. The effectiveness of the trial vaccinations will be measured by observing whether or not there is a skin reaction, such as a blister, at the site of the vaccination, as well as laboratory tests to determine immune responses. A skin reaction is a typical response to smallpox vaccination. The response also will be measured by examining the size of the skin reaction and the time it takes for the blister to heal. Participants may become immune to smallpox, which would reduce or prevent infection with smallpox.

Smallpox was one of the major causes of death and sickness through the first half of the 20th century, but a global program of smallpox vaccinations eliminated the smallpox disease. The last cases of smallpox in the United States occurred in 1949 in Texas.

Gregory Poland, M.D.

Because of the absence of smallpox, routine vaccination in the United States ceased in the early 1970s. However, the U.S. government has determined it is necessary to keep smallpox vaccine available, in case the disease returns naturally or because of bioterrorism.

The U.S. military has taken great interest in the testing. For his service as a member of the Armed Forces Epidemiological Board, which advises the military on health policy issues, Dr. Poland was awarded the Secretary of Defense Medal for Outstanding Public Service. He received the silver medal at an award ceremony on May 21 at Fort Detrick, Md.

Dr. Poland and his group also are conducting an anthrax vaccine study. The anthrax vaccine testing at Mayo Clinic is part of a Phase IV clinical trial. The study is testing if giving the shot in the muscle of the arm instead of under the skin will reduce side effects such as lumps, swelling, itching and soreness. The study also is testing if the shot, when given in the muscle, will reduce the number of shots needed to develop immunity against anthrax. Participants are placed into one of six groups at random. Some groups will get the vaccine under the skin. Some groups will get the vaccine in the muscle. Some shots given in the study will be salt water instead of vaccine.

During a visit to Mayo Clinic in February, Lt. Gen. George Peach Taylor Jr., M.D., U.S. Air Force Surgeon General said the anthrax vaccine can be used as a medical countermeasure that serves to increase survivability.

"By using the anthrax vaccine before exposure to a lethal dosage, and then treating with antibiotics after the attack, the chances of survivability rise to roughly 100 percent," Dr. Taylor said.

He said the mere existence of such tools could serve as a deterrent. "If the bad guys know you're protected against these agents, they may choose not to use them," says Dr. Taylor.

Facial temperature recognition: new lie detector?

A Mayo Clinic-led study published in the 2002 edition of *Nature* found that a new high-definition technology that involves measurement of the heat patterns created by the face accurately detected lying in more than 80 percent of cases studied.

The new high-definition technology involves the measurement of the heat patterns created by the face. Researchers noted that the heat patterns in the face changed dramatically when a person was lying.

A research team lead by James Levine, M.D., a Mayo Clinic endocrinologist, and supported by Ioannis Pavlidis, Ph.D., Honeywell Laboratories, based their work on the concept that people about to perform a deceptive act give off physiological signals, such as excessive blood flow to certain areas of the face. When these signals are detected, via high-definition thermal imaging equipment, they can significantly assist authorities in detecting deception.

The advanced thermal imaging technology was developed as part of a collaborative effort between Mayo Clinic and Honeywell Laboratories, the global research and development organization for Honeywell International.

"The technology represents a new and potentially accurate method of lie detection," says Dr. Levine. "The development holds promise for practical application in high-level security operations, such as airport security and border checkpoints. If the technology proves this accurate in the airport, it could revolutionize airport screening. However, further testing and development are needed."

The thermal imaging technology detects the subtle changes in metabolism in parts of the body. When an individual is exposed to the thermal imaging camera and is being deceptive, the computer detects the warming around the eyes. Clinical trials of the technology were conducted using a mock crime scenario. The thermal imaging system correctly categorized 83 percent of these subjects as guilty or innocent.

– Michael Dougherty

James Levine, M.D.

Living life forward

Dr. Geoffrey Kurland reflects on his experiences as a patient

"What is going on with me? Then, quite suddenly, I realize who I am, into whom I have been transformed at the moment I saw the white shadow on my film. And although I can't possibly know it completely, my new persona is taking over as it melds itself unalterably into my being. I am no longer the doctor. I am the person with the disease."

A new book, *My Own Medicine: A Doctor's Life as a Patient*, written by pediatric pulmonologist and cancer survivor, Geoffrey Kurland, M.D., details the story of his cancer diagnosis, illness, treatment at Mayo Clinic and survival.

In 1987, at the age of 41, Dr. Kurland, a pediatric pulmonologist at the University of California, Davis, was diagnosed with a rare form of leukemia, hairy cell leukemia. As an avid long-distance runner, it was during training for a 100-mile endurance race that he noticed chest pain and a cough. Thinking that he had broken a rib during one of his long training runs, Dr. Kurland arranged for an X-ray, which revealed a large mass in his chest. Ultimately, his visit to Mayo Clinic resulted in the diagnosis of hairy cell leukemia; the chest mass proved to be a thymic cyst. Dr. Kurland found that his focus on being a physician was dramatically shifted to one of being the patient.

My Own Medicine, details Dr. Kurland's experiences as a patient at Mayo Clinic and the race he has won against leukemia. The son of Leonard Kurland, M.D., a renowned Mayo Clinic epidemiologist who passed away in 2001, Dr. Geoffrey

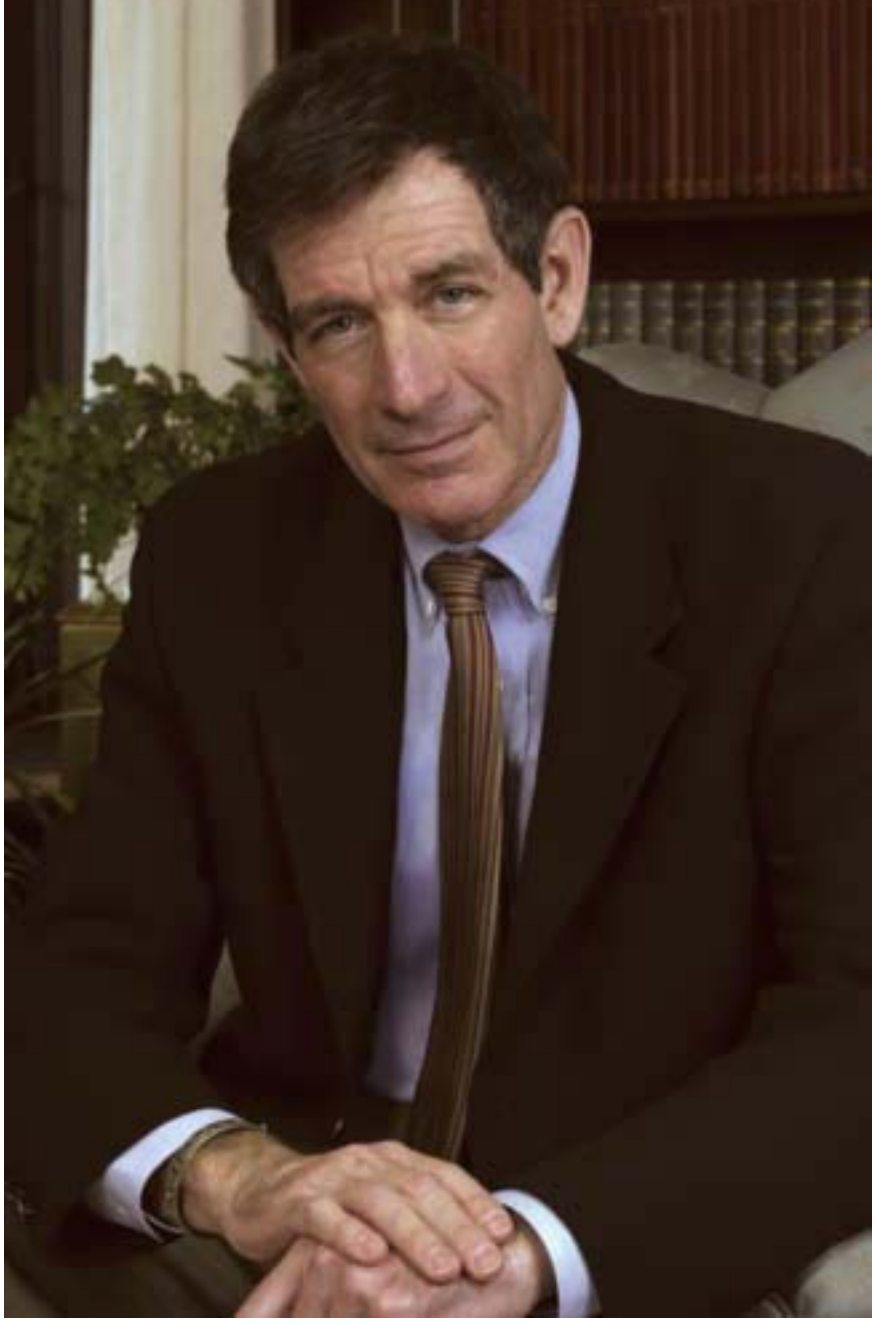
Kurland now lives and practices in Pittsburgh. He is scheduled to speak in October at the International Meeting of the Mayo Clinic Alumni Association in Scottsdale, Ariz. He recently talked about his motivation for writing the book, how being a patient affected his work as a physician, and his lifelong passion for running.

What prompted you to write a book detailing your fight against cancer?

Soon after arriving in Pittsburgh, I received an invitation from a friend to join a writing group being led by Professor Lee Gutkind at the University of Pittsburgh. I didn't write much until one night memories of my illness suddenly flooded my consciousness. I wrote down a brief essay, which Gutkind helped me shape into a 1,000-word article that was published by *Newsweek* in their My Turn column. A literary agent read it, liked it, and contacted me and convinced me to write a book — a personal reminiscence —exploring my perspective and experience as a physician who becomes a patient. I tell folks that my agreement to try to write the book was the result of temporary insanity, which is probably true as it took me 10 years to complete!

Describe your personal experience at Mayo Clinic.

At Mayo Clinic, I have seen how medical care can and should be administered to patients. There is a feeling of compassion from everyone that you encounter here — and each patient is treated with the utmost respect. I was amazed at the efficiency in my every encounter; in addition, the teamwork of my care providers was patient-focused and of the highest quality.



How has your experience as a patient continued to influence your work as a physician?

I like to think that I was a pretty good doctor to start with, but my illness served to heighten aspects of life as a physician. As a pediatric pulmonologist, I am very honest with the children that I am treating. Using my own experience in my discussions with patients helps assuage some of their anxiety.

Talk about your marathon running history and how it helped your fight against leukemia.

Thanks to my father and his passion for swimming, I was not a stranger to regular exercise when I started running in 1960 as a teenager. I am the first to admit that I was, and remain, not a very good runner. In fact, when I first started I can honestly say I was terrible, but persevering. Over the years, I got a bit better and running became part of my persona. I've been a runner longer than I've been a physician.

As for my recovery, the medicine and surgeries were critical, but being in shape helped me progress and inspired me to get better. I still had the goal to run the 100-mile race across the Sierra Nevada Mountains that I'd been training for when I was diagnosed. In order to achieve that goal, I had to first have my leukemia successfully treated. I wanted to work again — but I also wanted to run again. Throughout my treatment I tried my best to do both.

Dr. Kurland has now been in remission for nearly 13 years and still runs over 40 miles each week. He successfully completed the 100-mile race in 1990 — almost exactly one year after he found out he was in remission — and still cites that as one of his proudest accomplishments. While running will always be his passion, Dr. Kurland's commitment to medicine and treatment of his patients continues to be the focus of his life. He is gratified to be able to treat his patients and teach medical students and fellows training in pediatric pulmonology. He shares his life with his wife Kristen and other members of his family. Dr. Kurland views life not so much as a race, but rather as a beautiful long distance run.

– Amy Knutson

Using Mayo Clinic's philosophy to help American Indians

A profile of Dr. Judith Kaur

Soon after Judith Salmon Kaur, M.D., began her career as an oncologist in a private practice in Bismarck, N.D., she detected a discrepancy between published and actual data on cancer rates in American Indian populations.

It was the late 1980s, when information from the National Cancer Institute (NCI) detailed low rates of cancer occurrence in American Indians, and native people themselves considered cancer a "white man's disease." But Dr. Kaur, practicing in a state where American Indians are the largest minority, noticed a higher rate of occurrence than was reported.

She became a co-investigator on a grant from the Centers for Disease Control to the state of North Dakota to track cancer rates among American Indians. The work marked the beginning of what would become a mainstay in Dr. Kaur's career – conducting research and education to improve patient care among American Indians.

Dr. Kaur, now medical director for the Native American Programs of the Mayo Clinic Cancer Center and one of two American Indian oncologists in the United States, calls the work "a constant struggle. There are a lot of needs. But if we don't do these things, the next generation will pay the price."

Thomas Kottke, M.D., a Mayo Clinic cardiologist, says Dr. Kaur's enthusiasm for her work has never waned, despite the challenges involved with improving care for American Indians.

"She has worked tirelessly to promote good cancer prevention and high-quality care for this group," says Dr. Kottke. "And it's a very, very challenging task. The average American doesn't understand what the conditions are on reservations and how insufficient staffing and funding for the Indian Health Service often limits Native Americans from getting the best care."

Dr. Kaur was a school counselor before she switched her career to medicine.

Disproving the myths

Dr. Kaur's early work in North Dakota proved revealing. Data on cancer rates among American Indians came primarily from tribes in the southwest United States, she found, while tribes in the Midwest were overlooked.

In the years since Dr. Kaur's initial research in North Dakota, physicians have discovered that cancer rates among American Indians and Alaska Natives are rising significantly and American Indians have the poorest survival rate from cancer of any minority population. Among the causes, Dr. Kaur cites a prevailing unawareness of cancer risks among native people, limited access to cancer screening and general misunderstanding of the disease.

Dr. Kaur has devoted much of her career to this population. Leaving her private practice in 1994, she came to Mayo Clinic and has since expanded the clinic's first cancer program geared toward American Indians, the Native WEB, founded two other programs and formed the Native Americans Programs under the section of Population Sciences of the Mayo Comprehensive Cancer Center.

The programs – WEB, Native CIRCLE and Spirit of EAGLES – are geared toward expanding access to quality cancer care, including clinical trials among American Indians with cancer, distributing culturally appropriate materials to tribes throughout the United States and training on-site health-care professionals and lay people to screen for cancer among native people.

Dr. Kaur says it's been a fulfilling nine years. Cancer-related materials have been distributed to more than half of the nation's tribes and cancer is no longer always viewed as fatal among native people.

"The awareness level has increased dramatically, the screening levels have picked up," says Dr. Kaur. "But the access to clinical trials requires a lot more outreach."

One approach that increases the awareness of cancer treatment options uses "patient navigators" to help newly diagnosed patients through their health-care system. A very successful pilot project using patient navigators has been completed in Alaska through the Spirit of EAGLES grant and others are under way in other tribes. This model may prove to be the most culturally acceptable and feasible approach to assisting cancer patients in these communities, says Dr. Kaur.

Helping with this outreach is Mary Alice Trapp, a registered nurse at Mayo Clinic, who helps provide on-site training to nurses for the early detection of breast and cervix cancer. She also is training community health representatives to discuss basic cancer information with community members as they transport them to local clinic appointments.

Humble beginnings

Dr. Kaur, 57, grew up an only child in Chicago. Her childhood fell short of lonely, however, as numerous cousins lived in the same Wicker Park-area apartment building, crowding each other's homes to play and attend school together.

Dr. Kaur's mother was a homemaker until her husband died when Judith was only 13. Her mother, at age 30, went to work as a waitress. Her father, a truck driver, was a significant influence on Dr. Kaur's life. A Choctaw/Cherokee Indian, he imparted to his daughter the values and culture she's carried with her into her personal life and career.

Her parents hadn't graduated from high school, but they encouraged Dr. Kaur to excel in her studies at an early age. Recognized as a bright student, she skipped seventh grade and graduated valedictorian of her high school class at the age of 16.

Throughout the years, her smarts drew praise and attention from teachers. A college chemistry instructor sought Dr. Kaur out to encourage her to become a physician.

"I was flattered, but it was something I didn't even consider," recalls Dr. Kaur. She graduated from college at 19 and earned a master's degree two years later as she embarked on a career as a school counselor.

"My first goal was teaching because I'd had teachers as role models and I loved to teach," says Dr. Kaur. "I love to learn, I love to read. I really felt I could teach."

She taught and served as a school counselor in schools in and near Chicago for five years before staying home full time to care for her daughter Krista.

Choosing medicine

Dr. Kaur considered a career in medicine for the first time when Krista was two years old. Some people told Dr. Kaur that, at age 29, she was too old to become a doctor.

But she ignored her detractors and concentrated instead on the support of her husband, Alan, and teachers who told her she had the makings of an excellent physician.

"Her work ethic was very high, her compassion was at the top and she was always a natural leader," says Alan, a retired actuary. "I could see it, so I just laughed when other people told me she couldn't make it."

Dr. Kaur started applying to medical schools. Her alma mater, Northwestern University in Evanston, Ill., turned her down, but she was buoyed by acceptance from the University of North Dakota School of Medicine.

The University of North Dakota's Indians into Medicine Program appealed to Dr. Kaur for its small class sizes and family-friendly atmosphere. She moved to Grand Forks to begin her studies in medicine, with Krista, age 3, coming along and Alan following months later.

Alan secured a job in Bismarck, the state capital, as the state actuary and traveled 540 miles each weekend to Grand Forks and back to spend time with his wife and daughter. Dr. Kaur says she never could have achieved her career goals without Alan's support, sacrifice and love.

After the two-year program ended in North Dakota, Dr. Kaur transferred to the University of Colorado Health Sciences Center in Denver to complete her medical degree, medical residency

Dr. Kaur credits the support of her family in helping her succeed in her career. From left-to-right: Richard Meyers, son-in-law; Krista, daughter; Alan, husband; and Dr. Kaur.

The Native American Programs of the Mayo Clinic Cancer Center are comprised of three programs:

▼ **Native WEB** provides on-site training to nurses for the early detection of breast and cervical cancer. The program strives to eliminate unnecessary breast and cervical cancer deaths among under-served women and is working to increase the numbers of women who participate in regular screenings to 80 percent.

▼ **Native Cancer Information Resource Center and Learning Exchange (CIRCLE)** is a resource center that provides cancer-related materials to health-care professionals and lay people involved in the education, care and treatment of American Indians and Alaska Natives. Half of the American Indian tribes in the United States and Alaska have received cancer-related materials via the Native CIRCLE.

▼ **Spirit of EAGLES** is devoted to increasing awareness of and access to clinical trials for American Indians and Alaska Natives. EAGLES also provides funding to community-based cancer projects that serve American Indians by focusing on cancer research, prevention, screening, treatment and supportive care issues that affect native people.

Mary Alice Trapp of Mayo Clinic, left, James Hampton, M.D., from Oklahoma City, center, and Dr. Kaur, pause at an "honoring ceremony" for Dr. Hampton, the first American Indian oncologist. Dr. Kaur is the second American Indian oncologist.

and a fellowship in hematology and oncology.

An attending physician drew her into cancer research and care during her junior year of medical school.

"He recognized I had a knack for taking care of patients and their families," says Dr. Kaur, who'd been planning to become a pediatrician. "From that point on, I was hooked. It was so satisfying to take care of those patients. They appreciated someone who would talk to them frankly about their disease with compassion and understanding."

Dr. Kaur meets with former President George Bush, his wife Barbara and U.S. Sen. Dianne Feinstein, the chairs of the National Dialogue on Cancer. Dr. Kaur is a collaborating partner with the NDC.

Charting her course

After completing her studies, Dr. Kaur spent a year on staff at the University of Colorado Health Sciences Center in Denver, then worked for hospitals in Bismarck. In 1987, she opened Kaur Clinic, her own practice devoted to cancer care.

"People would stop us all the time to say how wonderful she was, what a difference she'd made for their family," remembers daughter Krista Kaur Meyers. "My mom has a very calming spirit. She somehow comforts people."

It was in the late 1980s that Dr. Kaur began her efforts to improve care among American Indians with cancer. She applied for a Bush Fellowship to spend a year doing cancer prevention and control activities with tribes. Mayo Clinic Cancer Center, with Dr. Kottke as a mentor, agreed to be a sponsor for her. At the same time an opening in Medical Oncology occurred and she was approached by Lynn Hartmann, M.D., to consider doing the Bush Fellowship and joining the staff .

As Dr. Kaur has many times in her career, she turned to Alan, who encouraged her to accept both the Mayo job and the fellowship.

It was an important pairing. Through her Bush Fellowship work, she secured funding for Mayo's Native CIRCLE and Spirit of EAGLES programs and expanded the Native WEB program, then in its infancy.

In Mayo Clinic, Dr. Kaur saw a place where she could continue her work in research, patient care and as an educator, so she would not have to sacrifice her love in any single area. She'd conducted cancer research since her medical school days and taught classes in North Dakota while operating her clinic.

"I felt I could do so much more here than as one person trying to do it all by myself," says Dr. Kaur. "There's something about the Mayo system that makes the whole greater than its parts."

Lisa Baethke, resource coordinator for Native CIRCLE, calls Mayo's Native American Programs Dr. Kaur's "dream."

"This has always been her dream program," says Baethke. "She is so full of passion about this program and its goal to provide good care to members of the Native American communities."

"She has a big desire to make a difference in this world," explains Dr. Kaur's daughter Krista. "Rather than focusing on the challenges, she looks at the positive things and how she can make this world a better place."

Seeking balance

Dr. Kaur's professional life is rounded out by her work at Mayo Clinic in Rochester with oncology patients; she specializes in breast, gynecological, genitourinary cancers and melanoma. She also remains active in research, both through clinical trials and as part of a melanoma research group.

Palliative care and hospice programs are other important facets of Dr. Kaur's career. She serves as medical director for the Mayo Hospice Program. An article she wrote on palliative care and hospice programs for *Mayo Clinic Proceedings* in 2000 met with far-reaching interest, bringing her letters from around the world.

Dr. Kaur also teaches, counting instruction as a core part of her profession. The numbers of American Indians entering medicine are on the rise, and Dr. Kaur is gratified to mentor students of all races.

"I love working with students," she says. "Trying to encourage students to really stretch themselves and think about something exciting in the area of cancer is rewarding."

Outside of work, Dr. Kaur is no less devoted to people than she is to patients. When visiting Chicago, she returns to the Lutheran church where she was baptized and married, and remains updated on the church's changing congregation and leadership. She's maintained close relationships with former teachers and cared for aging relatives.

She loves to read, crediting her father with instilling in her a love for learning. "There was a time in my life when I wondered if I'd ever see the places I read about," says Dr. Kaur. Now, she travels the world, going to American Indian and Alaskan Native communities in Alaska, Arizona, California, Wisconsin and North Dakota as well as lecturing in India and China.

Health-care facilities and services vary greatly by reservation, Dr. Kaur says. American Indians from some reservations travel hundreds of miles for routine exams, a situation Dr. Kaur considers very challenging when trying to promote programs that focus on prevention rather than disease.

"Many native people don't have their own cars," she says. "It's another major barrier, plus it's foreign. It's uncomfortable to be in a strange setting."

Visiting the reservations, like the trips back to her home in Chicago, keeps Dr. Kaur centered on the important things in life.

Remaining centered in her life isn't possible without faith, says Dr. Kaur. At age 24, she was the first female president of any evangelical Lutheran church council while living in Matteson, Ill. She now attends Zumbro Lutheran Church in Rochester.

"In cancer work, you see a lot of seriously ill patients," says Dr. Kaur. "The way in which I restore myself is to pray and meditate and ask for guidance to help patients and their families through these times."

– Renee Berg

"I felt I could do so much more here than as one person trying to do it all by myself. There's something about the Mayo system that makes the whole greater than its parts."

— Judith Kaur, M.D.

Mayo **Update**

News briefs

Mayo Clinic financially sound but faces economic challenges

Mayo Clinic performed well financially in 2002 but continues to face substantial external economic challenges in the opening years of the 21st century, Mayo Clinic officials said in the release of its annual report in April.

"While Rochester, Jacksonville, Scottsdale and Mayo Health System performed well in 2002, declining Medicare reimbursement continues to make it difficult to achieve even a modest margin," says Robert Smoldt, chief administrative officer of Mayo Clinic. "Prudent long-term financial management will allow Mayo to continue its mission of providing superior patient care through strong programs in medical education and research during these difficult economic times."

Robert Smoldt

In 2002, income from current activities, the best indicator of Mayo's overall financial performance, was $61.3 million, a margin of 1.4 percent. Income from patient care increased to $125.2 million. The increase reflects that patients continue to seek Mayo Clinic's unique medical services, combined with practice efficiencies and expense management.

Among the detailed 2002 results are:

- Mayo Clinic served more than 501,000 patients. Mayo Clinic continued to care for sicker patients, a higher number of which required hospitalization.
- Funding for education totaled $148 million — $101 million of which came from Mayo operating sources, $38 million from government and industrial sources, and $9 million from gifts and endowment proceeds.
- Funding for research totaled $324 million — $193 million of which came from government and industrial sponsors, $106 million from Mayo operating sources, and $25 million from gifts and endowment proceeds.
- Gifts from benefactors reached $121 million, the fifth highest total in Mayo's history.
- Diversification activities — including publishing, clinical-laboratory testing and other services and products that extend Mayo's knowledge base — generated a net surplus of $38 million to support programs in education and research. This amount is included in the $61 million from income from current activities. The value of Mayo's net assets decreased by $212 million. This reduction in net assets is primarily the result of poor investment markets, funding requirements associated with the pension fund, and growth in pension and other postretirement benefit liabilities.
- Although Mayo's investment returns were better than national benchmarks, they declined in value by $89 million during 2002. In addition, $87 million from Mayo's investments was allocated to support Mayo Clinic programs in research and education, resulting in a combined reduction in investments of $176 million.

Denis Cortese, M.D.

Denis Cortese, M.D., president and chief executive officer of Mayo Clinic, says, "We can only provide superior patient care through strong programs in medical education and research. To fully support this mission, we need an operating margin greater than the 2002 actual margin of 1.4 percent. That is why gifts from our patients and partnerships with industry and the government are critical for continued medical advancements."

Among the 2002 activities that Dr. Cortese cited as partnership examples were:

- Philanthropy enables Mayo Clinic to offer state-of-the-art facilities and biomedical programs. For example, since the Jacksonville, Fla., Mayo Clinic Hospital project was launched in 2001, benefactors

have provided more than $60 million in gifts and commitments toward the $70 million goal. In addition, benefactors have given or pledged more than $220 million to support the construction and outfitting of the Gonda Building and other practice integration-related projects in Rochester. Mayo Clinic leaders say that this level of giving is especially noteworthy considering last year's turbulent economy and unsettled global events.

- Research funding from government and corporate sources was $193 million, or nearly 60 percent of Mayo Clinic's overall research budget.
- IBM and Mayo Clinic began to collaborate on an information system that will give Mayo Clinic investigators fast access to genetic, clinical, laboratory and demographic data with the goal of improving both diagnosis and treatment of patients with complex diseases.

"We will continue to look for creative ways to fund our mission," Smoldt says. "Mayo is not immune to the current economic climate."

Smoldt notes that the bear market affected Mayo Clinic's portfolio last year, resulting in a net investment loss of $89 million. Because of the market decline and low interest rates, Mayo had to make a $78 million contribution to its pension fund. Smoldt says over the long-term, Mayo anticipates a return to positive investment markets.

Dr. Cortese also points out another significant challenge for Mayo — Medicare reimbursement.

"Medicare reimbursements don't cover the cost of providing the care," he explains. "We believe that the time for Medicare reform is now," he says.

Gov. Tim Pawlenty, left, announced the partnership between Mayo Clinic and the University of Minnesota at a state capitol news conference that included Robert Bruininks, president of the University of Minnesota, middle, and Hugh Smith, M.D., chair of the Board of Governors of Mayo Clinic in Rochester.

Minnesota governor announces historic partnership between Mayo Clinic and University of Minnesota

Minnesota Gov. Tim Pawlenty announced in April the details of a joint agreement between the University of Minnesota and Mayo Clinic to implement a multiyear research partnership to position Minnesota as a world center in biotechnology and medical genomics.

By the end of the 2003 regular session of the Minnesota Legislature, lawmakers approved a $400,000 appropriation for the planning phase of a proposed Rochester genomics research center. Another bill that passed provides $2 million in state funding over two years — to be matched by $1 million each from Mayo Clinic and the university — for a comprehensive inventory of research strengths and areas of need in both institutions and development of one or more collaborative projects.

The governor announced the partnership between Mayo Clinic and the University of Minnesota at a state capitol news conference with Hugh Smith, M.D., chair of the Board of Governors of Mayo Clinic in Rochester, and Robert Bruininks, president of the University of Minnesota.

"In future years, the world will look back and realize that the research discoveries developed through biotechnology and medical genomics will rank among the most important scientific breakthroughs in history," says Pawlenty. "We have a very limited window of opportunity to capitalize on two of the world's stellar scientific resources to make Minnesota a world hub in biosciences. Fortunately, this industry is still in its infancy, similar to where the computer industry was 25 years ago. But it's going to grow up fast."

The proposal would create a private-public partnership that leverages Minnesota's two most significant research institutions — the University of Minnesota and Mayo Clinic — in a state-sponsored initiative to attract multimillion-dollar research grants and world-class scientific talent to Minnesota. This research partnership is expected to yield major new scientific discoveries in the diagnosis and

treatment of human disease, improved technology for food and agriculture research, and lead to creation of new businesses and jobs in Minnesota as a result of these discoveries.

"This alliance will mean new discoveries, new patents, new businesses and new jobs for Minnesota," says Gov. Pawlenty. "We are extremely fortunate to have two world-class institutions like the University of Minnesota and Mayo Clinic located in our state, employing nearly 100,000 people. This partnership will create hundreds of new highly skilled research positions in Minnesota, significant advances in health care and the birth of a major new industry creating thousands of quality jobs and positioning Minnesota as a world center in this field."

Both the University of Minnesota and Mayo Clinic rank among the top 30 institutions nationally for National Institutes of Health (NIH) research funding, and last year collectively managed $700 million in major research projects.

The "Minnesota Partnership for Biotechnology and Medical Genomics," includes the following elements:

- Establishment of a joint coordinating committee between the University and Mayo Clinic to inventory existing areas of expertise, resources and capabilities and identify priorities and implementation of joint research collaborations. The first scientific projects are likely to be in the areas of cancer, neurological disease or heart disease.
- $2 million over the next biennium in seed money from the state, matched by the university and Mayo Clinic to complete the planning, formally organize the partnership and launch the first joint research project.
- The University and Mayo will submit a capital bonding proposal to the governor for consideration in the 2004 capital bonding process.
- Over five years, the state would finance an additional $70 million to partially support the faculty, equipment, technology and scientific infrastructure investments required to help make the Minnesota initiative competitive with other states that are aggressively promoting this research.

Hugh Smith, M.D.

"The potential of biotechnology and medical genomics is huge and so is the cost of development," says Dr. Smith. "Neither the University nor Mayo Clinic can do it on our own and even working together, we cannot fund a competitive initiative without the additional partnership by the state. Leveraging the University investments along with over $200 million already invested by Mayo Clinic, this partnership creates the opportunity for our state to emerge as a world leader — benefiting current and future Minnesotans through improved treatment of disease and valued economic development."

2002 Nobel Laureate in Chemistry Part of Proteomics Seminar at Mayo Clinic

John Fenn, Ph.D., Nobel Laureate in chemistry and professor of analytical chemistry in the Department of Chemistry for Virginia Commonwealth University, delivered the keynote address at the Mayo Clinic Proteomics Seminar on April 22.

Dr. Fenn, 85, received the 2002 Nobel Prize for his invention of a technique, known as electrospray ionization, which allows researchers to "weigh" large biological molecules, such as proteins, with unprecedented accuracy. Dr. Fenn's research and understanding of free jets allowed the invention of electrospray ionization, a technique that is now used in chemistry laboratories globally to rapidly and simply reveal what proteins a sample contains.

Mayo Clinic Proteomics Seminar attracted researchers and clinicians for its topics focused on research related to proteomics. Dr. Fenn was a colleague of David Muddiman, Ph.D., director of the W. M. Keck FT-ICR Mass Spectrometry Laboratory at the Mayo Clinic Proteomics Research Center. Dr. Muddiman worked with Dr. Fenn for five years at Virginia Commonwealth University.

Mayo Clinic receives patent for new treatment of chronic sinus infection

Broad patent coverage was granted to Mayo Clinic in April for a new treatment of chronic rhinosinusitis (CRS), a disease that annually affects 32 million adults in the United States and currently has no Food and Drug Administration-approved treatment.

Studies at Mayo Clinic have found the cause of CRS — a reaction to certain fungi — and demonstrated that the delivery of antifungal drugs directly into the nose and sinuses is safe and significantly reduces patients' symptoms. Improvements in asthma symptoms were noted in the same patient group. Past medical treatments for chronic sinus infections have been unsuccessful or produced severe side effects.

"We've seen significant improvement in the quality of life for the large majority of patients with chronic sinus infection who were treated with antifungal drugs," says David Sherris, M.D., a Mayo Clinic ear, nose and throat specialist and one of the project researchers. "Many of them had been miserable for years and were severely hampered at work and in social situations by their illness. Many are pain-free and able to breathe effectively through their noses for the first time in years."

CRS has a significant impact on health care in the United States.

The prevalence of CRS has increased by more than 50 percent in the past 10 years.

- CRS results in 18.3 million physician visits per year.
- Overall health-care expenditures attributable to CRS in the United States were estimated to be over $5.8 billion in 1996.
- In 2001, 27.9 million prescriptions were issued to treat CRS in the United States.
- Approximately $2 billion is spent annually to treat nasal and sinus disorders.

The road to the patents began with research at Mayo Clinic into the cause of the disease. Jens Ponikau, M.D., Eugene Kern, M.D., and Dr. Sherris, who are Mayo Clinic ear, nose and throat specialists, and Hirohito Kita, M.D., a Mayo Clinic allergic diseases researcher, led a group of investigators who demonstrated the presence of fungi in everyone's nasal mucus. However, patients diagnosed with CRS have an immunologic response to the fungi causing activated eosinophils to enter their mucus. The activated eosinophils release a major basic protein — a toxic protein — into the mucus, which attacks and kills the fungi but damages the nose and sinus membranes. The major basic protein also injures the epithelium, which allows bacteria to infect the tissues.

Mayo Clinic's pioneering medical treatment for CRS is designed to stop antigen release by administering antifungal drugs. Without fungal antigens, the immune reaction does not occur, eosinophils do not enter the nasal mucus, major basic protein is not released and damage to the nasal and sinus linings is eliminated.

Clinical studies first conducted by Mayo Clinic found that this treatment provided greater improvement of symptoms than other treatments that have been used. Past treatments used by physicians include antibiotics and systemic or inhaled steroids, as well as endoscopic sinus surgery.

Mayo Clinic conducted a prospective open-label trial using amphotericin B, an antifungal drug, in 51 randomly selected CRS patients. Treatment with amphotericin B resulted in an improvement of CRS symptoms in 38 of 51, 75 percent, of the patients. Endoscopically, 18 of 51, or 35 percent, of the patients became disease-free; an additional 20 patients, or 39 percent, improved mildly; no effect was seen in 13, or 25 percent, of patients. Researchers in Switzerland conducted a similar open trial and confirmed Mayo Clinic's results.

The National Institutes of Health has committed itself to further investigation of the fungal link to chronic sinus infection and the role of antifungal medications in treatment of the disease. So far, Mayo Clinic has received broad patent coverage that protects the delivery of antifungal drugs to mucus in the nose and sinuses. The patents are: antifungal treatment of asthma; antifungal treatment of colitis; eosinophil degranulating conditions; and antifungal treatment of CRS.

The issuance of the CRS treatment patent completes Mayo Clinic's portfolio on antifungal treatment of inflammatory conditions such as CRS, asthma and colitis and may offer pharmaceutical companies an incentive to invest in this technology to make it widely available to patients. The U.S. Patent and Trademark Office also has allowed claims for treatment of asthma and CRS combined; the patent is expected to be forthcoming.

Mayo **Update**

Mayo Medical School and Mayo Graduate School 2003 commencement ceremony held

Ninety-one new physicians and medical scientists received their M.D.s, and Ph.D.s from Mayo Clinic.

Mayo Medical School and Mayo Graduate School held a joint commencement ceremony for their 2003 graduating classes on May 17, in the Siebens Medical Education Building on Mayo Clinic's downtown Rochester campus.

Richard Weinshilboum, M.D., a Mayo physician, researcher and pioneer in the field of pharmacogenomics, delivered the commencement address. Dr. Weinshilboum is a long-standing consultant at Mayo Clinic and a world-renowned researcher who has helped to identify the genetic reasons why individual patients respond differently to medications. His groundbreaking research has helped make it possible to predict and prevent life-threatening, genetically determined drug reactions to disease treatments for childhood leukemia, inflammatory bowel disease and organ transplantation.

"We are entering a new era of medical practice and research," says Anthony Windebank, M.D., dean of Mayo Medical School. "These graduates will lead us through the revolution in medical care that will take place in the next 25 years."

Forty-three students received medical doctorate degrees. Twenty-four students received master's degrees, and 24 students were granted doctorate degrees in biomedical research. Mayo Graduate School and Mayo Medical School awarded five students who have completed eight years of training as physicians and biomedical research scientists with M.D./Ph.D. degrees.

"All of our graduates have an important role in the future of medicine," explained Richard A. Robb, Ph.D., associate dean of Mayo Graduate School. "Our Ph.D. and M.D./Ph.D. graduates will help to fulfill an increasingly needed role as scientists who can advance basic biomedical discoveries and translate them into improved diagnoses and treatments for patients."

Mayo Clinic Trustees honor new named professor

Robert Rizza, M.D.

The Mayo Clinic Board of Trustees has recognized Robert Rizza, M.D., a Mayo Clinic endocrinologist, with a Mayo Medical School named professorship.

Dr. Rizza is the recipient of the Earl and Annette R. McDonough Professorship, established in 1998 in honor of Mr. and Mrs. McDonough and in recognition of a generous bequest for diabetes research from the estate of Annette R. McDonough. Mr. McDonough worked for the Hilton Hotels Corporation for the majority of his career. He died in 1991, and Mrs. McDonough died in 1995.

Dr. Rizza was the chair of the Mayo Clinic Division of Endocrinology and Metabolism from December 1992 to October 2002, and is a professor of medicine at Mayo Medical School. He earned his medical degree at the University of Florida Medical School, followed by an internship and residency at Johns Hopkins Hospital, and a fellowship at Mayo Clinic in endocrinology.

Dr. Rizza is recognized as a world's authority in the regulation of carbohydrate metabolism in humans. He also has been a leader in national efforts to improve the curriculum in endocrinology training programs to enhance patient care.

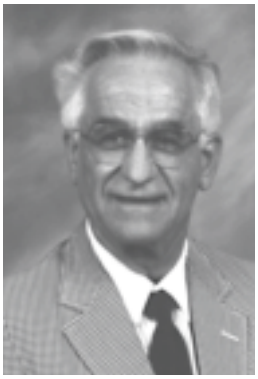
Named professorships at Mayo Medical School represent the highest academic distinction for a faculty member. Faculty are appointed to a professorship through nomination and endorsement of their peers, and then confirmed by Mayo Clinic senior leadership. Appointed individuals are recognized for distinguished achievement in their specialty areas and service to the institution. The Mayo Clinic Board of Trustees confers the named professorship in person at a board meeting. Named professors hold the appointment for the duration of their active Mayo Clinic careers. Upon an incumbent's retirement, a new professor is appointed. The professorship remains in perpetuity.

These professorships are named in honor of the benefactors. The gift funds, which may be unrestricted or focused on a specific medical area, are held in endowment. All income from the endowed professorships supports Mayo Clinic programs in medical education and research.

Mayo Foundation Distinguished Alumnus awards

Mayo Clinic recently honored three physicians for their contributions to medicine, research and education.

Francis Haddy, M.D., Ph.D., Gertrude Tyce, Ph.D., and Jack Whisnant, M.D., each received Mayo Foundation Distinguished Alumnus awards during commencement ceremonies for the Mayo Medical School and Mayo Graduate School in Rochester. The awards recognize alumni of Mayo Clinic education programs who have achieved significant national and international distinction in their fields.



Francis Haddy, M.D., Ph.D.

Gertrude Tyce, Ph.D.

Jack Whisnant, M.D.

Dr. Haddy was honored for his contributions to physiology and medicine.

Dr. Haddy earned his medical degree from the University of Minnesota and later completed a fellowship in internal medicine at Mayo Clinic. He went on to earn his Ph.D., in physiology from the University of Minnesota Medical School.

He has published over 150 papers in peer-reviewed journals. Dr. Haddy has also published 112 reviews and 367 abstracts. These publications concerned cardiovascular physiology and cardiovascular disease, particularly the roles of sodium, potassium, and digitalis-like substances in low renin hypertension. He taught 45 classes of medical students and chaired three departments of physiology (University of Oklahoma, Michigan State University and Uniformed Services University). He has been on the editorial boards of a number of journals, including the *American Journal of Physiology, Circulation Research, Hypertension* and the *Journal of the American College of Nutrition.*

Dr. Haddy has served on advisory committees and as a member of the boards of trustees for the National Hypertension Association, American College of Nutrition, American Association for Accreditation of Laboratory Animal Care (AAALAC), and Federation of American Societies for Experimental Biology (FASEB). He has made Liaison Committee on Medical Education (LCME) site visits, including one to the Mayo Medical School. He is a past president of the American Physiological Society. Dr. Haddy administered the grant application peer review program in the cardiopulmonary, integrated physiology, and clinical areas for the National Aeronautics and Space Administration (NASA) and currently serves as a consultant to NASA Life Sciences.

Dr. Tyce was recognized for her contributions as a researcher, mentor and leader in the field of physiology.

Dr. Tyce is currently chairperson-elect of the emeritus staff, Mayo Medical School. She did her graduate work in plant physiology and plant biochemistry at the University of Durham, England, and earned a Ph.D., in botany before becoming an instructor in chemistry and biology at several colleges. She completed a fellowship in biochemistry at Mayo Clinic in 1963, beginning her long career with Mayo.

During her career as a researcher, Dr. Tyce devoted her studies to the metabolism, pharmacology and physiologic effects of catecholamines. She has been credited for her tireless efforts of integrating the biochemistry of catecholamine metabolism with clinical medicine. Dr. Tyce has 377 peer-reviewed publications. She was a valued collaborator with colleagues at Mayo Clinic and neurochemists in the United States, Canada and Japan. Some of Dr. Tyce's studies laid the groundwork for the use of L-DOPA in the treatment of patients with Parkinson's disease. Many of her trainees have gone on to prestigious academic positions. Dr Tyce served as councillor of the Catecholamine Club from 1981 to 1992 and president from 1983 to 1984. She also served as assistant editor of *News in Physiological Sciences* from 1988 to 1994 and served on the Board of Editors of the Society for Experimental Biology and Medicine.

Dr. Whisnant was recognized for his contribution to education, research and clinical care in neurology.

Dr. Whisnant is an emeritus professor of neurology at Mayo Clinic. He earned his medical degree from the University of Arkansas School of Medicine in 1951.

He came to Mayo Clinic in 1952, completed fellowships in internal

medicine and neurology and joined the Mayo Clinic staff in 1955. Dr. Whisnant served in a number of leadership roles during his career at Mayo Clinic. He chaired the Department of Neurology from 1971 to 1981, was director of the Mayo Cerebrovascular Clinical Research Center from 1975 to 1996 and was chair of the Department of Health Sciences Research from 1987 to 1993. His leadership of the Mayo Cerebrovascular Clinical Research Center elevated it to be a national model of accomplishment in the development and introduction of clinically pertinent methods of diagnosis and therapy.

Dr. Whisnant also served as president of three national academic neurological organizations: the American Academy of Neurology, the American Neurological Association and the American Board of Psychiatry and Neurology. His epidemiologic studies using the records of the Rochester Epidemiological Project provided the scientific community with the necessary evidence to recognize the pertinent risk factors that today are the basis for community-based programs of stroke prevention. He has served on the editorial boards of a number of scientific journals. He served on the National Advisory Council of the National Institute of Neurological Disorders and Stroke and as chair of a National Institutes of Health program project review committee. Dr. Whisnant was appointed the Roy E. and Merle Meyer Professor of Neurology at Mayo Medical School and displayed a unique skill in mentoring colleagues in cerebrovascular research. He has inspired several generations of physicians to understand the concept of "evidence-based medicine" and to apply its principles to the practice of medicine, particularly neurological medicine.

Mayo Clinic researchers discover significant link between head injury and Parkinson's disease

Mayo Clinic researchers have found that those who have experienced a head injury are four times more likely to develop Parkinson's disease than those who have never suffered a head injury. The risk of developing Parkinson's increases eightfold for patients who have had head trauma requiring hospitalization, and it increases 11-fold for patients who have experienced severe head injury.

The study was published in the May 27 issue of *Neurology*.

Says James Bower, M.D., Mayo Clinic neurologist and the study's lead author, "The risk is elevated for people with more severe head injury — longer loss of consciousness and brain bruising visible in a CT scan. We did not find mild head injury — head injury with no or only a brief loss of consciousness — to be associated with Parkinson's disease."

The investigators point out that caution is appropriate in interpreting one's risk, however. "By no means does it mean that if you have a severe head injury that you will definitely develop Parkinson's," says Dr. Bower.

A few of the study's findings were unexpected by the investigators. "I was surprised by the strength of the association," says Dr. Bower. "I also was surprised that the average head trauma was about 20 years before the start of the disease."

The exact link between head trauma and Parkinson's remains elusive, however. The investigators offer some possibilities, pointing out that while these theories are plausible, they are purely hypothetical.

"We're learning a lot about the molecular basis of Parkinson's," says Demetrius Maraganore, M.D., Mayo Clinic neurologist and one of the study's authors. "It's hard for me to know, however, how a blunt injury to the head would cause later Parkinson's disease."

Dr. Bower points out that Parkinson's disease is probably not caused by only one factor. Head trauma, then, may be one of various factors that may lead to Parkinson's.

The Mayo Clinic investigators initiated this study to help resolve conflicting findings in previous studies of the link between Parkinson's and head injury. They also had reason to suspect that Parkinson's and head injury might be related due to reports of a sports-associated disease.

"There is a disease seen in boxers called dementia pugilistica that looks a lot like Parkinson's disease," says Dr. Bower. "Although our patients did not have dementia pugilistica, it gave us a hint that there may be a link between trauma and parkinsonian symptoms."

Even though the association between head injury and Parkinson's is strong, the investigators caution that no direct causal link can be made between head injury and Parkinson's. Therefore, advice about what people can do with this new information is limited.

"It shows the risk is increased; it doesn't show causality," says Dr. Maraganore. "You can worry, but we don't encourage that. It would be enough of an increase in risk that I'd think, 'What can I do to reduce that person's risk?' "

As a precaution, Dr. Bower suggests using head protection while bike riding or playing other sports in which a person has an increased likelihood of head injury. "Certainly, appropriate headgear is important in reducing the risk of serious head injury," says Dr. Bower. "Unfortunately, there is no other proven way to reduce the risk of getting Parkinson's disease once a head injury has occurred."

The study involved reviewing medical records of 196 patients participating in the Rochester Epidemiology Project to look for preceding incidence of head trauma. Parkinson's cases were age-matched and gender-matched to someone who did not have Parkinson's disease.

The investigators point out that this study is the first population-based and medical records-based study of head trauma and Parkinson's.

"The problem with the previous studies is that they were based on patient memory," says Dr. Bower. "It is very common for those who have a disease to try to remember something that could explain the disease. Patients who do not have the disease don't go through that mental effort."

Dr. Maraganore concurs. "In our study, we relied on head trauma being recorded in the medical record before diagnosis of Parkinson's. That's why our study is stronger. It's less likely to suffer from recall bias," he says. "It's a confirmatory study, but confirmatory in a unique setting that renders this study more plausible."

"Norman Rockwell and Medicine"

collection at Mayo Clinic

Seven original Norman Rockwell paintings were displayed at Mayo Clinic in Rochester in early June. Commissioned during the 1930s to the 1950s, the collection depicts medical scenes painted for an advertising and health-education campaign. The pieces appeared as advertisements in magazines such as *The Saturday Evening Post* and were used extensively in drugstore displays, schools and physicians' offices.

Two lectures were delivered during the weeklong display. Tom Daly, curator of education at the Norman Rockwell Museum in Stockbridge, Mass., talked about the history of the collection.

The event was hosted by the Mayo Clinic Center for Humanities in Medicine, which integrates the arts, history and ethics in the medical environment to support the Mayo Clinic ideal that the needs of the patient come first. The center's programs and research in the humanities serve patients, families, caregivers and the larger community, promoting the compassionate delivery of health care. Mayo Clinic, private benefactors, foundations and grants fund programs. The Rockwell collection was on loan from Pfizer Inc.

Mayo **Update**

Pictured is the new C.V. and Elsie R. Griffin Cancer Research Building at Mayo Clinic in Jacksonville. The building was dedicated in February. The center is named after C.V. and Elsie R. Griffin, longtime Mayo Clinic patients and benefactors, whose gift along with a host of others contributed to the construction of the $22 million building.

Alumni meetings

Receptions

American Association of Clinical Chemistry, July 20-24, 2003, *Philadelphia, Pa.*
American Academy of Otolaryngology — Head and Neck Surgery, Sept. 23, 2003, *Orlando, Fla.*
American Academy of Physical Medicine and Rehabilitation, Oct.9-12, 2003, *Chicago, Ill.*
American College of Gastroenterology, Oct. 10-15, 2003, *Baltimore, Md.*
American Society of Anesthesiologists, Oct. 11, 2003, *San Francisco, Calif.*
American Academy of Child and Adolescent Psychiatry, Oct. 14-19, 2003, *Miami Beach, Fla.*
Congress of Neurological Surgeons, Oct. 18-23, 2003, *Denver, Colo.*
American College of Surgeons, Oct. 19-23, 2003, *Chicago, Ill.*
American College of Rheumatology, Oct. 23-28, 2003, *Orlando, Fla.*
American Association for the Study of Liver Diseases, Oct. 24-28, 2003, *Boston, Mass.*
American College of Chest Physicians, Oct. 25-30, 2003, *Orlando, Fla.*
American Society of Plastic and Reconstructive Surgery, Oct. 25-29, 2003, *San Diego, Calif.*
American Academy of Maxillofacial Prosthetics, Nov. 1-4, 2003, *Scottsdale, Ariz.*
Association of American Medical Colleges, Nov. 7-12, 2003, *Washington, D.C.*
Society for Neuroscience, Nov. 8-12, 2003, *New Orleans, La.*
American Heart Association, Nov. 9-12, 2003, *Orlando, Fla.*
Minnesota Nephrology Collaborative Group (American Society of Nephrology), Nov. 12-17, 2003, *San Diego, Calif.*
American Academy of Ophthalmology, Nov. 16-20, 2003, *Anaheim, Calif.*
Radiology Society of North America, Nov. 30 – Dec. 5, 2003, *Chicago, Ill.*
American Society of Hematology, Dec. 6-9, 2003, *San Diego, Calif.*

Postgraduate meetings

For more information, please complete and return the tear-out card in this issue. Or you may call 507-284-2509 or 800-323-2688. Unless otherwise noted, meetings are held in Rochester.

Summer Clinical Reviews, June – Aug., 2003, *Phoenix, Ariz.*
International Medicine Review — Certification and Recertification, July 13-19, 2003
Update in Hepatology and Liver Transplantation — 2003, July 26-27, 2003, *Brainerd, Minn.*
Mayo Clinic Neurology and Clinical Practice, July 28-Aug. 1, 2003, *Whistler, British Columbia, Canada*
Annual Update in Nephrology and Kidney/Pancreas Transplantation, July 31-Aug. 3, 2003, *Brainerd, Minn.*
Psychiatric Genomics — Applications for Clinical Practice, Aug. 4-8, 2003
Mayo Clinic High Risk Emergency Medicine: Conundrums in the ED, Aug. 6-9, 2003, *Whistler, British Columbia, Canada*
8th Annual Mountain Course SUCCESS WITH FAILURE: New Strategies for the evaluation and treatment of Congestive Heart Failure, Aug. 10-12, 2003, *Whistler, British Columbia, Canada*
Cardiovascular Review for Nurse Practitioners and Physician Assistants, Aug. 25-26, 2003
Mayo Clinic Gastroenterology and Hepatology Board Review, Sept. 10-14, 2003
Practical Surgical Pathology, Sept. 11-13, 2003
Parkinson's Disease and other Movement Disorders for the Practitioner, Sept. 12-13, 2003, *San Diego, Calif.*

Mayo Cardiovascular Review Course for Cardiology Boards and Recertification, Sept. 20-25, 2003
Nutrition in Health and Disease, Sept. 25-26, 2003, *Chicago, Ill.*
Quality of Life III TRANSLATING THE SCIENCE OF QOL INTO CLINICAL PRACTICE An Example-Driven Approach for Practicing Clinicians and Clinical Researchers, Oct. 2-4, 2003, *Scottsdale, Ariz.*
Pediatric Days, Oct. 2-3, 2003
The Impact of Genomics on Medical Practice, Oct. 6-7, 2003
Rhinofest, Oct. 9-12, 2003
Geriatric Update for the Primary Care Physician, Oct. 9, 2003
Integrating and Assessing the New Competencies, Oct. 16-18, 2003
Mayo Clinic Nicotine Dependence Conference: Counselor Training and Program Development, Oct. 19-22, 2003
Update in Psychology, Oct. 22-25, 2003
Internal Medicine, Oct. 23-26, 2003, *Sedona, Ariz.*
Update in Cardiovascular Diseases: A Case-Oriented, Interactive Approach, Oct. 25-26, 2003
Clinical Reviews, Mayo Clinic Rochester, Oct. 27-29, 2003
16th Annual Techniques in Advanced Laparoscopic and Gynecologic Surgery, Nov. 5-8, 2003, *Maui, Hawaii*
16th Annual Epilepsy Update, Nov. 7-8, 2003, *Scottsdale, Ariz.*
Current Concepts in Primary Eye Care, Nov. 6, 2003
Sports Medicine Symposium, Nov. 7-8, 2003
Clinical Reviews, Mayo Clinic Rochester, Nov. 10-12, 2003
Mayo Clinic OB/GYN Clinical Reviews, Nov. 13-15, 2003
2003 Fall Nursing Conference, Nov. 15, 2003, *Scottsdale, Ariz.*

Alumni news

1930s

Alfred Deacon *(Orthopedics '36)* celebrated his 100th birthday on Nov. 21, 2002, in Winnipeg, Manitoba.

1960s

Drake Duane *(Neurology '68)* was appointed to the Board of Directors of the Phoenix Symphony.

1970s

Donald Greydanus *(Pediatrics '76)* received the 2003 William B. Weil, Jr., M.D., Endowed Distinguished Pediatric Faculty Award from the Michigan State University College of Human Medicine for contributions to the field of pediatrics and adolescent medicine He is also editor-in-chief of the book *Caring for Your Teenager, The Complete and Authoritative Guide*. Dr. Greydanus is also the senior editor of an adolescent medicine textbook, *Course Manual for Adolescent Health*.

Alkis Pierides *(Nephrology '78)*, director of nephrology, Nicosia General Hospital, is co-editor of *Textbook on Emergency Nephrology*, and is editor of the book *The Use of Genetics in the Study of Inherited Kidney Diseases with Emphasis on Nephrology*.

1980s

Joseph Broderick *(Neurology '87)* received the 2003 William M. Feinberg Award for Excellence in Clinical Stroke from the Stroke Council of the American Stroke Association, a division of the American Heart Association. Dr. Broderick is chair of the University of Cincinnati Department of Neurology and is affiliated with Cincinnati's Neuroscience Institute.

Christian Harker *(Physiology '87)*, president of Cayuse Software in Portland, Ore., has been awarded a grant from the National Center for Research Resources to develop electronic submission of grant proposals to the National Institutes of Health.

Curtis Kamida *(Internal Medicine '81, Diagnostic Radiology '83)* was inducted as a fellow in the American College of Radiology. He is affiliated with the University of Hawaii and Straub Clinic and Hospital in Honolulu.

William Law, Jr. *(Endocrinology '83)* was elected vice president of the Board of Directors of the American Association of Clinical Endocrinologists. He is in private practice in Knoxville, Tenn., and a clinical associate professor and chief of the section of endocrinology at the University of Tennessee Graduate School of Medicine.

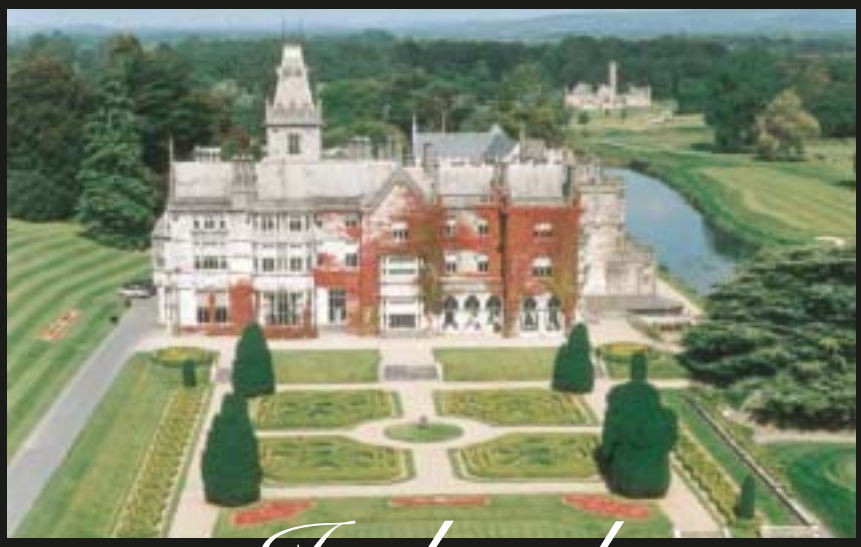
1990s

Yoshi Yamamoto *(Neurosurgery '98)* was appointed head of section, neurosurgery, at the Lexington Clinic and is clinical associate professor in the division of neurosurgery at the University of Kentucky.

2000s

Daniel Pinheiro *(Otolaryngology ' 01)* authored an article for *Current Surgery*, presented Grand Rounds in the Department of Otolaryngology at Johns Hopkins University in 2001 and is teaching a course at the annual meeting of the Academy of Otolaryngology.

Mayo **Update**



2004 meeting in Ireland

Plans are being finalized for the 2004 Mayo Clinic International Medical Education Program and Tour in Ireland Sept. 9-22, 2004. The scientific program will be held at Adare Manor on the west coast of Ireland near Limerick on the edge of the village Adare on Sept. 9-11, 2004. The manor was built in the 1720s and is set within 840 acres of gardens, park land and ruins. The meeting room is in the Great Gallery filled with period stained glass windows, original flooring and carved paneling. The manor is rated as Europe's No. 1 resort by *Conde Nast Traveler*. An optional tour through Ireland will follow the meeting Sept. 12-22. Details of the meeting and tour will be published in the fall issue of Mayo Alumni.

Staff news

Samuel Asirvatham, Jamil Tajik, and **Douglas Wood** were honored for outstanding achievements and contributions at the annual scientific session of the American College of Cardiology.

Lorraine Fitzpatrick was appointed to the Advisory Committee to the Women's Health Initiative.

Peter Harris was awarded an inaugural Lillian Jean Kaplan International Prize for Advancement in the Understanding of Polycystic Kidney Disease.

Diane Jelinek was appointed dean of Mayo Graduate School.

Sundeep Khosla was appointed a member of the Orthopedics and Musculoskeletal Study Section, Center for Scientific Review, National Institutes of Health (NIH).

Robert Kyle was made an Honorary Fellow of the Royal College of Pathologists in London.

Kay Mitchell was honored at the annual Celebration of Leadership dinner.

Peter Pairolero was elected first vice president of The Society of Thoracic Surgeons at its 39th annual meeting.

Wojciech Pawlina gave the keynote address at the 33rd Annual Conference of the Anatomical Society of Southern Africa.

Piero Rinaldo was named Second Place Laboratorian of the Year by ADVANCE for Medical Laboratory Professionals.

Thomas Rizzo was selected CME editor of *Archives of PM&R*.

James Scolapio was appointed national chairman of Nutrition Week and the American Society of Parenteral and Enteral Nutrition.

Susan Slager received a College of Public Health Outstanding Alumni Award from the University of Iowa School of Public Health.

John Sperling, Robert Cofield, and **Charles Rowland** received the Neer Award from the American Shoulder and Elbow Surgeons in recognition of outstanding research.

Eric Tangalos chaired the 15th annual Alzheimer's Association Public Policy Forum in Washington, D.C.

Pawan Vohra won a Postdoctoral Travel Award from the American Society for Biochemistry and Molecular Biology for the most outstanding abstract.

Floyd Willis was the keynote speaker at the Minorities in Medicine Student Symposium at the University of North Florida.

Anthony Windebank was named to an advisory board for the Association of American Medical Colleges' new Institute for Improvement in Medical Education.

Fellow, resident and student news

Ariel Carls *(Mayo Medical School)* received the Medical Student Award for Contributions to Family Medicine from the Minnesota Academy of Family Physicians.

Nicole Marshall *(Mayo Medical School)* was selected as a 2003 Bristol-Myers Squibb Academic Medicine Fellow.

Mayo Graduate School of Medicine and Mayo Fellow's Association announced the following recipients of Mayo International Health Program scholarships. Scholarships are given to support international rotations to underserved areas of the world.

Lida Aghdam, M.D., *(Women's Health)* Mayo Clinic in Jacksonville, to Izmir, Turkey, July 2003

Amado Baez, M.D., *(Emergency Medicine)* Mayo Clinic in Rochester, to Santo Domingo, Dominican Republic, June 2003

Derek Boahene, M.D., *(Otolaryngology)* Mayo Clinic in Rochester, to Kumasi, Ghana, January 2004

Elizabeth Carey, M.D., *(Gastroenterology)* Mayo Clinic in Scottsdale, to Bomet, Kenya, September 2003

Pablo Castillo, M.D., *(Cerebrovascular Diseases)* Mayo Clinic in Jacksonville, to Guayaquil, Ecuador, June 2003

Kristin Chrouser, M.D., *(Urology)* Mayo Clinic in Rochester, to Jos, Nigeria, January 2004

Eileen Dauer, M.D., *(Otolaryngology)* Mayo Clinic in Rochester, to Oaxaca, Mexico, February 2004

V. Persis Dhas, M.D., *(Internal Medicine)* Mayo Clinic in Rochester, to Cuba, January 2004

Sameer Gupta, M.D., *(Family Medicine)* Mayo Clinic in Rochester, to Bangkok, Thailand, February 2004

Angela Martin, M.D., *(Otolaryngology)* Mayo Clinic in Rochester, to Oaxaca, Mexico, February 2004

Edgar Martorell, M.D., *(Internal Medicine)* Mayo Clinic in Jacksonville, to Roatan, Honduras, February 2004

Picha Moolsintong, M.D., *(Internal Medicine)* Mayo Clinic in Rochester, to Ensenada, Mexico, July 2003

Aroop Pal, M.D., *(Internal Medicine)* Mayo Clinic in Scottsdale, to Pune, India, December 2003

Noelene Pang, M.D., *(Ophthalmology)* Mayo Clinic in Rochester, to St. Lucia, West Indies, March 15, 2004

James Russell, M.D., *(Dermatology)* Mayo Clinic in Rochester, to Sao Paulo, Brazil, May 2004

Andres Sanchez, D.D.S., *(Periodontics)* Mayo Clinic in Rochester, to Santa Fe, Argentina, February 2004

Daniel Waggoner, M.D., *(Internal Medicine)* Mayo Clinic in Jacksonville, to Banska Bystrica, Slovakia, May 2003

Obituaries

1930s

Eleanor Kernohan, 97, died March 29, 2003. Dr. Kernohan received her medical degree from the University of Manitoba in 1930 and completed a fellowship in anatomic and clinical pathology at Mayo Clinic in 1934. She later joined the Mayo Clinic pathology staff, working there until her retirement.

1940s

James Barger, 84, died April 3, 2002. Dr. Barger received his medical degree from the University of Pennsylvania in 1941. After a residency at Milwaukee General Hospital, he joined the U.S. Army and served in the Medical Corps through 1945. Upon his discharge, he came to Mayo Clinic and completed a fellowship in pathology in 1949. Dr. Barger served as laboratory director of Samaritan Hospital in Phoenix from 1950 to 1961. He joined the clinical laboratory staff at Sunrise Hospital in Las Vegas in 1963. During his career, he served as president of the College of American Pathologists and was among the first physicians to receive Professional Engineer certification in Quality Control Engineering. Dr. Barger also served on the American Medical Association's board of governors. He retired in 1997.

Daniel Crowley, 89, died March 9, 2003. Dr. Crowley received his medical degree from the University of Iowa Medical School before serving in the U.S. Army Air Corps during World War II. Upon his return from the service, he completed fellowships at Mayo Clinic in general surgery (1950) and thoracic surgery (1956). He went to Des Moines, Iowa, after his fellowship and began a long surgical practice there until retirement in 1982. During his career, he was chief of staff at Mercy Hospital.

Kenneth Devine, 85, died May 18, 2003. Dr. Devine received his medical degree from the University of Iowa Medical School in 1941. He came to Mayo Clinic and completed a fellowship in general surgery in 1944 and plastic surgery in 1947. Dr. Devine joined Mayo Clinic in 1947 in plastic surgery and laryngology. He was appointed a professor of clinical plastic surgery in 1968 and a professor of clinical otolaryngology in 1971 in the Mayo Graduate School of Medicine. He retired in 1979.

Mayo **Update**

1950s

Edward Krusen, 82, died Sept. 14, 2002. Dr. Krusen received his medical degree in 1944 from the University of Pennsylvania, and served in the U.S. Army Medical Corps after World War II. After he completed his fellowship training in physical medicine and rehabilitation at Mayo Clinic in 1950, Dr. Krusen joined the Baylor Medical Center as its first specialist in physical medicine and rehabilitation. He served as the chief of the department and in 1982 helped establish the Baylor Institute for Rehabilitation. Dr. Krusen also served as a consultant for the Veteran's Administration hospital in Dallas and a clinical professor at the University of Texas Southwestern Medical Center in Dallas. He served in leadership positions on the American Board of Physical Medicine and Rehabilitation. Dr. Krusen received the Distinguished Clinician Award from the American Academy of Physical Medicine and Rehabilitation in 1985. He retired in 1985.

Henry McWhorter, 81, died March 6, 2003. Dr. McWhorter received his medical degree from the University of Chicago in 1944 before he served in the U.S. Navy as a medical officer. He completed fellowships in general surgery (1951) and plastic surgery (1954) at Mayo Clinic. Dr. McWhorter moved to Toledo, Ohio, in 1954 and began a plastic and reconstructive surgery practice. He retired in 1986.

Ernest Stewart, 78, died Oct. 25, 2002. In1956, Dr. Stewart received his Ph.D. in biochemistry from the University of Utah. He completed a fellowship in biochemistry at Mayo Clinic in 1958. Dr. Stewart joined Lovelace Clinic in Albuquerque, N.M., in 1958, and later became manager of the clinical laboratory. He joined the staff of Baxter-Travenol Laboratories in Cost Mesa, Calif., in 1974 and worked there until 1990.

1960s

Matt Ehlen, 71, died Nov. 21, 2002. Dr. Ehlen received his medical degree from Tulane University in 1956. After an internship and residency at St. Luke's Hospital in Fargo, N.D., he came to Mayo Clinic, completing his fellowship in internal medicine in 1961. He joined the Fargo Clinic-St. Luke's Hospital, where he worked until 1992. Dr. Ehlen joined Pioneer Mutual Insurance Co. in 1992 as its medical director. He retired in 2001. Dr. Ehlen was a clinical associate at the University of North Dakota School of Medicine, an adjunct associate professor in the College of Pharmacy at North Dakota State University and was vice president and acting president of the North Dakota Heart Association.

John Posey, 78, died Dec. 26, 2002. He was drafted into the U.S. Navy in World War II, serving until 1944. He returned to college and earned his medical degree from the University of Nebraska College of Medicine in Omaha in 1951. Dr. Posey completed a residency in general surgery at Mayo Clinic in 1958 and a fellowship in urology in 1961. He joined a private practice in Denver in 1961, where he worked until 1986. Dr. Posey joined the Veteran's Administration system, serving as the chief of urology in Hot Springs, Colo., before transferring to the VA hospital in Long Beach, Calif., where he worked until he retired in 1996. He then worked part time at the University of California, Irvine, until his death. A lectureship at the university has been established in his memory. During his career, Dr. Posey was president of the Rocky Mountain Urological Association and president of the South Center Section of the American Urological Association.

1970s

Julian Alvarez, 62, died Dec. 2, 2002. Dr. Alvarez earned his medical degree from Facultad de Medicina in Madrid, Spain, in 1968. After completing his residencies in neurology at Hospital Clinico in Madrid and the University of Arizona in Tucson, Dr. Alvarez completed a fellowship in electro-encephalography at Mayo Clinic in 1976. Dr. Alvarez was head of the electroencephalography and epilepsy unit at the 12 de Octubre hospital in Madrid at the time of his death.

John Cullen, 78, died Oct. 14, 2002. Prior to earning his medical degree, he served in the U.S. Army Medical Corps, eventually being discharged in 1946. Dr. Cullen earned his medical degree from Western Reserve University in Cleveland, Ohio, in 1953. After his internship and residency, Dr. Cullen joined a private practice in Defiance, Ohio. In 1969, he came to Mayo Clinic for a fellowship in anesthesiology. Dr. Cullen completed his training at Mayo Clinic in 1971 and was on staff at Good Samaritan and Shriner's hospitals in Lexington, Ky., where he lived.

Blayne Hirsche, 60, died Nov. 24, 2002. Dr. Hirsche earned his medical degree from the University of Alberta. He completed a fellowship in general surgery at Mayo Clinic in 1975. In 1977, he settled in Provo, Utah, establishing a plastic surgery practice. In 1993, Dr. Hirsche founded the Hirsche Smiles Foundation, a nonprofit organization that has arranged more than 600 surgeries for children without access to medical services or health education. He and other medical experts traveled to Central America at their own expense to perform plastic surgeries on children with cleft palates, burn scars, tumors and other maladies. He was named Utah County's 2001 Doctor of the Year by the Utah County Medical Alliance.

Mayo Clinic Resource Central

Resources to help you stay connected with Mayo Clinic and Mayo Clinic Alumni Association

Mayo Clinic in Rochester
200 First Street SW
Rochester, MN 55905
507-284-2511

Mayo Clinic in Jacksonville
4500 San Pablo Road
Jacksonville, FL 32224
904-953-2000

Mayo Clinic in Scottsdale
13400 East Shea Boulevard
Scottsdale, AZ 85259
480-301-8000

For Mayo Clinic and health information on the Web:
www.mayo.edu
www.mayoclinic.org
www.mayoclinic.com

Alumni Center Information

Mayo Clinic Alumni Center
507-284-2317
Karen Skiba
Administrator
507-538-0162

E-mail: mayoalumni@mayo.edu

Alumni Relations Coordinators:
Betsey Smith
507-538-1164

Carol Demulling
507-538-1663

The Doctors Mayo Society
Mark Hintz
800-297-1185

Department of Development
800-297-1185

Physician Referral Information

Rochester	800-533-1564
Jacksonville	800-634-1417
Scottsdale	800-446-2279

Executive Health Program

Rochester	507-284-2288
Jacksonville	800-634-1417
Scottsdale	480-301-8088

Mayo Medical Laboratories
800-533-1710

Mayo Clinic MedAir, Mayo One
800-237-6822

Regional Visiting Faculty Program

Rochester	507-284-2242
Jacksonville	904-953-2944
Scottsdale	480-301-7348

Visiting Clinician Program

Rochester	507-284-3432
Jacksonville	904-953-2944
Scottsdale	480-301-4338

Continuing Medical Education

Rochester	800-323-2688
Jacksonville	800-462-9633
Scottsdale	480-301-4580

Employment Opportunities

Mayo Clinic Human Resources
For information about employment opportunities at Mayo Clinic visit: **www.mayo.edu** or e-mail: **careers@mayo.edu**

You will be asked to specify Rochester, Jacksonville or Scottsdale for specific employment opportunities.

Mayo Health System
Michael Griffin
507-284-9114
www.mhs.mayo.edu

Medical Journal

Mayo Clinic Proceedings
800-707-7040
www.mayo.edu/proceedings

Mayo Clinic Alumni Association

STATEMENT OF FINANCIAL POSITION
As of December 31, 2002

ASSETS		
Cash and cash equivalents	$	177,154
Accounts receivable		315
Inventory		34,603
Prepaid expenses		40,812
Investments, at fair market value		486,923
Total Assets	**$**	**739,807**
LIABILITIES AND NET ASSETS		
Liabilities:		
Accounts payable	$	14,041
Sales tax payable		102
Total Liabilities	**$**	**14,143**
Net Assets, unrestricted		725,664
Total Liabilities and Net Assets	**$**	**739,807**

STATEMENT OF ACTIVITIES
For The Year Ended December 31, 2002

Revenues:		
Membership dues	$	281,168
Meeting registration fees		83,663
Sale of Mayo Alumni memorabilia		53,138
Interest and dividends		21,104
Realized and unrealized gains and losses on investments, net		(45,218)
Miscellaneous		1,910
Total Revenues		**$395,765**
Expenses:		
Program Services:		
Alumni foreign trips	$	21,529
International meetings		1,236
Receptions		101,128
Regional meetings		36,677
Group Association meetings		80,048
Specialty meetings, net of reimbursements		10,864
Mayo Alumni memorabilia		36,219
Alumni awards		6,225
Mayo Graduate School		6,484
Mayo Graduate School of Medicine		8,816
Mayo Medical School		30,695
Heritage program		2,800
Total Program Services	**$**	**342,721**
Supporting Services:		
Operating expenses		**83,944**
Total Expenses		**$426,665**
Change in Unrestricted Net Assets	**$**	**(30,900)**
Unrestricted Net Assets, beginning of the year		756,564
Unrestricted Net Assets, end of the year	**$**	**725,664**

Printed on paper that contains 10 percent postconsumer waste and 40 percent preconsumer waste.

Editorial staff

Executive Editor — Suzanne Leaf-Brock

Managing Editor — Michael Dougherty

Art Director — Mary Ayshford

Feature Writers — Amy Berg, Renee Berg, Michael Dougherty, Yvonne Hubmayr

Mayo Update Contributors — Lee Aase, Lisa Copeland, Susan Fargo-Prosser, Chris Gade, Carol Lammers, Mary Lawson, John Murphy, Shelly Plutowski

Editorial Assistant — Kristine Schuchard

Photographers — Joseph Kane, Randy Ziegler

Proofreader — Michael McDaniel

Mayo Alumni Center e-mail address: mayoalumni@mayo.edu
Web Site: http://www.mayo.edu
Alumni Association Internet address: http://www.mayo.edu/alumni/alumni.htm

Mayo Alumni magazine is published quarterly and mailed free of charge to physicians, scientists and medical educators who studied and/or trained at Mayo Clinic, and to Mayo consulting staff. The magazine reports on Mayo Clinic alumni, staff and students, and informs readers about newsworthy activities throughout Mayo Foundation. Please send correspondence to: *Mayo Alumni*, Mayo Clinic, 200 First Street S.W., Rochester, Minn. 55905; or via e-mail to schuchard.kristine@mayo.edu; or telephone 507-284-2450; or fax 507-284-8713. Send address changes to the Mayo Clinic Alumni Association office at the preceding address or e-mail to mayoalumni@mayo.edu.

Mayo Clinic is committed to creating and sustaining an environment that respects and supports diversity in staff and patient populations.

MAYO CLINIC

200 First Street S.W.
Rochester, Minnesota 55905
www.mayoclinic.org

MC44090703